G1: Formative Studies & Problem Framing

Topic: UofT Dining Experience

Group: AM-18 · Next Group

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Problem framing and stakeholders

Problem Framing

University of Toronto students constantly need to make quick and efficient decisions as to where and what to eat on campus in multifarious scenarios, especially under constraints such as time pressure and limited attention due to competing tasks, despite having lagging, incomplete, or inaccurate information about available dining options and conditions.

To be specific, as most of the times students whether living on or off campus have to be involved in tight schedules, physical movements among different locations and diverse academic pursuits, accessing food in a convenient and efficient way is a basic everyday need that students must regularly cope with. As to the current situation, students generally depend on insufficient information about dining options such as crowdedness, food variety and dining-related facilities and conveniences. An experience that is commonly found is that waiting time and crowd density are difficult to anticipate, menus may not reflect actual food provision, and nearby dining-relating facilities or conveniences are not always clearly indicated. Consequently, students may arrive at locations where service does not meet reasonable expectations, devote extra time spotting alternatives, or settle for choices that do not meet their needs or even exert additional constraints. Over time, such kind of experiences with their frequent breakdowns might give rise to frustration, wasted time, and discomforting dining experiences, which is otherwise quite avoidable with better information sharing and decision-making support during the academic day.

The challenge resides in how students navigate everyday food decisions in actual campus contexts where conditions keep changing with the moment, and information is discrete and fragmented. Examining how these decisions are made, and where difficulties arise, provides a foundation for identifying opportunities to upgrade students' dining experiences.

Stakeholders Identification

Primary Stakeholders (Targeted End Users)

The primary stakeholders are those students who eat on campus, since they are the targeted end users whose daily dining decisions are directly involved. Within this category, there are different types of students, such as on-campus and off-campus students, as well as students with diverse schedules and varying degrees of access to meal plans. Even with these differences, they are all related to dining options and the challenges identified in this problem space.

Secondary Stakeholders

The secondary stakeholders include campus dining hall staff and food truck vendors, who provide inputs that bear upon students' dining experiences. Their practices in relation to menu availability, staffing, and day-to-day operations contribute to the information and conditions students encounter, even though they do not belong to the direct users of the system.

Tertiary and Facilitating Stakeholders

Other stakeholders, such as campus dining administration, may indirectly benefit from improvements in students' dining experiences, while there are potential groups that may serve a facilitating role in formulating potential solutions, such as the project team. Yet, these stakeholders do not constitute the focus of the current investigation.

Formative Field Studies

To make our project capture real user needs, we conducted three formative research methods, which are questionnaires, semi-structured interviews, and natural observations, between January and February 2026. These methods were intentionally selected to capture both broad behavioral patterns and in depth contextual experiences related to on campus dining.

Each method was chosen to serve a specific purpose within the research process. The questionnaire was designed to efficiently capture high level behavioural patterns such as dining frequency, decision factors, and information needs across a broader student population. This allowed us to understand general trends and determine which topics required deeper exploration. Semi-structured interviews were selected to examine students decision making processes and sources of uncertainty in greater detail, while the vendor interview focused on operational workflows and information communication methods. Natural observations were used to capture real world dining behaviors that may not be fully reflected through self reported data.

For each method, we designed appropriate study instruments tailored to its purpose. The questionnaire included a combination of multiple choice and short answer questions to balance structured responses with flexibility. Interview guides were prepared in advance to ensure consistency across participants while still allowing follow up questions. Observation protocols were created to systematically record behaviors such as queue dynamics, menu visibility, seating searches, phone usage while waiting, and payment interactions. Together, these instruments supported a consistent and focused data collection process across methods.

We distributed an online questionnaire to University of Toronto students through peer networks and group chats, collecting 33 responses in total. The survey focused on dining frequency, decision factors such as distance, wait time, and predictability, use of dining apps or websites, last minute plan changes, payment experiences, and information needs. Students were selected as the primary stakeholder group. Vendors were not surveyed due to limited availability during operating hours and were instead represented through interviews and observations.

We conducted three semi-structured interviews, each lasting approximately 10 to 15 minutes. These included one on campus student with a meal plan, one off campus student, and one food truck vendor. Student participants were recruited through peer outreach, while the vendor interview was conducted in person. These interviews provided perspectives from both primary and secondary stakeholders.

We also conducted two natural observation sessions, each lasting approximately 10 to 20 minutes. One session took place at New College Dining Hall during lunch peak hours, and the other was conducted at campus food trucks. Observations focused on waiting behavior, menu access, seating searches, phone usage, payment interactions, and moments of hesitation. These sessions were designed to capture authentic dining behavior without interacting with participants.

In Conclusion, these methods allowed us to look at the problem from different angles, combining survey responses, interview perspectives, and observed behaviours. This helped us better understand student dining experiences and informed our personas and later design decisions.

Synthesized Research Findings

Based on the collected data, we analyzed and concluded 7 key research findings.

1. Student dining behaviour differs based on living situation and meal plan status

- **Evidence:**

As Figure 1 for Survey Q1–Q3 shows, on/off-campus students without a meal plan eat on campus 0–3 times/week and use food trucks, restaurants, and non–all-you-can-eat halls. While on-campus students with meal plans eat 10+ times/week, mostly at all-you-can-eat halls.

Observations: Food trucks primarily attract off-campus students, who often rely on them for quick meals. Menu visibility and location influence usage. (Vendor & natural observation)

Interviews: Off-campus students prioritize proximity to classes, while meal plan students prioritize locations compatible with tcard payment.

