Empathize Report

Focal Points

Here are the focal points:

- How to give food suggestions based on students' preferences?
- How to better inform students of special events in the dining hall and student-run businesses?
- How to enable users to quickly explore the menu with a search feature?

How we choose them:

The current UMass Dining App has three main features. The first feature provides information on whether a particular dining area is open or closed alongside its business hours. Another feature allows users to view the menu with nutritional and allergen information for food being served at the dining halls and information on the menu of several cafes across campus. There is also a crowd sensing feature that lets users know whether a particular location is not busy, moderate, or busy. When thinking about the dining app, we found 3 main features that we feel, and found that others also feel, are missing and would make the app significantly better.

Firstly, we would like to implement a questionnaire that would serve two main purposes. As students under meal plans, we want to create a system where our app could make personalized recommendations based on the results of a quick survey. This would take into account personal preferences, location, menu options, and other factors that would contribute to creating the best recommendations. This would furthermore be expanded to help people with dietary preferences, so instead of having students scroll through countless menu options due to their preferences, we would offer that service after a quick questionnaire. This short questionnaire would be able to guide a student to their desired dining location based on the type of food they would like to eat - for instance there are several dishes and cuisines only available at particular dining halls or offered at certain times of the week.

Based on the groups' experiences, we think that a key component missing from the Dining App is information on student-run businesses such as Sweets and More, Greeno Sub Shop and others. These dining options remain unknown to many students unless they live in close proximity to a given residential hall. We want to implement them into our app, which would allow students to have a scope of all their options, what they serve, where they are, and how busy they are when making dining decisions.

Lastly, we wanted to implement a search feature that would allow users to quickly explore the menu by typing keywords that corresponds to a dish of their liking. Not everyone would like a survey that finds preferences for them, they would rather have a service that provides the tools for them to make their own decisions, so our search feature would work in the direction of that. This allows us to help the majority of students, as it would cater to the people who would rather find their own place to go with our resources, or decide to go somewhere based on our recommendations.

Overall, we aim to create an application that encapsulates all these features. We believe that, if done well, it could help UMass students greatly. Our goal is to make the app more

user-friendly and efficient for users by making dining decisions easier given the busy lifestyle of college students.

Study Methodology

The research we conducted followed a two pronged approach based on interviews and surveys. Dining hall staff were interviewed so that we could get a better understanding of what goes on behind the scenes of the dining halls. This allowed us to better understand the menu function and identify when the dining halls are the busiest. Interviews were used as employees may have been otherwise difficult to get in contact with. By speaking face to face, we could speak to employees directly, at a time that was convenient for them and which would ensure answers. We also decided to interview a normal student who lives on campus so we could better understand their UMass dining experience and find out what underlying problems might be at play. This was to better understand our user-base and better identify our focal points and the real problems we are looking to solve with this web application. Two interviews were conducted by reaching out to employees after their shift while the third was just a normal student who lives on campus. We took a semi-structured approach to these interviews. As a group, we designed questions we believed would get us the best information, but left room for interviewers to ask further questions and probe deeper if more information was needed. Since our interviews were to be used for gaining information about dining hall habits, we designed questions that would aid our app design. We especially asked about the trends in the dining halls, in order to inform how we design our busy feature. We also asked about menu information, which we believed would help us update our own menu feature.

For our surveys, we decided to target the student body, as these are the primary users of both dining halls and the app we are designing. We chose to use surveys for students as they could be easily distributed to a large number of people. The results could also be easily visualized and analyzed. We created a 17 question survey using Google Forms that asked about students' views on the current dining app (which features they use, how satisfied they are, etc), their habits for mealtimes (what time they go, where they go, etc), and any additional comments they may have about dining on campus. These questions were designed to get the most information and therefore avoided yes/no questions and allowed survey participants to select or add answers that best suited their habits. Surveys were distributed over Piazza to classmates and to students in other classes, using class group-chats similar to Piazza.

