How can a service be used to improve dietary behaviour by bringing people together through cooking lessons and shared meals?



1

Buster Collins

Introduction

Eating meals alone can have serious negative effects on one's health. A study made in Tokyo investigating the negative impact eating alone can have on a person claims that "Eating alone and living alone may be jointly associated with higher prevalence of obesity, underweight and unhealthy eating behaviors in men." (Tani, et al., 2014) along with a further study that also shows "men who ate alone were more likely to die compared with those who ate and lived with others". (Tani, et al., 2018). This case study will be exploring how to make a life of greater wellbeing by encouraging a healthier & happier lifestyle through social interaction (united by food) whilst also reducing food waste. A similar idea is proposed by Allen (2004) who claims that "a local food system will be environmentally sound and produce healthy food." This is referencing how some communities can make their own food and share their food between families. A way to achieve this on a modern, common scale would be through a subscription-based service to a place where multiple households can meet up. They would be given access to fresh ingredients to cook with along with a recipe or an on-site chef to teach people new ways to cook as a group, whilst also encouraging teamwork and bonding. Sharing the cooked food immediately after would also encourage healthy eating and bring those from different cultures and backgrounds together.

The idea for this study comes from the Royal Society of Arts (RSA) Student Awards Brief "Cultivating Community", which refers to the fact that 50% of meals each week are eaten alone and that eating in the company of others releases Endorphins in our brains, which helps with social bonding (RSA, 2019). Additionally, a study from an elderly medical ward also shows that eating in the company of others allows us to take in more energy from our meals (Wright, et al., 2006). As a student myself I have noticed a difference in my own mood, often feeling lonely after eating food alone in my room at university, as opposed to eating in the company of housemates, or eating out at a pub with friends and feeling energised. It is hoped that the 'Food Mood' application and service will encourage social bonding and therefore improve the health and well-being of its users.

The aim of my case study is to explore how communities can be brought closer by eating meals together so that stronger relationships can be formed and the amount of food waste is reduced. The biggest issue to tackle is creating a good enough reason to get people to leave their homes and do something inconvenient to them for the sake of their well-being, because "some [people] even see eating alone as an efficient way of having a meal" (Chae, et al., 2018). This is supported by talking briefly with Winchester University students, who say they prefer to eat on their own, confirming the research that when eating alone, fast and simple meals are preferred, and many more meals are skipped also applies to university students. However, more introverted people claim that eating alone is more favourable, choosing to watch TV shows while eating, which is shown to have a similar level of energy intake from food as eating with friends. "Energy Intake was significantly enhanced by presence of familiar others (D: 4565 \pm 272 kJ, p < 0.001) and watching TV. (B: 4350 \pm 252 kJ, p < 0.05)" (Hetherington, et al., 2006) However, this still leads to an unhealthy diet of more convenient - and less healthy - meals. If a service was put in place to actively encourage more people to eat meals together and choose healthier meals over convenience, then would pre-existing services to find people to eat with start becoming more popular? My research will find exactly why people choose to eat alone and will allow me to find a good incentive to get people to eat meals together.

Aims & Objectives

How common is the dietary problem that comes with eating alone and how drastic is it in those that almost exclusively eat alone?

- Data will be collected from university students to explore common dietary problems that may be linked to eating alone.

How much of a difference is immediately noticeable between eating alone and with a group?

 Data will be collected from my housemates and myself, by offering to cook a meal and sharing the meal together at a table. This will serve as a small-scale test of the service and I will be able to obtain instant feedback. I will compare this to the results from my previous primary research.

What are the pros and cons of inventing a community service to bring people together?

- To investigate how people would feel about spending money on a subscription and finding the time and energy to go somewhere to cook dinner, especially after a long day.