- **Interpretation:** Meal plan and residence lead to distinct patterns of flexibility, location choice, and information needs. Off-campus students need variety and real-time information, while on-campus students rely on predictable dining halls and payment compatibility.
- **Design Implication:** Apps should tailor features for user types: highlight food trucks and flexible options for non-meal plan students, and campus hall menus, seating, and payment information for meal-plan students. Vendors should be able to update menus, crowd levels, and wait times in real time, especially for flexible diners relying on food trucks.

2. Dining decisions are primarily time-sensitive and proximity-driven

- **Evidence:**

As **Figure 2** for Survey Q4 shows, convenience, wait time, and proximity are the main factors, while price, payment methods, and opening hours matter less.

Interviews: Students change plans last-minute if lines are long or food preparation is slow. *"Even short unexpected waits feel stressful if I have class soon after eating."*

Observations: Students mostly decide on-site, after seeing actual line lengths and seating.

- **Interpretation:** Students' dining decisions are constrained by tight schedules and short buffers between classes. Decisions are made reactively and emphasize minimizing risk of being late.
- **Design Implication:** Apps should provide location-related suggestions, estimated wait times, and quick-service indicators to help students make fast, low-risk decisions.

3. Real-time crowd, wait-time, and seating availability are critical for students and impact vendor operations

- **Evidence:**

  Survey Q12–Q13 shows that 18/32 students experience unexpected crowding at least sometimes, and wait time and crowd level strongly influence staying or leaving (**Figure 3**).

  Interviews (student): Students abandon first-choice locations if wait time is too long or seating is unavailable.

  Interviews (food truck vendor): Food availability, menu, and location information are mainly communicated through WeChat; students often only learn about changes upon arrival.

  Observations: Students search for seating after ordering; frustration peaks during lunch with long lines. Food trucks and dining halls experience stress during peak hours.

- **Interpretation:** Students need real-time information to avoid wasted trips and stress. Limited visibility of menu, seating, and crowd information, especially when communicated only through a single channel like WeChat, creates uncertainty and reactive decision-making.
- **Design Implication:** Apps should display live crowd levels, estimated wait times, available seating, and menu availability, which can reduce uncertainty, improve student experience, and help vendors manage peak periods.

4. Visual and descriptive menu information is key for confidence and quick choice

- **Evidence:**

  Survey Q10 & Q17 (**Figure 4**) shows that food photos (student-uploaded or official) are most valued, and ingredients and dietary labels also matter.

  Interviews: Students report difficulty understanding menu items from text-only descriptions, leading to uncertainty or last-minute plan changes. Students hesitate or ask staff for clarification when menus are text-only. *"Sometimes I don't really understand what the dish is until I see it in person."*

Observations: Students must approach food trucks closely to read menus; hesitation occurs when details are unclear.

- **Interpretation:** Lack of visual or descriptive information increases uncertainty and makes the ordering process slow.
- **Design Implication:** Apps should include high-quality images, ingredients, dietary information, and peer-uploaded photos to improve decision speed and confidence.

5. Students' dining plans are dynamic, influenced by situational and social factors

- **Evidence:**

  Survey Q5 & Q6: About 70% of students change dining plans sometimes due to long lines, sold-out items, or friends' choices (**Figure 5**).

  Interviews (student): Students adjust based on real-time observations, peer behaviours, and social cues, often choosing safer options close to class.

  Interviews (vendor): Some students leave food trucks when items sell out or lines are long.

  Observations: Students switch lines or leave food trucks if wait times are long, or items are unavailable.
- **Interpretation:** Dining decisions are reactive, not fixed, and influenced by real-time conditions and social context.
- **Design Implication:** Apps could provide real-time alternatives, alerts for sold-out items, peer recommendations, and social features to help students adjust plans efficiently and help vendors manage expectations.

6. Comfort, amenities, and environment affect satisfaction and convenience

- **Evidence:**

Survey Q18: Students rank seating and table space highest, followed by microwaves, washrooms, and water access.

Interviews: Students feel frustrated when seating is scarce, even if food and service are fine.

Vendor observation: Food trucks often lack nearby seating, causing students to search elsewhere.

- **Interpretation:** Dining decisions are influenced not only by food but also by comfort and available amenities.
- **Design Implication:** Apps could show seating availability, nearby study/eating spaces, and amenities to reduce friction and improve the overall dining experience.

7. Payment methods are low priority, but clarity and flexibility reduce friction for students and vendors

- **Evidence:**

Survey Q14–Q16 shows that payment rarely drives choice, most students haven't experienced failures, and issues mostly involve TCard limits, TBucks restrictions, or cash-only locations.

Interviews: Students may change plans if payment options are unclear.

Vendor interviews: Food trucks handle multiple payment types; unclear payment info can slow service or deter students.

Observations: Minor delays occur when students check available payment methods.

- **Interpretation:** Payment is secondary to time, crowd, and menu visibility, but unclear options can slow decisions and create minor frustration.
- **Design Implication:** Apps should clearly display accepted payment types, tcard/TBucks support, and any restrictions to help students plan and improve vendor efficiency.

User Personas

User Persona 1: On-campus Student

Profile	**Data Sources**
• Name (Pseudonym): Lily • Status: First-year undergraduate • Residence: On-campus (New College) • Meal Plan: Mandatory meal plan	• Student interview (Jan 2026) • On-campus student survey (n = 6) • Food truck observation (Jan 30)
Context & Constraints	**Goals**
• Eats on campus frequently (10+ times/week) • Primarily uses dining halls and AYCE locations • Often eats between classes • Restricted to meal-plan-accepted locations • Experiences peak congestion at lunch Evidence: Survey Q2, Q3; Interview Q1, Q4	• Minimize waiting time • Avoid crowded locations • Find available seating • Make predictable choices • Use meal plan efficiently Evidence: Survey Q4, Q13, Q18; Interview Q6
Information Practices	**Behaviors**
• Checks food services website/apps • Uses mobile order mainly for ordering • Verifies information in person • Avoids relying solely on digital info Evidence: Survey Q7–Q9; Interview Q2, Q3	• Prioritizes nearby locations • Joins lines before fully deciding • Leaves when wait is long • Searches for seating after ordering • Uses phone while waiting Evidence: Interview Q4, Q6; Observation notes
Pain Points	**Decision-Making Pattern**
• Long and unpredictable wait times • Inaccurate or delayed menu updates • Menu–reality mismatch • Payment acceptance uncertainty • Limited seating at peak times Evidence: Survey Q6, Q10, Q15; Interview Q3, Q5	• When choosing where to eat, Lily typically evaluates: • Distance/convenience • Wait time/crowd level • Seating availability • Menu reliability • Payment compatibility

