

Understanding Food Waste Drivers and Food Preferences Among 1st Year Student Residences to Reduce All Access Dining Waste and GHG Emissions



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Practitioner's Summary

FOOD WASTE AND GHG EMISSIONS



BACKGROUND

- UBC's food system generates over 21% of total campus GHG emissions (UBC Sustainability, 2022b)

GOALS

- Achieving 50% GHG emissions reduction of food systems by 2030 (UBC Sustainability, 2022b).
- By focusing on UBC's food waste, the impact can contribute to UBC policies, plans and goals

RESEARCH METHODS



Figure 1. Poster used to motivate students to contribute to food waste reduction

- Community-Based action research (CBAR) where the aim is to promote solutions benefiting the community (Gullion & Tilton, 2020)
- Secondary data: literature review on food waste, promising practices and survey strategies
- Primary data: online survey, and in-person booth interviews for understanding food waste drivers

KEY FINDINGS

- Lack of food waste awareness was correlated to students wasting food "Most of the time"
- Majority of OK residents are Asian who also prefer Asian cuisine

UBC has the opportunity to set a standard for universities across the world through its exemplary practices (UBC Sustainability, 2021)

Executive Summary

Food waste is an ongoing global issue that results in irreversible consequences, including greenhouse gas (GHG) emissions that disrupt climates across the globe. As a recognized global leader in sustainability, the University of British Columbia (UBC) has the opportunity to set a standard for universities across the world through its exemplary practices (UBC Sustainability, 2021). Considering this, the university has recognized the significant contribution of food systems, generating over 21% of total campus GHG emissions (UBC Sustainability, 2022b). Specifically, emphasis has been placed on addressing food waste generated by the campus food system as an important contributor of GHG emissions (UBC Sustainability, 2016). By understanding the drivers of food waste, UBC can inform their plans, policies and practices that are working toward achieving its intended 50% GHG emissions reduction of food systems by 2030 (UBC Sustainability, 2022b). These learnings can also contribute to the global targets set by the IPCC and the Paris Agreement, both identifying the reduction of food waste as an integral step in reaching net zero emissions on campus (UBC Sustainability, 2021).

By establishing a fundamental understanding of first-year residents' food preferences, the University of British Columbia Food Services (UBCFS) can revise their menu selections to align more closely with climate-friendly practices, while ensuring student consumption preferences are met. Additionally, a change to a more sustainable menu can potentially inspire students to adopt more climate-friendly dietary habits. Moreover, exploring potential factors influencing students' food plate waste, including portion sizes, flavors, convenience, or location, can provide valuable insights for implementing practical innovations. This can benefit not only the overall student dining experience but also support the campus in achieving its targets.

Our methodology includes a mixed-methods approach, utilizing both quantitative data from our online surveys, and qualitative data from our in-person booths. The online survey was disseminated to residents of Orchard Commons through the help of UBCFS associates, and was promoted by our in-person booth. The in-person booths served as a means to enhance the results we obtained from our online survey, providing understanding of students' experience with food plate waste at the Open Kitchen (OK) dining hall. With this strategy, our team was able to evaluate the influence of the UBC Residence All Access Dining (AAD) Plan on the food preferences of first-year students, and help narrow the causes of food waste generated at Open Kitchen. Furthermore, a comprehensive literature review was conducted in order to summarize existing knowledge and take into account sensitivities, such as those that may influence individuals with eating disorders while designing surveys and conducting focus groups.

Community-Based action research (CBAR) is the guiding framework with which our research was conducted. CBAR's fundamental aim is to promote research and solutions that benefit the community in ways that can foster equity, collaboration, and encourage social change and justice (Gullion & Tilton, 2020). With this in mind, our research's primary aim is to provide knowledge that can be used to inform and support future sustainable practices at UBC and beyond. This project engages stakeholders at all levels, ensuring all have the opportunity to be co-creators of knowledge and have a stake in this process of learning. In this way, proposed interventions formed through joint creation and consultation ensure that solutions are realistic, sensitive to a multitude of perspectives, and align with dining operations and student preferences.

Following the facilitation of our research methodologies, we developed two main deliverables: a data analysis of student food preferences and the primary drivers contributing to food waste at Open Kitchen, and recommendations for action that aim to minimize food plate waste and encourage climate-friendly eating habits among the Orchard Commons community. The findings of our research can support direct efforts to help lower GHGs emissions from dining hall-related food consumption on UBC's Vancouver campus. Understanding the variables that affect food waste and student dietary preferences will help UBC put solutions into place to meet its climate action objectives and act as a role model for other academic institutions looking to minimize their environmental footprint. The results of this study are anticipated to have contributed to the broader understanding of sustainable food systems and to larger societal initiatives aimed at reducing climate change and promoting environmental sustainability.

Table of Contents

Practitioner’s Summary	1
Executive Summary	2
Table of Contents	3
List of Figures & Tables	4
List of Abbreviations	4
1. Introduction	5
1.1 Research Topic	5
1.2 Research Relevance	5
1.2.1 Societal Issues	5
1.2.2 UBC Sustainability Issues, Policies, and Practices	6
1.2.3 Community Benefits	7
1.3 Project Context	8
1.4 Research Purpose, Goals and Objectives	9
2. Research Methodology & Methods	9
2.1 Research Methodology	9
2.2 Research Methods	10
2.2.1 Secondary Data Collection	10
2.2.2 Primary Data Collection	11
2.3 Methods of Administration	12
3. Results	13
3.1.1 Literature Review	13
3.1.2 Online Survey Results	13
3.1.3 In-Person Booth Interview Results	19
4. Discussion	24
4.1 Key Contributors to Food Waste at Open Kitchen	24
4.2 Student Preferences	25
4.3 Gap between Students’ Willingness and Action to Reduce Food Waste	25
4.4 Diet Type vs. Food Preferences	26
4.5 Time Spent Eating vs. Leftover Food	26
4.6 Research Limitations	26
5.1 Recommendations for Action	27
5.1.1 Short Term Recommendations	27
5.1.2 Long Term Recommendations	29
5.2 Recommendations for Future Research	30
5.2.1 Long Term Recommendations	30
6. Conclusion	31
7. References	33
8. Appendix	37

List of Figures & Tables

Figure 1: Poster used to motivate students to contribute to food waste reduction	1
Figure 2: Breakdown of participant ethnic background	14
Figure 3: Breakdown of participants cuisine preferences	15
Figure 4: Breakdown of participants dietary restrictions or dietary preferences	15
Figure 5: Most visited station at Open Kitchen	16
Figure 6: Sometimes visited station at Open Kitchen	17
Figure 7: Least visited station at Open Kitchen	17
Figure 8: Breakdown of students perspectives on food waste	18
Figure 9: Participant Engagement in Reducing Food Waste	19
Figure 10. How often do you have leftover food on your plate that you have to throw away ?	20
Figure 11. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food?	20
Figure 12. How much time do you spend at the dining hall during each visit ?	21
Figure 13. Are your food preferences and tastes consistent, or do they vary from day-to-day week-to-week?	22
Figure 14. How aware are you about food waste / what aspects of it concern you?	22
Figure 15. What is one thing that would improve your overall experience in your residence dining?	23
Figure 16. If you can take your leftovers back home, are you willing to do so?	24
Table 1: Examining current research on post-secondary dining hall food waste	13
Table 2: Promising practices to guide our recommendations and future research	13

List of Abbreviations

CAP 2030: Climate Action Plan 2030

CBAR: Community-Based Action Research

GHG: Greenhouse Gas

SEEDS: Social Ecological Economic Development Studies

UBC: The University of British Columbia

UBCFS: University of British Columbia Food Services

1. Introduction

1.1 Research Topic

UBC has been contributing to GHG emissions through food waste from all access dinings. By understanding food waste drivers and food preferences among the 1st year student residents enrolled in this dining plan, we aim to address this issue. Through this understanding, potential solutions will be innovated that can be of use for UBC's food services.

1.2 Research Relevance

1.2.1 Societal Issues

Greenhouse gases (GHGs) play a significant role in driving climate change, and their impact on Earth is becoming increasingly evident in the world today. (IPCC, 2023). In order to minimize these environmental consequences, solutions have been put in place in order to reduce GHG emissions, notably waste management (Crippa et al., 2021; Manfredi et al., 2019). Waste management plays a critical role in GHG emissions; for instance, organic waste disposed of in landfills produces potent levels of methane (Manfredi et al., 2019). In 2020, organic waste emitted 1.51 billion tons of methane which accounts for roughly 19% of the global methane emission. (Climate Watch, 2023) Moreover, the global warming potential of methane is 28 times higher than carbon dioxide (USEPA, 2023); even though methane only accounts for 20% of total GHG emissions (Jones et al., 2023). The United Nations Environment Programme (UNEP) suggests that the adoption of sustainable waste management practices have significant potential to reduce global GHG emissions, with estimates projecting a reduction of 15 to 20% (Bogner et al., 2008). Considering the challenges that climate change poses to current consumption patterns and waste management practices, it is important to adopt proactive measures to address these issues (Bogner et al., 2008). Failure to do so may worsen the situation and lead to further catastrophe (Bogner et al., 2008). Therefore, sustainable waste management practices such as reducing food waste, recycling single-use items, and composting organic waste are key components of our efforts to mitigate climate change impacts (Bogner et al., 2008). Another major factor in GHG emissions is dietary choices. Dietary patterns strongly influence GHG emissions since carbon footprints vary greatly

between different types of food (Ritchie, 2024). For example, producing one kilogram of beef would cause a GHG emission equivalent to 100 kilograms of carbon dioxide whereas producing one kilogram of rotted vegetable only causes a carbon dioxide emission of 0.4 kilogram (Ritchie, 2024). Research in Spain shows that adopting certain dietary patterns can reduce regional GHG emission in the agriculture sector by 11%-17% (Batlle-Bayer, L., et al., 2019). Similar research in North America found that vegetarian diets emit 29% less GHG emissions than non-vegetarian diets (Soret, S., et al., 2014). Since agriculture accounts for around 12% of global GHG emission, this illustrates that a shift in dietary pattern greatly impacts GHG emission (Ritchie, 2024a). Moreover, individuals who follow dietary recommendations are more efficient at managing food through planning, avoiding excess purchases, and utilizing leftovers, which ultimately minimizes food waste (Grant, F. & Rossi, L., 2022). This illustrates the importance of dietary education in promoting healthier, sustainable eating habits (Grant, F., & Rossi, L., 2022). In conclusion, shifting dietary choices to reduce waste in general plays an immense role in reducing large-scale GHG emissions.