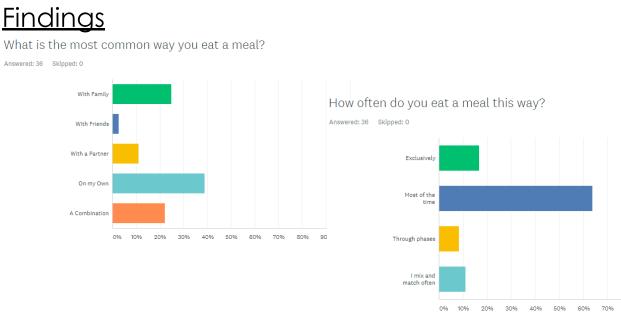
<u>Method</u>

The aim of my research is to investigate why it has become normal to eat meals alone. Surveys created with SurveyMonkey were posted to the Facebook groups and relevant reddit forums for people who are lonely, people who have eating disorders and people who enjoy answering surveys (see appendix A for links to forums) and to university students as well as full-time workers. Some considerations have been made to avoid any shaming, for example, questions about weight will have the option to abstain from answering and all survey results will be anonymous. I will also be interviewing my own housemates after eating alone and after sharing a meal to find out if there is an immediate difference between the two and a comparison of results between their answers and my secondary research will be made to determine if there is a significant difference in mood and health after eating in a group. (See Appendix C for interview questions)

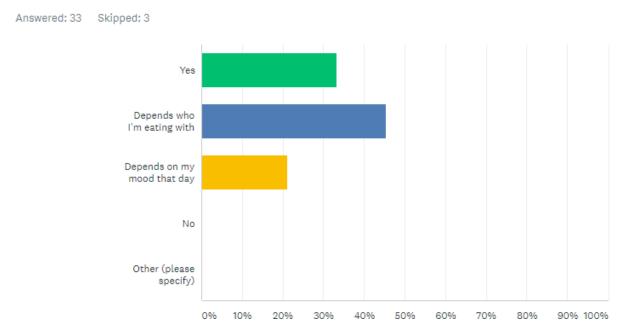
Additionally, a survey was created to investigate what potential users would expect and require from a shared kitchen and diner and discover where people prefer to share meals and who they would usually / like to share meals with as well as how people would like a shared kitchen to be set out. 3D Visualisation was used to test an initial concept.

Secondary Research was implemented to analyse the user interface of modern apps, such as Yoyo, JustEat, and Deliveroo. This then informed the creation of a prototype using Adobe XD, which was then published and sent to r/UXDesign and r/Design_Critiques, as well as the Winchester Digital Media Design group to get app/web Developers and Designers to critique my design and collect feedback. Additionally, on top of this, students and Digital Media developers (Winchester University) provided unrestricted feedback on the look and feel of the app.

As a new building will need to be created, I will research ways a building can be made as environmentally friendly as possible. To do this I will speak to a building surveyor as well as conducting secondary research on the topic.



This survey was to find how most meals are eaten and whether people realise any difference between eating alone compared to with people. I found that it is commonplace to eat alone.



Do you feel happier after eating with a group of people?

I also found that the negative effects of eating alone occur regularly but are not recognised as negative quirks and are considered normal. This mentality coupled with the noticeable positives of eating in a group shows that the problem is serious and commonplace. (Evidence and further information in Appendix B)

A similar result was shown by talking with several students from the University of Winchester. Some students already actively search for people to share their meals with, as they feel lonely or unsociable while eating alone, especially in their room in 80%

90% 100%

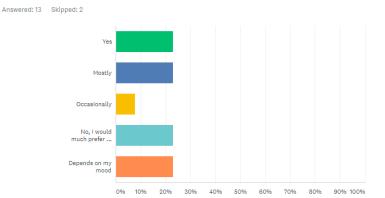
the same place as they work. However, most would choose to eat alone and much prefer to be given space and left alone to eat a meal, but when a shared meal is planned and expected, eating a meal within a group makes everyone seem much more friendly and reduces stress.

I then sent a follow-up survey to see how people would feel about using a service that would fix these problems and to tailor the design of my service to potential





Would you prefer to eat a healthy meal cooked for you over being taught to cook something healthy in a group?