	Evidence: Survey Q4, Q13, Q14; Interview Q1, Q6

User Persona 2: Off-campus Student

Profile	**Data Sources**
• Name (Pseudonym): Alex • Status: Second-year undergraduate • Residence: Off-campus commuter	• Student Survey (Jan 2026) • Off-campus Student Interview (Jan 2026) • Observations (Feb 2026)
Context & Constraints	
• Comes to campus several days per week but not every day • Eats on campus depending on schedule gaps between classes • Dining decisions often occur while moving between buildings • May alternate between buying food and bringing meals from home • Resorts to multiple types of dining locations (dining halls, food trucks, campus vendors) • Has limited time to evaluate different options before needing to return to class • Pre-arrival information is fragmented and not always timely across sources Evidence: Survey Q2, Q4; Interview Q1, Q2	
Goals	
• Make quick and workable decisions about where to eat • Coordinate meals within variable and sometimes short time windows • Avoid delays that interfere with class schedules • Identify options that are reasonably satisfying without extensive searching • Make value-conscious choices under uncertainty and avoid paying without sufficient clarity (e.g., cash vs. card price differences, or buffet-style meals with unclear selection before paying) Evidence: Survey Q4, Q5, Q6; Interview Q1, Q5, Q6; Observation Notes	
Information Practices	
• Uses visible situational cues such as line length or crowd density • May consult informal sources (peers, social posts, quick online checks) when time permits	

- Often finalizes decisions only after arriving at a location
- Relies on proximity and convenience when reliable pre-arrival information is limited
- App and information-source use can be socially influenced, with adoption shaped by whether peers rely on the same tools

Evidence: Survey Q7, Q8; Interview Q2, Q3; Observation Notes

Behaviors

- Adjusts plans if waiting time or crowd density appears unmanageable
- May switch between dining locations before committing
- Sometimes brings food and looks for microwaves or seating
- Prioritizes locations that allow completion of a meal within the available break

Evidence: Interview Q4, Q6; Observation Notes

Pain Points

- Pre-arrival information is often incomplete or inconsistent across sources, which makes it hard to feel confident about a dining choice before heading over
- Real-time waiting time, crowding level, and seating availability are usually only visible after arrival, which can force last-minute rerouting
- Comparing nearby options can require checking multiple separate sources, which makes decision-making inefficient during short breaks
- Text-only menus and minimal context, with few photos and limited reviews, make it difficult to figure out dishes and choose with confidence ahead of time
- Extra time is sometimes needed to locate suitable seating or facilities once on site, especially when moving between buildings with food
- Price and payment information is not always clear in advance, especially when pricing varies by method or food option is unclear before paying

Evidence: Survey Q12, Q13, Q16, Q18; Interview Q2, Q5, Q7; Observation Notes

Decision-Making Pattern

When choosing where to eat, Alex typically evaluates:

- Potential dining location relative to current position or next scheduled activity
- Expected wait relative to available time
- Availability of seating or necessary facilities

- Whether switching to a nearby alternative would reduce delay
- Whether the available food is favorable or appears consistent with expectations

Evidence: Survey Q4, Q12, Q13; Interview Q1, Q6

Brief Synthesis:

The two personas capture contrasting decision contexts: routine, meal-plan-based choices for on-campus students versus flexible, time-constrained, situational decisions for off-campus students. This comparison clarifies how residence context shapes goals, constraints, and information practices in campus dining.

Experience Map

	Planning	Choosing	Arrival	Deciding to Stay or Leave	Paying & eating	Reflection
Doing	• Be hungry.	• Checks class schedule. • Considers nearby dining hall or food trucks. • Opens Food Services and search for menus. • (On-campus) Looks for payment information.		• Checks the menu to see if it matches. • Sees crowds. • Calculates wait time. • (May) Check if there is any better option.	• Pays • Eats	• Reflects on whether the choice was worth it. • Shares opinions informally with friends or on social platforms
Thinking	• "I'm so hungry." • "Let me open the map and check what food is there."	• "I wanna see the food pics" • "That place might be packed" • "I only have 10 min to eat" • (On-campus) "Does this place accept tcard?"	• "Hope the line isn't too long." • "Hope there are still seats available."	• "Is my favorites food available?" • "Can I wait? Will I be late for class?" • "Should I go to another place?" • (May) "Are there any other options nearby?"	• "Hope it takes tcard." • "Uhhh no seats!" • "Hope it taste good."	• "I wish I had known this was so busy." • "Will recommend to someone asking."
Feeling	 Hungry	 Confused, cautious	 Anxious	 Regret, frustrated, impatient / happy	 Annoyed, frustrated / happy	 Disappointted / satisfied
Experience	• Motivation to choose a place to eat	• Having clear location info for restaurant. • No food truck info. • No real-time crowd or seating info. • Cannot see the picture of food in menu. • Menu update not on time.	• Going to a dining hall.	• Finding that reality may not conform to expectations. • No real-time crowd info.	• Payment method uncertainty. • No real-time seating info. • Cannot find reviews from others.	• There is no unified platform for expressing those opinions.
Evidence		Interview Q1, Q3		Interview Q4, Q6	Interview Q4, Other-Q1	Interview Other-Q3

Opportunities	More choices	Helping to make a quick decision	Display foot traffic	Accurate information	Public comment platform	
	• Collect information on food trucks	• Add pictures in the menu • Provide payment information	• Provide real-time crowd or seating information	• Providing accurate information can prevent unforeseen situations.	• Be available to view other people's reviews.	

bright spots
hot spots
gaps & seams

Job Stories

Job story 1:

Context: When I have class next and need to eat quickly,

Motivation: I want to see nearby dining options with real-time crowd levels and estimated wait times,

Outcome: So I can choose a place that won't make me late for my next class.