1.2.2 UBC Sustainability Issues, Policies, and Practices

As a global leader in sustainability research, UBC is going above and beyond most universities in the world to harness and mobilize its full powers to build a sustainable campus food system. Yet, the UBC food system still has various issues despite their efforts. On one hand, around 40% of students in the campus are currently experiencing food insecurity (Rideout & James, 2019). On the other hand, UBC generated approximately 615 tonnes of food waste in 2022 (UBC sustainability, 2022a). The outcomes of this research project have the potential to contribute towards a number of university plans and policies that aim to resolve these issues. For instance, our research has the potential to be a big step in achieving the targets in the UBC Vancouver Climate Action Plan 2030. One target in the UBC Vancouver Climate Action Plan 2030 is to reduce GHG emission by 85% (UBC Vancouver, 2021). Our research directly contributes to this goal by identifying potential solutions to reduce food wastes across UBC dining halls which are the major contributors for methane emission (Wang et al., 2018). Our research also contributes to the UBC Climate Emergency Action by raising public awareness about the impact of dietary consumption on climate issues (UBC climate emergency response, 2023). Moreover, our research plays a critical role in addressing persistent food insecurity across campus. The

goals of this research are in line with UBC's food security initiatives which aim to build a campus where "all community members can obtain adequate, accessible, nutritionally, and culturally appropriate food in a just and ecologically sound manner." (FSI, 2023). This research also contributes to UBC Vancouver Student Housing & Community Services 5-Year Plan, which provides a strategic framework and goals for improving the university's food services. In this plan, there is an expressed ambition for the residence dining hall to serve as a model that other Canadian universities can follow, as well as providing meals that are of exceptional quality and value (UBC Vancouver Student Housing & Community Services 5-Year Plan, 2023). Further, our findings have the potential to address various avenues of food waste that stem from the residence dining halls, which can help inform some of the goals and strategies outlined in the UBC Zero Waste Action Plan 2030. Lastly, our research contributes to the university's Inclusion Action Plan. Part of the effort for UBC to build an inclusive community is to "develop, consult on, and implement guidelines for decision-making that incorporate equity, diversity, and inclusion principle" (Szeri et al., 2022). Our research contributes to this goal by providing all students an equal chance to influence UBC dining hall policies.

1.2.3 Community Benefits

On a community level, our research will enhance dining experience across all dining halls in UBC. As a community that cherishes its diverse background, providing culturally-accepted food has always been the primary goal for UBCFS. Despite its efforts, 37% of UBC students currently enrolled in UBC Vancouver campus are having challenges accessing safe, adequate, and personally-accepted food (Carry, Thistle, & Buszard, 2019). Providing culturally-accepted food not only protects the physical, mental, emotional, spiritual and social well-being of our community members, but also retains the connections which students have towards their original culture and traditions. Our research will gather data on the dietary preferences of UBC students from various backgrounds. Results of this research will help UBCFS design a culturally-accepted menu for all students. Moreover, our research will help identify factors contributing to food plate waste generated by UBC dining halls and devise strategies to address these drivers. In 2019, UBC generated approximately 615 tonnes of food waste despite continuous effort in reducing food waste across campus (UBC Sustainability, 2022a). Our research will identify important causes for food waste in dining halls which can help the community design

strategies in reducing food waste and ultimately contribute to UBC's Zero Waste Action Plan by 2030. Lastly, our research will also provide students with the opportunity to directly influence university policies. Student feedback from this research will be used to identify key areas of improvement for UBC dining halls, such as diversifying the menu options. These results can help UBC improve its dining experience for students.

1.3 Project Context

As highlighted in the UBC Vancouver Climate Action Plan 2030, UBC is making concerted efforts to achieve net zero campus emissions, as well as substantially reduce emissions by the year 2030. Food systems claim the second-highest spot in the extended impact emissions category, following just behind transportation (UBC Campus + Community Planning, 2023). The anticipated target goal is to achieve a 50% reduction in GHG emissions from food systems. This is rationalized by the significant implications food systems raise for climate change as they are estimated to contribute 21-50% of global GHG emissions (UBC Vancouver Climate Action Plan 2030). Hence, UBC CAP 2030 has emphasized the need for a revised Zero Waste Action Plan, urging the prioritization of campus emissions reduction and promoting opportunities that contribute to a circular economy. (UBC Zero Waste Action Plan 2023).

Outlined under the UBC Zero Waste Plan, food waste is one of the greatest generators of total waste on campus. Therefore, the reduction of food waste is a key step in mitigating GHG emissions and reaching the universities goal of net zero emissions by the year 2030. One of the goals described in this plan indicates the need to develop a Food Waste Prevention, Reduction and Recovery Strategy for campus vendors and services. Furthermore, the plan underscores the importance of incorporating various food waste measurement tools. These tools can serve to inform and guide strategies for reducing food waste within campus food systems, specifically the first year residence-mandatory AAD plan. AAD gives the students the opportunity to fill their plates as many times as they like; this newly implemented model of September 2022 has not been implemented for long enough to evaluate whether it has significantly impacted dining residence food waste levels. Furthermore, this study aims to dive deeper into whether the concept of AAD is the primary food waste driver. By understanding student residents' food preferences, this can clarify in accordance with this study's context whether there is room for sustainable AAD modifications.

1.4 Research Purpose, Goals and Objectives

Purpose: The purpose of our project is to develop a comprehensive understanding of students' food plate waste and food preferences. The development of this understanding can ultimately contribute to reducing GHG emissions that are resulting from campus food waste and consumption at UBC.

Goals: To enhance our main purpose of understanding student food waste and preferences, the goals that must be achieved are: (1) Create specific understanding of Orchards Commons residents' food preferences at Open Kitchen (OK) dining hall, (2) Evaluate student perceptions on the food waste created by the All Access Dining (AAD) model and the contributing factors, (3) Develop strategies that encourage students to adapt sustainable eating habits, (4) Identify potential actions to be implemented by UBCFS to reduce food waste while fulfilling student food preferences

Objectives: To satisfy the goal of this research project, individual objectives must be met: (1) Gain a foundational understanding on how UBC's AAD Plan may have impacted student dietary habits through the administration of an online survey and in-person focus groups, (2) Investigate the potential factors contributing to individual food plate waste (portion sizes, menu options, convenience, and other relevant factors) based on student responses to our survey and focus groups, (3) Develop recommendations for further research based on data obtained from our research, and inform future actions that aim to decrease food waste that contribute to GHG emissions associated with food consumption, and (3) consult key stakeholders (i.e. UBCFS) on their perspective toward food preferences in order to develop realistic solutions that aim to reduce food waste.

2. Research Methodology & Methods

2.1 Research Methodology

Our project's research process was guided by the principles and framework of Community-Based action research (CBAR) to ensure that our research design was consulted on and approved by our key stakeholders, such as UBCFS. Community-based action research (CBAR) is a research approach that involves communities in the research process, allowing them to take a leading and active role in addressing issues that impact them directly (Gullion & Tilton, 2020). The research process involves the community at every stage,

from planning to carrying out and implementing the results. By encouraging a cooperative learning environment for researchers and community participants, CBAR seeks to advance equity. The ultimate objective is to produce information and workable solutions for the community's benefit, which can spur social change and advance social justice.

We applied CBAR by involving pertinent stakeholders of the UBC community—students, faculty, and staff—in all phases of the research process. We conducted surveys and in-person interviews to obtain diverse perspectives and input from our target demographic. This was important to ensure that the solutions we propose are relevant and helpful to those voiced by this particular population. Moreover, we engaged with UBCFS culinary experts from the Open Kitchen residence dining hall to gain valuable insights into how UBCFS operations align with the broader UBC goals aimed at reducing food waste on campus. Furthermore, we sought guidance from members of the UBCFS management team to discuss strategies they have implemented to mitigate food waste in the dining hall and explored potential actions forward based on their expertise. In this regard, we were able to gain a variety of perspectives from several stakeholders, and devise strategies based on all the input we received. This approach aims to ensure that all outcomes are inclusive, feasible and beneficial. Ultimately, our project supports UBC's sustainability and climate action goals by highlighting the scalability and sustainability of effective waste reduction measures and pushing for their wider adoption both within and outside of UBC.

2.2 Research Methods

Our research employed a mixed methods approach, conducting both primary data collection and secondary data collection. The primary methods included structured interviews held at a booth outside of the Open Kitchen, as well as an online survey distributed via Qualtrics. The secondary methods included conducting a literature review to ensure that our primary data collection was carried out in a well-informed manner. These methods are described below in more detail.

2.2.1 Secondary Data Collection

Literature Review

A preliminary literature review was conducted to guide our primary research study to ensure that it was carried out in a well-informed manner. The literature review covered three main objectives: examining current research on post-secondary dining hall food waste, identifying promising practices to inform our recommendations for future action and research, and exploring strategies for creating surveys that are considerate of diverse lived experiences. Search queries included entering keywords such as “Dining Hall Food Waste”, “Inclusive Survey Design”, and “Inclusive Focus Group Design”, into search engines such as the UBC Library and Google Scholar. Additionally, our client provided us with past surveys sent out by UBCFS to obtain student experiences and satisfaction with residence dining halls. This helped in the creation of the framework for the survey we sent out in our primary data collection.

2.2.2 Primary Data Collection

Our primary research consists of two main methodological tools: 1) an online survey and 2) in-person interviews.

Online Survey

The objective of the online survey was to capture basic demographic information regarding our target population, as well as obtain short-answer responses to questions regarding food waste at the Open Kitchen dining hall. To encourage maximum response rates, printed copies of QR codes to the survey were distributed across Orchard Commons. Moreover, posters were displayed across the dining hall to promote the survey, as well as engage individuals in discourse around food waste. Our online survey was able to reach 153 responses with 93 being valid, with an initial target of 100 participants.

In-Person Booth Interviews

The aim of the in-person booth interviews was to enhance the results obtained through the online survey. The interviews were conducted using a series of previously curated questions that sought to obtain more in-depth answers regarding student’s food preferences, motivations for food waste, and overall experiences at Open Kitchen. The booth was situated right outside of Open Kitchen; our client provided support and guidance

on optimal location and design for our set up. Our target sample was first-year residents dining at the Open Kitchen, particularly those enrolled in the residence-mandatory AAD Plan. This approach ensures that our data will be representative of the population most impacted by our research objectives. We were able to surpass our target sample size of 15 for our in-person booth interviews by 5, giving us an achieved sample size of 20 participants.

2.3 Methods of Administration

Online Survey

We coordinated with the management team at Open Kitchen to distribute the online survey in late February to all first-year students enrolled in the AAD.

In-Person Booth Interviews

Prior to conducting our interviews at the Open Kitchen, our team contacted management at Open Kitchen to arrange a time where we could display our printed posters around the dining hall. We displayed our posters a few days prior to encourage engagement and awareness around our survey and booth. Following this, the team scheduled two windows to conduct our interviews: one during the lunchtime rush, as well as another following a few hours after. After setting up our booth outside of the Open Kitchen, a few team members stood around the booth to actively engage and recruit participants. Each student passing by the booth was asked if they were interested in participating, followed by a few questions confirming whether they were a first year student enrolled in the AAD. Those that chose not to participate in the interview were given a printed QR code that directed them to the online survey. Students that chose to participate provided informed consent to the collection of their responses for the purpose of this study, while ensuring confidentiality and anonymity. Prior to transcription of their responses, they were given the option of having their voice recorded, or simply transcribed by a team member during the interview. Following the interview, participants who were willing were asked to provide their contact information to enable UBCFS to reach them in the event that they were selected for the incentive draw associated with participating in the interview.

