UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program Student Research Report

Exploring the dynamics of "Affordability" for students at UBC Vancouver

Stephanie Lin, Joy Jiao, Emma Gangbar

University of British Columbia

Course: LFS 450

Themes: Community, Food, Wellbeing

Date: April 16, 2020

Disclaimer: "UBC SEEDS Sustainability Program provides students with the opportunity to share the findings of their studies, as well as their opinions, conclusions and recommendations with the UBC community. The reader should bear in mind that this is a student research project/report and is not an official document of UBC. Furthermore, readers should bear in mind that these reports may not reflect the current status of activities at UBC. We urge you to contact the research persons mentioned in a report or the SEEDS Sustainability Program representative about the current status of the subject matter of a project/report".

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EXECUTIVE SUMMARY

"School is already so expensive ... I would hope you can understand you are targeting one of the least financially stable demographics ... it's students' whole lives you're impacting" (The University of British Columbia, 2018). This personal anecdote by a UBC student in the UBC Board of Governors Tuition Consultation Report encapsulates the deep feelings of the vexation of the all-consuming impact of a school-wide tuition increase. Affordability can be defined as a cost within one's financial means, or the cost relative to the amount that the purchaser is able to pay (Das, 2017). However, this rather limited definition must be expanded upon and wholly understood. Affordability has been an ongoing, complex discussion at UBC, in Vancouver, Canada, and around the globe (Das, 2017; The University of British Columbia, 2018). It affects individuals to varying degrees and has the potential to control all aspects of one's life (Das, 2017). However, the issue of affordability is often considered narrowly by primarily focusing on income, rather than in conjunction with the affordability of food, education, finances, and other related factors (Das, 2017). This multidimensionality of affordability has yet to be synthesized. Therefore, from the point of view of a UBC student to the broader contextual issues of Vancouver and North America, the purpose of this project was to bring to light the layers of affordability, with a particular focus on the affordability of food.

In this sense, the goal of this study was to collect a wealth of nuanced knowledge regarding affordability from a post-secondary student's viewpoint using a mixed method of data collection approach. The following objectives were used to accomplish this goal - identify affordability related policies in Canada and relate this to current campus policy, gain a thorough understanding of the affordability experience of UBC students, comprehend the status of affordability on campus from a student perspective and its implications, and outline a set of thorough action and research-based recommendations to create a more affordable campus.

Applying Community Based Action Research (CBAR) as our methodological framework, we collected research from both primary and secondary sources. Following the principles of CBAR, we ensured that all stakeholders throughout the research process were involved (Burns et al., 2011). With our SEEDS client and our team of three students, we agreed that the multiplex issue of affordability is best understood and untangled based on UBC student narratives. Primary sources of data emerged from the diverse student body - commuters and non-commuters, domestic and international, undergraduate and graduate, and across a variety of faculties, and living arrangements. Using a random sampling technique, this exploration took place on campus through five pilot semi-structured interviews and an additional 21 semi-structured interviews, totaling twenty-six in order to hear from the voices of the students themselves. To complement the students' personal anecdotes, secondary literature research involved delving into affordability policy at UBC and other Canadian post-secondary institutions, the affordability of higher education outside of Canada, and the intersectionality of affordability. Using these two forms of data collection, we could better comprehend the status of affordability on campus in comparison to other higher-education institutions as well as its extensive impact on a student's everyday life.

From this semester-long endeavour, we were able to understand and encompass the UBC student perspective and challenges related to affordability that complemented the secondary research. Key findings included that most students interviewed tracked their spending mentally, which has proved to be an ineffective technique. Also, oftentimes students were forced to make sacrifices to afford their fixed costs, such as eating at restaurants less frequently. Finally, most students interviewed were regularly skipping meals largely due to lack of time, not lack of money. Based on these findings, we produced a set of recommendations that cohesively support each other with a systems-understanding of affordability from both UBC students as well as Canadian and American secondary-research. Action-based recommendations include creating a UBC-wide financial literacy week, as well as UBC Food Services subsidized grocery store, restaurant, and convenience food items on campus. Research-based recommendations include app development to save students money on food costs, investigating self-preparation food facilities, and reducing the cost of all items sold at UBC Food Service outlets. We believe that these proposed recommendations can be applied to UBC to address affordability on campus, and to other post-secondary institutions. In doing so, we hope to help achieve the goal of a more affordable university experience, with an emphasis on food affordability.

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1. INTRODUCTION

1.1 RESEARCH TOPIC

Vancouver is often ranked as one of the most livable cities in the world in terms of the quality of education, its economy, and infrastructure; however, it is simultaneously experiencing an affordability crisis (Gold, 2020). In Vancouver, home prices are four times higher than what the average millennial can afford, well-paying jobs are limited, and the cost of living doesn't appear to be decreasing (Gold, 2020). Affordability is clearly an issue affecting many students, however a gap in knowledge exists regarding the impact and lived experience of those facing the consequences of a lack of affordability at UBC Vancouver. Thus, in this Social Ecological Economic Development Studies (SEEDS) project, we explored the dynamics of affordability for students specifically studying at UBC Vancouver, within the context of affordability throughout Canada and the United States.

We believe that increased knowledge and a stronger narrative about the realities of affordability for the diverse students at UBC can contribute to meaningful action within this institution. With a particular focus on the affordability of food, we hope to influence changes that create a more sound food system at UBC, where all students can live comfortably. Beyond the campus-wide knowledge collection and action research-based recommendations, we believe that this project can be applied to other university campuses experiencing similar issues with affordability. All in all, we hope that this project provides recommendations that will be adopted to help solve the financial crisis faced by many university students worldwide.

1.2 RESEARCH RELEVANCE

The research conducted in this project will not only provide insight into the issue of affordability at the UBC Vancouver campus, but it will help inform sound policy to fill the gap that currently exists in UBC campus affordability policy. Based on secondary research, there is a lack of affordability policies proposed or enforced by UBC, as well as an incomplete understanding of what affordability means, and how it affects the everyday lives of students. One leading framework is the UBC Wellbeing Strategic Framework, which outlines a campus wide goal of increasing the number of food secure students, faculty, and staff at UBC (UBC Wellbeing, n.d., p.13). However, the framework provides vague indicators of what improved food security looks like, such as "baseline and target established" for the level of on-campus food security, without stating what their target reduction actually is. The

current projects in place under the framework do not provide timelines for completion, or sound project deliverables, with one being "creating food security reduction targets, as well as advocacy and program activities to address the issue" (UBC Wellbeing, n.d., p.13).

The UBC Action Framework for a Nutritionally Sound Campus (UBC AFNSC) provides excellent action strategies to increase opportunities for the campus community to participate in learn-to-cook programs and the number of healthy food options provided by campus food providers (UBC Wellbeing, 2017). Their goal is to decrease hunger and food insecurity on campus. As such, they are taking action to make the services provided by the AMS Food Bank better known to UBC students and to provide the food bank with more food donations. Even though this is a step in the right direction to address campus affordability, it remains unclear how UBC Wellbeing is promoting the AMS Food Bank and how much donations have increased since the publication of the framework. Aside from food bank promotions, the UBC AFNSC does not have any other current strategies to help students with affordability issues (UBC Wellbeing, 2017).

One advancement put forth by the UBC Alma Mater Society (AMS), a student-led, non-profit organization, is that it worked with the student body to develop the AMS Affordability Policy. This policy aims to improve student affordability, with a focus on lowering the increasing tuition and housing costs at UBC Vancouver (AMS University and External Relations Committee, 2015). The policy provides clear indicators to reduce the financial burden on students, including the maintenance of the 2% cap on tuition increase as recommended by the government, as well as ensuring that international tuition fee increases are not greater than domestic tuition fee increases (AMS University and External Relations Committee, 2015). However, this document does not broaden the scope of affordability to also consider food accessibility.