Students are often pressed for time and need to eat quickly. Without real-time occupancy data, they risk choosing crowded locations and then skipping eating due to time constraints. This aligns with interview findings where students mentioned leaving a dining hall due to long lines and lack of seating, directly impacting their academic schedule and eating habits.

Job story 2:

Context: When I'm checking the menu online before heading to a dining hall,

Motivation: I want to see accurate, updated menus with photos of the actual food,

Outcome: So I can avoid arriving to find that the food is different from what was advertised.

Inaccurate or text-only menus leads to wasted time and frustration. Checking the menu in advance is particularly important, especially when the dining hall switches to an all-you-can-eat format. Adding food pictures to menus can provide visual support and help students make decisions more easily.

Job story 3:

Context: When I'm choosing where to eat as a student with a mandatory meal plan,

Motivation: I want to clearly see which payment methods each location accepts before I go,

Outcome: So I don't arrive and find out that TCard isn't accepted and have to leave or use another payment method.

On-campus students tend to prefer using TCard for payments. If they frequently eat at places that don't support TCard, they might end up not using up their meal plan by the end of the semester, wasting money. The interview mentioned that payment uncertainty is a barrier for on-campus students; inaccurate information often forces them to physically check payment options, which is inefficient and frustrating. Providing accurate payment information can greatly help on-campus students.

Job story 4:

Context: When I'm trying a new food,

Motivation: I want to read other students' reviews and see how they rate the taste of the food,

Outcome: So I can make better dining choices and avoid less tasty food.

Current feedback systems are private and don't allow students to learn from each other. Public reviews would help students better understand the wide variety of dining options on campus. Students also expressed their desire for a public common system in interviews, indicating that shared experiences could significantly improve decision-making and meal satisfaction.

Job story 5:

Context: When I feel tired of the usual dining hall options and want something different,

Motivation: I want to easily find which food trucks are currently on campus and where they're located,

Outcome: So I can explore more diverse food choices without having to walk around randomly or miss out.

Students often seek variety in their meals, but food trucks are not always listed on school dining websites. Having access to real-time location and menu information can enhance meal satisfaction and provide more flexible, enjoyable eating experiences. This addresses a gap in current dining information systems and provides students with more dining options.

Design Requirements

Design Requirement 1: Support quick food-related decisions under time pressure

The system must support students in making food-related decisions quickly when they have limited time either between classes or for other pursuits. Research findings prove that students often decide where to eat within short time windows, which prevents them from exploring or comparing options extensively. When decision-making takes too much attention, students would tend to experience frustration and settle for unsatisfactory choices. Therefore, rapid assessment support is essential to the smooth functioning of everyday campus life.

Recognition: This requirement could be met if students can determine a suitable dining option within a short time window without extensive searching or comparison.

Design Requirement 2: Reduce uncertainty about current dining conditions

The system must help reduce uncertainty about conditions such as crowd density, waiting time, menu details, and dining related facilities. Research and experience mapping show that students commonly run into discrepancies between expectations and reality, giving rise to wasted time and frustration. In redressing this uncertainty, the system can support more assured decision-making at the moment decisions are pending. This requirement hinges upon the clarity and reliability dimensions of information.

Recognition: This requirement could be met if students report lower incidences of unexpected findings, such as arriving at overly crowded locations or mismatching menu items.

Design Requirement 3: Accommodate diverse student routines and constraints

The system must accommodate variation in students' routines, including differences between on-campus and off-campus students, commuting modes, and varying degrees of access to meal plans. Research findings indicate that there is no single dining experience that can cover all students' needs. A design that is based on a

kind of uniform user experience risks muddling or deteriorating the current situation. This requirement ensures flexibility across different routines and constraints.

Recognition: This requirement could be met if students with different schedules and access conditions can all find the system relevant to their dining decisions.

Design Requirement 4: Support comparison across multiple dining options

The system must support students in comparing multiple dining options when making a decision. Research shows that students often evaluate factors such as proximity, crowding, food quality, and payment flexibility, rather than sticking to a single predetermined location. Without support for valid comparison, students may fall back on familiar but suboptimal choices. This requirement emphasizes supporting informed trade-offs through access to more accurate and timely information.

Recognition: This requirement could be met if students can easily weigh multiple options and articulate why one option better fits their needs at a given moment.

Design Requirement 5: Bring together real-time, campus-available information for practical decision support

The system must integrate relevant, real-time information that is already available across various campus contexts to support students' dining decisions in daily transactions. Research and experience mapping suggest that students currently rely on multiple discrete channels to learn about dining options (e.g., location, food availability, crowding, and dining-related facilities), which makes decision-making less efficient and reliable. To render decision support workable in everyday campus life, the design must tap into existing channels and make them accountable at the moment decisions are involved. This helps ensure that the overall design idea is grounded in what the campus context can actually provide and thus could be carried into realistic use.

Recognition: This requirement could be met if students can make better-informed dining decisions using integrated, campus-available real-time information without resorting to multiple separate sources.

