

FEASIBILITY ANALYSIS

14xx West 46th Ave

Vancouver, BC V6M 4G4

March 26, 2022

Celene Fung

Senior Policy Planner

University of British Columbia

2210 West Mall, BC V6T 1Z4

Dear Mrs. Fung:

Here is my report, Feasibility Analysis of Enhancing COVID Protection for On-campus dining at UBC. In preparing this report, I have learned a great deal about UBC's current students' opinions on UBC's dining environment under pandemic and other universities' on-campus dining measures against coronavirus. I believe my information represents the thoughts of UBC students. Please consider the proposed recommendations to improve on-campus dining safety at UBC.

UBC campus is home for UBC students to participate in various student activities. Since back to campus, UBC has announced a series of measures to prevent coronavirus transmission. However, on-campus dining, an activity with a high potential for spreading, is highly under-protected.

Therefore, it is time for UBC Community to act and provide UBC students and faculty with a safer dining environment.

It is enjoyable to work on this project and welcome to answer any questions. Please email at han.li956100@gmail.com anytime.

Sincerely,



Han Li.

**Feasibility Analysis of Enhancing COVID
Protection for
On-campus Dining at UBC**

for

Celene Fung

Senior Policy Planner

UBC Community Planning and Programming

&

Gabriella Scali

Community Programs and Outreach Manager

UBC Community Planning and Programming

By

Han Li

ENGL 301 Student

University of British Columbia

March 16, 2022

Table of Contents

	PAGE
I. Abstract	iii
II. Introduction	1
1. Background	1
2. Statement of Problem	1
3. Purpose of the Report	2
4. Description of Data Source.....	2
5. Scope of the Report	2
III. Data Section.....	3
1. On-campus Indoors Dining Areas	3
2. Current COVID-19 Protocols	4
3. Survey.....	5
4. Other Universities.....	7
IV. Conclusion	8
1. Summary and Overall Interpretation of Findings	8
2. Recommendations.....	9
Works Cited.....	11
Appendix	12

Figures and Tables

Figure 1 Weekdays 15:00 at AMS Nest.....	3
Figure 2 Weekdays 15:00 at Life Building	3
Figure 3 Survey-Q3 Do you eat with friends (on campus)?	6
Figure 4 Survey- Q7 Dining in UBC is?	6
Figure 5 Robotic Delivery Fleets.....	8
Figure 6 Anti-droplet isolation boards.....	8

FEASIBILITY ANALYSIS

Abstract

The feasibility of enhancing COVID protection for on-campus dining at UBC depends on the Coronavirus situation in BC, UBC's current prevention measures for eating on-campus, and student's perception of the safety and comfort of on-campus dining.

This report surveys UBC students collecting their current dining habits and opinions on UBC's dining environment. The survey results show that most students are accustomed to dining with friends indoors, which cannot guarantee effective social distance, leaving students with a greater likelihood of infection if exposed to the virus. This report summarizes UBC's current on-campus COVID protection measures and find that they are highly reliant on students' self-consciousness and are general. Overall, UBC fulfils all Provincial Health Orders and Interior Health requirements outlined. However, UBC has a responsibility to propose more comprehensive protection measures for students and faculty on campus safety.

UBC considering enhancing on-campus dining COVID protection should follow these recommendations:

1. Updating UBC Vancouver COVID-19 food protocols.
2. Encouraging students to dine outdoors.
3. Unified entry and exit routes of popular dining areas.
4. Considering a contactless operating system.
5. Designing UBC's ordering app to avoid waiting time.
6. Planning specific dining areas in AMS Nest and Life Building and set acrylic transparent anti-droplet isolation boards.

Introduction

Background

On December 31, 2019, Wuhan first reported viral pneumonia, later officially identified as the novel SARS-CoV-2 virus, which majority calls it as COVID-19. As of March 15, 2022, the international pandemic has infected more than 458 million people and caused more than 6 million deaths (WHO). The sudden outbreak caught countries off guard, and people's studies, work, and lives came to a standstill. It also posed an unprecedented challenge for universities. University campuses are buzzing cultural hubs where students from all over the world study and live close to each other. However, the rapid spread of the coronavirus impacted the foundations of this unique ecosystem.