Several student-run initiatives, including Sprouts, Agora Cafe, and the Land and Food Systems

Undergraduate Society have taken it upon themselves to provide affordable meals that also prioritize locally sourced, and sustainable food for the student body (Agora Cafe, 2020). Some programs include "Wednesday Night Dinner" and "Community Eats" that provide healthy meals for \$5.00 or by donation, respectively (Land and Food Systems Undergraduate Society, 2018). While these affordable meals are a step in the right direction, they are offered on a small-scale, and struggle to support the large proportion of UBC students facing financial stress. To

support these affordability initiatives, our research informed policy is essential to help transform many of the campus food establishments to provide at-cost meals.

Through our research goal of creating and advancing several affordability recommendations, we aim to create a more inclusive, sustainable food system on campus that is inclusive of marginalized populations who may not have the funds to purchase the high-priced food options found at UBC. This research will be an asset in addressing the price discrimination that continues to rise across campus food outlets, in addition to exploring the student affordability experience (Heckelman et al., 2018). Our recommendations help strengthen the campus food system to combat the affordability crisis.

It is important to note that the issue of affordability extends beyond the campus community of UBC Vancouver. The city of Vancouver, Canada faces food price inflation, increasing tuition, and a rising cost of housing (The University of British Columbia, 2018). At the national level, the Canadian government enforces the Food Policy for Canada, which has implemented income support systems to increase food purchasing power across the country, and ultimately, reduce hunger and poverty (Agriculture and Agri Food Canada, 2019). The Food Policy for Canada has many of the same objectives as the internationally-based UN Sustainable Development Goals, such as #1: No Poverty and #3: Zero Hunger (The United Nations, n.d.).

One of the most notable international policies is the Okanagan Charter, which aims to increase health promotion at universities and colleges around the world (Okanagan Charter, 2015). This charter emphasizes the importance of including student voices in all decisions made by the university that affect their health and wellbeing (Okanagan Charter, 2015). It also includes food security as a target, mentioning that they encourage universities to mimic the global agenda of the World Health Organization and other leading organizations in fighting food insecurity (Okanagan Charter, 2015). The Okanagan Charter has been adopted by UBC, and will hopefully be considered as the university makes further decisions involving campus food affordability.

Our project can assist in furthering UBC policymaker's understanding of the student affordability crisis by providing an honest student perspective of their experiences with affordability, or lack thereof. We hope that these interviews will bring to light the urgency of change that is needed to allow students to live comfortably at UBC.

1.3 PROJECT CONTEXT

A recent survey ranked Vancouver as the second least affordable housing market in the world (Crawford, 2019). Legislative changes have been enforced by the provincial government in an effort to ease the inflated market with the introduction of the foreign buyers' tax and the empty homes tax. Even still, the median house price in Vancouver is almost twelve times more than the median household income in Canada (Thibault, 2020). It has been reported that these tax measures will likely take several more years to affect the housing market (Thibault, 2020). The unaffordable housing market impacts all aspects of our Vancouver lifestyle, from the food we purchase and the services we seek, to the way we transit through the city.

Post-secondary students are a portion of the population who are often overlooked in research related to affordability (Ly et al., 2016). This stems partially from the misconception that those who attend post-secondary education can afford nutritious food (Farahbakhsh et al., 2015). On the contrary, university students may experience a higher likelihood of food insecurity because of their limited earning potential, high tuition fees, and lack of financial support from parents (Farahbakhsh et al., 2015).

In the context of UBC, the average cost of tuition for domestic students is \$5,646.40, while the average cost of international tuition is \$38,946.20 (The University of British Columbia, 2018). Tuition fees are reviewed by the Board of Governors, and in recent years, tuition has increased annually by 2% for domestic students and between 2-5% for international students (The University of British Columbia, 2018). Compounding this issue is the cost of housing. The undergraduate cost of residence living for two terms, inclusive of a meal plan, is between \$10,700 and \$13,850 (The University of British Columbia, 2019a). Upper year residence costs between \$8,720 - 11,439 for two terms, without a meal plan (The University of British Columbia, 2019a). The cost to rent off campus in Vancouver can vary between \$8,702-13,600 for the same rental term (The University of British Columbia, 2019a). However, the cost of renting varies depending upon living arrangements (i.e. shared with roommates versus studio), the accommodation condition, and its location. There also are additional costs to keep in mind, such as utilities, internet, parking, tenant insurance, and more.

The latest tuition consultation reported to the UBC Board of Governors found that 90% of all respondents (undergraduate, graduate, domestic, and international students) indicated that they experienced "a great deal of

financial stress", "quite a bit of financial stress", or "some financial" stress due to the tuition and living expenses at UBC (The University of British Columbia, 2018). The top three reasons for this financial stress included the cost of housing (82%), textbooks (63%), and food (61%) (The University of British Columbia, 2018).

Due to the financial stress that the majority of UBC students are facing, it is inevitable that these students will be forced to compromise their food quality and quantity to be able to afford their fixed costs, like housing and textbooks. This sacrifice had caused 37% of UBC students to become food insecure, which is comparable to other Canadian universities (Nguyen, 2019). As such, affordability in Vancouver, particularly at UBC, remains a major concern.

1.4 PROJECT PURPOSE, GOALS AND OBJECTIVES

PURPOSE:

The purpose of this project was to explore and develop an understanding of the way that multiple environmental, social, and economic factors interact to make "affordability" a complex and urgent issue for the UBC Vancouver student body. Overall, we created pragmatic action and research-based recommendations to alleviate the financial burden experienced by UBC students.

GOALS:

The goal of this project was to develop a nuanced understanding of affordability for those in post-secondary education, with a particular focus on UBC Vancouver students. This included an increased understanding of the personal impact and experience of affordability issues of UBC students. This informed the development of short, medium, and long-term recommendations to address affordability at UBC, with a broader applicability to other post-secondary institutions.

OBJECTIVES:

- 1. Identify current and emerging affordability related policies and practices from post-secondary institutions in Canada and around the world to conduct a gap/opportunity analysis on the current campus policy.
- 2. Elicit and identify factors that contribute to an increased understanding of what affordability means to students, how they experience it, and how it affects their daily lives.

- 3. Determine a holistic understanding of the status of affordability on campus and its far-reaching effects, and how this is applicable to institutions both inside and outside of Canada.
- 4. Develop recommendations to create a campus affordability policy including a set of associated strategies that can address student affordability challenges.

2. METHODOLOGY AND METHODS

2.1 RESEARCH METHODOLOGY

We incorporated the principles and ethics of Community-Based Action Research (CBAR) into every aspect of our research process. This entailed a collaborative approach to research by including all stakeholders (SEEDS team and LFS professors) in establishing a research question, developing data collection tools, and analyzing our findings (Burns et al., 2011). Beginning with the research question, this was grounded in the needs, issues, and concerns of the UBC student body. From here, it was vital to directly engage with the wider community in the research process, targeting the students. The aim of this CBAR process was to explore the affordability crisis impacting the community, and create tangible action and research-based recommendations (Burns et al., 2011). Aligning with CBAR, these proposed recommendations are built upon and increase the strength of the existing community resources and networks in place. We remained committed to acting respectfully in our research engagements with students by offering the diverse UBC population an opportunity to vocalize their opinions. Consequently, we sought to represent our findings accurately in an unbiased manner that has been disseminated among all involved in the project.