3. Results

3.1.1 Literature Review

Table 1: Examining current research on post-secondary dining hall food waste

Current research on post-secondary dining hall food waste	References
How Food Becomes Waste: Students as “Carriers of Practice” in the UC Davis Dining Commons.	(Yui & Biltekoff, 2021)
Food waste generation and potential interventions at Rhodes University, South Africa.	(Painter, et al. 2016)
Food Choice and Waste in University Dining Commons—A Menus of Change University Research Collaborative Study.	(Wiriyanich et al., 2021)
Toward food waste reduction at universities.	(Filho et al., 2023)

Table 2: Promising practices to guide our recommendations and future research

Promising Practices	References
From evaluation to action: Testing nudging strategies to prevent food waste in school canteens.	(Vidal-Mones et al., 2022)
The opportunity of tracking food waste in school canteens: Guidelines for self-assessment.	(Derqui & Fernandez, 2017)
A simple awareness campaign to promote food waste reduction in a University canteen.	(Pinto et al., 2018)
Closing the loop on Canada's National Food Policy: A food waste agenda.	(Soma, 2018)

3.1.2 Online Survey Results

The online survey received a total of 153 responses. Incomplete responses were excluded during data analysis which results in 93 valid responses.

Ethnic Background

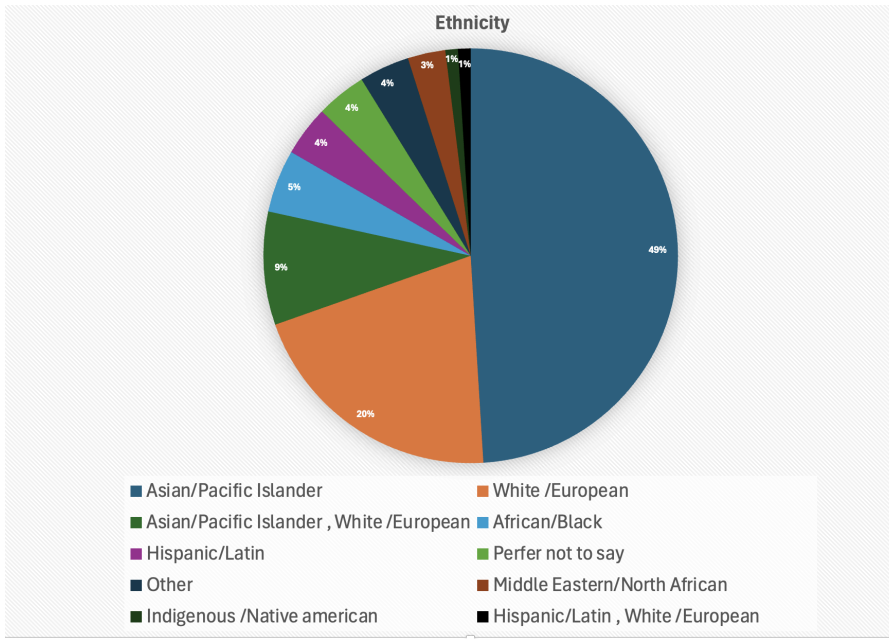


Figure 2: Breakdown of participant ethnic background

The majority of first-year students who complete the survey are Asian, accounting for 50% of the responses. This is followed by Caucasian (20%), Mixed Ethnicity (9%), Black (5%), Latinx (4%), Middle Eastern (3%), and Indigenous (1%). 3% of participants did not choose to answer this question and 3% of the participants chose “other”.

Student Cuisine Preferences

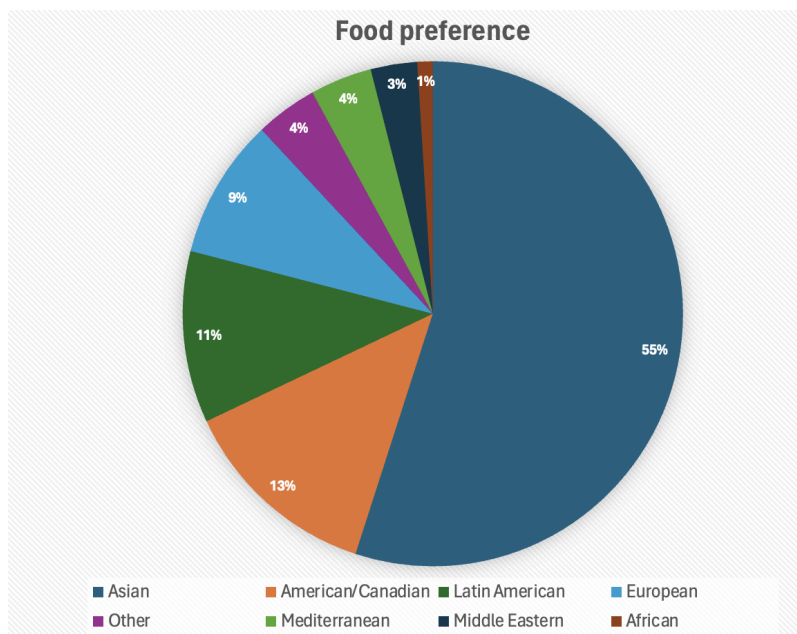


Figure 3: Breakdown of participants cuisine preferences

Student food preference shows a similar trend to ethnicity. Asian cuisine is preferred by the majority of students; (55%) this is likely a result of having a higher portion of Asian students in the survey. This is followed by American/Canadian cuisine, (13%) Latin American cuisine, (11%) European cuisine, (9%) Mediterranean cuisine, (4%) Middle Eastern cuisine, (3%) and African cuisine. (1%)

Dietary Restrictions/ Dietary Preferences

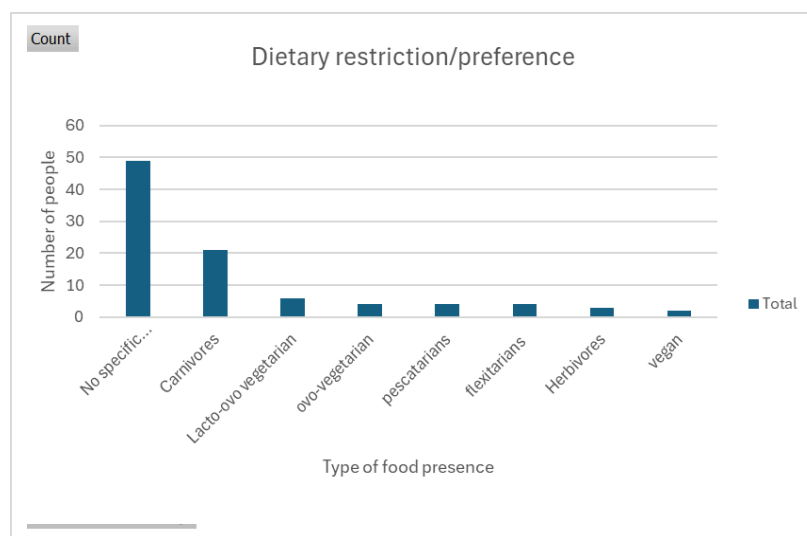


Figure 4: Breakdown of participants dietary restrictions or dietary preferences

Out of 93 valid responses, 49 participants (53%) do not have dietary restriction; 21% follow a meat-based diet. There are also 4 participants who are pescatarians and 4 participants who are flexitarians. In contrast, only 13% of the participants are vegetarian or vegan.

In the online survey, participants were given the opportunity to rank the 11 food stations in the Open Kitchen. (1 being the most preferred, 11 being the least preferred) These rankings are then used to generate the set of histograms above. Based on the histograms, the 11 stations have been divided into 3 categories: most visited, sometimes visited, and least visited.

Most Visited Stations at Open Kitchen

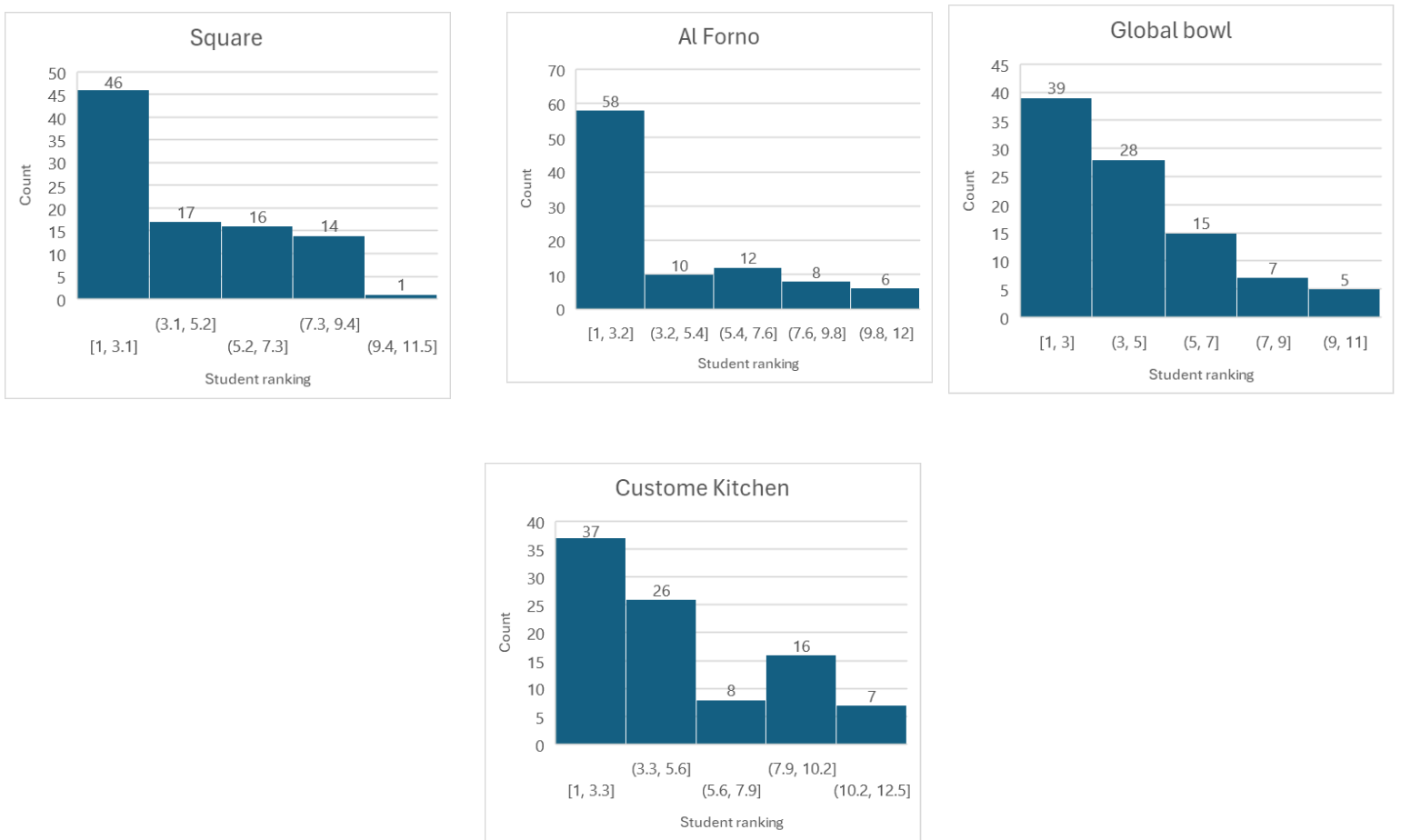


Figure 5: Most visited station at Open Kitchen

x-axis description: Student ranking (1 indicates most favorite, 11 indicates least favorite)

y-axis description: Number of students in each category

As Figure 5 depicts, 58 students strongly prefer the Al Forno Kitchen which shows its popularity. Moreover 46 students strongly prefer the Square Kitchen, 39 students strongly prefer the Global Bowl Kitchen, and 37 students strongly prefer the Custom Kitchen demonstrating the popularity of Square, Global bowl, and Custom Kitchen respectively.