Statement of Problem

In response to the outbreak of the coronavirus, UBC transited to online learning. Fortunately, as vaccination rates rise, UBC resumes back to campus again. However, coronavirus is challenging to end soon, with the BC Centre for Disease Control and Prevention reporting 236 confirmed new cases in a single day yesterday. UBC students participate in various campus activities, including lectures, club activities and daily activities. Therefore, there is a high probability of rapid transmission if someone is tested positive. Hence, it is vital to enhance COVID-19 protection on campus.

To prevent the spread of COVID-19, UBC has implemented several measures, including masks compulsory during indoor activities and regular seating for each class during the semester. However, on-campus dining has many risks, especially indoors. Coronavirus spreads mainly through two aspects. One is through respiratory droplets from an infected person; the other is by touching something with the virus, then touching the mouth, nose or eyes with unwashed hands. Besides, certain environmental conditions facilitate the transmission, such as re-circulated air (Government of Canada). Therefore, many students gather in confined spaces during mealtimes without wearing

masks for a long time, putting students at high risk of getting coronavirus. There are two main reasons: First, students remove their masks to eat and talk in confined spaces where they cannot keep their distance. Second, students must wait in line for long periods to order or heat their meals due to the similarity of mealtimes.

Purpose of the Report

This report aims to present the findings on the data sources and propose solutions to enhance COVID protection for on-campus dining at UBC. Therefore, it will be more comfortable for students to eat on campus during the pandemic. It benefits students' physical and mental health and positively affects UBC's reputation.

Description of Data Sources

Based on a review of crucial research as well as surveys with UBC students, this report is to (a) determine the extent of student satisfaction with on-campus dining, (b) confirm the feasibility of having acrylic transparent anti-droplet isolation boards in confined dining areas and (c) provide practical recommendations on enhancing student safety for on-campus dining.

Scope of the Report

This report covers five major topics: what are UBC's current on-campus indoor dining areas and how is the environment, what action does UBC take presently sticking to students' on-campus dining, what are UBC students' attitudes towards current indoor dining environment, how many students agree to have isolation boards and what actions are being taken worldwide to mitigate risk.

The report concludes by acknowledging the limitations of the survey samples, the adjustments of BC's current policy on coronavirus and by recommending practical suggestions for our campus.

Data Section

On-campus Indoors Dining Areas

UBC offers a variety of dining options for students, including restaurants, quick service, cafes, dining halls, and bring meals. Excluding the above options with their own separate dining spaces, AMS Student Nest and UBC Life Building are the two most popular indoor dining areas among students. They are student-centered activity hubs that house cafes, restaurants, tables, and quiet study spaces. Here are two pictures of Life and Nest taken around 15:00 on weekdays.