2.2.1 RESEARCH METHODS: SECONDARY DATA COLLECTION

The secondary data collection took place in the form of an extensive literature review of affordability from January 22 to March 1, 2020. To ensure complete coverage of the topic, affordability was divided into several subsections in order to effectively support the primary data. These include affordability at UBC and other Canadian post-secondary institutions, affordability outside of Canada, and the intersectionality of affordability with other factors, such as food, rent, and tuition. "Affordability" research was narrowed down to specifically target student affordability experiences. The review was conducted with online resources provided, and through the UBC Library search engine and Google Scholar. Databases, networks, and organizations were also consulted, which included the

Association for the Advancement of Sustainability in Higher Education (AASHE) and Meal Exchange Canada. The type of data collected included newspaper articles and scholarly, peer-reviewed journals. The keywords included were university, affordability, food, budget, access, and student. The selection criteria included reliable authorship, as it should be clear who developed the article, as well as the publication date of the article to make sure it was published in the past decade. Objectivity was also taken into account to include publications with limited to no bias, by checking to see who had funded the given research, as well as the authors injecting personal beliefs into the report. Finally, publications must be entirely accurate in their referencing, grammar and spelling, with the information they provide comparable to other publications on the same topic.

2.2.2 RESEARCH METHODS: PRIMARY DATA COLLECTION

To acquire an insider's perspective on campus affordability, we interviewed a diverse UBC student population to understand the variation of experiences across the UBC community. Rather than a focus group, we chose the semi-structured interview technique to maintain maximum confidentiality in a one-on-one setting due to the sensitive nature of the questions, and to eliminate bias that could arise in a focus group setting. Our sample size was twenty-six undergraduate and graduate students, both domestic and international, including several nationalities, faculties, and living conditions (i.e. on and off-campus). A pilot round of interviews, with five participants, was conducted on February 28th in the Place Vanier Residence commonsblock. Interviewees were invited to a strategically placed table with a poster in a high traffic area by a group member using random sampling, where every passerby was contacted when an interview was not already taking place (Appendix A). These five interviews were sufficient to gather feedback to improve our affordability questions prior to completing the remaining interviews. Modifying our initial interview questions, an additional question was added to the end of the interviews to allow interviewees to share any personal experiences or stories regarding affordability on campus that could enrich the interview.

After the pilot data had been analyzed and interview techniques have been perfected, the second group of interviews were conducted with an additional twenty-one individuals from February 28 to March 2, 2020. These interviews took place in the Place Vanier Residence commonsblock (12 pm-1 pm), the Ponderosa Residence commonsblock (1:30 pm-2:30 pm), and in front of Sprouts Cafe in the Life Building (12 pm-2 pm). Interviews took place at lower and upper year residences to include students from different year levels. Interviews were also

held in the Life Building, where individuals from every year level and faculty gather, in order to obtain a range of responses from the diverse student body at UBC. Each location was thoughtfully selected in order to gather responses of different demographics to accurately reflect the student body.

To recruit our sample population, we began by using the random sampling technique by initiating communication and engaging with every student that walked by our booth when we were not occupied with conducting interviews. Other sampling methods were not required, as random sampling alone provided a balanced sample population of domestic, international, graduate, and undergraduate students. To recruit the maximum number of participants, our team set up a table with a poster at each of the three locations mentioned above with an attractive infographic on food affordability (Appendix A).

Before the interview began, the purpose of the interview and aspects of confidentiality were explained to each interviewee. The interviewees were then prompted to read and sign a confidentiality form provided on an iPad. Then, a random number generator was used to assign each individual a number to maintain anonymity. Before the interview about affordability commenced, seven questions related to demographics, including those about nationality and year level, were asked to categorize the interviewee. For the affordability portion of the interview, the questions included eight open-ended questions that were both qualitative and quantitative in nature. All fifteen questions are listed below in Appendix B. These questions provided us with a percentage estimate on how many UBC students were struggling with various aspects of affordability, as well as detailed reasoning for the cause of this issue, and how this affected their wellbeing. In total, each interview lasted between ten and fifteen minutes. The interviews were conducted with various important key roles in mind, including a data recorder and notetaker. After speaking to the student, the interview data was then transferred into a spreadsheet on a tablet. Based on the detailed notes, the interview data was coded using keywords for each question. These were then grouped into themes for further analysis.

3. RESULTS

3.1 DEMOGRAPHICS

Twenty-six students from a variety of demographics were included in this study. In terms of nationality, 46% of interviewees are domestic students, and 54% of interviewees are international students. The international students are from a wide range of countries that include Italy, India, China, The United States of America, and the United Kingdom.

The interviewees also engage in studies in the following faculties: arts, business, engineering, kinesiology, forestry, science, and land and food systems. 85% of these students are at the undergraduate level, and 15% are completing graduate studies.

In terms of housing and employment, 65% of student respondents were not employed at the time of the interview, and 35% were employed. Given that many interviews took place in Ponderosa and Place Vanier residences, the majority of interviewees live on campus in UBC residences with kitchen access (46%). An additional 27% of interviewees live in UBC residences, but without access to a full kitchen. The remaining 27% of students live on campus, but not in a UBC residence, or live off campus either alone, with roommates, or with their family.

3.2 WHAT IS AFFORDABILITY?

To begin a discussion about affordability, it was important to start the interview by asking the students for their personal definition or interpretation of affordability. Many styles of responses were obtained, ranging from bold, single-word statements, to lengthy explanations about one's ability to pay for necessities.

Figure 1 shows the common themes that arose when the interviewees discussed their interpretation of "affordability". The most common theme was "the ability to pay", where ten students indicated that affordability means having the financial means to obtain everything that they need to purchase. This was communicated by students through phrases such as "you are able to get what you want with the money you have", and "being able to spend, while keeping money for emergencies and investments" (953, personal communication, February 28, 2020;

123, personal communication, March 2, 2020). When providing definitions, students often discussed specific items that they defined as fixed costs. The most commonly named fixed costs by UBC students were textbooks, rent, and tuition. Additionally, many interviewees also commented on the lack of affordability they experienced on campus, even before providing a definition of affordability to the interviewer.

Student Interpretations of "Affordability"

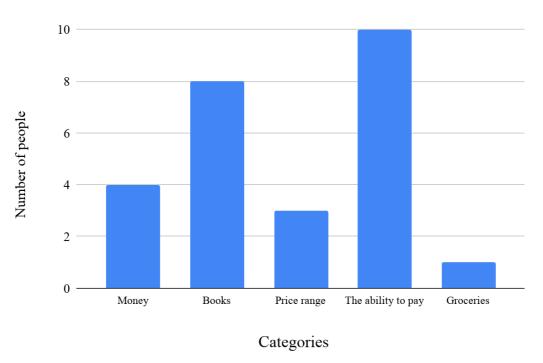


Figure 1. Student Interpretations of "Affordability". Responses of twenty-six UBC students to the question: "When I use the term "affordability", what comes to mind for you?". The common themes included a) money, b) the cost of books c) price range, d) the ability to pay, and e) groceries.

There are many different definitions of affordability found in the literature. In an American review of resources investigating student and family affordability with respect to university, a common definition was found:

"the proportion of annual family income required to pay for educational expenses (tuition, room/board), after deducting financial aid from all sources (federal and state governments, and institutions), often called "net price" "(Finney & Kelly, 2004, p. 54).