Participants Demographics

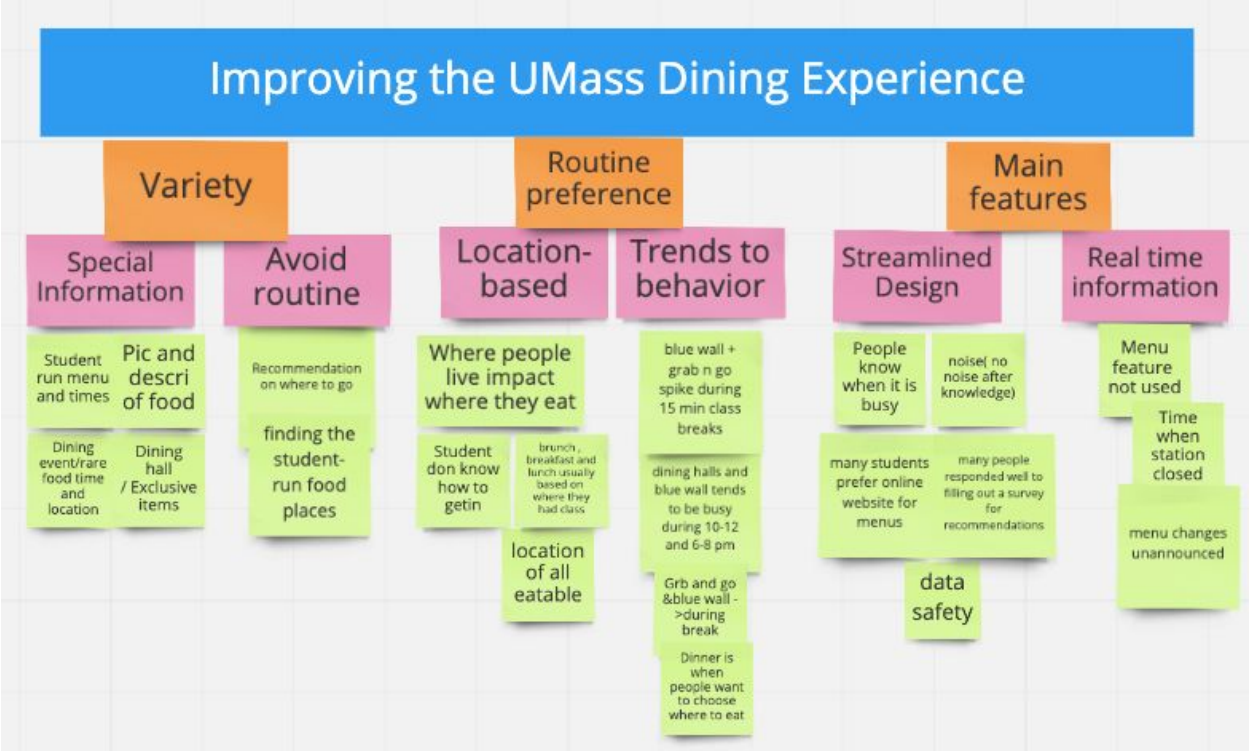
The collective demographics were UMass students, between the ages of 18-22. Two of these students were also dining hall employees, one of whom worked at Greeno Subs, a

student run business, and the other worked at Franklin Dining Commons, having previously worked at Blue Wall.

As the application will be primarily for undergraduates, we decided to interview and survey this primary audience. We tried to include people from all majors and all eating habits with age from 18 to 22. The Undergraduate Age Distribution (Fall 2018) (https://www.umass.edu/diversity/data-policies) stated the undergraduate students' range is from 18 all the way up to 59. The majority (82%) of undergraduates are 18 to 21, however.

We believe our participants were sufficiently representative of the population as the survey primarily targeted students, and was shared amongst students using class group-chats, such as Piazza. It was also distributed to members of various clubs to ensure that the participants were varied and we were not sampling from the same population (ie: members of a specific class/major). The interviews targeted UMass dining hall workers. As many workers are students from UMass, all dining hall workers we surveyed were UMass students. They could provide information about the app and dining hall trends. In addition, the workers represented each of the types of dining hall on campus: retail, a dining commons, and a student run business and were therefore representative of dining hall workers.

Affinity Diagram



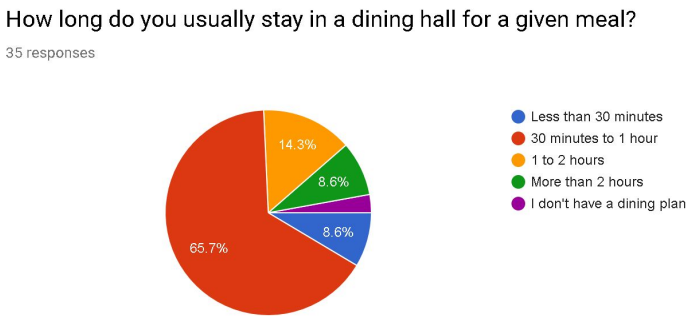
Findings

Findings in Variety

- Our participants want easier access to the menus and time information for student run businesses.
- Our participants like being able to see visual representations of each food product as well as a description.
- Our participants want to know about special events and exclusive dining hall foods
- Many newer students oftentimes have difficulty finding certain locations on campus (especially the student run businesses).
- Other events, such as a band performing in Worcester on Sunday morning regularly, may affect where participants choose to eat.
- Some participants think that easy access to personal meal plan information, such as the number of meals left this semester, is useful in the dining hall website.