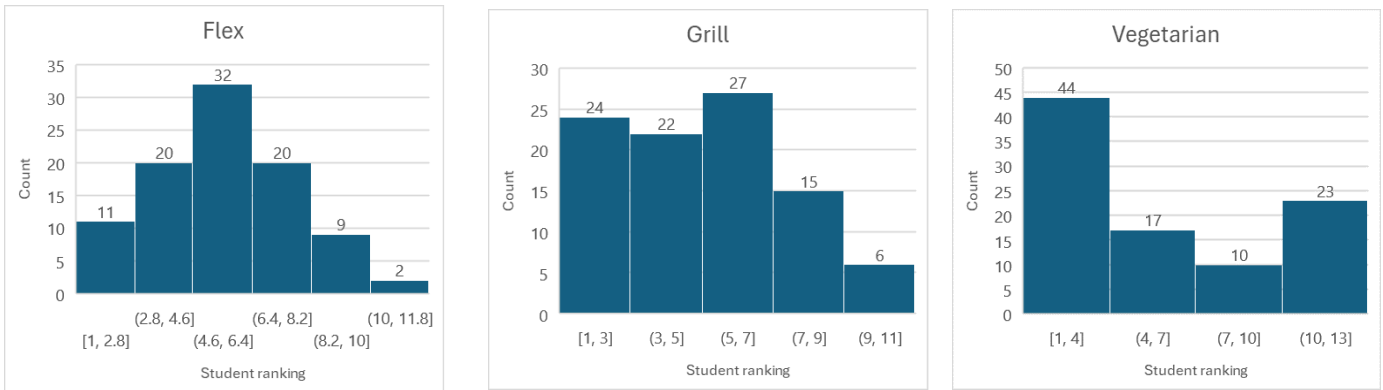


Figure 6: Sometimes visited station at Open Kitchen

x-axis description : Student ranking (1 indicates most favorite, 11 indicates least favorite)

y-axis description : Number of students in each category

As figure 6 depicts, student preferences on the Flex, Grill and Vegetarian Kitchen are evenly spread out. 81 students put Flex station as neither their most preferred nor their least preferred stations and 64 students put Grill Kitchen as neither their most preferred nor their least preferred stations. Student preference on the Vegetarian station is high variable with 44 students putting the Vegetarian station as their most preferred and 23 as their least preferred.

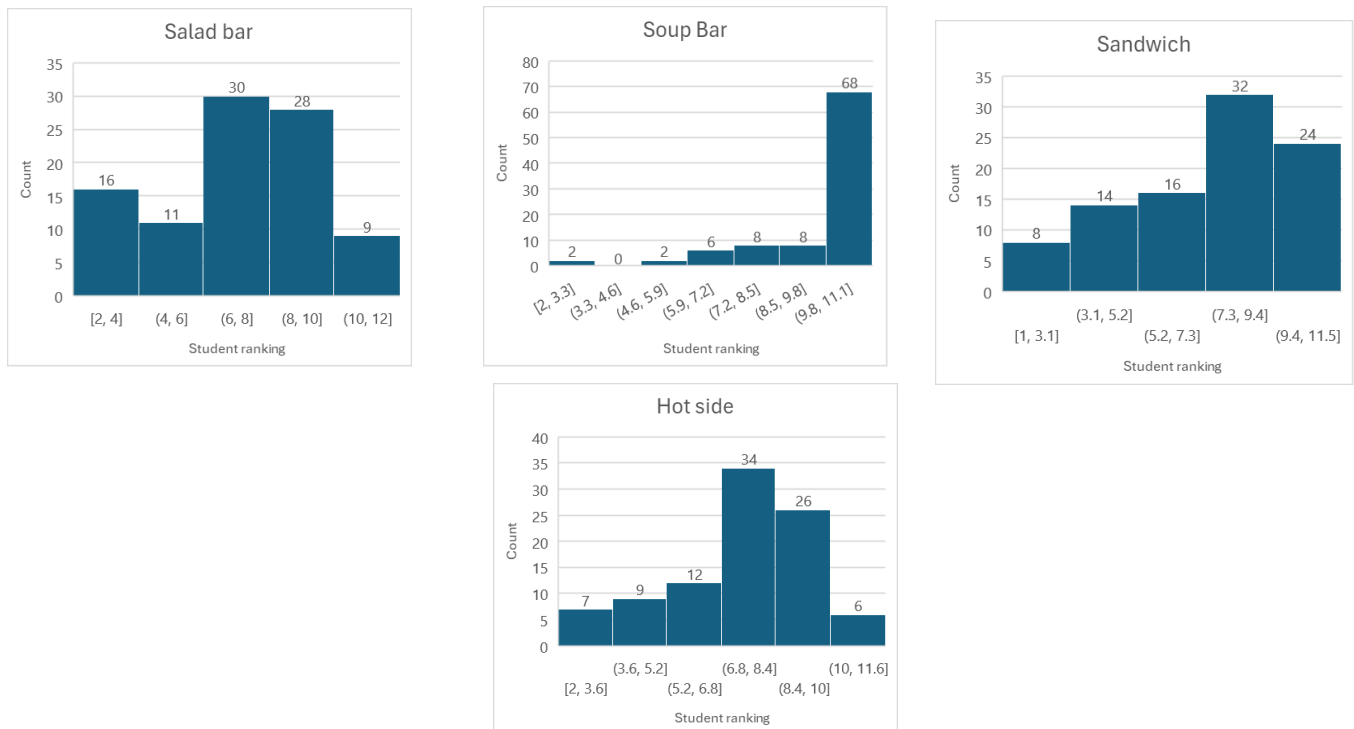


Figure 7: Least visited station at Open Kitchen

x-axis description : Student ranking (1 indicates most favorite, 11 indicates least favorite)

y-axis description : Number of students in each category

As Figure 7 depicts, 37 students disliked the salad bar, 24 students strongly disliked the Sandwich station, and 32 students disliked the hot side bar. Noticeably, 68 students placed the Soup bar as their least favorite station which demonstrates a strong dislike towards this particular station.

The most visited stations include the Custom Kitchen, the Square Kitchen, the Global Bowl Kitchen, and the Al Forno Kitchen. The sometimes visited stations include the Flex Station, the Grill Kitchen, and the Vegetarian Kitchen. The least visited stations include the Sandwich Kitchen, the Soup Bar, the Hot Side Bar, and the Salad Bar.

Students Perspectives on Food Waste

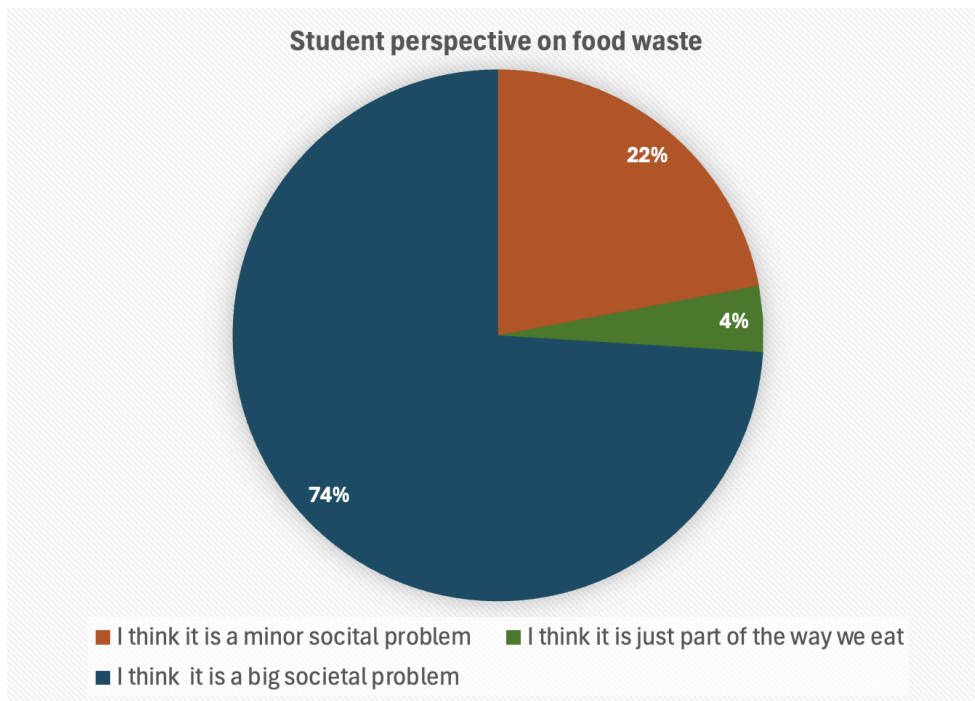


Figure 8: Breakdown of students perspectives on food waste

Most students (74%) who participate in the survey consider food waste a major social issue. 22% of participants consider it a minor social issue and 4% do not consider food waste an issue.

Student Engagement in Reducing Food Waste

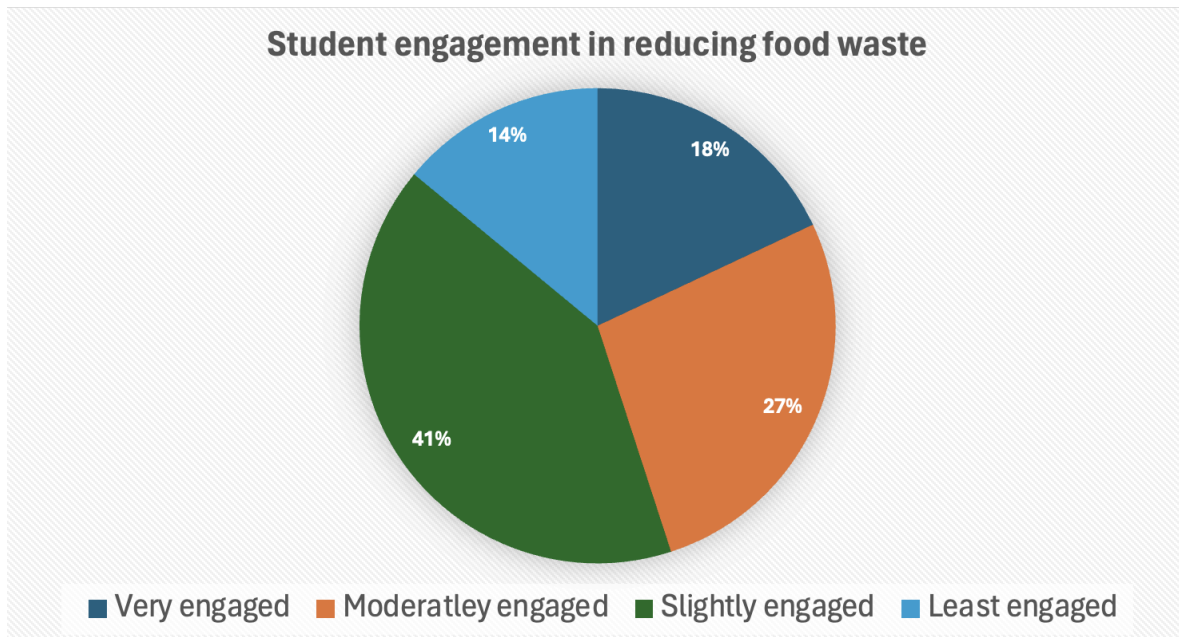


Figure 9: Participant Engagement in Reducing Food Waste

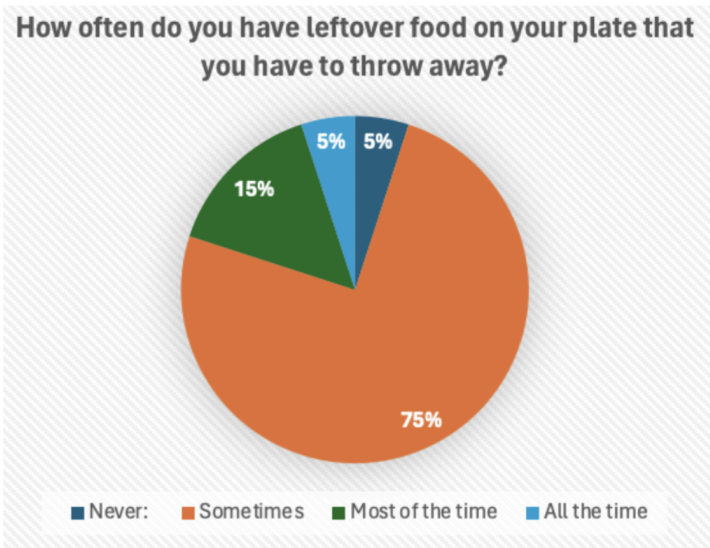
Only 18% of the participants are actively engaged in reducing their food waste; the majority of participants (41%) are only slightly engaged in reducing food waste. 27% of the participants are moderately engaged and 14% are not very engaged in reducing food waste.

3.1.3 In-Person Booth Interview Results

As per the methodology, qualitative data was gathered from in-person booths to complement the results obtained from the online survey. A total of 20 first-year residents were interviewed and their responses were recorded. To create a comprehensive report, the qualitative data was converted into quantitative data. This was achieved by categorizing the student responses into different subcategories. The results illustrate the 6 questions

that students were asked during the interviews. The anecdotes provide a description of how each subcategory was defined.

Frequency of Leftover Food



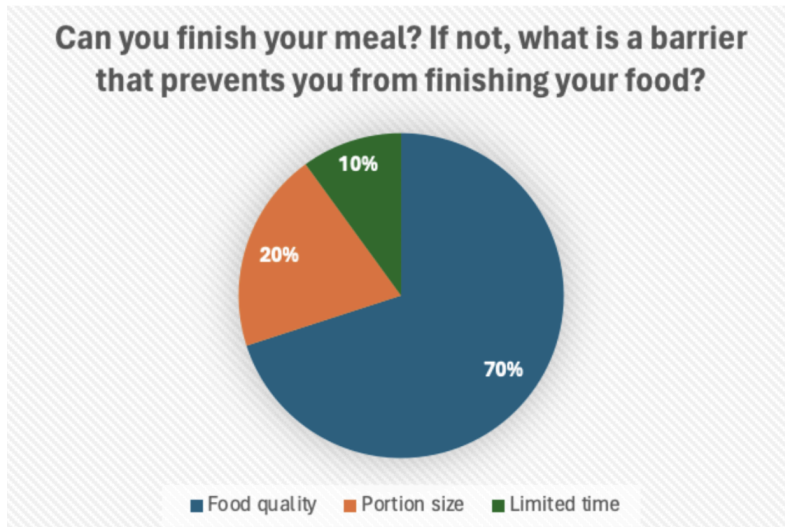
Anecdotes

- **Never:** Try to finish everything, and have nothing to throw away.
- **Sometimes:** Once a week.
- **Most of the time/ All the time:** Almost every visit

Figure 10. How often do you have leftover food on your plate that you have to throw away ?

Based on Figure 8, when students were asked how often they have leftover food on their plate that they have to throw away, 15 out of 20 students (75%) reported that they never have to throw away food. 3 out of 20 students (15%) indicated that they sometimes end up with leftover food, while 2 out of 20 students (10%) answered that most of the time or all the time they have food to discard.. This suggests that while the vast majority of students typically finish their meals, there is still a portion who occasionally or frequently have food waste.

Barriers to Finishing Food



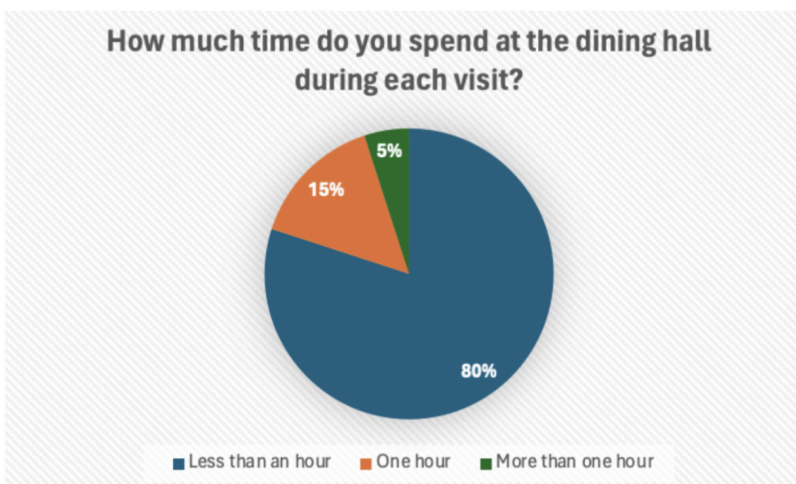
Anecdotes

- **Food quality:** "To be honest, I find that sometimes the food appears to be undercooked." "The bread is often stale, especially for the burger station, which makes it difficult to finish my meal."
- **Portion size:** "I find the portion to be too little, but then when you come back for more you aren't as hungry for the same amount of food," "Sometimes I am given too much food because there is no option for portion sizes."
- **Limited time:** "Time restrictions like having to be somewhere."

Figure 11. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food?

According to Figure 9, when students were asked about the biggest barrier they face to finish their meal, 14 out of 20 students (70%) mentioned that food quality is the major barrier. They specifically indicated about some of the meats being raw. The second biggest barrier, confirmed by 4 out of 20 students (20%), was determined to be the portion size. These 4 students mentioned that the portion size is too small. Lastly, 2 out of 20 students (10%) stated that limited time was the reason they throw away food.

Time Spent at Open Kitchen



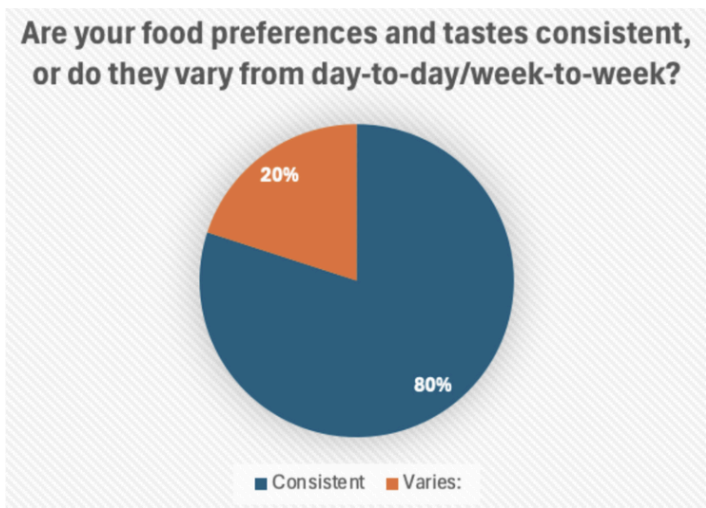
Anecdotes

- **Less than an hour:** "Depends on the meal, but on average 30 minutes"
- **One hour :** "Around an hour"
- **More than one hour :** " 2-3 hours with friends"

Figure 12. How much time do you spend at the dining hall during each visit ?

According to Figure 10, when 20 students were interviewed about the amount of time they spend at the dining hall during each visit, a significant majority of 16 students (80%) reported spending less than an hour. Meanwhile, 3 students (15%) indicated that they spend exactly one hour per visit. Only 1 student out of the 20 surveyed (5%) mentioned spending more than an hour at the dining hall. This distribution suggests that most students prefer shorter dining experiences.

Exploring Food Preferences Over Time



Anecdotes

- **Consistent:** “Very consistent.”
- **Varies:** “Vary week-to-week depending on what I am feeling.”

Figure 13. Are your food preferences and tastes consistent, or do they vary from day-to-day / week-to-week?

Based on Figure 11, when 20 students were asked about their food preferences and tastes, the results showed that the majority of them, 16 out of 20 interviewed students (80%), indicated that their food preferences remain consistent from day-to-day and week-to-week. In contrast, 4 out of 20 survey students (20%) reported that their food preferences and tastes vary over time. Therefore, it can be inferred that while a significant portion of students stick to their favored choices, there is a smaller group that seeks variety in their meals.