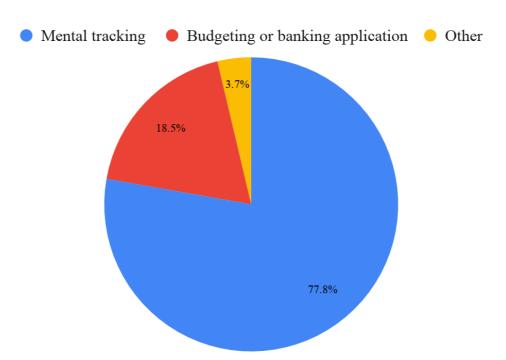
This definition touches upon tuition and board as two of the main educational expenses. These two themes have been acknowledged by many post-secondary institutions, who have received recommendations to make changes to improve on-campus affordability for students (USDHUD, n.d.b). The Office of University Partnerships

in the United States has facilitated partnerships between dozens of universities and community stakeholders in order to decrease the price of housing close to university campuses, and make living more affordable for students (US Department of Housing and Urban Development [USDHUD], n.d.a). For example, Jon Hopkins University and the Homewood Community Partners Initiative effectively increased the amount of low-income student housing by 2,000 units (USDHUD, n.d.b). To target affordability for university students, many countries, including Finland, Germany, Malaysia, and Brazil do not charge students for tuition (World Population Review, 2020). This eliminates one of the largest costs that impact the affordability of university for students worldwide.

3.3 FINANCES AND BUDGETING

Given the diverse demographics of the interviewees, it is important to acknowledge that these students come from a variety of different social and financial backgrounds, which made every student's budget and strategies for money management unique. Upon asking the question "how do you budget your finances between all of your expenses?" Figure 2 shows that twenty-one respondents said that they mentally tracked their expenses. This was interpreted from interview quotes such as "I use a mental budget and prioritize what's important" and "generally mental tracking, just whatever I need, I buy" (623, personal communication, March 2, 2020; 212, personal communication, February 28, 2020).

UBC Student Budgeting Techniques



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Figure 2. UBC **Student Budgeting Techniques.** Responses of twenty-six UBC students to the question "How do you budget your finances between all of your expenses?". The common strategies included a) mental tracking, b) a budgeting or banking application, and c) other.

Diversity is present in the way that UBC students made decisions around what they could afford. From the interviews, it was determined that fourteen students had no regard for what they could or could not afford to purchase, and spent the money anyway. As seen in Figure 3, six of these individuals indicated that they received parental support for most financial costs they faced as a student. Some interviewees said that "having my parents make the financial decisions allows me to have freedom", and "my parents pay for everything now" (575, personal communication, February 28, 2020; 956, personal communication, February 28, 2020).

From our interviews, it became clear that social eating at food establishments is a popular activity for UBC students. When deciding what was affordable, seven interviewees often based their decision around the frequency of meals eaten at restaurants. These UBC students had indicated that when they are on a tight budget, they will "try not to eat out much because it's really expensive", and instead they "try to make the most of the food [they] have at home" (578, personal communication, March 2, 2020; 395, personal communication, February 28, 2020).

Consortium showed a similar trend, where funding from parents was the most common source of financial support for Canadian students.

From our interviews, it became clear that social eating at food establishments is a popular activity for UBC students. When deciding what was affordable, interviewees often based their decision around the frequency of meals eaten at restaurants (n=7). These UBC students had indicated that when they are on a tight budget, they will "try not to eat out much because it's really expensive", and instead they "try to make the most of the food [they] have at home" (578, personal communication, March 2, 2020; 395, personal communication, February 28, 2020).

Impulse buyer (3) No regard (14) Receives parental support (6) Decision Cost of Product (8) Other (5) Budget based (8) Income (6) Decide to eat out less often (7)

How UBC Students Decide What They Can Afford to Purchase

Figure 3. How UBC Students Decide What They Can Afford to Purchase. Responses of twenty-six UBC students to the question "How do you make decisions on what you can or cannot afford?". Common themes include a) no regard, b) cost of the product, c) budget based decision, d) income based decision, and e) decide to go or eat out less often.

Avoiding spending money in food establishments was also the main sacrifice that students made in order to be able to afford their fixed costs. Figure 4 shows that thirteen students indicated that they were making sacrifices in order to afford tuition, housing, and the cost of books. Of these thirteen students, eight sacrificed food or eating out to pay for these fixed costs. UBC students said "they spend a lot of money on food", and some rarely eat on campus due to high food prices (956, personal communication, February 28, 2020; 225, personal communication, March 2, 2020). One student even said that they were "dieting to save money" as a way to spend less money on food (499, personal communication, February 28, 2020).

What UBC Students Sacrifice to Afford University Expenses

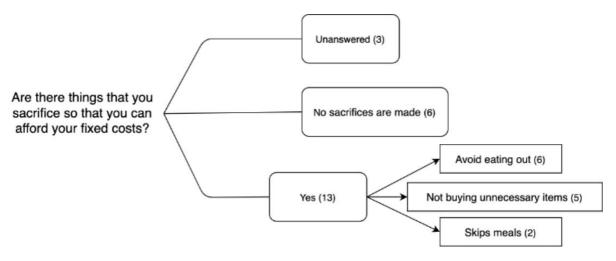


Figure 4. What UBC Students Sacrifice to Afford University Expenses. Responses of twenty-six UBC students to the question "Are there things that you sacrifice so that you can afford your fixed costs?". Common themes include a) avoid eating out, b) not purchasing "unnecessary" items, c) skipping meals, and d) no sacrifices are made.

During secondary data collection, a high proportion of students using a mental tracking technique were found in the literature. This method of budgeting is not always reported as an effective way to manage expenses. In the UK, Eccles and Bird (2004) found that students who keep a mental budget have difficulty sticking to said budget, which can vanish within the first week of classes. These students also tend to receive ample financial support from their parents, which contributes to their disregard for accurate and consistent budgeting (Eccles & Bird, 2004). Parental assistance with university expenses is a common theme seen across Canada. A private study conducted by the Bank of Montreal private found that Canadian students born to wealthy parents had an average of 69% of their expenses covered by their parent's personal savings (2014). The 2012 Canadian University Survey Consortium also identified a trend, which is funding from parents was the most common source of financial support for Canadian students.

Additionally, sacrificing food is not uncommon among students investigated in the literature. A survey conducted by Cengage found that 43% of the American college students they interviewed had skipped meals in order to pay for textbooks (2018). Further research conducted by the Meal Exchange found that 39% of Canadian students face moderate or severe food insecurity, and that the top three barriers preventing them from achieving food security are food costs, housing costs, and tuition fees (2016).

3.4 FOOD AFFORDABILITY

When focusing on food affordability among UBC students, several trends emerged. When students were asked what they considered to be the most important when purchasing food on campus, it was found that eleven students thought it was price (Figure 5). This was followed by six students who prioritized quality, and taste and accessibility were tied for five students each (Figure 5). Along the lines of price, one student said, "I usually eat at Tim Hortons because it's cheap" (453, personal communication, March 2, 2020). With respect to the second most common theme of quality, another student said, "I try to find things [made] in-house with natural ingredients" (579, personal communication, March 2, 2020).

Most Important Elements of Food for UBC Students

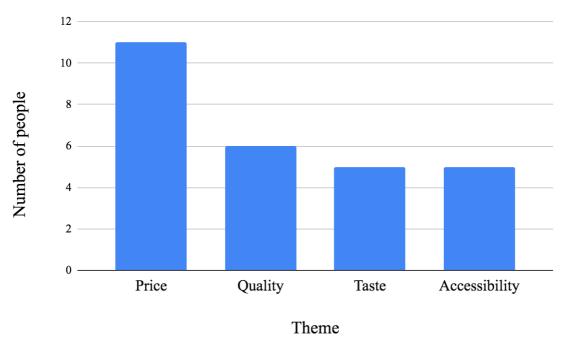


Figure 5. Most Important Elements of Food for UBC Students. Response to the question "Which of the following do you consider to be the most important when purchasing food on campus?" (n = 27).