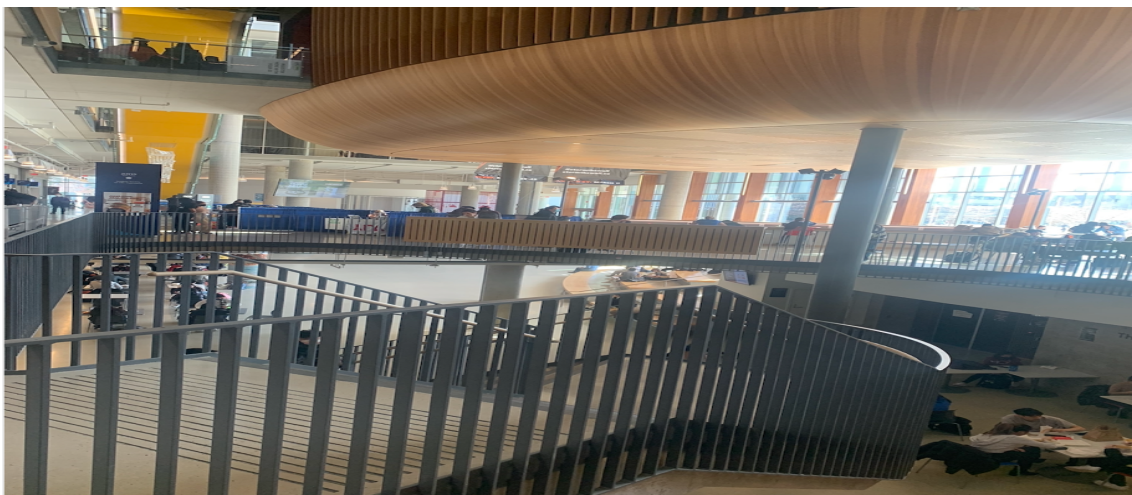


Figure 1: Weekdays 15:00 at Nest



Figure 2: Weekdays 15:00 at Life Building

As shown in Figure 1 and 2, even if it is not the peak mealtime, many students eat and chat with their friends without keeping distance. This kind of dining environment increases the risk of coronavirus transmission.

Current COVID-19 Protocols

The table below summarizes the protocols of UBC food services:

What UBC is Doing	What Students can do
1. Masks are mandatory except when sitting at tables and eating or drinking.	1. Wash hands frequently for 20-30 seconds using soap and water, or an alcohol-based hand sanitizer
2. All guests are required to sanitize when entering the dining hall.	2. Abstain from touching eyes, nose, and/or mouth, especially with unwashed hands
3. Increased frequency of cleaning in high-touch areas.	3. Sneeze or cough by covering mouth and nose with the crease of elbow, then wash hands
4. Hand sanitizer stations are available in all major locations.	4. Don't come to dining hall when you are uncomfortable. Contact the housing front desk for help.
5. Staff are reminded to wash hands frequently with proper hand-washing techniques.	5. Bigger spaces, fewer faces. Keep hang-outs small and give space to people outside your bubble.
6. Staff are asked to stay home if they are ill or have flu symptoms.	

Source: UBC Food Services

UBC follows all requirements outlined by the Provincial Health Orders and Interior Health.

However, both “What UBC is doing” and “What Students can do” are highly reliant on students’

self-consciousness and not detailed enough like “masks are mandatory except when sitting at tables and eating or drinking”. Nevertheless, it does not specify that students should put their masks on if they chat with their friends during eating or drinking. As mentioned before, droplets from an infected person are the primary means of transmission. Therefore, UBC should focus more on how to effectively prevent students from being exposed to each other’s droplets. Besides, some of them are hard to follow under the UBC context. For example, UBC suggests students keep social distance, it is impossible to guarantee effective social distancing as most students have similar mealtime.

Survey

Thirty-seven university students completed a short survey designed to understand students’ current dining habits, obtain opinions on UBC’s dining environment in pandemic and their attitude towards setting acrylic transparent anti-droplet isolation boards. The survey consisted of eight multiple-choice questions and sent to volunteers to participate.

There are thirty-two valid surveys. The first four questions of the survey are to collect frequency, location preferences, habits of students dining on-campus. Nearly 60% of them prefer to dine indoors with friends in common areas on campus, which is in line with previous expectations and demonstrates that UBC students are still at a relatively high risk of dining indoors on-campus. However, as the weather warms, some students may prefer to eat outside.

Q3 - Do you eat with friends (on campus)?