My proposed idea was received well, and I was able to begin designing the service itself. (More results and information in Appendix D) To find the best way to create a building, I spoke to a building surveyor, John (John who and from where?). We spoke about the use of BIM in buildings, the necessity of building regulations and how they can change from place to place and asked about building a house environmentally. John told me that the use of BIM and building houses "green" is

ideal and makes the workload easier for everyone involved, however, using BIM and completely going green is much more expensive in construction than the common ways of construction, and for an adventurous start-up idea such as mine, it would set me back, but is entirely possible, especially if replacing an existing building and reusing as much as possible from the previous building in its place.

I was also shown a ted talk about a woman who created a house as environmentally as possible, managing to cut down on energy used and reducing waste majorly by changing some things not usually considered. (Mohr, 2010) Using this method along with BIM would create a building that would be both sustainable and functional.

<u>Analysis</u>

After the follow-up survey, I created a 3D visualization using Revit of the ideal shared Kitchen and dining area. The layout is simple and can be fit into any space. Many people said they eat mostly with their families. Those that did not eat with family ate with friends or a significant other and would choose to eat at home or try somewhere unique to eat, this helped me to design the dining space, using two



different rooms, having one as a fine-dining area and another as a laid-back housestyle dining room with TVs and a cosier feel.

I also found most people prefer to eat with people they know, which was good research for the design of the app I would later design. From these results, I found it

was best to change my idea from a subscription-based service into a "simple booking" system to create something close to a walk-in service, while still only delivering as much food that is needed, reducing food waste. The service would also be best used as both a way to manage existing friend groups as well as for finding new people to eat with. (More information in Appendix E)

The 3D visualisation was also shown to some people who answered my surveys and critiqued my app design. Not much feedback was given on the visualisation and no changes were made.

The received feedback for the app design and found some aspects of my design included...put here what this was to make it more modern and make the app easier to navigate. (shown in Appendix F) Here discuss what the feedback was, how it relates to your design and pull in any outside theories that relate to app design and usability.

How will my solution solve these problems?

My Survey identified that there are many benefits to eating together, however, a lot of meals eaten together are unbalanced and unhealthy. My solution to bring people together to eat will encourage healthy eating while giving people a group to eat with. However, the biggest problem will be encouraging people to choose this service over fast food.

A way to combat this issue would be to open the Kitchen building to the public as well as having it as a subscription. This way people are encouraged to go there instead of fast food for a meal. This could be accomplished by sharing the Kitchen with subscription members for a slightly higher price or using the kitchen while it is not booked for use.

There are currently other services that attempt to solve this problem. However, they do not complete the task effectively.

The services I found to reflect this point are Eatwith.com, which allows people to find other households to visit and eat a meal with, as a guest in their house. This service is very good for encouraging people to meet up and eat together. However, the problem is that many people would not feel comfortable with strangers visiting their house. I believe it is because eatwith is not tailored towards bringing people together to eat, it is focused on the experience of trying a new culinary experience. By using a communal kitchen, this eliminates the awkwardness and hassle of having to host at your own house and potentially feeling that it is inadequate. Eatwith is also very hard to navigate, as well as being very costly for the host. This is where a subscription service where the price of food is evenly split, and no one has the pressure of being a host would be more accessible and beneficial to the community.

Another service that exists is HelloFresh (cite your source). HelloFresh delivers fresh ingredients to a customer's door along with specific recipes on how to make a new, healthy meal from the ingredients provided. HelloFresh sends just the right amount of ingredients required in recyclable packaging to reduce food waste and encourage sustainability. HelloFresh is tailored towards a couple living together, or a family. This encourages people to eat together every night, with a healthy meal. However, this service does not help people who live alone to find other people to eat with, and so the service is useless for those who live alone and cannot share the meals. The service is also quite a large sum compared to quick and easy meals that can be bought from supermarkets. My solution would split the cost among a large group of people eating together, making pricing cheaper as well as bringing people that live alone a chance to eat with a group of people every day.