Appendices

Reflection on Uncertainty & Limitations

Because we used convenience sampling and distributed our questionnaire via public channels, we received fewer responses from on-campus students than off-campus students. To address this limited representation, we adjusted our strategy to include qualitative data. We conducted a semi-structured interview with an on-campus student with a meal plan and natural observations in an "all-you-can-eat" dining hall, where on-campus students eat frequently, to better understand their behaviours and needs.

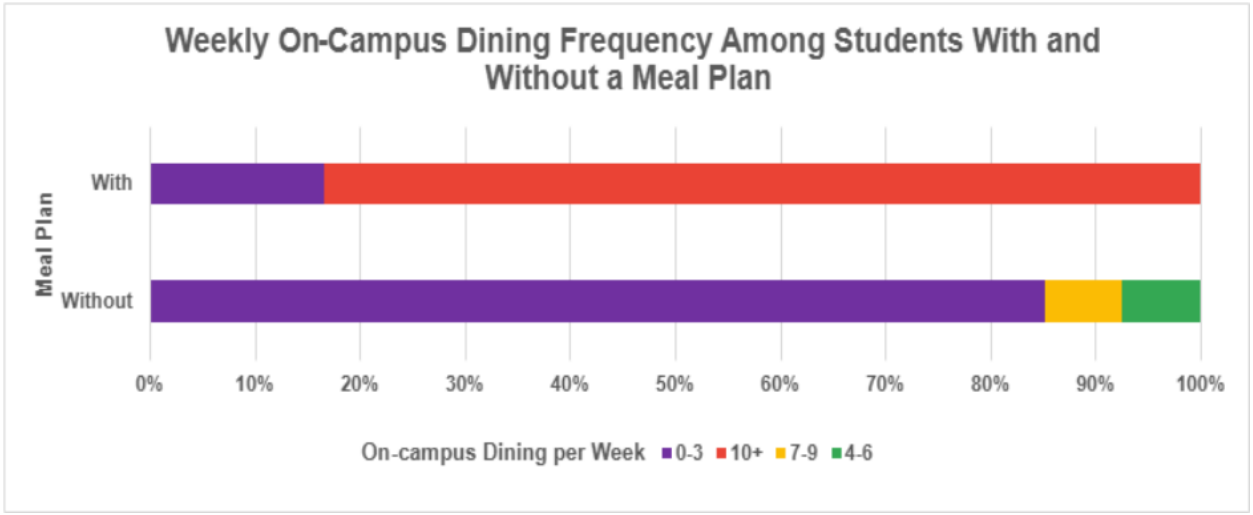
We initially assumed that the University of Toronto's food service website and app were widely used. Our questionnaire results showed that the assumption was not the case. While we updated our interview questions to reflect this new insight, the questionnaire itself could not be changed after distribution. However, we believe the impact of this difference on our overall results is minor.

Our original plan included a questionnaire for food vendors. In later stages, we found that we would not reach enough responses, so we changed to natural observation and interviews. While these methods provided valuable insights, we recognize they may still not fully capture the complete range of vendor constraints and needs.

Protocols and Consent Form, Instruments (Questionnaire Form, Interview Form, Natural Observation Form), Raw Data (survey data Excel, interviews, observations), Process Documentation, Meeting Notes: https://github.com/shiqio3o/CSC318-Next-Group

Bar Plots

Figure 1. Barplots for Meal Plan Status vs. Weekly Frequency of On-Campus Dining and Meal Plan Status vs. Dining Options Used on Campus