Later in the interview, the students were asked "If you had skipped a meal this week, what were the reasons for this?". As shown in Figure 6, it was found that twenty students had skipped a meal due to lack of time that week, three students had skipped a meal due to cost, four students did not skip any meals, and one student did not answer this question. When asked why a meal was skipped, one student said it was due to "sleep, running between classes, [or] working on something" (068, personal communication, February 28, 2020). Another student responded

to this question by saying that they "usually skip breakfast" because they had woken up too late (602 personal communication, February 28, 2020).

25 23 Due to cost (3) Due to time (20) 10

5

Yes

UBC Students Reasoning for Skipping Meals

Figure 6. UBC Students Reasoning for Skipping Meals. Responses to the question "If you had skipped a meal this week, what were the reasons for this?" (n = 28). Twenty-three students had skipped a meal, four students had not, and one person abstained from responding.

No

Response

Unanswered

When consulting previous research, one American-based study of undergraduate eating habits found that taste and convenience were prioritized (Abraham et al., 2018). Despite the students having proficient knowledge regarding nutritional requirements, a significant number consumed processed foods, including chips and cookies (Abraham et al., 2018). Price and quality were prioritized, while taste and accessibility (or convenience) were not popular selections (Figure 5).

With regards to skipping meals, a study based in the United States found that among sixty-six universities, 36% of students were not getting enough to eat due to skipped meals or not eating enough during meals (Dewey, 2018). These students were also found to be struggling to pay for their housing and utilities (Dewey, 2018). In a Canadian context, a study across five campuses found that 27% of students skipped a meal because they did not have enough money (Silverthorn, 2016).

4. DISCUSSION

4.1 WHAT IS AFFORDABILITY?

When asked about affordability, most students responded negatively; discussing how unaffordable the cost of UBC is as a whole. Moreover, unaffordability was frequently mentioned in addition to discussing what affordability meant to each interviewee. One student said, "Tuition is going up, making it less affordable for students" (692, personal communication, February 28, 2020) and shared that "housing in Vancouver tends to be so expensive. Food is not so bad, it just depends on how far you're willing to go" (453, personal communication, March 2, 2020). A third student simply replied "Unaffordability" (937, personal communication, March 2, 2020) in response to what affordability meant to them.

These responses from students speak to the deeply embedded and very real unaffordability crisis at UBC, in Vancouver, and in Canada at large, which at some level was difficult for the students to fully articulate due to the complexity of the issue. One study conducted nationwide exposes the unaffordability that the interviewees speak of by showing that housing prices need to fall 50% or earnings would need to double to restore affordability (Kershaw & Eaves, 2019). This same study showed that BC and Ontario are the most unaffordable places for millennials to live, particularly in urban areas, such as Vancouver and Toronto (Kershaw & Eaves, 2019). When it comes to food affordability, research has shown that one in eight households in Canada are food insecure - this amounts to more than four million Canadians (PROOF, 2018). Food insecurity is not simply about not having enough to eat, but takes a toll on overall health and wellbeing, and as such, impacts the entire healthcare system (PROOF, 2018). For example, experiences of hunger in childhood increase the risk of developing depression in adolescence and early childhood (McIntyre et al., 2017). Evidently, there is no one simple solution to solve these affordability issues. Affordability is tied to the rising cost of housing and food, and to the declining income that employees face. These multifaceted problems must be addressed across several fronts to make meaningful progress.

4.2 FINANCE & BUDGETING

It was found that 78% of respondents track their spending mentally (Figure 2). Related to this, only 19% of students were making decisions on what they could afford based on their budget (Figure 3). A possible correlation between mental budgeting and a disregard for what one can or cannot afford exists amongst the interviewee

population, where nine out of fourteen students who said they have no regard for their purchases used mental tracking as their budgeting technique. As a potential consequence of this, 59% of respondents had to make sacrifices in order to afford fixed costs, such as housing, utilities, and tuition (Figure 4).

This sheds light on the lack of financial literacy among the post-secondary students sampled, which can contribute to the affordability issues that some interviewees are experiencing. Financial literacy may be defined as the ability to understand and effectively apply various financial skills, including personal financial management, budgeting, and investing (Kenton, 2020). Financial literacy skills can lead to an understanding of whether an item is affordable, effective budgeting techniques, and properly planning for the direct cost of post-secondary education and its related expenses, including food, transit, and housing (Kenton, 2020).

This reality is extensively reflected in the literature. In a national survey across Canada among high school graduates, it was found that less than half (44%) kept a budget to record income and expenses, and only 12% had a written financial plan (BCSC, 2011). It was revealed that many students have weak financial literacy skills and little knowledge of financial realities (BCSC, 2011). As a result, they may make costly mistakes and are more vulnerable to scams and fraud (BCSC, 2011). In the United States, national data showed that 27 states received a grade of C, D, or F score in providing personal finance education (Champlain College, 2017). This means that the state did not have personal finance standards in place as a requirement to graduate high school (Champlain College, 2017). It is vital to educate students on financial skills beginning at a young age, to instill practical abilities and knowledge to manage their finances, and therefore achieve their goals (BCSC, 2011).

4.3 FOOD AFFORDABILITY

Based on our study, it appears that there was another reason that students could not afford to eat: time. Figure 6 shows that 71% of respondents skipped a meal due to lack of time, whereas 12% skipped a meal due to lack of money (Figure 6). Time poverty is a concept that may be applied to many different working individuals, including university students (Schneider, 2016). This term is the idea that time is a limited commodity, and often, individuals do not have enough time to engage in activities beyond what is required of them (Pritchard, 2015). Students have many commitments while attending university, including academic obligations in a full course-load, several extracurriculars, volunteer responsibilities, employment, and more. This is not necessarily a result of

choices and actions, but a system that values workaholism and evaluates productivity based on quantitative measures, such as high grades, only exacerbates the food insecurity problem (Pritchard, 2015). This pressure to accomplish more than what is seemingly possible in a specific timeframe leads to intense time stress, potentially causing problems with student nutrition (Pritchard, 2015).

One of the consequences of time poverty for students is not having enough time to purchase or prepare food to adequately nourish themselves (Baqleh, 2016). Skipping meals due to time poverty will keep students feeling exhausted and undoubtedly affect their mood, interactions with others, and overall well-being (Baqleh, 2016). However, it is important to note that when students did purchase food, 41% responded saying that price was the most important factor, followed by quality (22%), and taste (19%) and accessibility (19%). This shows that even when students made the time to purchase food, the quality of their food choices was not prioritized over the price of the items.

The final interview question was added after the first five interviews upon realizing that some interviewees had more to say that may not have been encapsulated in prior questions. By asking this final open ended question and prodding the students a little further, fourteen students spoke more about the lack of affordability on campus, four students spoke about other topics, and the remaining did not have anything else to add. With regards to affordability, it appeared as though there was a common theme presented: the heightened cost of on-campus food items relative to off-campus. One student said "UBC-run food places are quite expensive... \$10 for a proper-sized meal ... isn't affordable for the average student" (578, personal communication, February 28, 2020). Another student echoed this sentiment by blatantly stating, you can purchase the "same items [on-campus], but more expensive" (096, personal communication, March 2, 2020).

Looking at secondary research, two American schools did appear to be discussing this topic: the University of Arizona and Ithaca College (Quigley, 2014; Toole, 2019). At the University of Arizona, prices of fifty food items were compared at three on-campus markets (Toole, 2019). In this analysis, it was found that there was an average of 53.77% increase in prices for products sold at the campus markets, relative to off-campus grocery stores for the same items (Toole, 2019). This included basic items such as eggs, coffee, peanut butter, and more (Toole, 2019). This exacerbates food insecurity on campus among students who already struggle to make ends meet (Toole, 2019). Likewise, at Ithaca College located in New York State, prices at campus markets and cafes were found to be higher

than grocery stores in town (Quigley, 2014). It is thought that the higher prices were due to the convenience of having food-stores located beside classrooms, dorms, and other on-campus spots (Quigley, 2014).