A very recent service I have found is Olio. This Service brings people together to share food that would otherwise go to waste. Olio encourages social interaction and reduces the waste of food itself in a more passive way. Olio will get people to pick up each other's otherwise wasted food and eat it themselves. However, Olio does not encourage people to come together at the table itself to eat a meal together, which is a very important problem that is not currently being addressed. However, I believe Olio is a very non-intrusive and easy way to begin sharing food, which will eventually break down the barriers stopping people from using services such as my own proposed solution.

Conclusion

Eating alone has become much more commonplace, and although people do not realise it, it is having a negative knock-on effect to most people, becoming less healthy as people are choosing to eat alone, and are often given little other choice.

Everyone feels much better after eating with friends and my proposed solution will allow people to make friends and always have somebody to eat with.

<u>References</u>

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<u>Appendix A</u>

https://www.reddit.com/r/lonely/

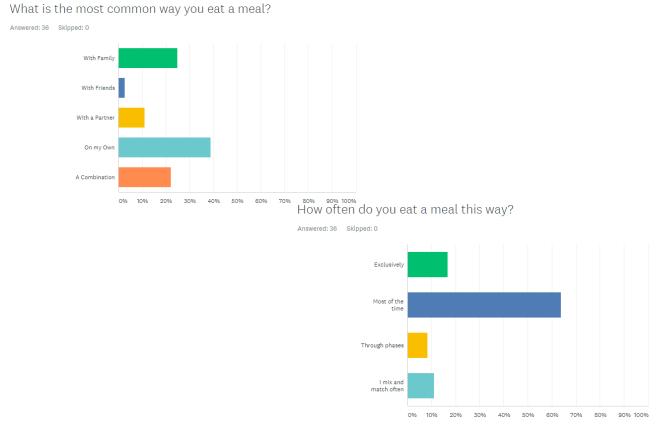
https://www.reddit.com/r/EatingDisorders/

https://www.reddit.com/r/SampleSize/

<u>Appendix B</u>

The scale of the problem

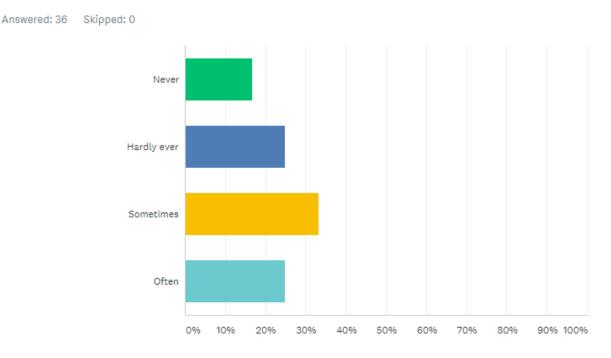
After sending out my Survey, I received 36 responses from a wide variety of people in completely different situations, which gave me a feel for the extent of the problem I am tackling. From the Survey, I was able to find that most people eat most of their meals alone, which supports my secondary research that eating alone regularly is becoming much more common.



What was surprising was how healthy the people that were eating alone actually were, contrary to how big of a problem my secondary research led me to believe.

Physical dietary problems

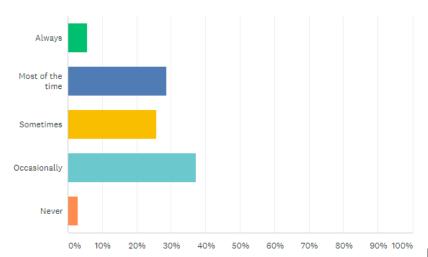
How often do you skip meals?



The results were evenly split, with about half the amount of people that said they would regularly be eating alone saying that they skipped meals "sometimes" and "often". This shows there is almost definitely a correlation between eating alone and meal skipping, which is just one of the dietary problems I found in my research surrounding people who regularly eat alone, however, the problem does not seem to be prevalent in all people who regularly eat alone.