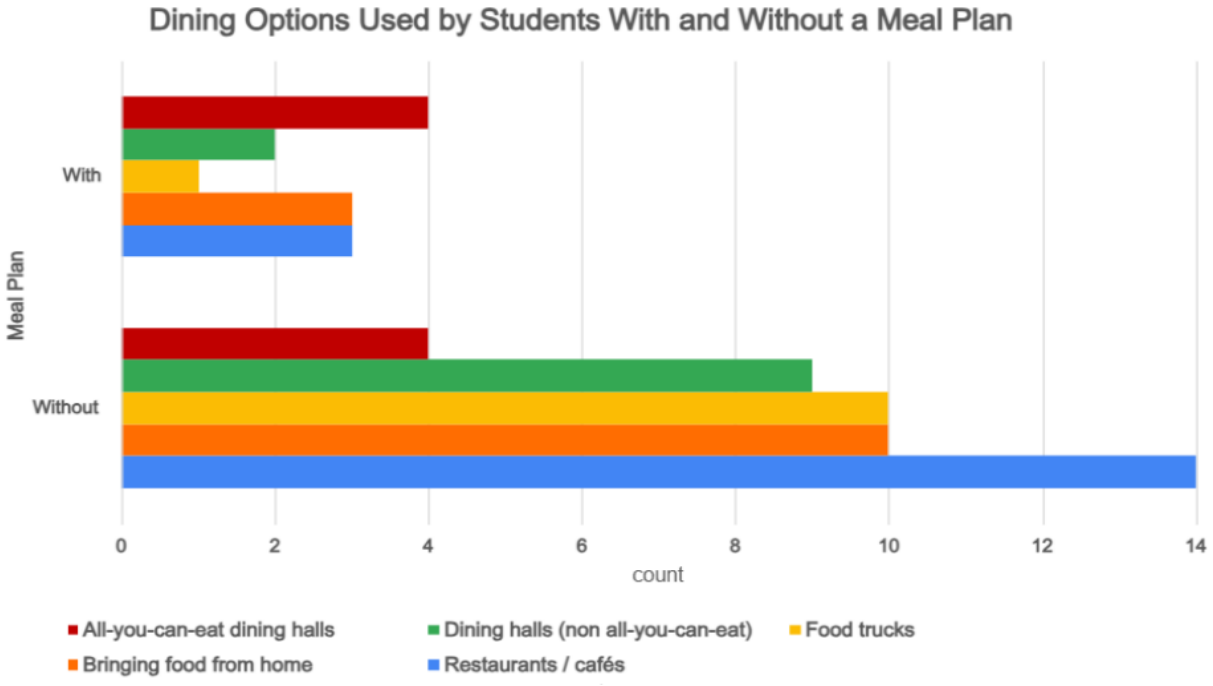


Figure 2. Barplot for Factors Influencing Students' On-Campus Dining Choices

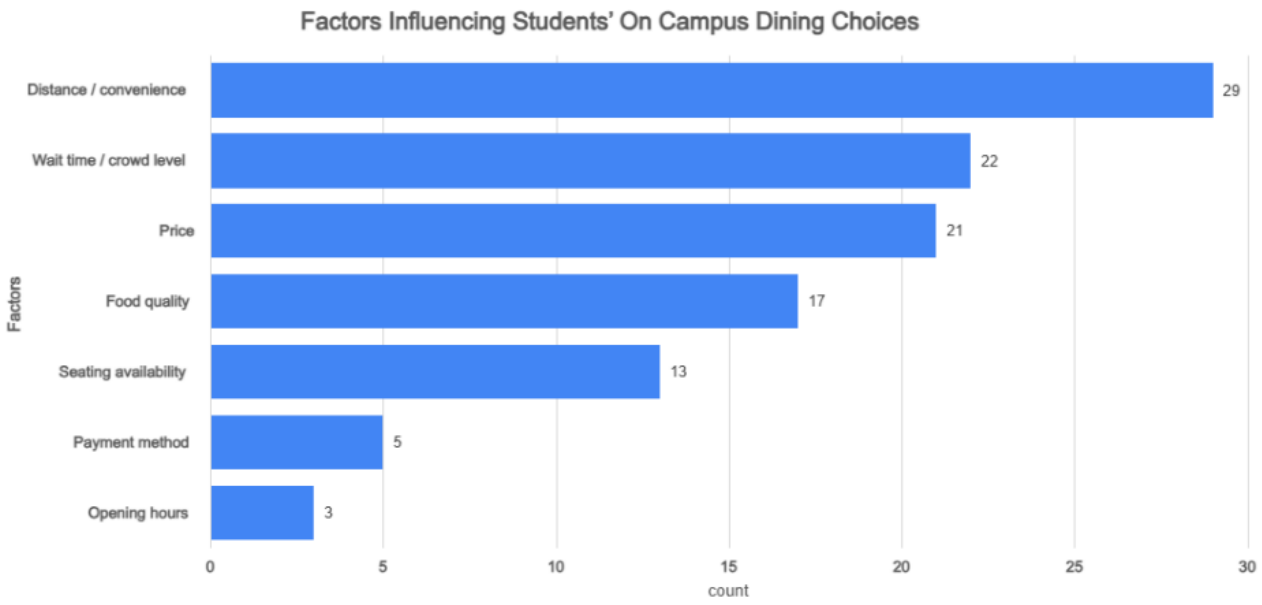


Figure 3. Barplot for Information That Matters When Deciding Whether to Wait or Go Somewhere Else

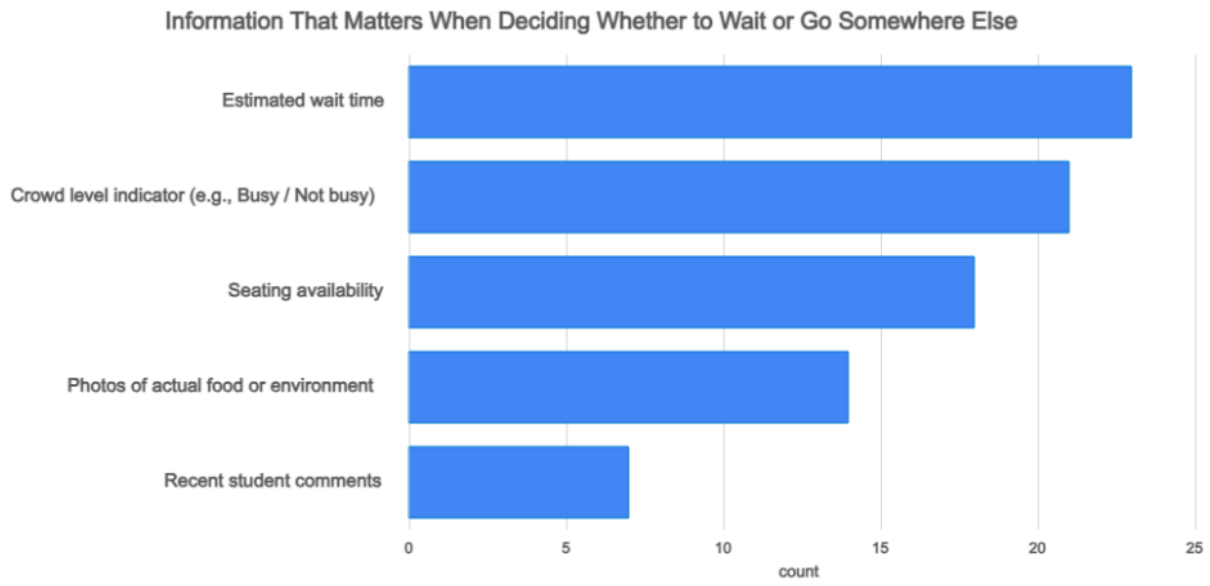


Figure 4. Barplot for Helpfulness of Student-Uploaded Photos When Deciding Where to Eat