During our interview, one student suggested that "UBC should focus on more UBC Food Services that are affordable". At this point in time, Fooood is the only UBC Food Services run cafe with affordable prices (UBC Food Services, 2020). This cafe offers a three-tier pricing system (\$5-15) to make meals more accessible to students, including those that may be food insecure. Fooood serves breakfast and lunch Monday to Friday with vegetarian and vegan options (UBC Food Services, 2020). Other student-run cafes on campus include Sprouts, Seedlings, and Agora with below-average food prices (UBC Sprouts, 2020; Agora, 2020). However, considering the enrollment size at UBC Vancouver with 44,882 undergraduate students, these small initiatives are not enough to create a more affordable campus (The University of British Columbia, 2019b).

The original goal was to interview fifty students, however, we were only able to conduct interviews with twenty-six students. Due to the unprecedented coronavirus pandemic, on March 13, 2020, all on-campus classes were suspended for the remainder of the term (UBC, personal communication, March 13, 2020). In the days that followed, UBC announced remote working arrangements for all faculty, staff, and students (UBC, personal communication, March 13, 2020). In adherence to social distancing measures (minimizing close contact with others unless essential), the safest path forward was to cancel all further on-campus boothing that is required to collect more responses. Although this may have limited the generalizability of our findings, we still feel confident with the breadth of the data collected.

5. RECOMMENDATIONS

5.1 RECOMMENDATIONS FOR ACTION AND IMPLEMENTATION

Short-term

Based on our findings, our first short-term action-based recommendation is to develop a financial literacy week at UBC. Across Canada, a couple of post-secondary institutions already host a financial literacy week, including Carleton University and the University of Alberta (Awards & Financial Aid, 2020; Office of the Registrar, 2020). Currently, UBC has a financial planning page on the UBC Student services website that has information about financial advising, cost calculators, budget planning worksheets, and other assistance programs

(Student Services, 2020). In the past, UBC has hosted one-off events for graduate students that introduced business financial management and literacy concepts (Graduate and Postdoctoral Studies, 2018). However, this excludes undergraduates, who make up the majority of the student body, so we believe this is insufficient to instill adequate financial literacy skills.

- First, we propose reaching out to the Canadian Professional Accountants of Canada (604-669-3555) to help run free financial literacy courses on campus.
- Second, we recommend partnering with the UBC Centre for Engaged Learning (community.learning@ubc.ca) to extend financial advising hours for students.
- Third, we suggest collaborating with UBC international student advising (isa@students.ubc.ca) to introduce specialized workshops addressing international student affordability concerns.

In summary, the aim of this week would be for students to learn financial decision-making tips and basic accounting principles to set students up for financial success throughout their undergraduate experience.

Medium-term

Our medium-term action based recommendation is for all UBC food outlets (i.e. Harvest) to carry two to three healthy subsidized meal items for students. When it comes to academics, it has been noted that healthy eating is associated with improved performance on standardized tests and overall grade point average (Alberta Health Services, n.d.). Another study addressing overall well-being found that healthy food choices have pro-mental health benefits (Wahl et al., 2017).

- To see this come to fruition, first, we suggest UBC Wellbeing (i.e. Natasha Moore Planning and Evaluation Strategist) partner with UBC Food Services (i.e. Melissa Baker - Manager, Nutrition and Wellbeing) to elucidate this idea.
- Second, UBC Food Services would need to reach out to their on-campus food providers, from Harvest (604-827-3007) to the Point Grill (604-822-9503), and design these subsidized meals together that are tailored to each outlet.

All in all, implementing these subsidized meal options allows all students to reap the academic and wellbeing benefits of a nutritious meal at a subsidized price without feeling a sense of shame.

Long-term

Our long-term action-based recommendation is to create a UBC Food Services run subsidized grocery store and restaurant. As mentioned previously, Fooood, is the only UBC-run cafe with affordable prices (UBC Food Services, 2020). This cafe offers a three-tiered pricing system (\$5-15) to make meals more accessible to students, with vegetarian and vegan friendly options (UBC Food Services, 2020). In addition, student-run campus food initiatives, including Sprouts, Agora, and Roots on the Roof are partially subsidized by UBC through the Sustainable Food Access Fund. This 2018 referendum passed which gives \$0.35 of student tuition to Sprouts, Agora, Roots on the Roof, and the UBC Farm to support on-campus food initiatives, allow student-friendly discounts, and ensure continuous operation (Agora, 2020). Other schools across Canada and the US also have partially-subsidized cafes and food banks, such as the Cogro and Tea Room at Queen's University (Cogro, 2019.; Tea Room, n.d.) and the Food Pantry at New York University (The New School, 2020). However, these initiatives are not enough to create an affordably-sound campus.

- First, we propose establishing a partnership among a number of stakeholders Fooood employees (604.827.1525), UBC Food Services (i.e. Colin Moore Director), and student focus groups who identify themselves as food insecure.
- Second, in this partnership, a dialogue must ensue to discuss what they envision this fully subsidized future grocery store and restaurant to look like.
- Third, in the coming 3-5 years, we believe that this collaborative process, from project dialogue to implementation, can successfully create two new food outlets to secure every person's right to food security and overall health.

To sum it up, we believe it is feasible to expand upon the Fooood pilot model by creating a UBC Food Services run grocery store and restaurant that are subsidized and accessible for students to create a more affordable campus.

5.2 RECOMMENDATIONS FOR FUTURE RESEARCH

Recommendations for future research elucidate some areas for which more information is needed that went beyond the scope of our research this semester. Extending upon the UNICEF Framework of Malnutrition, we sought to apply this to our current study at hand (2019). Similar to malnutrition as well as other contentious issues, there are three major causes of affordability: immediate, underlying, and basic causes (UNICEF, 2019). The immediate causes of unaffordability act on the individual level, the underlying causes act on the household level, and the basic causes act on the community level. As such, we decided to frame our future research using these three categories of analysis.

Immediate causes of unaffordability

- We propose a future LFS 450 SEEDS partner with UBC Food Services (i.e. Brad Vigue Executive
 Director) to research the feasibility of partnering with the app, Flashfood. This app allows shoppers to
 receive major discounts on food items nearing their best before date, however, it has yet to expand to the
 UBC campus (Flashfood, 2019).
- This research and development would look into adapting the current app to a UBC setting that is free and user-friendly for all students.
- By partnering with Flashfood, not only would it allow students to save money on their grocery bills each week, but also eliminate food waste, thereby reducing greenhouse gas emissions.

To summarize, this research idea acts on the individual level of affordability by directly reducing the price of groceries that students buy each week.

Underlying causes of unaffordability

- We suggest a future LFS 450 SEEDS sustainability project partner with Campus and Community Planning
 (i.e. Penny Martyn Manager, Green Buildings, Sustainability and Engineering) investigating whether
 creating more self-preparation food facilities allows for a more affordable campus.
- Perhaps if there were more water fountains and microwaves throughout campus, students would be more inclined to prepare and pack their own food for the day, rather than purchasing from campus food outlets.

 This may limit students from purchasing food, snacks, and beverages each day, thereby reducing a significant cost contributing to substantial financial debt at the end of each school term over the span of four years.

Therefore, this acts on the household level of affordability by encouraging students to prepare and cook meals from home.

Basic causes of unaffordability

- We recommend a future LFS 450 SEEDS partnership with UBC Food Services (i.e. David Speight -Culinary Director) to investigate the feasibility of a reduction in the cost of the items sold at UBC foodrun outlets as well as its implications for students.
- One possibility is a reduction in 10% over the next 3 years, and 20% over the next 7 years.
- However, before implementing such a reduction, it is important to research how this would financially impact students and whether it is worth implementing this regulation.
- Other factors taken into account would be to consider whether it would be more effective to target a reduction in tuition, UBC housing, or UBC meal plans.