Next, I began to further analyze the other dietary problems my background research had informed me was linked to eating alone.

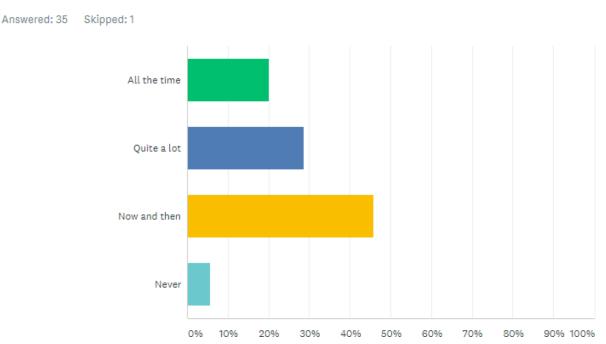




Answered: 35 Skipped: 1

Buster Collins

Unsurprisingly, regardless of how many meals are eaten, everyone eats unhealthy meals alongside their healthy ones, which is perfectly natural. However, the number



Do you often find yourself snacking inbetween or after meals?

of people frequently eating unhealthy meals only about half that of the number of people eating meals alone the most frequently and nearly identical to the number of people skipping meals often. This confirms the link that for several people, eating many of their meals alone has a serious negative impact on their diet. This is once again supported by the number of people snacking between meals.

However, snacking between meals appears to be very common practice with everyone, regardless of how they eat their meals, with a similar number of people snacking between meals as people who eat with their loved ones "most of the time" and those that eat alone, allowing the conclusion to be made that snacking between meals is a very big problem in people that are eating alone, especially when being used to eating with company. This conclusion is further backed up by the responses received from the question "If not never to the previous 2 questions, could you please specify why not?", getting such results as:

So I can justify skipping a meal.	And	I find treats needed as part of a balanced diet
10/16/2019 1:33 AM		10/12/2019 8:58 PM

This further shows the problem of more and more people finding "convenient" and "efficient" meals favourable over healthy, balanced meals. Other responses included:

I am not always the one cooking and can as a result not always decide how healthy the food is going to be, also I sometime go out to eat with friends in which case we usually get fast food.

And

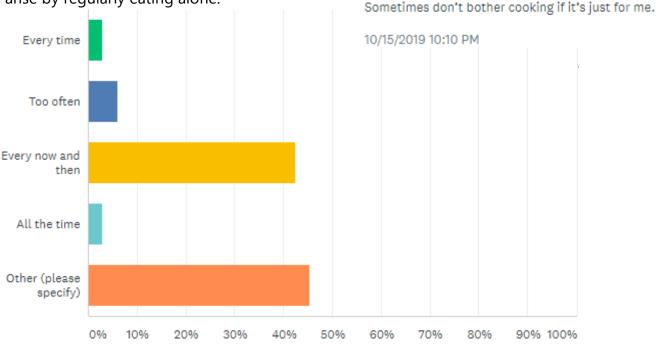
Just try not to And

Not all meals are healthy or balanced. In fact most nice meals are not I.e. pizza and burgers. As for snacking, depends whether I think about food or not

These responses show that people would prefer to eat healthier but find it very difficult to start eating healthy as bad dietary behaviour has become normal and has become a bad habit and breaking this stigma will be the hardest part of this project, especially breaking the habit of eating unhealthily when with friends and encouraging more healthy eating, even when in a group of friends, by getting people to find the joy in cooking healthily as a group.

Mental problems

The next segment of my survey questioned the potential mental problems that could arise by regularly eating alone.