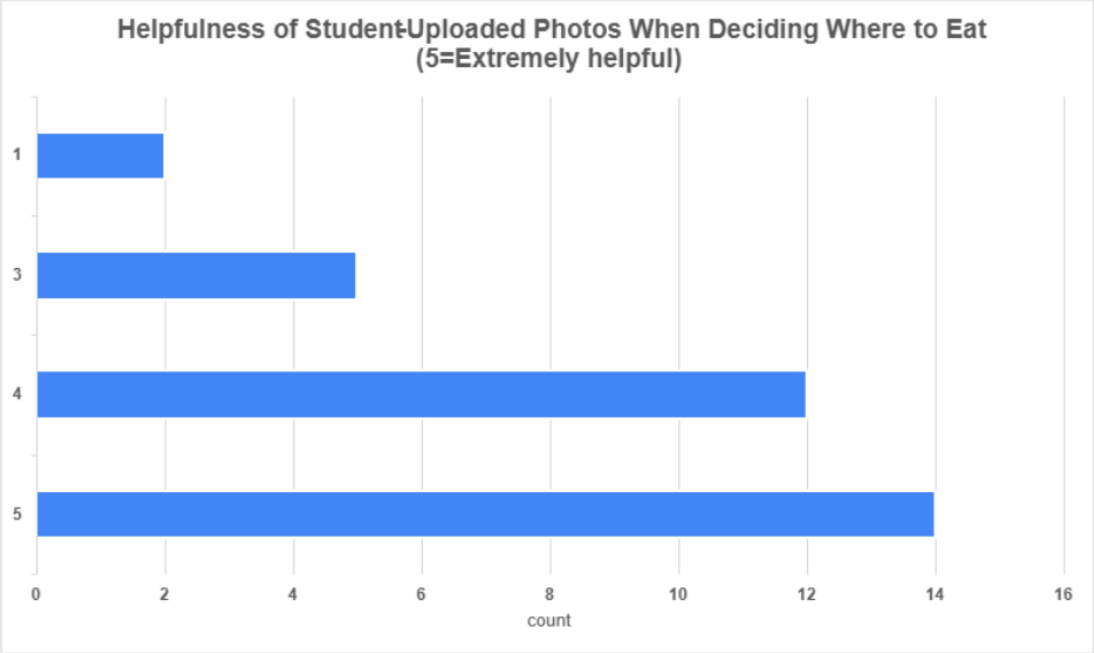
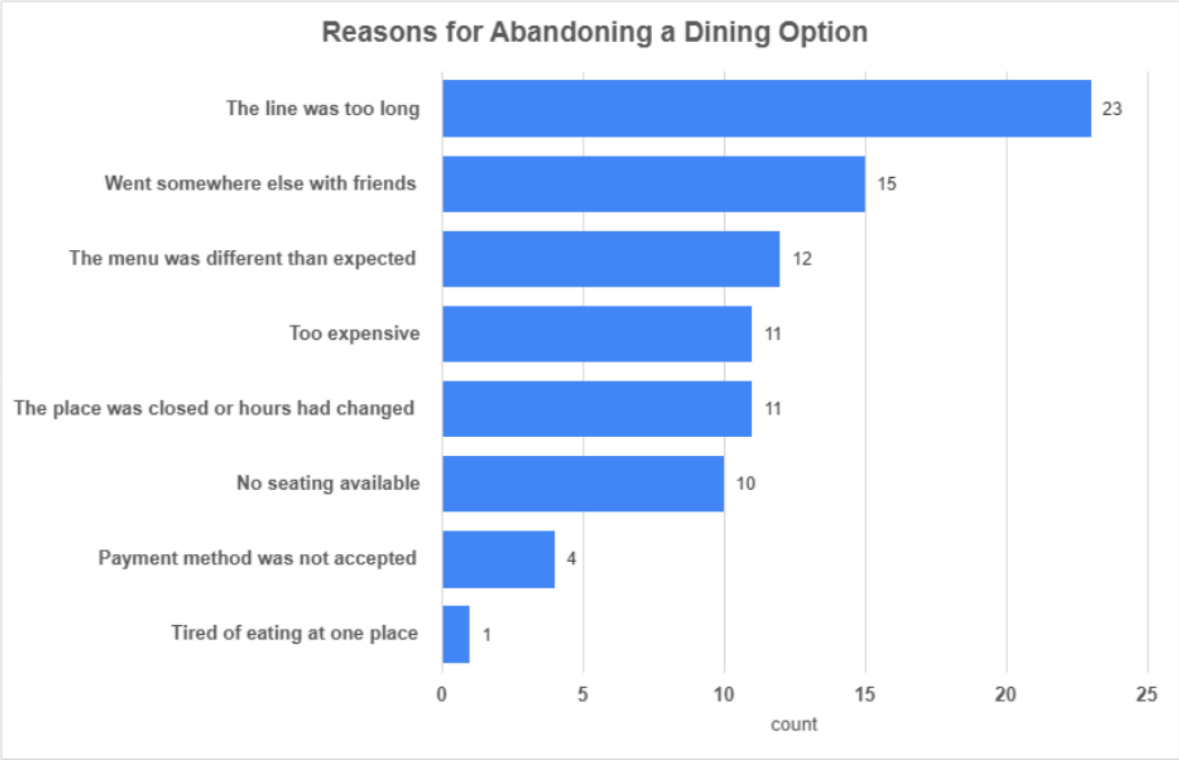


Figure 5. Barplot for Reasons for Abandoning a Dining Option



G1 Contribution Report

Purpose

The purpose of the G1 Contribution Report is to document actual contributions made by each team member during G1 and to compare them against the planned contributions outlined in the G1 Contribution Plan.

This report supports fair and transparent individual grading by:

- Making individual effort visible after the work is complete
- Accounting for changes in scope, effort, or availability
- Providing a basis for contribution multipliers applied to the group grade

The G1 Contribution Report does **not** change the group's assessed score. Instead, it is used to adjust **individual grades upward or downward relative to the group grade**.