Page Options ▾

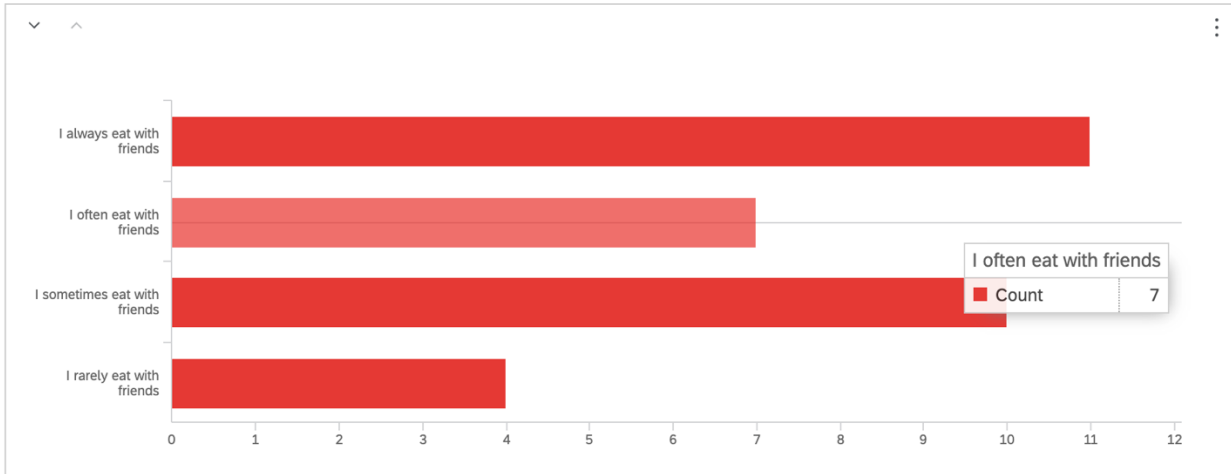


Figure 3: Survey-Q3 Do you eat with friends (on campus)?

Questions five to seven focus on students' opinions towards the current indoor dining environment. It is worth noting that 75% of students believe that "Dining in UBC is sometimes unpleasant and/or uncomfortable". On the other hand, more than half of the students think the dining space is adequate, but the waiting time is long.

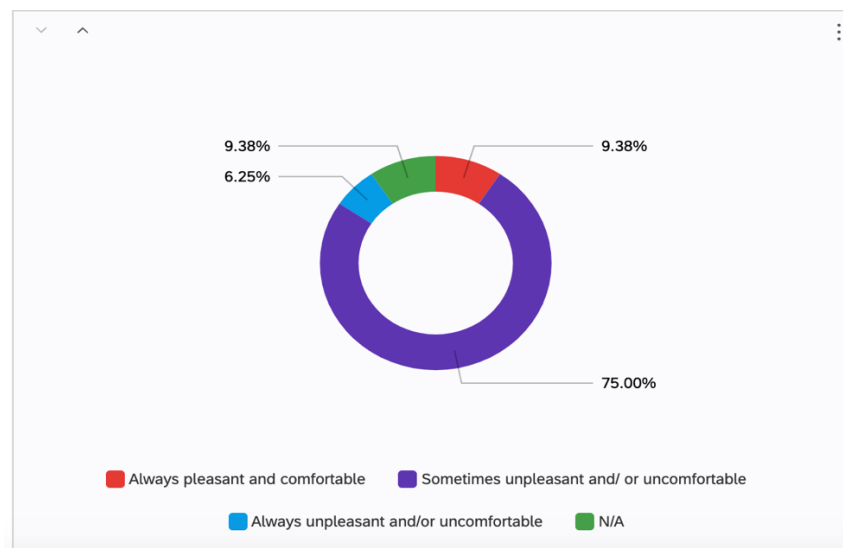


Figure 4: Survey-Q7 Dining in UBC is?

The last question collects students' opinion towards having acrylic transparent anti-droplet isolation board in confined dining areas. There are 43.75% of students strongly agree with having baffles, 21.88% are ok with it, 15.63% of students choose neither agree nor disagree and 18.75% of them disagree. Therefore, most students are in favor of the installation of baffles.

Other Universities

COVID-19 is global, so it is necessary to understand and learn how the other world's universities respond to on-campus dining during the pandemic.

Virginia Commonwealth University, located in Richmond, Virginia (Elliott):

- All campus dining locations are cashless.
- No more buffets on campus
- Strict cleaning and sanitation procedures
- Expand ordering through its "Bite" app and implement "to-go" dining

North Carolina Agricultural and Technical State University (Elliott):

- Use of personal protective equipment
- Timed sanitizing procedures
- Rearrange tables and seating to offer at least six feet of space between students

University of Houston (Fischer):

- Robotic delivery fleets to let students get their food without having to step into crowded dining halls



Figure 5: Robotic delivery fleets at University of Houston

Source: EAB

Hokkaido University, Japan & Gyeongsang National University, Korea have acrylic transparent anti-droplet isolation boards in dining halls:



Figure 6: Anti-droplet isolation boards

Source: RED

Conclusion

Summary and Overall Interpretation of Findings

Coronavirus has posed a significant challenge to daily life and work in the past few years and greatly affects UBC students' campus life and studies. UBC students spend a significant amount of time on-campus, and many students gather, causing a high possibility of transmission.