I'm too indulged in the food that I forget about those around me Not really, I just listen to music or watch youtube

10/15/2019 2:55 PM

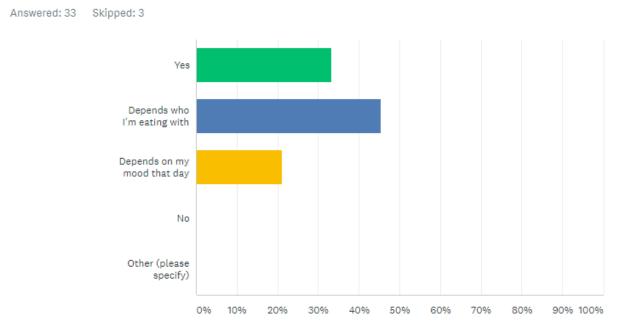
10/12/2019 10:02 PM

No. Actually enjoy it. Me time

These responses surprised me

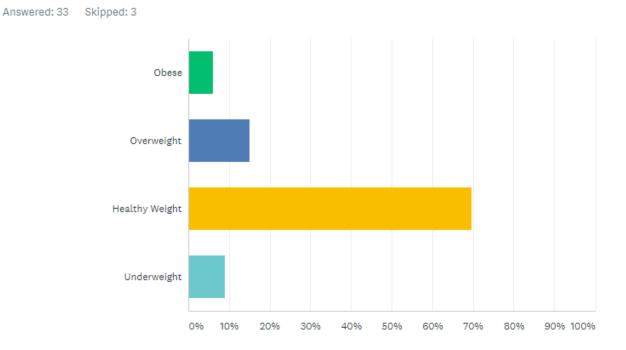
10/15/2019 7:57 PM

as it suggested there was little to no feeling of loneliness while cooking or eating meals alone, which is interesting as it either shows a lack of acknowledgment of the situation or implies that the problem may not be as large as was first thought. However, the conclusion leans further towards the former after the next question: Do you feel happier after eating with a group of people?



It is important to note here that the participants in the survey could not see this question before answering the previous and could not see the responses made by other participants, with this information we are able to deduce that although not necessarily feeling bad or lonely about eating alone, everyone surveyed would prefer to eat with people they are close with rather than eat alone. I found this incredibly interesting and this conclusion directly correlated with some of the secondary research I had encountered previously: "Many Australian and Japanese young adult participants associated eating alone with both pleasure and stress of being isolated from others." (Takeda & Melby, 2017) Which appears to be a mirror of the results found within my own research.

Further physical dietary problems



What weight weight class are you currently a part of?

I next addressed the research that eating alone was linked to unhealthy weight gain and loss, but only a very few percentages of the people surveyed were not at a healthy weight, however, I acknowledge that an anonymous online survey is not the best source of information for truthful answers regarding personal questions such as this.

Reflection

My final question was regarding my proposed solution to the problem

Would a service to meet with other people to learn to cook balanced, healthier meals together and eat the meal together interest you?

Answered: 32 Skipped: 4 10 responses for yes
8 responses for no 1 response for nah 4 responses for not really Probably not because I would just watch YouTube videos to learn to cook and get healthy meal ideas If it was a with a group of mates it would be a laugh but if it was a serious event with random people, I wouldn't be interested. 2 responses for may be 4 responses for maybe

From these responses, we can see I've had an overall positive response to my solution, but still have a lot of negativity to tackle, which I will need to address by creating more incentive to get people involved.

Other Primary Research

After asking more people in standard conversations about how they eat most of their meals, a friend of mine told me that they watch Mukbang while eating their meals, which is the process of watching another person or group of people eat a meal themselves while interacting with the audience or talking to each other. Like a podcast but with food involved. This idea interested me as it shows an almost emulation of sharing a meal without being in the same room.

<u>Appendix C</u>

Interview questions were structured as follows:

Before eating together:

- So, we all eat alone in the house, does that make you feel negative or have any negative thoughts at all?
- Do you think that you'd feel any different after eating together as a house?
- Do you ever skip any meals, or eat an unhealthy meal because of convenience?