Group Information

Group name: Next Group

Project title/problem space: UofT Dining Experience

Date: 2026/02/09

Team members	Planned Contribution %	Actual contribution %
1. Shiqi Zuo	20%	20%
2. Hong Nie	20%	20%
3. Mengzhou Zhang	20%	20%
4. Xiyan Chen	20%	20%
5. Wanru Cheng	20%	20%

Actual Distribution of Work

For each artifact/activity, report what actually happened, including any redistribution of effort.

Percentages should reflect **actual effort**, not intended effort, and should sum to approximately 100% across the table. Additionally, the sum of the percentage splits for each student should match the actual contribution % on page 1.

Artifact/Activity (approximate effort range)	**Actual effort %**	**Primary owner** (percentage split)	**Secondary contributors** (percentage split)
Problem framing & stakeholders (5-10%)	5%	Mengzhou (5%)	
Field study design (10-15%)	15%	Wanru (15%)	
Data collection (20-25%)	25%	ALL (5% each person)	
Synthesis & research findings (15-20%)	15%	Shiqi (15%)	
Personas (5-10%)	10%	Mengzhou (5%), Xiyan (5%)	
Experience map (10-15%)	15%	Hong (10%)	Xiyan (5%)
Job stories & design requirements (10-15%)	10%	Mengzhou (5%), Hong (5%)	
Report integration & editing (5-10%)	5%	Xiyan (5%)	

Reference to Contribution Plan

Briefly summarize (3–5 sentences)

- How closely our group followed the original G1 Contribution Plan
- Any major changes we made from the plan
- Why those changes happened (e.g., time limits, recruitment issues, scheduling, or scope changes)

Brief Summary (3–5 sentences)

Overall, our group tried to follow the original G1 Contribution Plan as much as possible. Most of the responsibilities for interviews, questionnaires, observations, and synthesis were completed as planned. However, we made adjustments throughout the process of working on the project. These changes helped us better connect insights from different stakeholders and link our data more clearly to our design work.

One significant change we made was because interview analysis and synthesis required more time than initially estimated. Recruiting the vendor participant and scheduling interview also took longer than expected, which led to a redistribution of workload. To keep the project on schedule, some team members took on additional synthesis and writing tasks.

Individual Contribution Summary

Each student must complete **one row** summarizing their own contribution. Percentages should be consistent with the table above.

Focus on contributions for which you had primary or shared responsibility in the Contribution Plan.

Team member	Planned %	Actual %	Key Contributions (2-4 bullet points)	Major Challenges or Additional Effort
1. Shiqi Zuo	20%	20%	• Data collection (5%) • Synthesis & research findings (15%): data cleaning and visualization, synthesize and conclude insights	Major challenge: It is difficult to contact the interviewee, especially the vendor. Additional effort: Contributed to field study participation and interview form design and improvement
2. Hong Nie	20%	20%	• Data collection (5%) • Experience map (10%): The main content filling with the data arranging and the experience describing and the visual table creating • Job stories (5%)	Major challenge: Visualizing maps is more difficult than imagining; making it easy for readers to see the important content is a challenge. Additional effort: Contributed to field study participation interview form design

3. Mengzhou Zhang	20%	20%	• Problem framing & stakeholders (5%) • Persona: Off-campus Student (5%) • Design requirements (5%) • Data collection (5%)	Major challenge: Articulating design requirements with the right level of specificity, so they remain grounded in evidence while avoiding premature solution details. Additional effort: Contributed to field study participation and documentation.
4. Xiyan Chen	20%	20%	• Data collection (5%) • Persona (5%) • Experience map (5%) • Report integration & editing (5%)	Major Challenge: Dividing the action steps acurately and efficiently is challenging while making the experience map. And it's also difficult to note down every detail while observation. Additional effort: Made Observation on primary and secondary stakeholder
5. Wanru Cheng	20%	20%	• Data collection (5%) • Formative Field Studies: Generating Evidence (15%): Summarized survey, interview, and observation findings into clear insights to inform personas and design requirements.	Taking detailed notes during the dining hall observation was challenging, especially during peak hours, since I needed to carefully track students' movements, waiting behaviors, and decision patterns

Reflection on Contribution Changes

Briefly answer (5–8 sentences total):

- Which contributions increased or decreased relative to the plan?
- Why did these changes occur?

- How did the group adapt to ensure completion of G1?

Focus on **process and coordination**, not blame.

Compared to our original plan, we adjusted the weighting of Report integration & editing from 10% to 5%, and reassigned the remaining 5% to the personas work. This change occurred because, as the report progressed, we found that integration and editing was a lighter effort than initially estimated, while persona development required more synthesizing and checking in terms of work and time. Aside from this reallocation, we majorly followed the original contribution plan and maintained consistent progress. To ensure completion of G1, we held several online meetings, clarified responsibilities in advance, and coordinated deadlines so each section could be drafted and reviewed in sequence. All team members also contributed across key research activities, including interviews, observations, and data collection, which helped keep the workflow steady.

Acknowledgement of Grading Policy

Each team member must read and acknowledge the following statement:

I understand that the G1 submission is graded based on its overall quality. My individual grade may be adjusted upward or downward relative to the group grade based on how my actual contribution compares to what was documented in the G1 Contribution Plan and this G1 Contribution Report.

Team members	Signatures
1. Shiqi Zuo	Shiqi Zuo
2. Hong Nie	Hong Nie
3. Mengzhou Zhang	Mengzhou Zhang
4. Xiyan Chen	Xiyan Chen
5. Wanru Cheng	Wanru Cheng

Submission Instructions

- Submit this document as a single PDF
- One submission per group
- Submit alongside the final G1 report