Awareness of Food Waste



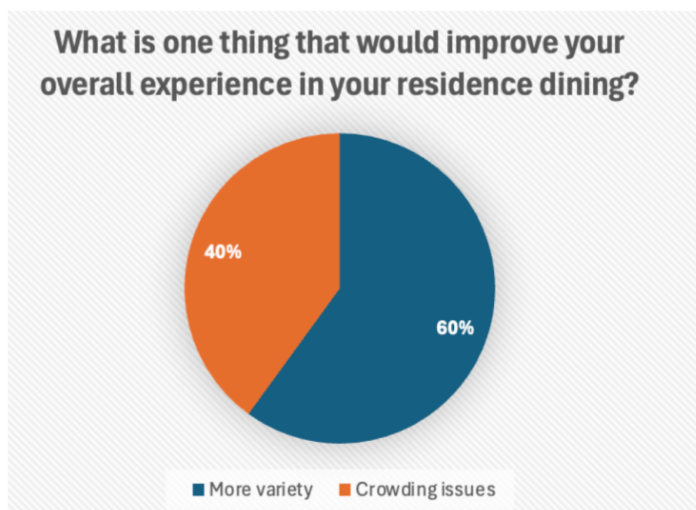
Anecdotes

- **Aware:** "I feel concerned for the environment and I feel bad to be wasting food because of hunger."
- **Not aware:** "I could be more aware."

Figure 14. How aware are you about food waste / what aspects of it concern you?

According to Figure 12, when asked about their knowledge of food waste and the concerns related to it, a vast majority of the participants, which included 17 out of 20 students (85%), responded that they were aware of the issue of food waste. On the other hand, 3 out of 20 students (15%) stated that they were not aware of the issues related to food waste. This data indicates a high level of awareness among most students surveyed regarding food waste.

Improving Experience at Open Kitchen



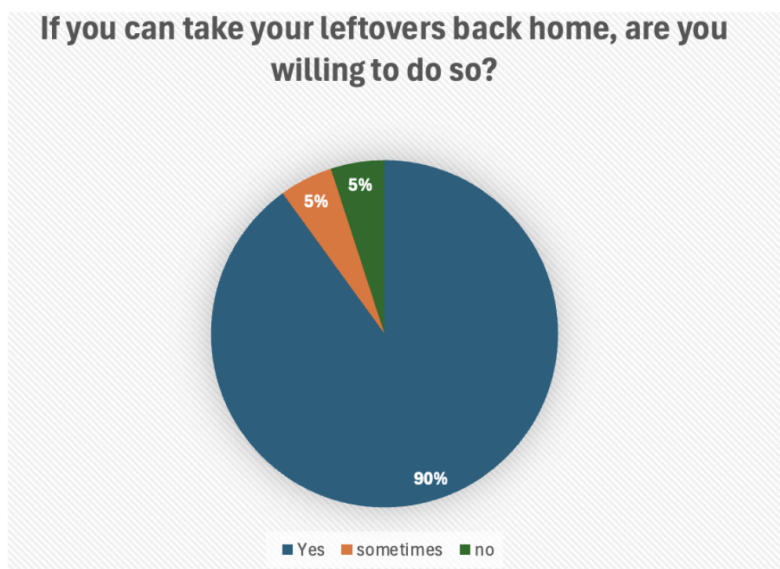
Anecdotes

- **More variety :** "Improving the taste quality, more variety for vegetarians because there is often lack of options at Open Kitchen."
- **Crowding issues** "Can be pretty crowded at times, so that can influence whether they come to Open Kitchen or not."

Figure 15. What is one thing that would improve your overall experience in your residence dining?

According to Figure 13, the interview was conducted among 20 students to know their views about how their experience in residence dining could be improved. Out of 20 students, 12 students (60%) suggested that having more food options would enhance their dining experience, while 8 students (40%) identified crowding issues as a significant factor that, if improved, would positively impact their experience. This means that the majority of students would like to have a wider variety of meals, while a significant minority believes that reducing overcrowding is crucial for a better dining environment.

Willingness to Take Leftovers Home



Anecdotes

- Yes: " Yes, I am willing to take leftovers home."
- Sometimes : " If I don't like the food, then no, but if it's something that I am too full to eat but enjoy I would take home."
- No : "I would not take my food home because I usually leave it for a reason, like undercooked food."

Figure 16. If you can take your leftovers back home, are you willing to do so?

According to figure 14, the majority of students interviewed, 18 out of 20 (90%), expressed their willingness to take leftovers back home if given the option. Meanwhile, 1 out of 20 students (5%) stated that they would sometimes be willing to take leftovers home, and another 1 out of 20 (5%) said they would not be willing to do so. This suggests that most students are open to the idea of taking leftovers home, potentially reducing food waste.

4. Discussion

4.1 Key Contributors to Food Waste at Open Kitchen

The results of our survey highlight important findings as they relate to food waste at Open Kitchen. Restating from our survey results, the two primary barriers to finishing food are food quality and portion size: 70% cited food quality as being a main barrier to food waste, while 20% reported portion sizes being too large and contributing to not finishing their plates. This suggests that quality control measures to 1) increase the perceived quality of food served to students and 2) eliminate or address less-frequented menu items and/or food stations, as well as offering more flexibility in food portion offerings, may be effective in reducing food plate waste.

4.2 Student Preferences

The majority of survey participants are Asian (50%), and this number correlates strongly to the 55% of students who ranked Asian cuisine as their most preferred. On the contrary, only 9% of the participants prefer European cuisine, yet European dishes account for approximately 40% of the menu offered at Open Kitchen. This suggests that Open Kitchen's menu may not accurately align with the cuisine preferences of students. Another interesting finding was that preferences varied strongly when it came to ranking the 11 stations of Open Kitchen. Soup bar, for instance, was unanimously the least visited station with over 80% of participants ranking the soup bar among their top 3 least visited stations. Consequently, the soup bar and other less visited food stations should be the primary focuses of future research and operational re-evaluations. Improving the quality and/or selection at these stations may greatly enhance the overall dining experience for students at Open Kitchen, and moreover, help reduce food waste.

4.3 Gap between Students' Willingness and Action to Reduce Food Waste

Another key observation is that there is a definitive gap between students' willingness to engage and students' actions as they relate to food waste reduction. Most students (74%) stated that they consider food waste to be a major societal issue, but only a small portion of students (18%) reported being very engaged in

reducing food waste. It is likely that many of these students who reported they had a good awareness of food waste simply do not have the sufficient motivation or habits in place to change their behavior. Future research may focus on finding ways to bridge the dissonance between student awareness and student action. Our team reached out to the culinary team at Open Kitchen for their perspective on the situation, and a key idea that came out of our discussions was the implementation of measures to increase the monitoring of students. One idea put forth by the culinary team was to set up a screen next to the compost bins, which would give a live count of that day's food waste in kilograms. In general, measures and campaigns similar to this example that work to increase students' engagement and/or motivations around food waste reduction could be very useful.

Although the majority of students are aware of food waste, it is important to mention that 15% of students expressed that they are not very confident or lack awareness about food waste issues. It appears this minority falls predominantly into the category of wasting food "most of the time". Therefore, it could be beneficial to implement measures targeted at this particular segment of the student body that increase foundational awareness and education about food waste. In our talks with the Open Kitchen culinary team, some ideas included more in-person booths and interactive events. According to Painter et. al. (2016), educational, informative approaches are typically the most effective in the context of reducing food waste in university dining halls. This points to the efficacy of targeted educational outreach to this particular portion of the student population in fostering awareness and involvement in food waste reduction

4.4 Diet Type vs. Food Preferences

An interesting finding was that vegetarians and vegans did not report significantly higher levels of awareness about food waste compared to the rest of the students surveyed. Our survey elucidated the fact that vegetarians and vegans in this research generate as much food waste, if not more (i.e. more reported leaving leftover food on their plates) than non-vegetarian diners. 8% of vegetarians reported generating zero food waste, while 18% of non-vegetarians reported generating zero food waste. While plant-based diets certainly play an important role in reducing food waste, they are not the end-all-be-all for sustainable eating. On the other side, there is certainly a place for some meat-based meals and dishes within the scaffolding of a sustainable menu at Open Kitchen.

4.5 Time Spent Eating vs. Leftover Food

Another interesting finding was the relationship between the time spent eating and the prevalence of leftover food. 80% of respondents reported spending less than an hour at Open Kitchen and 75% of respondents reported sometimes having leftover food on their plates. Those 80% who spend less than an hour per visit were a part of the respondents who reported that they sometimes had leftovers. This indicates that time constraints may be a significant factor in students having food leftover on their plates. To address this, campaigns focused on mindful eating or encouraging students to not feel pressured to eat large meals may help cut down on time-related food waste.

4.6 Research Limitations

It is important to note that our research is limited in scope as the findings obtained in this project specifically pertain to the Open Kitchen residence dining hall. Our project initially covered all three residence dining halls; however, through consultation with our stakeholder, we decided to focus our research on Open Kitchen due to the time constraints of our project. Accordingly, our findings may not be fully representative of experiences across all three residence dining halls: Gather, Feast, and Open Kitchen. Secondly, due to the intrinsic nature of our research design, our survey and in-person interviews relied on self-reported data from respondents. That being mentioned, there were no foreseen pressures that we placed on respondents that would have incentivized them to be untruthful, and we have a high degree of confidence that our responses were robust.

5. Recommendations

5.1 Recommendations for Action

In light of our findings, we have created a number of actionable steps that UBC Food Services can implement to reduce food waste and GHG emissions generated at the Open Kitchen residence dining hall. The following section outlines both short-term actions to be implemented by the start of the UBC Winter Session 2024, and long-term actions to be implemented by the year following. The recommendations for action are rooted in a

number of key findings from the research, and show potential for improving the state of food waste at the Open Kitchen, as well as other All-Access residence dining halls at UBC.

5.1.1 Short Term Recommendations

For UBC Food Services operating at the Open Kitchen Residence Dining Hall:

1. Consider adopting the following measures to prevent food waste:

1.1. Allowing students flexible portion sizes

Justification: Insights shared from the student interviews conducted outside of the Open Kitchen residence dining hall reveal that 20% of students indicated portion sizes as a barrier to finishing their meal. Several students were in agreement that flexibility in regards to portion size could improve their ability to finish their meal. One student shares in the anecdotes for : **“I find the portion to be too little, but then when you come back for more you aren’t as hungry for the same amount of food.”**, another echoing similar remarks stating: **“Sometimes I am given too much food because there is no option for portion sizes.”** These anecdotes suggest that allowing students greater flexibility in choosing their desired portion sizes can mitigate waste stemming from overconsumption. To establish a more targeted approach, UBCFS can identify which stations generate the most food waste, and establish portion size protocol accordingly.