After eating together:

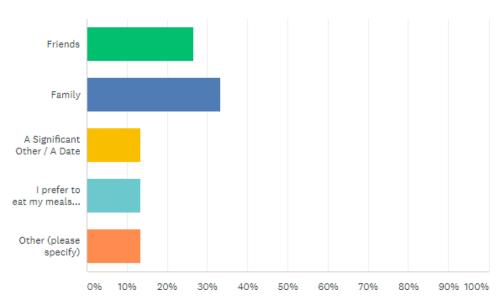
- Did you feel any differently while or after eating dinner together as a house?
- Would you want to eat together more often?
- If you were cooking while the shared meal, would you make more of an effort to make a healthy, balanced meal than if you were only cooking for yourself?

Appendix D

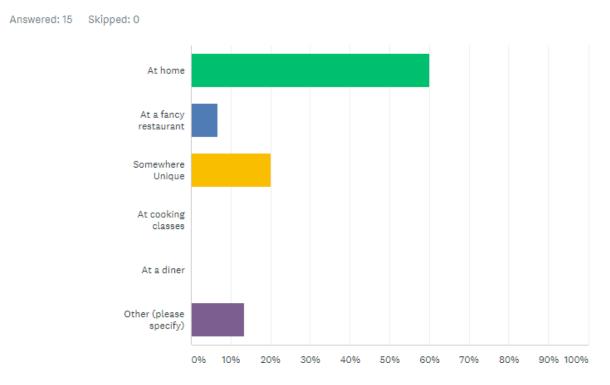
My follow-up survey was to help create a design for the shared kitchen and App. I started by finding what relation most people tend to share a meal with.

Who do you prefer to share a meal with?

Answered: 15 Skipped: 0

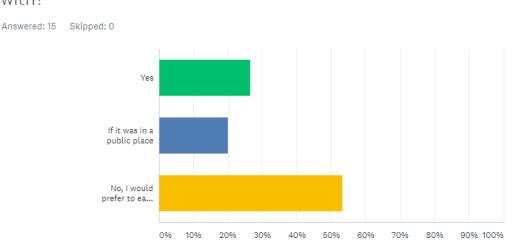


I then found where most meals were shared, so I could design the shared eating space to be as comfortable and natural as possible.



Where do you prefer to share a meal?

My next question was some background on how many people would likely be using this service to find new people to eat with. For this, I realised the app would be better suited for both finding new people to eat with as well as managing groups of current friendships.



Would you feel comfortable finding a group of new people to share a meal with?

Next, I attempted to find the best way to layout my kitchen. The results were useful

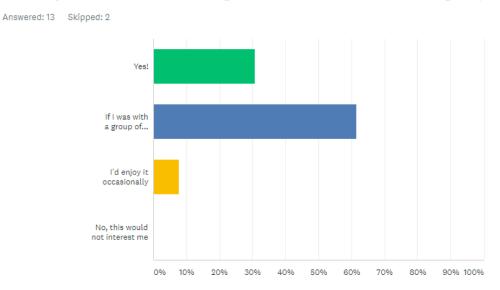
for creating a visualisation.

What would you find most to least essential in a shared Kitchen for creating large meals?



Next, I pitched my idea, which was received well.

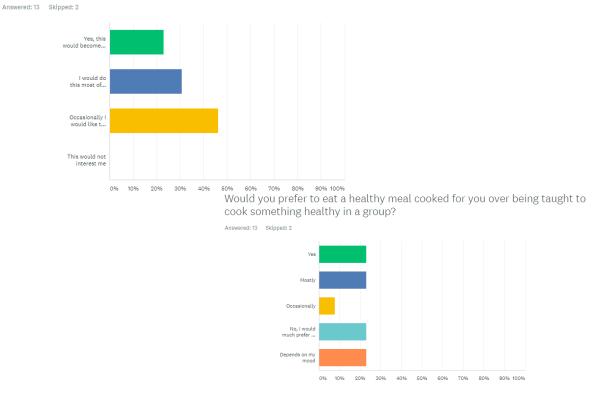
Would you find it entertaining and fun to cook meals in a group regularly?