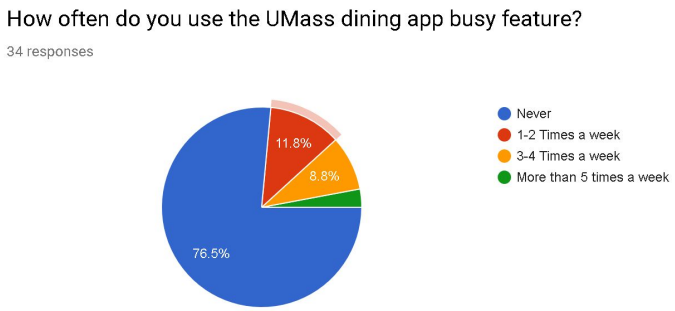
Findings in Routine Preference

- Dining halls and Blue Wall tend to be the busiest during lunch time and dinner (specifically 10-12 and then later from 6-8).
- Biggest spikes come from students who are getting food before classes and getting food after classes.
- If the menu does spontaneously change, it is not updated on the online menu.
- Blue wall and grab-n-go tend to spike during the 15 minute in between classes.
- Our participants go to lunch at locations close to their classes in the time in between classes.
- Students are more flexible with where to go for dinner, as they are not bound by class times and can go somewhere farther away.
- When bus services are reduced during the weekends or snow days, our participants are more likely to choose a closer dining hall.
- People typically spend between 30 minutes to one hour in a dining hall.



Findings in Main Features

- Among the people who used the app, many people were disappointed with the busy feature.



- Among the students that were interviewed, most did not frequently use the actual UMass dining app.
- Many however used the online menu to find what food was being served at the dining hall they were planning on going to.
- The menu at the dining halls is set beforehand by the head chefs and is not supposed to change however often times will randomly change if they are unable to get the ingredients for the food or if there were mistakes made in preparing the meal.
- Some participants complained that while the dining app has improved, they feel there is a lot of white noise and they simply just want to see what foods are on the menu.
- Another theme that popped up is that students wanted consolidation in their application (for instance why can't Sylvan snack bar be included with the rest of the dining halls).
- Many surveys takers would like a food recommendations features.

Takeaways

Takeaways from Variety
In our application, we should

- include student run business information;
- include pictures of the food being served;
- provide notifications about special events;
- identify which dining halls have unique foods;
- include a map of all dining locations (especially student run businesses) on campus;
- create a survey that provides recommendations on where to eat.

Takeaways from Routine Preference

- Students don’t need a feature that indicates how busy the dining hall is.
- The menu should be updated when it changes from breakfast to lunch to dinner.

Takeaways from Main Features

- One of the main features that was well received was the recommendation survey that would provide suggestions based on user preferences and dietary restrictions.
- Some other features that were requested were the elimination of redundant information such as Get Well meal, the themed menus each week, and the guide to using the healthfulness labels.
- A streamlined design could be implemented to reduce the clutter from the original dining app.
- Students would also prefer to have information regarding when the specific stations in the dining halls stop serving and updates on menu changes.
- A main concern was if the data we collect from the recommendation survey is mined.
- Search feature might not be as important as we thought based on survey results.
- Nutritional information is requested by many.

Team Member Contribution

- **Jarrod Daniels** - Survey, 2 interviews, Findings/Takeaways, Affinity Diagram, findings from interviews
- **Xiaoxue Lou** - Participant Demographics, Findings/Takeaways, Affinity Diagram
- **Arianna Kazemi** - Study Methodology, Findings/Takeaways, Survey Questions, Affinity Diagram
- **Vista Sohrab** - Focal Points, Findings/Takeaways, Affinity Diagram
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- **Efosa Ighodaro** - Interview, Affinity Diagram
- **Annapurna Jagasia** - Document frame, Findings/Takeaways, Affinity Diagram
- **Kuhu Wadhwa** - Findings/Takeaways, Affinity Diagram
- **Jinhong Gan** - Interview, Findings