1.2. Including more Asian soups at the Soup Bar

Justification: According to our online survey results, 55% of first-year students specified a preference for Asian cuisine. Additionally, the Soup Bar was identified as the least frequented station, with 68 students indicating it as their least visited option. Therefore, we suggest offering more Asian soups at the Soup Bar, as this will both satisfy the preferences of those students that indicated a taste for Asian cuisine, as well as enhancing resource efficiency at the Soup Bar. Ultimately, this recommendation shows promise in mitigating food waste resulting from the Soup Bar.

1.3. Implementing additional quality control measures

Justification: Based on the results from the interviews conducted outside of the Open Kitchen residence dining hall, students identified food quality (70%) as the top barrier that prevents them from finishing

the food on their plate. Several students reported instances where they believed the food to be undercooked. One student shared an anecdote, stating: **“To be honest, I find that sometimes the food appears to be undercooked.”** When asked whether they would take leftovers home or not they stated: **“I would not take my food home because I usually leave it for a reason, like undercooked food.”** This evidence suggests that UBCFS may benefit from taking additional quality control measures to ensure that they are providing consistently high-quality meals that meet the expectation and preferences of their student population, thereby minimizing food waste and enhancing overall dining experience. Below are several specific actions aligned with the broader recommendation of implementing additional quality control measures.

1.3.1. Implementing monthly culinary training sessions

Justification: Such quality control measures can include providing monthly staff training sessions, where the UBCFS team can develop and implement skill development sessions for kitchen staff that focuses on proper food handling, as well as cooking techniques and standards. Emphasis should be placed on the importance of consistency, as instances such as those described above where food may not meet the standards set by UBCFS, can ultimately contribute to food waste generation.

1.3.2. Establishing a designated role for consistent quality checks

Justification: To ensure that the food at each station is up to standards prior to plating for consumption, we suggest the establishment of designated staff members to take on the role of monitoring food quality at various stages of the production process. This individual plays a crucial role in ensuring that the food prepared for service meets the standards set by UBCFS, while also serving as an extra layer of inspection to verify the quality of the food.

1.3.3 Establishing a consumer feedback channel

Justification: While the students we interviewed shared valuable insights into the barriers related to their plate waste, it is equally important to have the ability to communicate this information with the staff that is responsible for meal preparation. Therefore, we propose that UBCFS develops an accessible channel that allows students to provide feedback regarding

specific stations and particular meals served that day. This encourages students to provide constructive feedback through suggestion boxes, online surveys, regular feedback sessions, as well as allowing the food service team to proactively identify areas that require immediate attention and improvement. For example, multiple students shared that specific stations often put too much sauce on the food, making it difficult to finish their meal. Thus, receiving consistent feedback everyday could enable staff to make the necessary refinements to service, ultimately tackling minor factors that influence consumer food waste.

5.1.2 Long Term Recommendations

For UBC Student Housing and Community Services:

1. Consider implementing the following measures to improve awareness around food waste

1.1 Incorporating discourse around food waste during orientation week for first-year residents enrolled in the AAD

Justification: Our findings reveal that only 18% of students feel that they are actively engaged in reducing food waste, whereas 41% of students only feel slightly engaged. Moreover, a notable 15% of students report that they are not very aware of food waste issues. These findings justify that there's a significant portion of students who either feel minimally engaged in reducing food waste or lack awareness of the issue altogether. As discussed in the analysis, this highlights the potential efficacy of educational initiatives to help address the issue of food waste. Thus, we propose that UBC Student Housing consider developing dialogue around mindfulness of waste behaviours and navigating the AAD framework of their residence dining hall. This can be incorporated into the orientation week when students first become acquainted with their dining hall, and have the opportunity to establish mindful habits at the beginning of the year. Another approach to include conversation around food waste habits could involve organizing workshops aimed at engaging students in practical strategies to minimize their food waste, while also educating them on the subject.

5.2 Recommendations for Future Research

Based on the scope and time constraints of our research project, we propose a few recommendations for future research that we believe will enhance some of the findings from our results as well as some of the goals, objectives and purposes of this project.

5.2.1 Long Term Recommendations

- 1. Consider exploring the following to obtain a more complete understanding of food waste drivers and student food preferences:**

1.1 Exploring more specific aspects of student food preferences

Justification: The purpose of this project was to develop a comprehensive understanding of students' food plate waste and food preferences that can ultimately contribute to reducing GHG emissions that are resulting from campus food waste and consumption at UBC. While we were able to develop a baseline understanding of student food preferences at the Open Kitchen dining hall, the time constraints of our project limited our ability to delve deeper into specific aspects such as preferred flavours, temperatures and ingredients that influence food choices.

1.2 Replicating this study at the other two residence dining halls at UBC: Gather and Feast

Justification: We recognize that the scope of our study was limited to the Open Kitchen residence dining hall, and relied on self-reported data. As a result, our findings may not be fully representative of all dining experiences across UBC campus. Hence, we suggest that this study be replicated across the other two residence dining halls on UBC campus, Gather and Feast. This approach would provide a more comprehensive understanding of student food preferences and behaviours, ensuring a broader representation of the university dining experiences.

- 2. Consider researching the following to explore its influence on student food waste:**

2.1 Exploring the efficacy of educational tools on reducing student food waste

Justification: Drawing on established literature and promising practices for addressing food waste at university canteens, educational approaches are often found to be effective in encouraging students to mitigate their food waste (Painter et al., 2016). Within the context of a university dining hall, implementing food waste awareness signage proves to be an effective strategy to combat food waste.

Therefore, we propose conducting similar research at UBC residence dining halls to investigate the potential impact strategic signage around the cafeteria has on reducing food waste generation.

6. Conclusion

In conclusion, our extensive research conducted through this project enabled us to obtain a baseline understanding of student food preferences and motivators behind food waste. This was achieved through our online surveys, in-person booth interviews, and preliminary literature review. Moreover, through this project we were able to analyze students' perceptions on food waste, as well as their engagement and awareness on the broader issue. Drawing on the discussion and analysis of the results, we developed a set of recommendations for action to reduce food waste, as well as potential avenues for further research. We believe that these recommendations can help UBCFS mitigate food waste generated at Open Kitchen, as well as contribute to the broader food waste and GHG emissions reduction goals at UBC. Our hope is that the research conducted through this project serves as a valuable tool for UBCFS, and contributes to the ongoing endeavours working towards a more sustainable, environmentally responsible academic community.

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8. Appendix

Survey data: [Qualtrics_Survey.zip](#)

In-person interview transcripts: listed below

March 13, 2024; Open Kitchen at Orchard Commons

Interview #1 *Did not want to be recorded*

1. How much time do you spend at the dining hall during each visit?
30mins
2. How often do you have leftover food on your plate that you have to throw away?
1/3 of the time
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food?
4. E.g. food quality, portion size, insufficient dining time, poor appetite
Too much sauce on the food, because they add the sauce for you.
5. What factors contribute to you leaving some of your food uneaten? If there is a specific food option, specify please.
Sometimes the food is undercooked (chicken)
6. If you can take your leftovers back home, are you willing to do so?
Would not take food home because they often leave food for reason like undercooked or too much sauce
7. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Very consistent
8. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: meatball station; least: fish station (allergy)
9. What is the biggest factor for you personally that dictates your level of concern about food waste? E.g. upbringing, socio-economic class, concern for the environment.
Don't think about it regularly, there is concern and try to mitigate food waste when they can
10. What is one thing that would improve your overall experience in your residence dining room?
They have allergies, so it would be nice to be able to choose how much sauce and condiments are put on the entree. More plain entrees and then being able to add would be better

Interview #2

1. How much time do you spend at the dining hall during each visit?
Depends on the meal, but on average 30 minutes
2. How often do you have leftover food on your plate that you have to throw away?
Once a week
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Taking more than you actually eat, so often contribute to food waste
4. What factors contribute to you leaving some of your food uneaten? If there is a specific food option, specify please.

Taking more than you actually eat, so often contribute to food waste

5. If you can take your leftovers back home, are you willing to do so?
Pretty consistent
6. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Pretty consistent
7. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Vegetarian kitchen ; Least: Salad Bar. Food never attracted them to the salad bar
8. What is the biggest factor for you personally that dictates your level of concern about food waste? E.g. upbringing, socio-economic class, concern for the environment.
Everytime they waste, they feel concerned. Feels that it happens way more at OK, since don't know what it tastes like they take food that ends up not being to their preference
9. What is one thing that would improve your overall experience in your residence dining room?
**First try to have more healthy habits i.e put a lot of unnecessary oil/sauces
Try to sensitize people about food waste
When people ask for a lot of food, then the servers can ask them to come back for more after they finish.**

Interview #3

1. How much time do you spend at the dining hall during each visit?
Around an hour
2. How often do you have leftover food on your plate that you have to throw away?
Once every 6-7 visits
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
**To be honest the food is not the best, sometimes chicken is raw, food is undercooked, defrosted.
Usually just because take too much and can't finish the rest**
4. If you can take your leftovers back home, are you willing to do so?
Yes, they would take them easily if they provided boxes to take home.
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Very consistent, always eat the same thing, but the dining hall is not consistent with meals so this affects consistency
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
**Fav: Custom Kitchen but not good all the time
Least fav: Custom Kitchen because its not good all the time**
7. How aware are you about food waste/ what aspects of it concern you?
I don't think much about food waste; my focus is more on the variety and quality of the food available
8. What is one thing that would improve your overall experience in your residence dining room?
Didn't answer

Interview #4

1. How much time do you spend at the dining hall during each visit?
Frequency: OC visit once a day, but all the other dining halls more often
Time spent ranges : 30 mins by myself, 1 hour with others
2. How often do you have leftover food on your plate that you have to throw away?
Not much, once a month if there is a meal that they don't like
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Food Quality is the main reason they don't finish the meal
4. If you can take your leftovers back home, are you willing to do so?
Yes, I don't usually like having leftovers
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Stays the same
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Vegetarian Station
Least: Custom Kitchen
7. How aware are you about food waste/ what aspects of it concern you?
Aware of food waste, sees friends throwing out food. But not particularly common knowledge
8. What is one thing that would improve your overall experience in your residence dining ii?
Environment: Seating can be cluttered
Food wise: more culturally relevant foods

Interview #5

1. How much time do you spend at the dining hall during each visit?
Somewhere between 20-40 mins depending on whether eating with others
2. How often do you have leftover food on your plate that you have to throw away?
Not very often, raised in a household that they don't waste. Once every 15 meals
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Rarely portion sizes, usually because of the food quality
Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Generally consistent, likes trying different foods
4. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Global Bowl Kitchen / Square Kitchen
Least: Flex Station
5. How aware are you about food waste/ what aspects of it concern you?
Does concern, did project on it. Concerns them in general, but don't know much about UBC policies and work on food waste
6. What is one thing that would improve your overall experience in your residence dining ii?