In doing so, this acts on the community level of affordability by changing the economic context of the UBC campus.

6. CONCLUSION

Complementing secondary research with student narratives has allowed our team to more wholly understand the impact, lived experience, and opportunities regarding student affordability on campus. Building on the currently existing literature, our major findings on finances and budgeting with respect to affordability are that most students track their spending mentally, which has proven to be an ineffective technique. Similar to the literature, unfortunately, students were forced to make various sacrifices in order to afford their fixed costs in life, such as skipping meals or eating out less often. Concerning food affordability, most students interviewed were regularly skipping meals, however this was largely due to lack of time as an involved university student, not lack of

money. This shed light on the issue of time poverty, as examined in the secondary literature. Also, when students purchased food, price and quality were the top two most important factors that students considered, which was not always reflected in the secondary research.

We understand that these findings are just the beginning of this ever-evolving research and action implementation process. In fact, these findings formed the basis of our thorough recommendations. As outlined above, our three tangible action-based recommendations - financial literacy week, campus food outlets with a couple of subsidized meal items, and the creation of a UBC Food Services subsidized grocery store and restaurant - have the ability to transform UBC into a more affordable campus for all. Furthermore, our sensible research-based recommendations - a UBC food services app, on-campus self-preparation food facilities, and a gradual decrease in price of all on-campus food items - continue the exploration into the three major causes of affordability (immediate, underlying, and basic). In summary, we believe that this endeavour builds upon the narrative that contributes to the institutional understanding, discussion, and action for affordability among UBC students and beyond.

REFERENCES

- Abraham, S., Noriega, B. R., & Young Shin, J. (2018). College students eating habits and knowledge of nutritional requirements. *Journal of Nutrition and Human Health*, *2*(1), 13-18. Retrieved from https://www.alliedacademies.org/articles/college-students-eating-habits-and-knowledge-of-nutritional-requirements.pdf
- Agora Cafe. (2020). Our philosophy. Retrieved from https://blogs.ubc.ca/agora/
- Agriculture and Agri Food Canada. (2019). Food policy for Canada. Retrieved from https://www.canada.ca/content/dam/aafc-aac/documents/20190614-en.pdf
- Alberta Services. (n.d). *Healthy eating and school performance: an evidence summary*, 1-4. Retrieved from http://school.cbe.ab.ca/School/Repository/SBAttachments/fd2939ac-5b4c-4fe7-8cf3-eab1f2d612a9_AHS-Healthy-Weights-Initiative.pdf
- AMS University and External Relations Committee. (2015). *UBC and student affordability*. Retrieved from https://www.ams.ubc.ca/wp-content/uploads/2018/09/066-16-Affordability-Policy-2015-2016-v2-2.pdf
- Awards & Financial Aid. (2020). *Announcing financial literacy week!* Retrieved from https://carleton.ca/awards/2020/flw/
- Bank of Montreal. (2015). BMO private banking study: affluent Canadians pay for the majority of their children's post-secondary education. BMO Bank of Montreal. Retrieved from https://newsroom.bmo.com/2015-08-27-BMO-Private-Banking-Study-Affluent-Canadians-Pay-for-the-Majority-of-Their-Childrens-Post-Secondary-Education
- BCSC. (2011). Public opinion research: national report card on youth financial literacy, 1-9. Retrieved from https://www.investright.org/wp-content/uploads/2016/09/National_Youth_Survey_Executive_Summary_English-25-10-11.pdf
- Burns, J.C., Cooke, D.Y., & Schweidler, C. (2011). A Short Guide to Community Based Participatory Action Research: A Community Research Lab Guide. *KT Pathways*, 1-5. Retrieved from https://ktpathways.ca/resources/short-guide-community-based-participatory-action-research
- Cengage. New survey: college students consider buying course materials a top source of financial stress. Cengage. Retrieved from https://news.cengage.com/corporate/new-survey-college-students-consider-buying-course-materials-a-top-source-of-financial-stress/
- Champlain College. (2017). *Is your state making the grade?* Retrieved from https://www.champlain.edu/centers-of-experience/center-for-financial-literacy/report-national-high-school-financial-literacy
- Cogro. (2019). Common ground coffeehouse. Retrieved from http://cogro.ca/
- CPA. (2020). *Financial literacy sessions*. Retrieved from https://www.cpacanada.ca/en/the-cpa-profession/financial-literacy/financial-literacy-education

- Crawford, T. (2019, January 22). Vancouver housing second least affordable in world: report. *Vancouver Sun*. Retrieved from https://vancouversun.com/news/local-news/vancouver-housing-second-least-affordable-in-world-report
- Das, H. (2017). Housing Transportation Food Affordability Nexus. *Sustainable Calgary*, 1-23. Retrieved from https://static1.squarespace.com/static/5ab716b9ee1759b04ca2703e/t/5bff0cc7c2241b91e81739ab/1543441609302/HTF+Literature+Review+Report+-+Hemontika.pdf
- Dewey, C. (2018). The hidden crisis on college campuses. *The Washington Post*. Retrieved from https://www.washingtonpost.com/news/wonk/wp/2018/04/03/the-hidden-crisis-on-college-campuses-36-percent-of-students-dont-have-enough-to-eat/
- Farahbakhsh, J., Ball, G. D. C., Farmer, A. P., Maximova, K., Hanbazaza, M., & Willows, N. D. (2015). How do Student Clients of a University-based Food Bank Cope with Food Insecurity? *Canadian Journal of Dietetic Practice and Research*, 76(4), 200-203. Retrieved from https://pubmed.ncbi.nlm.nih.gov/26280467/
- Eccles, S. & Bird, D. (2004). *Mental budgeting: how young people manage their money, credit, and debt.* Retrieved from ://eprints.lancs.ac.uk/id/eprint/48701/1/Document.pdf
- Finney, J.E. & Kelly, P.J. (2004). Affordability: obtaining and making sense of information about how students, families, and states pay for higher education. *Change: The Magazine of Higher Learning.* 36(4), 54-59. https://doi.org/10.1080/00091380409604978
- Flashfood. (2019). Save money while reducing food waste. Retrieved from https://www.flashfood.com/
- Gold, K. (2020, January 27). Vancouver's affordability crisis is hampering its much-touted 'livability'. The *Globe and Mail*. Retrieved from https://www.theglobeandmail.com/real-estate/article-vancouvers-affordability-crisis-is-hampering-its-much-touted/
- Graduate and Postdoctoral Studies. (2018). *Financial literacy for your professional Career and personal well being*. Retrieved from https://students.ubc.ca/enrolment/finances/funding-studies/financial-planning
- Heckelman, A., Mannoe, M., Krupp, I., McGuire-Wood, L. (2018). *UBC student dialogue on poverty reduction in BC*. Retrieved from https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/initiatives-plns-strategies/poverty-reduction-strategy/submissions/centre-for-community-engaged-learning-ubc.pdf
- Kenton, W. (2020). *Financial literacy*. Investopedia. Retrieved from https://www.investopedia.com/terms/f/financial-literacy.asp
- Kershaw, P. & Eaves, S. (2019). Straddling the Gap: A troubling portrait of home prices, earnings, and affordability for younger Canadians. *Generation Squeeze*, 1-31. Retrieved from http://d3n8a8pro7vhmx.cloudfront.net/gensqueeze/pages/5293/attachments/original/1560279096/Straddling-the-Gap-2019 final.pdf?1560279096