And then I compared my proposed idea against the most common existing ways of

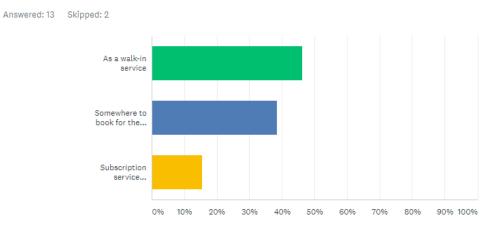
eating as a group.





Lastly, I asked how people would prefer to use the service.

If this service was to become a reality, how would you prefer the service to be used?



<u>Appendix E</u>

The feedback I received from my app prototype was very helpful. Some people thought that the font was a little dated, but others thought it was a good font to

use, it was just used too much throughout the app.



 spacing between join the table and list below

 spacing between existing user and sign in button

 try to fix the text wrapping in the list maybe try bullet points

 less spacing between beating loneliness text and join the table button

- more inner padding on the join the table button (or smaller text)

 add a slight drop shadow to buttons and the white box with the list (it adds depth to the page)

Lewis Guest Nov 25

Spacing between join the table and instructions needs to be bigger.

Some changes were very simple, which I sceptical to change at first, but after changing the design slightly, it was obvious how big of a difference was made by such small tweaks.

Lewis Guest Nov 25

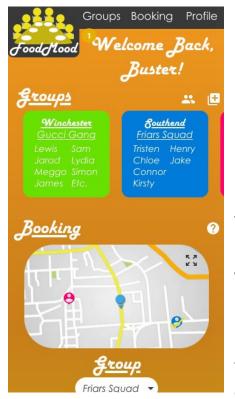
The text field subtitles don't need underlines.

Most of the feedback was on the design of the app and not necessarily the functionality, however, some of the feedback was on the user experience, which would be very important to change, such as changing multiple elements into single buttons and changing the position of the home button and navigation bar.

One of the biggest pieces of feedback I had repeated was creating a space between the prompt to join up and the instructions that go along with the signup, and to create a more structured and uniform page layout.

Another repeated feedback was the use of padding on the boxes and the removal of borders from buttons and boxes to be replaced with a drop shadow.





Android Mobile – 4

Lewis Guest Nov 25

Position the logo on the right side of the screen and the welcome back on the left so that it lines up with the rest of your text.

The feedback received was only on the sign-in pages, splash page, and home page. No feedback was given in the deeper levels of the app.

Further information was towards to add larger margins and spaces and again the overuse of the fonts, and to use less variety of colour and the overuse of the logo and nav bar.

Flux_Gaming_ 1 point · 1 day ago

Love the style and font. All I'd say is slightly shrink all of the elements so it doesn't cover the whole screen. Also try not to over use that font. It's a nice font but can be difficult to read.

Otherwise looks great mate.

Xzavios 1 point · 1 day ago

Hi N This fancy font should just be used for H1 type headlines; basically don't use it too often because it's hard to read. Esp do not use it for buttons!

Your inputs when creating an account are too close to the edge; be careful to watch your margins. The titles for your inputs could be a lot smaller and you don't need the underline as it's confusing. Just use an underline for links.

Inside the app I think things are coming together. The main thing to look out for is contrast of text. Esp areas with white on top of light/yellow backgrounds.

Speaking of color, you're using quite a bit of different colors. This can be fun but sometimes overwhelming. It can make it a little unclear what is interactive or important. Try the 60/30/10 rule (a principle from interior design I believe)

Lastly, your navigation seems inspired by web but think about it app-wise. You don't need to blast the logo on every page. Also, I would try to use a bottom nav (tab bar) in place of the top nav.

I hope this helps! Good luck and keep at it :)

Appendix F

I changed the design to match the feedback I had received, and the app immediately looks more inviting and interesting, as well as being easier to navigate.