Enjoys the cultural foods options, more variety at GatherOrchard has much smaller selection, but makes them really happy when they see the cultural options

Interview #6

1. How much time do you spend at the dining hall during each visit?
30 minutes
2. How often do you have leftover food on your plate that you have to throw away?
Couple times a week
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food?
E.g. food quality, portion size, insufficient dining time, poor appetite
Food quality affects the amount the throw away
4. If you can take your leftovers back home, are you willing to do so?
Probably, yah
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Vary Week to week depending on what they are feeling
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Square Kitchen
Least: The Grill Kitchen
7. How aware are you about food waste/ what aspects of it concern you?
Concern about the environment, feels bad to be wasting food because of hunger
8. What is one thing that would improve your overall experience in your residence dining ii?
Improving the taste quality, more variety for vegetarians because there is often lack of options at Open Kitchen

Interview #7

1. How much time do you spend at the dining hall during each visit?
30 minutes
2. How often do you have leftover food on your plate that you have to throw away?
1 out of 5 meals
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite full or preference
Food preferences can be a barrier, as well as being full from too much on plate
4. If you can take your leftovers back home, are you willing to do so?
Yes, willing to take leftovers home
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Pretty Consistent
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Global
Least: Custom Kitchen
7. How aware are you about food waste/ what aspects of it concern you?

Pretty aware, concerns them when they see people throwing out a lot

8. What is one thing that would improve your overall experience in your residence dining?
Seating improvements

Interview #8

1. How much time do you spend at the dining hall during each visit?
30 minutes
2. How often do you have leftover food on your plate that you have to throw away?
50% of the time
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite full or preference
Sometimes it time, a lot of time stuff comes with the meal that they don't like
4. If you can take your leftovers back home, are you willing to do so?
Yes, they would
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Pretty consistent
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Vegetarian Kitchen
Least: Custom Bowl (tons of carbs and not enough protein ; chickens kind of weird)
7. How aware are you about food waste/ what aspects of it concern you?
Could be more aware, said that information around food waste could
8. What is one thing that would improve your overall experience in your residence dining ii?
More options for food and less restrictions on portion sizes

Interview #9 & #10

1. How much time do you spend at the dining hall during each visit?
Depends on the meal
Average: 20-30 minutes
2. How often do you have leftover food on your plate that you have to throw away?
Almost every visit
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Small portion is too little, but then when you come back for more you aren't as hungry for the same amount of food.
Spice warning: too spicy too finish
4. If you can take your leftovers back home, are you willing to do so?
Yes
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Look at all the stations before, and try different things

6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours

Fav: Vegetarian

Least: Sandwiches Kitchen

7. How aware are you about food waste/ what aspects of it concern you?

Aware because are part of or aware of sustainability initiatives

8. What is one thing that would improve your overall experience in your residence dining?

Spice: include rating and full portion or half size option

More self-serve options, especially with portion sizes because its like too little or too much.

Interview # 10

1. How much time do you spend at the dining hall during each visit?

Average: 20-30 minutes

2. How often do you have leftover food on your plate that you have to throw away?

half the visits

3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite

Small portion is too little, but then when you come back for more you aren't as hungry for the same amount of food.

4. If you can take your leftovers back home, are you willing to do so?

Yes

5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?

Hears certain things about foods, so stay away from those. Relatively consistent otherwise

6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours

Fav: Square Kitchen

Least: Global Bowl Kitchen

7. How aware are you about food waste/ what aspects of it concern you?

Aware because are part of or aware of sustainability initiatives

8. What is one thing that would improve your overall experience in your residence dining?

More self-serve options, especially with portion sizes because its like too little or too much.

Interview #11

1. How much time do you spend at the dining hall during each visit?

40 minutes on average, but depends on what meal ex. Breakfast is a lot quicker (5 minutes)

2. How often do you have leftover food on your plate that you have to throw away?

Once every five visits

3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite

Food preferences

Sometimes when very full but not usually

4. If you can take your leftovers back home, are you willing to do so?

If they don't like them then no, but if it's something that they were too full to eat but enjoyed they would take home

5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Consistent, just hard to explain what specific foods they don't like. Pescatarian so limits choices
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Vegetarian Kitchen
Least: Sandwhich Kitchen
7. How aware are you about food waste/ what aspects of it concern you?
Notice if there is leftover food on plate, but would be open to learning more details about its environmental impacts.
8. What is one thing that would improve your overall experience in your residence dining?
Prefers the stations that allow more flexibility on what is included in the meal. Would like more self-serve options

Interview #12

1. How much time do you spend at the dining hall during each visit?
30 minutes
2. How often do you have leftover food on your plate that you have to throw away?
Try to finish everything, so 95% nothing to throw away
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Time restrictions like having to be somewhere
4. If you can take your leftovers back home, are you willing to do so?
Yes, they would
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Try new things, varies day to day
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav:
Least:
Doesn't really have a consistent favourite, depends on the options that day and what they are feeling like eating
7. How aware are you about food waste/ what aspects of it concern you?
I am aware of food waste
8. What is one thing that would improve your overall experience in your residence dining?
More variety, more stations
Can be pretty crowded at times, so that can influence whether they come to Open Kitchen or not

Interview #13

1. How much time do you spend at the dining hall during each visit?
2-3 hours with friends
20 mins alone
2. How often do you have leftover food on your plate that you have to throw away?
Doesn't end up with a lot of excess food leftover

3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
**Given too much food because there is no option for portion sizes.
Labelling can be misleading ex. Saying it's vegan but its not actually vegan**
4. If you can take your leftovers back home, are you willing to do so?
Yes, finds it weird that it's not an option
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Consistent
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: depends on which offers non-meat options
7. How aware are you about food waste/ what aspects of it concern you?
Anxious about food waste, and sustainability here
8. What is one thing that would improve your overall experience in your residence dining?
More self-serve portion options

Interview #14

1. How much time do you spend at the dining hall during each visit?
20 mins -1.5 hours
2. How often do you have leftover food on your plate that you have to throw away?
Once every five visits
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Food preferences, or just full
4. If you can take your leftovers back home, are you willing to do so?
If just full, yes would take back home
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Pretty consistent, meals are usually the same
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
**Fav: Square Kitchen/Vegetarian Kitchen
Least: Depends on the day**
7. How aware are you about food waste/ what aspects of it concern you?
**Try not to waste food, pretty conscious of food waste
Likes the signs because they change decision to waste**
8. What is one thing that would improve your overall experience in your residence dining?
More flexibility in terms of the staple entrees, ex. adding jalapenos and mayo to the grill cheese.

Interview #15

1. How much time do you spend at the dining hall during each visit?
10 mins -20 mins
2. How often do you have leftover food on your plate that you have to throw away?
Once every five visits

3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Food preferences, or just full
4. If you can take your leftovers back home, are you willing to do so?
If just full, yes would take back home
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week?
Pretty consistent, meals are usually the same
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating them? E.g. food quality, cuisine, station open hours
Fav: Square Kitchen/ Sandwhich
Least: Custom/Soup Bar
7. How aware are you about food waste/ what aspects of it concern you?
Try not to waste food, pretty conscious of food waste
8. What is one thing that would improve your overall experience in your residence dining?
9. **More flexibility in terms of the staple entrees, ex. When they add jalapenos and mayo to the grill cheese, would prefer if it was offered plainly without additions**

Interview #16

1. How much time do you spend at the dining hall during each visit?
1 hour
2. How often do you have leftover food on your plate that you have to throw away?
Every three or four visits
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Almost always the stale bread, especially for burgers
4. If you can take your leftovers back home, are you willing to do so?
Probably yes
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Pretty consistent
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Global Kitchen
Least: Grill Kitchen (burgers get boring)
7. How aware are you about food waste/ what aspects of it concern you?
Fairly aware. Grew up with compost and it was part of daily life. Don't actively think about, but when grabbing seconds think about it more
8. What is one thing that would improve your overall experience in your residence dining?
If bread could be less stale

Interview #17

1. How much time do you spend at the dining hall during each visit?
30 minutes
2. How often do you have leftover food on your plate that you have to throw away?
Once a week

3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Quality of the food. If they ever do throw out food its because of the quality
4. If you can take your leftovers back home, are you willing to do so?
Yes, for sure
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Pretty consistent, not very picky
6. How aware are you about food waste/ what aspects of it concern you?
Do think about, and try to finish meal at the Open Kitchen almost everytime
7. What is one thing that would improve your overall experience in your residence dining?
Different options for different days, often repeats
Increasing variety each day

Interview #18

1. How much time do you spend at the dining hall during each visit?
40 mins -1 hours
2. How often do you have leftover food on your plate that you have to throw away?
Every other visit
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
4. If you can take your leftovers back home, are you willing to do so?
Food preferences and food quality
5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Pretty consistent
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Grill Kitchen
Least: Vegetarian Kitchen
7. How aware are you about food waste/ what aspects of it concern you?
Pretty aware of it, but tries not to unless preferences do not permit finishing the meal
8. What is one thing that would improve your overall experience in your residence dining?
Less oil, more healthy options

Interview #19

1. How much time do you spend at the dining hall during each visit?
20-30 mins
2. How often do you have leftover food on your plate that you have to throw away?
Try to not have any, but bring tupperware to take home leftovers
3. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Mostly food quality or given too much food
4. If you can take your leftovers back home, are you willing to do so?
Yes, willing to do so

5. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Tend to not try new foods, sticks to the same stations/food everytime
6. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Cookies (whatever station that is)
Least: depends on the food
7. How aware are you about food waste/ what aspects of it concern you?
Pretty significant, they feel bad because growing up was reminded about people going hungry.
Never really connected to climate change
8. What is one thing that would improve your overall experience in your residence dining?
Hears that people complain about prices. Open Kitchen seems to have higher prices than other residence dining halls. Don't usually come here for dinners because of the prices

Interview #20

- A. How much time do you spend at the dining hall during each visit?
More than 30 mins, less than one hour.
- B. How often do you have leftover food on your plate that you have to throw away?
Try not to, but sometimes the food is too dry.
- C. Can you finish your meal? If not, what is a barrier that prevents you from finishing your food? E.g. food quality, portion size, insufficient dining time, poor appetite
Mainly food quality
- D. If you can take your leftovers back home, are you willing to do so?
Yes, would take home leftovers
- E. Are your food preferences and tastes consistent, or do they vary from day-to-day/week-to-week? What factors influence these variations in cravings?
Sticks to certain stations, doesn't experiment much with new options
- F. Expand upon your favourite and least favourite food stations at Open Kitchen. Why or why don't you like eating at them? E.g. food quality, cuisine, station open hours
Fav: Square Kitchen
Least: Grill Kitchen
- G. How aware are you about food waste/ what aspects of it concern you?
Pretty concerned about it, they feel guilty wasting food
No environmental aspect, more just moral obligation
- H. What is one thing that would improve your overall experience in your residence dining?
Allowing students to take food home
Spreading out different food options during high traffic times, some stations rarely visited others a lot more.