- Land and Food Systems Undergraduate Society. (2018). *Wednesday night dinner*. Retrieved from https://www.lfsus.landfood.ubc.ca/wnd
- Ly, C., Garbeic, H., Ling, A., & Liang, W. (2019). Student Hunger at UBC Point Grey Campus. *SEEDS Student Report*, 1-80. Retrieved from https://sustain.ubc.ca/sites/sustain.ubc.ca/files/seedslibrary/SEEDS%20Report%202015W%20Food%20Hunger%20on%20campus_0.pdf
- McIntyre, L., Wu, X., Kwok, C. et al.(2017). The pervasive effect of youth self-report of hunger on depression over 6 years of follow up. *Journal of Social Psychiatry and Psychiatric Epidemiology*, *52*, 537-547. Retrieved from https://doi.org/10.1007/s00127-017-1361-5
- Meal Exchange. (2016). Food insecurity among post-secondary students in Canada. Hungry for Knowledge. Retrieved from https://www.mealexchange.com/what-we-do/hungryforknowledgereport
- Nguyen, A. (2019, September 26). Despite new action team, UBC has a long way to go on long-term solutions for food insecurity. *The Ubyssey*. Retrieved from https://www.ubyssey.ca/news/ubc-implements-action-team-to-address-food-insecurity/
- Office of the registrar. (2020). *Financial literacy week*. Retrieved from https://www.ualberta.ca/registrar/scholarships-awards-financial-support/money-talks-financial-literacy-week
- Okanagan Charter: An International Charter for Health Promoting Universities and Colleges (2015). Retrieved from http://www.gesundheitsfoerdernde-hochschulen.de/Inhalte/O1 Startseite/Okanagan-Charter 2015-EN.pdf
- Prairie Research Associates. (2012). Canadian university consortium: 2012 survey of graduating undergraduate students. Retrieved from https://cusc-ccreu.ca/?download=147
- Pritchard, P. (2015). Chapter 5 Time Stress: Dealing with the Stress Associated with Time Pressure. *Success Strategies From Women in Stem, 2*, 139-170. Retrieved from https://doi.org/10.1016/B978-0-12-397181-4.00005-0
- PROOF. (2018). *Household food insecurity in Canada*. Retrieved from https://proof.utoronto.ca/food-insecurity/
- Quigley, A. (2014, October 22). Food prices found higher at college retail than off campus locations *The Ithacan*. Retrieved from https://theithacan.org/news/food-prices-found-higher-at-college-retail-than-off-campus-locations/
- Schneider, P. (2016). Priced out: Low-income students struggle to meet costs, participate in college community. *The Cap Times*. Retrieved from https://madison.com/ct/news/local/education/university/priced-out-low-income-students-struggle-to-meet-costs-participate/article_57c2996f-6786-5b9d-852e-90007fccb3e9.html
- Silverthorn, D. (2016). Hungry for Knowledge: Assessing the prevalence of food insecurity on five Canadian campuses. *Meal Exchange*, 1-49. Retrieved from http://cpcml.ca/publications2016/161027-Hungry for Knowledge.pdf
- Student Services. (2020). *Financial planning*. Retrieved from https://students.ubc.ca/enrolment/finances/funding-studies/financial-planning

- The New School. (2020). *Food assistance*. Retrieved from https://www.newschool.edu/student-support/food-assistance/
- The Tea Room. (n.d.). *The tea room*. Retrieved from https://www.tea-room.ca/
- The United Nations. (N.d.) *About the sustainable development goals*. Retrieved from https://www.un.org/sustainabledevelopment/sustainable-development-goals/
- The University of British Columbia. (2018). Report to the board of governors: tuition 2019-2020.

 https://consultations.students.ubc.ca/sites/consultations.students.ubc.ca/files/reports/201920
 TuitionIncrease-Report.pdf
- The University of British Columbia (2019a). *Student residence Vancouver*. Retrieved from https://vancouver.housing.ubc.ca/
- The University of British Columbia. (2019b). *UBC Overview and Facts*. Retrieved from https://www.ubc.ca/about/facts.html
- Thibault, A. (2020, January 21). Vancouver ranked world's second-least affordable housing market—again. *CTV News*. Retrieved from https://bc.ctvnews.ca/vancouver-ranked-world-s-second-least-affordable-housing-market-again-1.4777809
- Toole, J. (2019, September 11). Food for thought: Higher than average prices found at on-campus markets. *The Daily Wildcat*. Retrieved from https://www.wildcat.arizona.edu/article/2019/09/i-food-prices
- UBC Food Services. (2020). Fooood. Retrieved from https://food.ubc.ca/place/fooood/
- UBC Sprouts. (n.d.). Join the sprouts board!. Retrieved from http://www.ubcsprouts.ca/
- UBC Wellbeing. (n.d.). *UBC wellbeing strategic framework*. Retrieved from https://wellbeing.ubc.ca/sites/wellbeing.ubc.ca/files/u9/wellbeing strategic framewok FINAL 0.pdf
- UBC Wellbeing. (2017). *UBC action framework for a nutritionally sound campus*. Retrieved from https://wellbeing.ubc.ca/sites/wellbeing.ubc.ca/files/documents/FN_Action_Framework_2017.pdf
- UNICEF. (2019). *Nutrition in Emergencies*. Retrieved from https://www.unicef.org/nutrition/index_emergencies.html
- U.S. Department of Housing and Urban Development. (n.d.a). *Anchor institutions*. Case Studies. Retrieved from https://www.huduser.gov/portal/casestudies/AnchorInstitutions.html
- U.S. Department of Housing and Urban Development. (n.d.b). *Johns Hopkins* university forms partnerships to strengthen nearby neighborhoods in central Baltimore. Retrieved from https://www.huduser.gov/portal/casestudies/study-021820.html
- Wahl, D. R., Villinger, K., Konig, L. M., Ziesemer, K., Schupp, H. T., Renner, B. (2017). Healthy food choices are happy food choices: Evidence from a real life sample using

smartphone based assessments. *Scientific Reports*, 7, 1-9. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5719018/

APPENDICES

Appendix A: Affordability Poster

HOW AFFORDABLE IS UBC?

HOW DO YOU BUDGET?

ARE YOU FINANCIALLY STRESSED?

LET US KNOW!

uвc wellbeing



Appendix B: Interview Questions

Pre-Interview Discussion

- 1. Can we record you? This will be used to ensure we accurately record your thoughts and opinions and for LFS 400 (explain what this project entails)
- 2. Explain purpose of the interview
- 3. Address terms of confidentiality
- **4.** Explain format of the interview
- 5. Indicate how long the interview usually takes
- **6.** Tell them how to get in touch later if they want to
- 7. Ask them if they have any questions before you get started

INTERVIEW QUESTIONS

Demographic questions:

- 1. Are you a domestic student or an international student?
- **2.** Where do you live?
 - a) First-year residence (no kitchen)? Upper-year residence (kitchen)? Non-residence?
 - **b)** Off-campus \rightarrow Housemates? Family?
 - c) How long does it take you to get to campus?
- 3. What faculty are you in?
- **4.** Are you a graduate or undergraduate student? What year level are you in?
- **5.** Are you employed currently?
- **6.** What is your nationality?

Affordability questions:

- 1. When I use the term "affordability", what comes to mind for you?
- 2. How do you budget your finances between all of your expenses (ie rent, transit, food)?
- 3. How do you make decisions on what you can/can't afford?
- 4. Are there things that you sacrifice so that you can afford your fixed costs, such as rent and tuition?
- **5.** Which of the following do you consider to be the most important when purchasing food on campus?
 - a) Price
 - b) Quality
 - c) taste
 - d) accessibility
- **6.** How has your financial status as a university student influenced your food choices?
- 7. If you had skipped a meal this week, what were the reasons for this?
- **8.** Is there anything else you would like to add on the topic of affordability that's related to this interview?