To prevent the spread of COVID-19, UBC is always in action. However, UBC has not paid enough attention to the indoor dining. Current protocols meet the standard of the official health departments without incorporating UBC's situation. It is vital to have more detailed protocols to guarantee student safety. If coronavirus continues to spread on campus, it causes panic among students and affects UBC's reputation.

Though the BC health departments believe the coronavirus is under control, it is not the time to relax. According to the survey, many UBC students think dining in UBC is not always comfortable and the waiting time is long.

Affected by the pandemic, world universities make changes on students' on-campus dining. The main principle is to maintain social distance and reduce contact.

Recommendations

Although people under 25 years old have the lowest risk of severe disease. However, students' activities can be key to persistent ongoing community transmission. UBC community still can take some immediate and inexpensive steps to mitigate the risk. Please consider the following recommendations:

- Updating UBC Vancouver COVID-19 food protocols.
- Encouraging students to dine outdoors.
- Unified entry and exit routes of popular dining areas.
- Considering a contactless operating system.
- Designing UBC's ordering app to avoid waiting time.
- Planning specific dining areas in AMS Nest and Life Building and set acrylic transparent anti-droplet isolation boards.

As a UBC student, I hope the COVID-19 will go away soon. Our campus gets better and safer.

WORKS CITED

- BCCDC. “BC COVID-19 Dashboard.” *BC Centre for Disease Control*, 2022,
<http://www.bccdc.ca/health-info/diseases-conditions/covid-19/data#COVID-19Dashboard> March 15th
- Elliott, C. “College Food Safety 101: How Do You Safely Feed Students During the Pandemic?” *Forbes*, 2020, <https://www.forbes.com/sites/christopherelliott/2020/08/14/how-will-americas-universities-safely-feed-students-during-the-pandemic/?sh=366e2ed62df0> March 10th.
- Fischer, M. “Gen Z was already transforming campus dining. Then COVID-19 happened.” *EAB*, 2020, <https://eab.com/insights/expert-insight/facilities/gen-z-was-already-transforming-campus-dining-then-covid-19-happened/> March 10th
- Government of Canada. “COVID-19: Main modes of transmission- How COVID-19 spreads.” *Government of Canada*, 2019, <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/main-modes-transmission.html> Feb 15th
- UBC Food Services. “Current COVID-19 Protocols.” *UBC Food Services*, 2022, <https://food.ok.ubc.ca/covid-19/> March 10th
- WHO. “WHO Coronavirus (COVID-19) Dashboard.” *WHO*, 2022, <https://covid19.who.int/> March 10th

Appendix: Survey questions

Link to Survey: https://ubc.ca/qualtrics.com/jfe/form/SV_9mHE3yoxeUx6vwa

- 1) How often do you eat in common areas on campus?
 - More than 5 days a week
 - 3-4 days a week
 - 1-2 days a week
 - Less than 1 day a week
 - Never
- 2) Do you eat indoors or outdoors in common areas on campus?
 - More indoors
 - More outdoors
 - Same
 - I do not eat on campus
- 3) Do you eat with friends (on campus)?
 - I always eat with friends
 - I often eat with friends
 - I sometimes eat with friends
 - I rarely eat with friends
- 4) How long does it take you on average to eat a meal on-campus?
 - 0-15 minute
 - 15-30 minutes
 - 30-45 minutes
 - 45-60 minutes
 - 60+ minutes
- 5) What do you think of the wait time in line for on-campus dining?
 - Super long
 - Long
 - It is reasonable
 - Short
 - Quick
- 6) What do you think of the space(indoors) for on-campus dining ?
 - Lots of space
 - Comfortable space
 - Enough space
 - Limited space
 - Crowded
- 7) Dining in UBC is:
 - Always pleasant and comfortable
 - Sometimes unpleasant and/ or uncomfortable
 - Always unpleasant and/or uncomfortable
 - N/A

8) Acrylic transparent anti-droplet isolation boards can effectively avoid sneezing and coughing without disrupting communication or obstructing eyesight. What do you think about having these baffles in confined dining areas?

- Strongly Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree