

plant-based food

A report on the results of the pilot project on canteen use and plant-based food in the SCIENCE university canteens.

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GSC Living Lab 2024: University Canteens at UCPH SCIENCE

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Introduction

This report summarizes the results of a pilot project on the university canteens at SCIENCE, which has been conducted by the Green Solutions Center as a part of the Living Lab "Our Plant Based Future". Briefly put, the project has mapped and been in dialogue with the involved actors surrounding the transition of the "Gumle" canteen at Frederiksberg Campus to the vegetarian concept "Wicked Rabbit". In addition, the project has conducted a survey among users of the canteens at Frederiksberg and Northern campuses, as well as qualitative interviews with a handful of canteen users and the head chef of the Gumle canteen.

The case of the University Canteens at SCIENCE

Following a suggestion by Compass Group, the firm that runs the canteens at UCPH SCIENCE, the Gumle canteen at Frederiksberg Campus adopted the concept "Wicked Rabbit". The concept involves a vegetarian buffet with completely plant-based options and was originally developed for a canteen at the University of Copenhagen's South Campus. This shift to a vegetarian canteen in the biggest of Frederiksberg Campus' two canteens occasioned the idea by the steering committee of the Living Lab "Our Plant Based Future" to document the process and investigate how canteen users responded to the change. This idea led to the establishment of this pilot project and to the engagement of Ph.D. and sociologist Morten Wendler Jørgensen to run the investigation. In the design phase, the pilot evolved and adopted a broader focus on changes in canteen use, not only at the Gumle canteen, but across all the SCIENCE canteens run by Compass Group. The aim of the project has been trifold; 1) to better understand how employees and students at UCPH use the university canteens 2) to investigate potentials for developing the canteens and 3) how the ongoing transition toward more plant-based and less meat-based food in the canteens factor into 1) and 2). The project has run from November 2023 to March 2024, and has involved the following activities:

- 1. A mapping of existing knowledge about the change to the "Wicked Rabbit" concept at the Gumle canteen through conversations with different stakeholders, researchers and students.
- 2. A series of qualitative pilot interviews with canteen users, as well as with the head of the kitchen at the Gumle canteen. These were supplemented by short observations at the Gumle and Gimle canteens, as well as at the vegetarian canteens at Søndre Campus. The aim of these was to get qualitative insights into how employees and students use the canteens, as well as the experiences of the head of the kitchen at the Gumle canteen.
- 3. A faculty wide survey about canteen use, which was sent to all employees and students at the UCPH Faculty of Science. The aim of the survey was to better understand how students and employees use the canteens, and how canteen use varies with financial situation, physical presence on campus and more.

¹ Gumle also delivers food to the location in Taastrup, which is called "Gamle", and services 10-20 costumers per day. In other words, the food is the same at the two locations.



The perspectives of Compass Group and Campus Service

This section briefly outlines some of the experiences and challenges highlighted by Compass Group, who has run the canteens at SCIENCE since 2019, and UCPH Campus Service, who is in charge of managing the canteen contract. The section is based on conversations with Eva Ganvig, the canteen coordinator at Campus Service Frederikberg+ and Esben Luplau, market manager at Compass Group, during November and December 2023. While the focus of the conversations was initially the transition of the Gumle Canteen to the "Wicked Rabbit" concept, some of the challenges mentioned focused on the management side of running university canteens in general.

The SCIENCE Canteens and general challenges from the perspective of Compass Group

At the beginning of the pilot, Compass Group was managing lunch arrangements at eight different locations on SCIENCE, six of which can be considered canteens. These locations are spread out across the city; three at Frederiksberg, two at the University Park, one at the Niels Bohr Institute, one at the Institute of Geography and one in Taastrup. This has several important consequences, according to Compass Group:

- 1. Many locations mean fewer people at each location, and therefore less potential customers.
- 2. At the same time, it also means it becomes necessary to employ more people at the canteens, since every location needs to be manned or at least managed.
- 3. Combined with the fact that on several of the locations, the kitchen facilities are old and relatively small, the number of locations and the distance between them makes harder to run the canteens, both when it comes to expenses and to securing the quality and variety of the supply across locations.

In addition to the above, several related challenges were mentioned:

- 4. According to Compass Group, the sales numbers across canteens have fallen significantly over the last years, which Compass Group attributes to a combination of the pandemic (which may have resulted in the students being present on campus less often) and the high inflation levels, which have led to higher prices in the canteens and less purchasing power among the costumers, especially students.
- 5. Finding enough qualified kitchen personnel is a challenge in the field. According to Esben Luplau, this may be due to the fact that many workers left the field during the pandemic, when there were fewer positions available, and they haven't come back since.

The above is, according to Esben Luplau, part of the explanation why the SCIENCE canteens are currently operating at a loss.



The SCIENCE Canteens and general challenges from the perspective of Campus Service

Before a recent reorganization of the UCPH administration, the canteen contracts were managed by each faculty. Now, instead they are managed by the three different sections of Campus Service: Frederiksberg+, City + South Campus and North Campus. This means that the current canteen contract on Frederiksberg+ and North Campus, which has been in effect since 2020, was negotiated by the SCIENCE faculty. In other words, Campus Service is managing a contract they didn't negotiate themselves. Canteen coordinator at Frederiksberg+, Eva Ganvig, mentions some of the same challenges as Compass Group (small kitchens, fewer costumers etc.) and adds the following:

- Due to the difficulties related to running the SCIENCE-canteens listed above, the contract between SCIENCE and Compass Group includes a yearly regulation of the prices and the remuneration according to the overall price index. This renegotiation has resulted in both an increase in the prices for meeting service options, but also a significant increase of the yearly remuneration fee to Compass Group.
- 2. A central challenge is that when Campus Service took over the management of the canteens, they did not receive any instructions regarding the strategy for the canteens of UCPH as a whole. This means that the contracts from location to location look quite different, which again means that the prices, content, and quality of the canteens vary from campus to campus. This also pertains to sustainability initiatives.
- 3. Another challenge, which is both related to managing as well as running the canteens, is user engagement. As part of the canteen contract with Compass Group, a number of user groups meetings are held each year to ensure that the users have an opportunity to give feedback to the canteens. However, in general not many users show up at the meetings.

Eva Ganvig highlights two important focus areas for the future administration of the canteen contracts: First, the development of a university wide canteen strategy, including details on sustainability strategies. Second, a heightened focus on the communication of canteen initiatives and meetings to the users.

Changing the Gumle Canteen to Wicked Rabbit

According to Campus Service and Compass Group, in some respects, the transition of the Gumle canteen to the vegetarian "Wicked Rabbit" concept has been much more frictionless than anticipated. For one thing, both Campus Service and Compass Group report receiving more positive feedback than complaints on the shift from users. For another, Compass Group reports that the sales numbers in the Gumle Canteen was about the same in the autumn of 2023 (following the shift to Wicked Rabbit in September) as they were in the same months in 2022. In other words, apparently there has been no significant backlash or boycotts from users of the canteen.

However, there have been other challenges. According to Compass Group, the general challenge of finding qualified kitchen personnel only grows when it comes to finding kitchen personnel who are qualified – and willing - to run a mainly plant-based canteen. At the same time, some of the existing kitchen personnel have been skeptical about removing meat from the menu, which is part of the reason why Gumle has so far been the only canteen at SCIENCE to shift to "Wicked Rabbit". In January 2024 it has been decided that the BIO canteen will shift to "Wicked Rabbit" by September 2024.



Analysis of the pilot project data

This section briefly describes the results of the interviews as well as the survey data. Due to the brief format of this report, details on the design of the pilot, for example on how the survey was conducted, can be found in the appendix.

Qualitative themes and insights

The interviews with users focused mainly on canteen *use* and lunch habits, rather than on the stated preferences of the participants. This was because these two subjects were especially relevant to challenges mentioned by both Compass Group and Campus Service, but also because other actors had already investigated preferences and motivations of users². The interview with the head of the Gumle kitchen focused both on the ups and downs of running a vegetarian canteen, as well as on reactions from users.

The interviews have resulted in four themes, each of which constitute potential pointers for further research. These have also served to inform the development of the survey questions.

Getting used to a plant-based canteen.

The first theme, which is directly related to the shift to the vegetarian Wicked Rabbit concept, is *adjustment*. When the employee Rosa³ is asked about how her colleagues have reacted to the vegetarian canteen, she says:

"Some people thought the canteen going plant-based would be a nightmare, but I think that was based on what the vegetarian options looked like in the previous canteen. They often didn't look that inviting or thought through and so on. So, it feels like people have surrendered to it, at least I don't think more people bring food from home than before. And I don't really hear people complaining about the canteen, which used to be a common occurrence, regardless of whether it was with meat or plants."

This view is also voiced by the head of the Gumle kitchen, Valentin, who describes that after a couple of months with some complaints, mainly from employees, people seem to have gotten used to the new concept. To sum up, this theme points to adjustment and normalization as a potentially fruitful area for further research. Or, put differently, to looking into if and how consumers' attitudes toward plant-based food shift gradually when they are more 'exposed' to it.

Plant-based food, food quality and canteen use.

The second theme is how the participants talk about the quality of the food in the canteens. They certainly have both praises, suggestions and complaints, but these are mostly related to other aspects of the canteen than the fact that there is no meat. To name a few examples: The students both mention they think prices are high, and that the pay-by-weight concept makes it hard to know in advance what

² These include: 1) Luke Schafer from FoodSHIFT, who conducted a user engagement survey for students and employees at Frederiksberg Campus in the early autumn of 2023, 2) Pernille Lykke Jørgensen who used the canteen as a case for her master's thesis and 3) students of the course "Introduction to Social Science Methods", who, by initiative of associate professor Kia Ditlevsen, used the Gumle canteen as a common exam case.

³ All participant names are pseudonyms.



the cost will be. Mikkel mentions that the 'smørrebrød' "seems to be made by someone who doesn't know what smørrebrød is", and that the salads are too starch heavy.

However, even for Mikkel, who probably is the participant least impressed with the food in the canteen, this doesn't mean that he doesn't *use* the canteen for lunch (he describes himself as "an almost-daily user"). Instead, he says he feels he "don't have much choice" since the other canteen is too far away. The above points to a potential avenue for further investigation, namely the relationship between understandings of food quality on the one hand and canteen use on the other. This leads us to the third focus.

Weekly schema and presence on campus

The third theme is the influence of the canteen users' daily schedules on how much they use the canteens. Put simply, for people to use the canteen, they first need to be present on campus during lunch time. This is especially relevant for students, since they have relatively flexible schedules, which vary from semester to semester and during exam periods. As the student Emil puts it:

"I'm not very successful in making packed lunches from home, so last semester I ate at the canteen maybe every other day I was at campus all day. But I didn't have many full days on campus. And if you just have three hours of classes, then you can just eat lunch at home."

Even though Emil eats at the canteen "every other" time he is at campus during lunchtime, he estimates that in practice this only means using the canteen once a week or so, because Emil only has two days with classes both before and after lunch. In cases where Emil only has half a day on campus, he describes going home to eat, or using the canteen at his place of work, which has a fixed price of 30 kr. for a buffet. Another example of how schemas influence canteen use is when the student Thor describes that he'd like to use the canteens discount right before closing time, but that he usually can't since the discount is only offered from 13.40-14.00 and he always has classes from 13-16. Thor, who is an omnivore, also describes using whichever canteen is closest to where his classes are held. This theme points to yet another potential avenue for further research, namely how much the physical movements and schemas of students and employees impact what canteens they use, as well as how much.



Understandings of cooking skills and the role of meat

The last theme originates from the interview with Valentin, who was the head of the Gumle kitchen until February 2024, and is the role of meat in a chef's skillset. Valentin, who is an omnivore himself and has run a conventional canteen before Gumle, puts it like this:

"This is just my opinion, but I think a lot of chefs would say no to running a vegetarian canteen, because they don't want to make only vegetarian food. They also want to be able to make something with fish and meat, and to be able to play around with different things. In part because that is more exciting, but also because you lose your skills over time if you only make vegetarian food. At some point, after 5 or 6 years, you won't be very good at making meat or fish dishes anymore."

The understanding of cooking skill that Valentin expresses here is important for several reasons. First, it places meat as important to professional creativity and enjoyment: as a central ingredient that makes cooking "exciting" and that makes the chef able to "play around". Second, it focuses on the risk of losing the ability to cook with meat, if this skill is not actively maintained. This may be an important perspective on understanding cases of pushback to sustainability initiatives from kitchen employees: They may not be cases of pure conservatism, but rather a clash between sustainability initiatives and the kitchen personnels understandings of the role of meat in their professional skillsets. It would be interesting to investigate further how widespread such understandings of meat as central to cooking skills are among chefs, and how this relates to the content and focus of the education of cooking professionals.

Results of the survey on canteen use

The survey was conducted over two weeks, beginning the 22nd of February, and ending the 8th of March 2024. During that period, more than 1800 people completed the survey. The number of respondents far exceeded the project's initial expectations, and the resulting dataset provides a valuable basis for understanding the canteen use of employees and students. It also provides a basis for investigating reactions among the students and employees to the tendency toward more plant-rich food at the university canteens.

Due to the relatively brief format of this report, the following sections will only provide a tentative interpretation of a small selection of the data and focus mostly on comparing employees and students. The reader can dive into more results from the survey by reading Appendix A, which provides an overview of the answers to all survey questions, and by reading Appendix B, which provides an additional selection of data visualizations. Finally, the dataset can be made available for independent analysis per request to the Green Solutions Centre. A detailed description of how the survey was designed, as well as of how participants were recruited, can be found in Appendix C.

Differences in the terms of canteen use: Income and campus presence

Income

In the survey, students were asked two questions about their income. First, they were asked to list their income sources, and second, they were asked to estimate their monthly income before taxes (see App. A, p. 9). It was assumed that the average income of employees was much higher than students', and so employees weren't asked about their income. Throughout the survey, other questions asked



directly about the relationship between canteen use and income. Here, some of the results will be presented and interpreted.

First some numbers. The average reported income of the student respondents was 8904 kr., and the median income was 8000 kr. (App. B, Table 1). Only 3% report incomes over 18000 kr., while 61% report incomes under 9000 kr. (App. B, Figure 6). 83% report income from SU, and 60% report having income from student jobs. 24% report SU as their only source of income (App. B, Figures 4 & 5). To put some of the above numbers into context, Student Services at UCPH estimates that their students typically pay 3500-7000kr in monthly rent. In other words, with all expenses included, it is safe to assume that many students have a very limited food budget. This may be part of the explanation why 82% of the student respondents who don't use the canteens at all report prices as one of the main reasons, compared to 52% of the employees⁴ and 88% of student respondents agree or strongly agree that they would use the canteens more often if the overall prices were lowered (compared to 77% of employees) (App. A, Section 8)

Campus presence and canteen use

As part of the survey, all respondents were asked how many days they are physically present on campus during lunchtime (App. A, p. 12). There are clear differences between students and employees: 42% of the students report being at campus 3 days a week or less, compared to only 14% of the employees. Together with limited income of students, this difference in campus presence is likely part of the explanation why students consistently across the six canteens report using the canteens less frequently than the employees:

All respondents were first asked at which campus they spend most of their time. Then they were asked how often they used each of the canteens on that campus. Employees consistently report using the canteens at their campus more often than students (with the single exception of the Gimle canteen). Let's for example, look at the Gumle Canteen at Frederiksberg campus. 22% of the employees at Frederiksberg report using the canteen 3 days or more each week, compared to 9% of the students (App. A, section 7). All respondents were also asked the question "From where do you most often get lunch when you are at campus during lunchtime?". Here, 41% of employees chose the option, "I buy lunch from the canteen", compared to only 20% of the students (App. A, p. 19).

To sum up, the survey responses point toward differences in the terms of canteen use among students and employees. In short, students spend less time on campus than employees, and many students have low incomes. Further analysis could fruitfully look more into this discrepancy in the terms of canteen use between different groups at UCPH SCIENCE, as well as into how the potentially mismatched needs of students and employees can be accommodated.

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⁴ 221 of the respondents reported never using any of the canteens at their campus for lunch.



Food habits among employees and students

As part of the survey, the participants were also asked about their dietary habits related to meat consumption (see answer categories in App. A, p. 10). Here, 11% of the total sample self-identified as vegetarians, 7% as pescetarians and 3% as vegans⁵. When it comes to comparing the students and employees, the differences are less than expected, considering that in existing surveys, young people usually have larger shares of meat excluders (e.g. see this). 4% of students identify as vegans, compared to 3% of employees. 11% of students identify as vegetarians, compared to 10% of employees (Appendix B, p. figure 8), and for both groups 7% are pescetarians. Perhaps part of the reason that the difference isn't bigger can be attributed to the fact that a lot of the employees are relatively young: the average age of employee respondents is 37 years.

In any case, among the respondents to the survey, identification with dietary categories that exclude (some kinds of) meat and animal products is much more widespread than in the general population. This is worth remembering when interpreting the numbers in the following section, which deals with the reactions and relations to meat and plant-based food in the canteens.

Reactions and relations to plant-based food and Wicked Rabbit at Gumle

The respondents of the survey were also asked a number of statements regarding plant-based foods in their everyday life and in the university canteens. Here is a selection of numbers from some of these questions, focusing mostly on the Gumle Canteen.

24% of employees and 22% of students agree or strongly agree that they would stop using the canteen they use now, if it turned vegetarian (App. A, section 10.1). However, respondents from Frederiksberg Campus were also asked if their use of the Gumle Canteen had changed since it introduced a vegetarian menu. Here, only 2% of the students and 1% of employees said they stopped using the canteen. 15% of students and 18% of employees said they started to use Gumle less, and 11% of students and 21% of the employees said they now use Gumle *more* than before (App. A, section 7.1.1.). In other words, there seems to be a difference between *imagined future use* and *actual* self-reported changes in canteen use when it comes to plant-based canteens. Or put simply, people may not react as strongly to a vegetarian canteen as they imagine — which brings to mind Rosa's quote from page four. This interpretation is of course somewhat speculative and would benefit from further empirical analysis.

The meat-eating respondents from Frederiksberg were also asked to state how much they agree to the statement "Even though I usually eat meat, I eat at the vegetarian Gumle canteen because it is convenient." Here, 28% of employees and 45% of students agreed or strongly agreed, while 28% of employees and 15% of students disagreed or strongly disagreed. This could indicate that for many of the meat-eating respondents, the convenience of going to a canteen nearby weighs heavier than the availability of meat. Again, this interpretation is somewhat speculative and would benefit from further empirical analysis.

There are several more questions related to the respondents' attitudes toward plant-based food and meat, as well if and how the food in the canteens influences their food habits in general. These could

⁵ For a discussion of how this reflects the food habits of the population, see Appendix C.

⁶ At Frederiksberg Campus, while the Gumle canteen is Wicked Rabbit, the Gimle canteen serves meat. The distance between the two canteens is 550 meters or an 8-minute walk, according to Google Maps.



also provide a basis for further investigation of the relationship between canteen use and the respondent's understandings of meat and plant-based food.

Suggestions for further research

This section provides an overview of the suggestions for further research derived from the analysis of the qualitative pilot interviews and the survey data.

- 1. If and how consumers' attitudes toward and relation to plant-based food shift gradually when they are regularly 'exposed' to it.
- 2. The relationship between understandings of food quality on the one hand and canteen use on the other.
- 3. How much the physical movements and schemas of students and employees impact what canteens they use, as well as how much.
- 4. How widespread understandings of meat as central to cooking skills are among chefs, and how this relates to the content and focus of the education of cooking professionals.
- 5. How campus presence and income influence canteen use.
- 6. The relationship between canteen use and the respondent's understandings of meat and plant-based food.
- 7. The relation between the attitudes toward meat and plant-based food of users of the vegetarian Gumle canteen and users of the other canteens.

In addition to the above list, further data analysis could also consist in completely different takes on the data, e.g. by focusing on differences in canteen use and attitudes between genders, or between people more or less worried about climate change. The survey data can be shared with any interested researchers or students per request to Green Solutions Centre.

List of actors working with the UCPH canteen

This section provides a list of the actors who are or have been working with different aspects of the canteens at UCPH. Anyone interested in working with the canteen data set can use this list as inspiration and to find people with relevant knowledge and experience.

Empirical investigations

- **Luke Schafer,** FOODShift, UCPH: In the fall of 2023 LS conducted a user engagement survey among canteen users at SCIENCE called "Choose your own adventure".
- Pernille Jørgensen, UCPH: PJ used the Frederiksberg canteens as the case for her masters thesis, and conducted survey experiments among canteen users and using these to analyze choice preferences among respondents.
- **Kia Ditlevsen,** associate professor at IFRO, UPCH, and her students. KD used the Frederiksberg canteens as the mandatory exam case in the 2023 course "Introduction to Social Science Methods". The students did short qualitative interviews with canteen users.



Management and campaigning

- **Esben Luplau** is the head of marketing at Compass Group Denmark and was one of the initiators of the shift of the Gumle canteen to the "Wicked Rabbit" concept.
- **Eva Ganvig** from Campus Service at Frederiksberg+ was the canteen coordinator during the shift of Gumle to the Wicked Rabbit concept.
- **Anna Gundorph,** a student of UCPH, is one of the driving forces behind a group of students who is pushing for a new, sustainable food strategy at UCPH. The group has started a dialogue with the rectorate of UCPH, and is arguing for more plant-based food in UCPH canteens across campuses.

Contact and questions

This report was written by Morten Wendler Jørgensen, who also was in charge of the data production behind the pilot project. MWJ can be contacted at mwj@plen.ku.dk.

For questions about access to the dataset, contact the Living Lab Manager at Green Solutions Centre, Mette Frimodt-Møller, at memo@science.ku.dk.

Appendix A: Survey Overview

Frequencies from the survey on canteen use at SCIENCE in 2024

UNIVERSITY OF COPENHAGEN



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1 Introduction

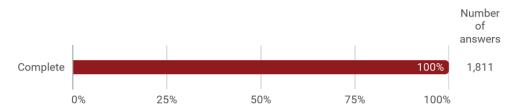
The following overview contains frequencies and percentages from all the questions asked in the survey on canteen use in February-March 2024. The overview focuses mainly on differences between students and employees. This is due to the fact that these two groups arguably constitute two quite different groups of (potential) canteen users, and I wanted to explore these differences in detail: To name a couple of factors, I expected the employees to have higher level of physical presence at campus and higher levels of canteen use. Many other aspects of the data would be interesting to delve into: Differences between genders, between the two campuses, between young and old and so on. While it has not been possible to look more into these differences in this project and the current report, the data behind this report can be made available to any student or researcher at the University of Copenhagen upon request to the Green Solutions Centre. I sincerely hope that some of the readers will grab this opportunity to analyze the data from this survey in more detail.

It is also worth noting that a selection of crosstabulations looking more into some of the below data can be found in the appendix.

by Morten Wendler Jørgensen, Project manager at Green Solutions Centre

2 Respondent overview

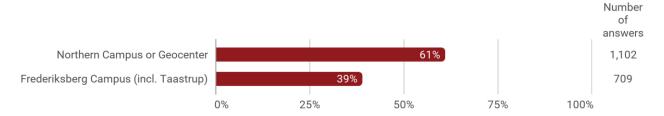
Overall Status



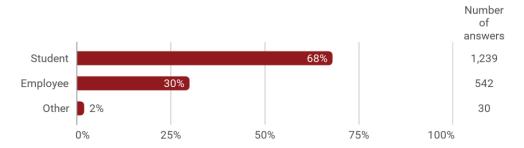
Note: According to the most recent numbers from UCPH, there were 3918 employees at UCPH SCIENCE in January 2024 (not counting the 131 student workers at science, who count as students in this survey) and 9550 students in Oktober 2023. In other words, this survey reached aprrox. 13,5% of the total intended population of employees and students on SCIENCE.

2.1 Affiliation to UCPH and campus

At which campus do you spend the majority of your time? (out of those mentioned)



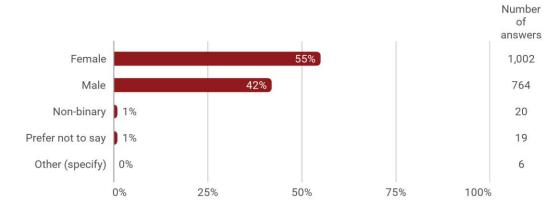
What is your primary affiliation with the University of Copenhagen? (note: PhD-students count as employees)



Note: According to the latest numbers from SCIENCE, in the actual population there are 71% students and 29% employees at SCIENCE. In other words, the sample reflects the distribution of students and employees fairly accurately.

2.2 Gender distribution

What is your gender?

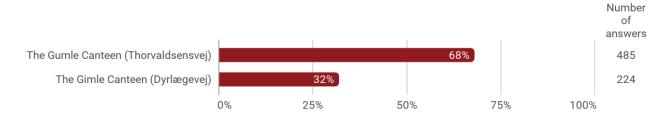


Note: The dispersion is 58/40/1/1/0% for students and 50/47/2/1/0% for employees. According to the latest numbers from UCPH SCIENCE, in October 2023 there were 49,1% female students and 50,1% male students at SCIENCE, as well as 46,6% female employees and 53,4% male employees. In other words, there is an overrepresentation of female respondents in the sample, both students and employees.

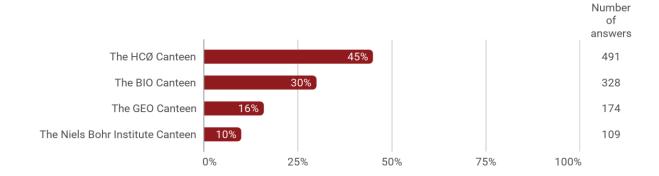
For unknown reasons, the UCPH numbers do not mention anything about those who identify as non-binary.

2.3 Closest canteen

What canteen is placed closest to where you spend most of your time at campus? (if you use the Gamle Canteen, answer "Gumle")

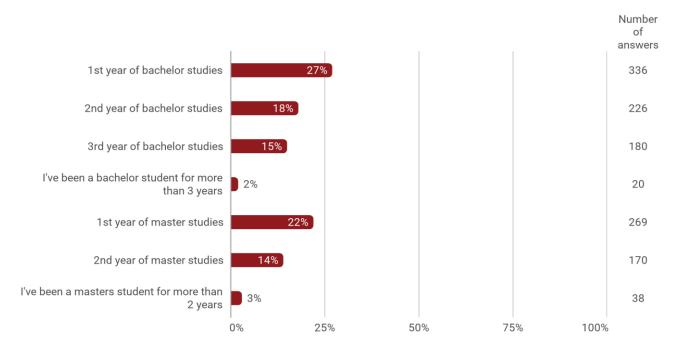


What canteen is placed closest to where you spend most of your time at campus?



2.4 Distributions of students in years of study

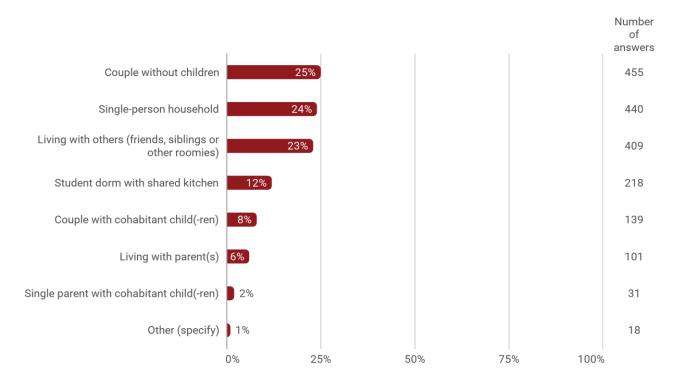
Which year of your university studies are you currently in?



Note: This question was only asked to respondents who identified as students. n = 1236

3 Household type and age distribution

What type of household do you currently live in? Please select the most appropriate option from the following:



What is your age in years?



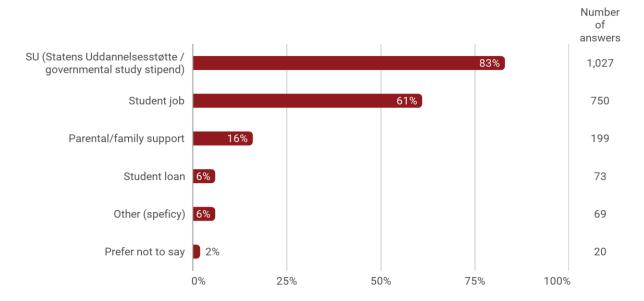
Note: For more details about the age distribution of participants, see the survey appendix.

4 The income of students

The income questions was only shown to respondents who identified as students. This was due to 1) a special interest in the income of students in relation to their canteen use and 2) the aim to keep the survey as short as possible to avoid partial responses. It would have been interesting to be able to compare the students income with data on the income of the employees, but in general it should be safe to assume that employees on average have a *much* higher income than the students (especially since student workers counts as students in this survey, while ph.d. students - who are paid a salary - is counted as employees).

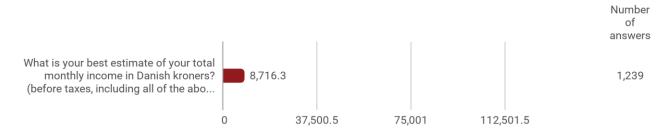
The student's sources of income

Which of the following sources of income do you have? (You can choose more than one answer)



The average income of students

What is your best estimate of your total monthly income in Danish kroners? (before taxes, including all of the above sources)

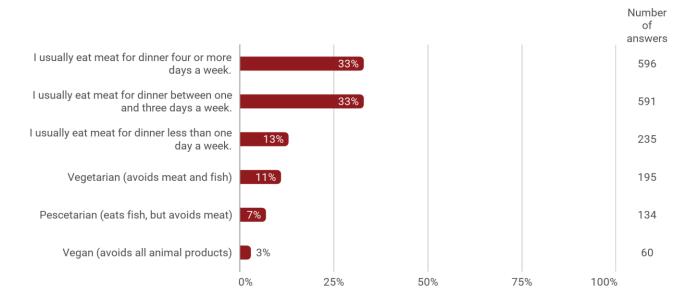


Note: For more details about the income distribution of the students, see the survey appendix.

5 Food habits and meat consumption

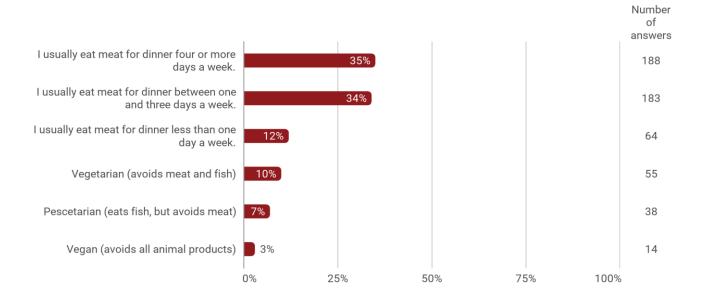
5.1.1 Overall food habits

Which of the following best describes your food habits?



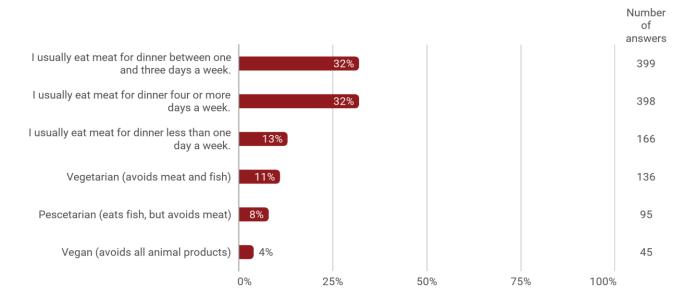
5.1.2 Food habits of employees

Which of the following best describes your food habits?



5.1.3 Food habits of students

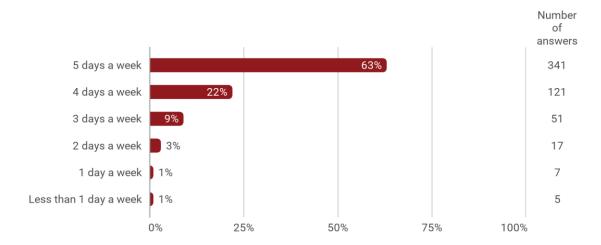
Which of the following best describes your food habits?



6 Campus presence

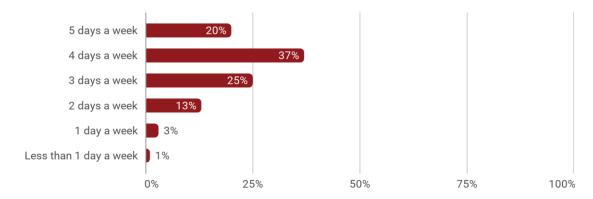
6.1 The campus presence of employees

How many weekdays (Monday-Friday) are you on average physically present on campus during lunchtime? (during the current semester, not counting exam periods)



6.2 The campus presence of students

How many weekdays (Monday-Friday) are you on average physically present on campus during lunchtime? (during the current semester, not counting exam periods)



7 Canteen use

7.1 Frederiksberg Campus Canteens

The following two figures show answers to the question "On average, how often do you use the following canteens?" divided by employees and students. The questions were only asked to the respondents from Frederiksberg Campus. Keep in mind that all Frederiksberg Campus respondents had to answer for each canteen.

Employees at Frederiksberg Campus



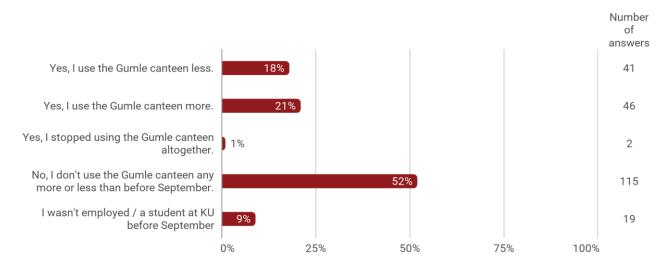
Students at Frederiksberg Campus



7.1.1 Changes since Gumle became Wicked Rabbit

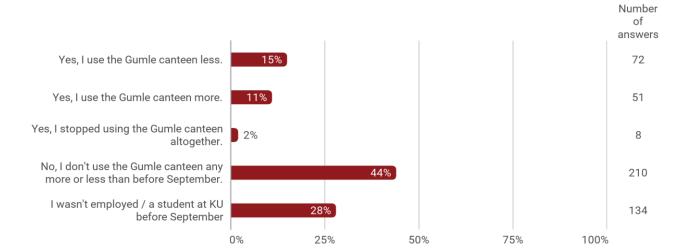
Employees

Has your canteen use changed since the Gumle canteen introduced a fully vegetarian menu in September 2023?



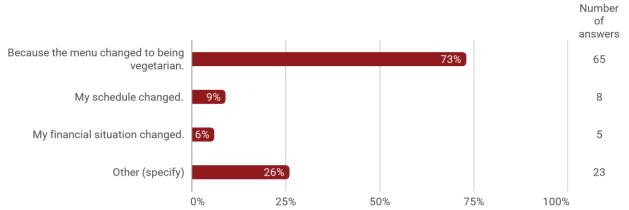
Students

Has your canteen use changed since the Gumle canteen introduced a fully vegetarian menu in September 2023?



Employees

Why did your canteen use change? (you can choose more than one option)

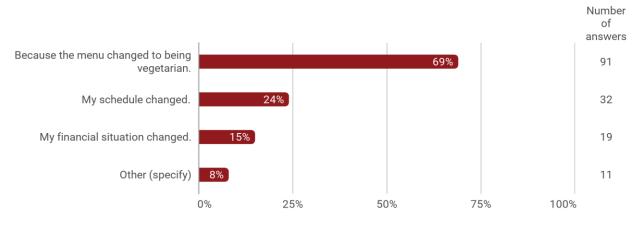


March 2024

This question was only asked to those who answered one of the three "yes" options to the question about whether their use of Gumle changed since september. That is why the number of respondents is low compared to other questions.

Students

Why did your canteen use change? (you can choose more than one option)



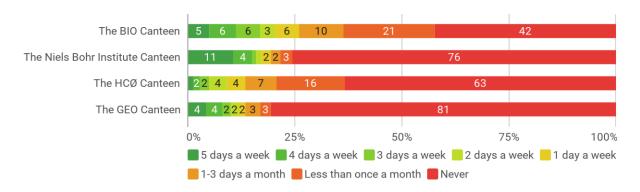
This question was only asked to those who answered one of the three "yes" options to the question about whether their use of Gumle changed since september. That is why the number of respondents is low compared to other questions.

7.2 North Campus Canteens

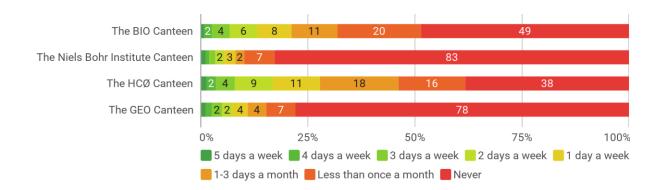
The following two figures show answers to the question "On average, how often do you use the following canteens?" divided by employees and students. The question was only asked to the respondents from North Campus. Keep in mind that all North Campus respondents had to answer for each canteen. This is likely part of the reason why the share of "never" answers is higher at North Campus - there are four canteens at North Campus, compared to only two at Frederiksberg Campus. In addition, the GEO and NBI canteens are placed quite far from the others, which likely means that mostly locals use them.

In other words, the interesting thing to notice here is the difference in canteen use between students and employees: The employees use the canteens more often at all canteens.

Employees at North Campus



Students at North Campus

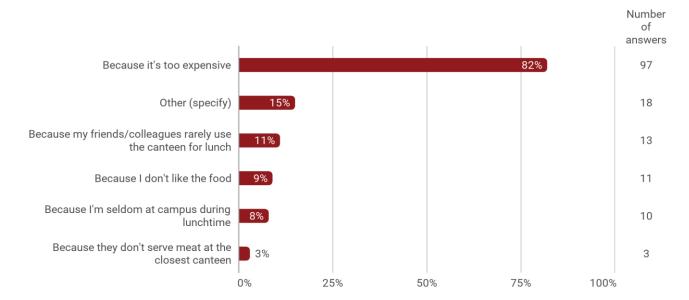


8 Reasons to not use the canteens

The following question was only asked to those who answered that they "never" used any of the canteens. This is why the number of answers is low compared to other questions in the survey: Most of the respondents use the canteens once in a while.

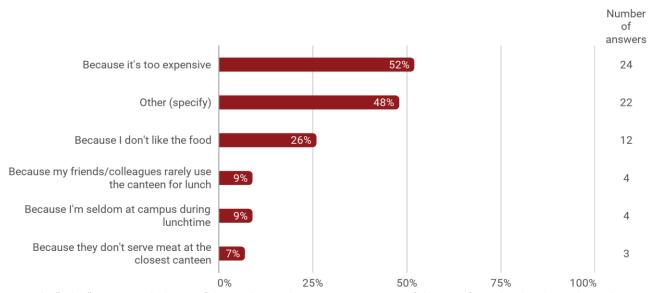
Reasons to not use canteens among students

What are the most important reasons you don't use the canteens for lunch? (choose 1-3 reasons) Figure filtered on "Student"



Reasons to not use the canteens among employees

What are the most important reasons you don't use the canteens for lunch? (choose 1-3 reasons)

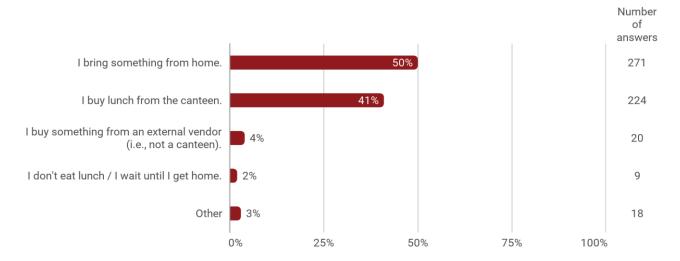


Note: The "other" category, which 48% of the employees chose, contains a variety of themes, often related to the quality and selection of the food at specific canteens.

9 Lunch habits

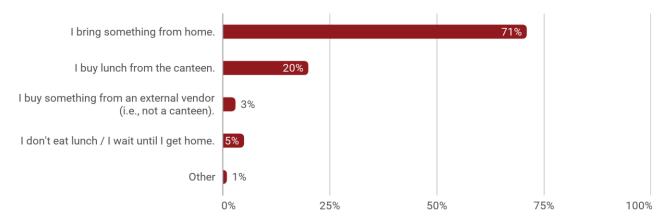
Employees

From where do you most often get lunch when you are at campus during lunchtime?



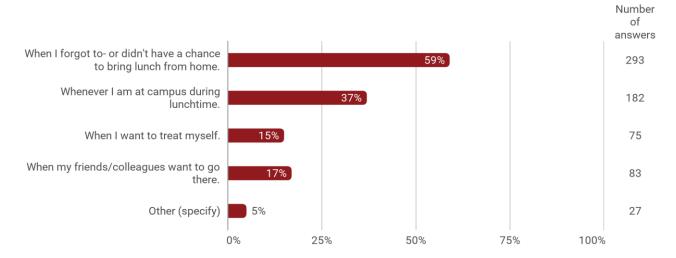
Students

From where do you most often get lunch when you are at campus during lunchtime?



Employees

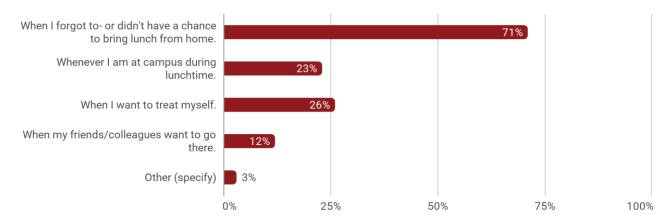
In which situations do you use the canteen for lunch? (you can choose more than one category)



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Students

In which situations do you use the canteen for lunch? (you can choose more than one category)

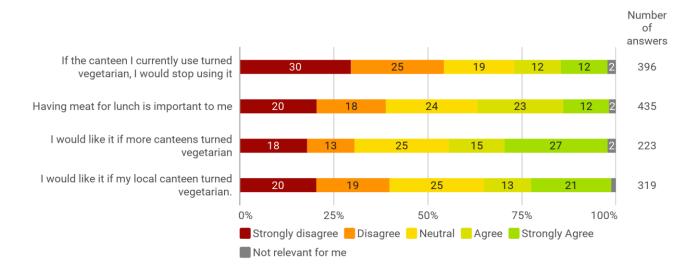


10 Relation to meat- and plantbased food

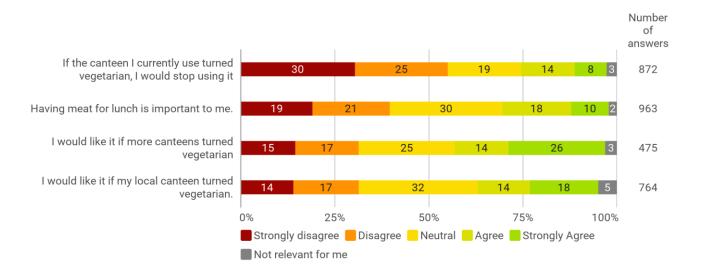
Note that the amount of respondents differ for some of the below subquestions. This is because the survey was designed to avoid that respondents was confronted with irrellevant questions. To name a couple of examples, questions about meat was only asked to meat-eaters, and questions concerning the Gumle Canteen specifically was only asked to respondents from Frederiksberg Campus.

10.1 Veggie versus meat

Employees



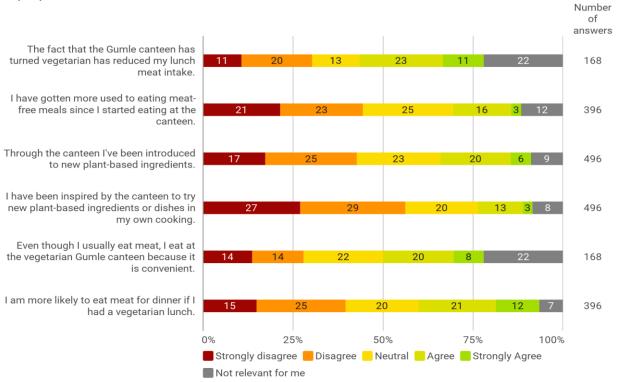
Students



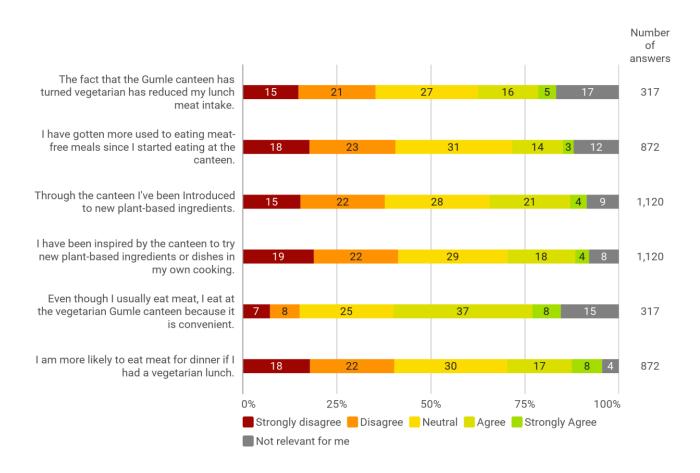
March 2024

10.2 The canteens' influence on food habits

Employees



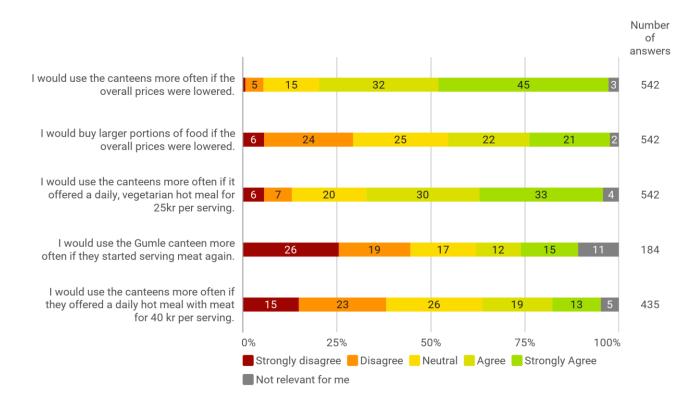
Students



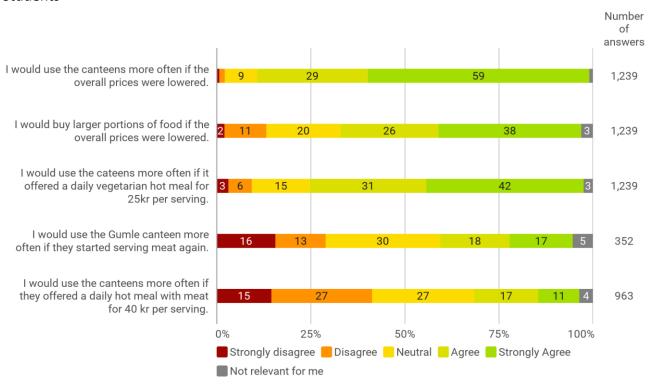
March 2024

10.3 Prices and concepts

Employees



Students



March 2024

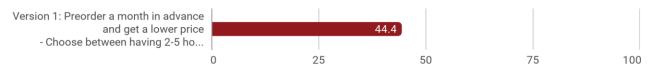
11 Interest in subscription options

Imagine the canteen introduced a subscription option. On a scale from 0% to 100%, how likely would you be to subscribe to this option?

Version 1: Preorder a month in advance and get a lower price

- Choose between having 2-5 hot, vegetarian meals per week on regular weekdays that suits you (e.g. monday, tuesday and thursday).
- The meals are vegetarian and costs 25 kr (or 35 kr for a larger serving).
- Vegan and gluten free options.
- You manage your meal-plan via an app and pay for the meals in advance on a monthly basis.
- You can always choose to change the days or cancel your subscription for the following month.
- You pick up the meals at the canteen between 11 and 13.30.
- If you don't pick up a meal, you don't get a refund. You can ask others to pick a meal up for you or give the meal to them.

On a scale from 0% to 100%, how likely would you be to subscribe to this option?

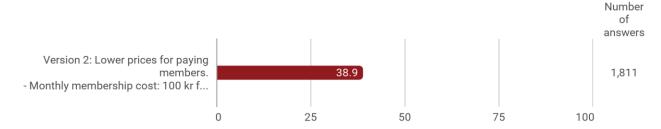


Imagine the canteen introduced a subscription option. On a scale from 0% to 100%, how likely would you be to subscribe to this option?

Version 2: Lower prices for paying members.

- Monthly membership cost: 100 kr for students, 150 kr for employees.
- Perk: 33% off buffet prices on one plate per day.

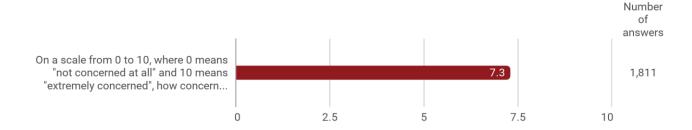
On a scale from 0% to 100%, how likely would you be to subscribe to this option?



Note: For more details on the answers to the above questions, see the survey appendix.

12 Concern about climate change

On a scale from 0 to 10, where 0 means "not concerned at all" and 10 means "extremely concerned", how concerned are you about climate change?



13 Notes on further analysis

As mentioned in the introduction, more data visualizations can be found in the survey appendix. Also, interpretations of some of the above results can be found in the report on the pilot project about canteen use on the Green Solution Centre website.

APPENDIX B: Selected Data Visualizations

Figure 1. Gender distribution among participants, divided by employees and students

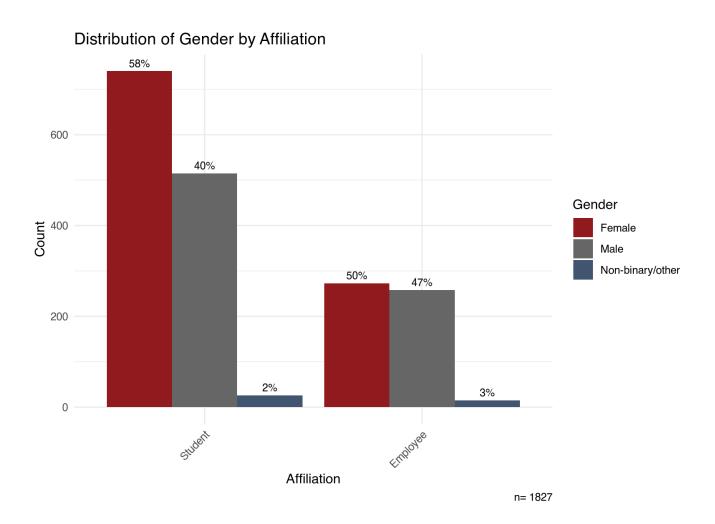
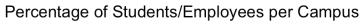
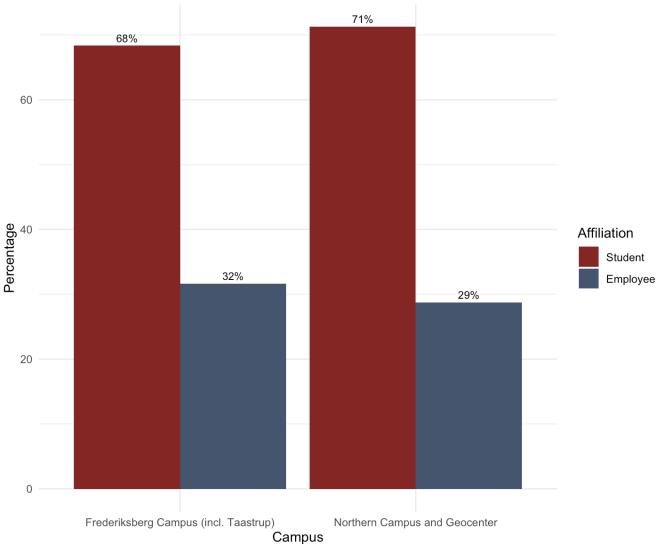


Figure 2. Number of participants per campus, divided by employees and students





n = 1827

Figure 3. Distribution of respondents across age groups

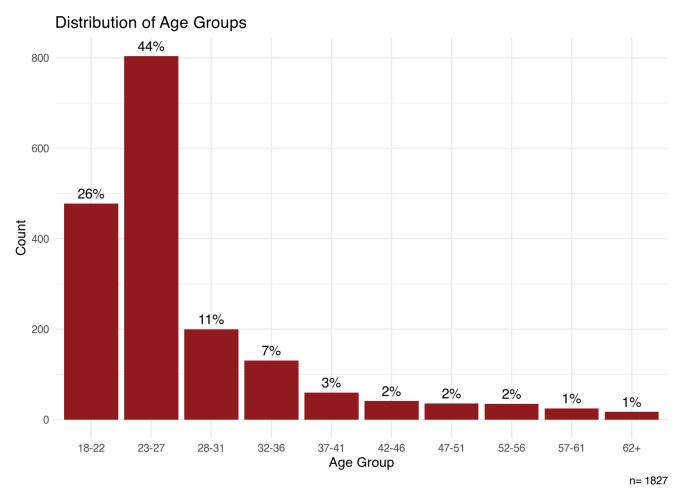
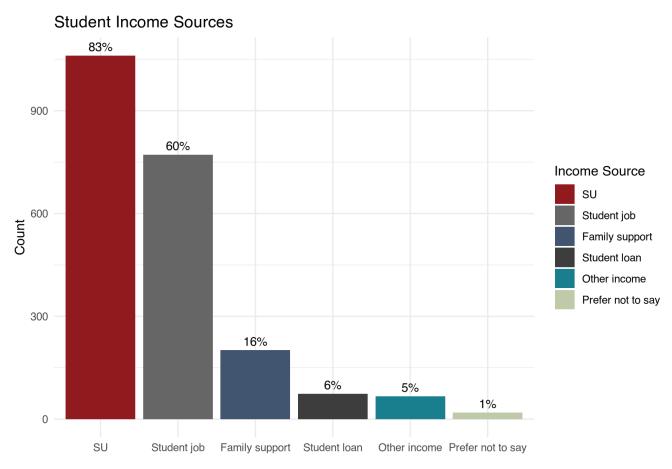


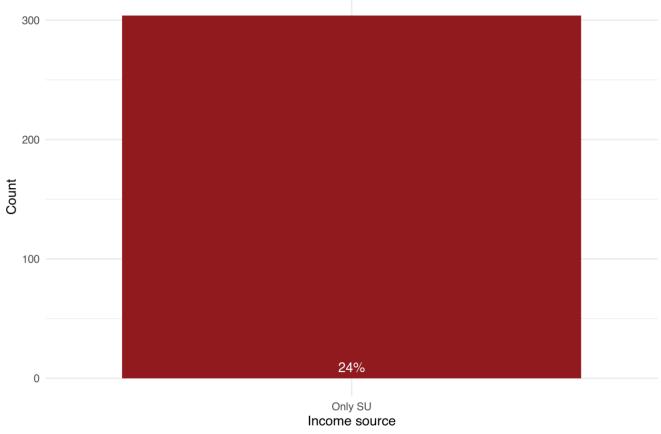
Figure 4. Distribution of Student Income Sources



n = 1281, Total number of responses = 2194

Note: Participants could choose more than one option. Percentages show the share of the student participants who report having income from the mentioned sources. 24% of the students' report having SU as their *only* income source.

Figure 5. Proportion of the Sample Relying Solely on SU Income Students with SU as only source of income



n = 1281

Income Distribution 37% 400 23.8% 300 Count 17.2% 200 8.4% 100 6.7% 4.1% 1.7% 1.1% 0 0-2999 3000-5999 6000-8999 9000-11999 12000-14999 15000-17999 18000-20999 21000+ Income Groups

Figure 6. Income distribution for student participants

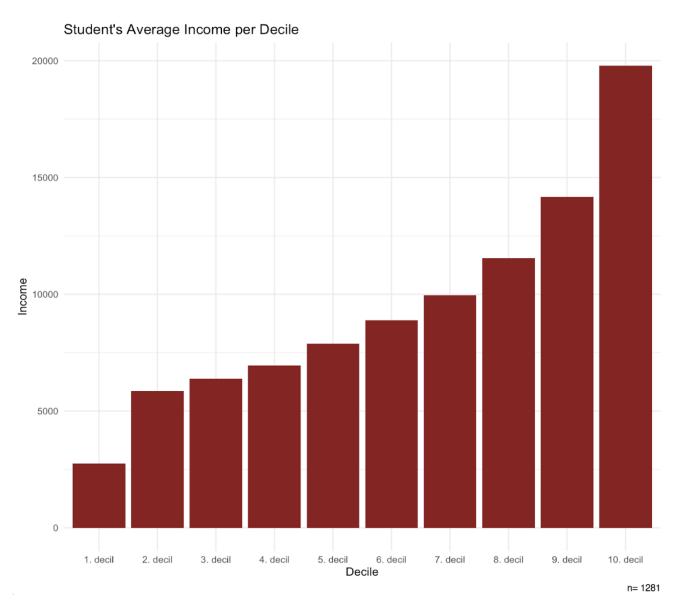
Note: The income groups in Figure 5 were designed to be rather narrow (intervals of 3000 kr.) to show the distribution of the student's income in greater detail.

Tabel 1a. Income Distribution Statistics Among Students

	n	Mean	Median	Min	1'st quartile	3'rd quartile	max
Income	1281	8904	8000	0	6200	10000	60000

n = 1281

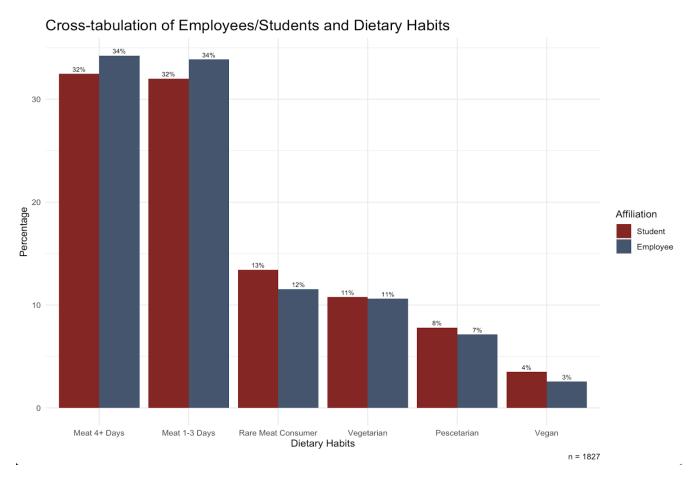
Figure 7. Income Deciles Among Students



Tabel 1b. Income Deciles Among students

Deciles	n	1.	2.	3.	4.	5.	6.	7.	8.	9	10.
Avg. Income	1281	2753	5856	6380	6940	7878	8890	9965	11548	14170	19789

Figure 8. Cross-tabulation of Employees/Students and Dietary Habits



Note: "Rare meat consumer" covers respondents who report eating meat less than once a week.

Figure 9. Physical Presence on Campus among Employees and Students

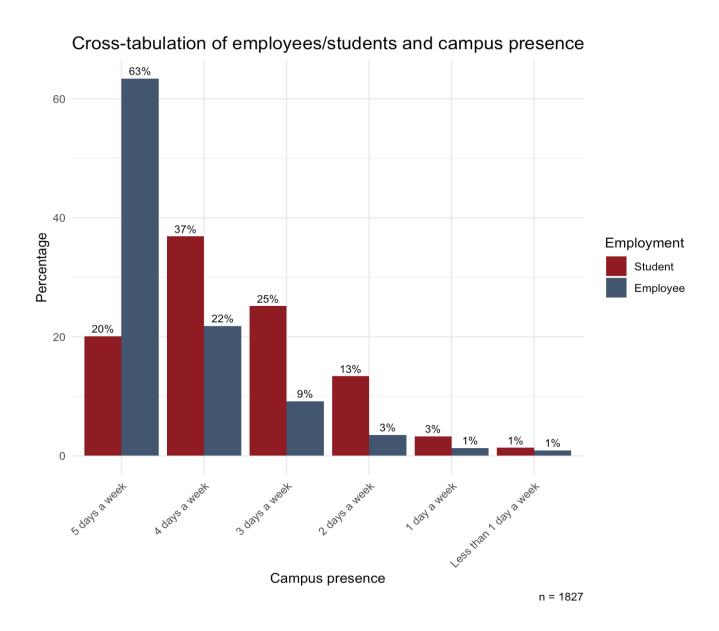
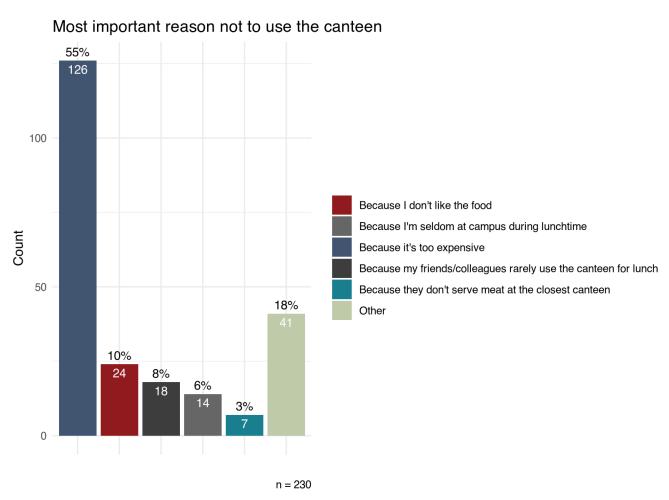


Figure 10. Most Important Reasons for Not Using the Canteen among Employees and Students



Note: This question was only asked to participants who replied that they never use any of the canteens, which is why the number of respondents (n) is relatively low.

Figure 11. Cross-tabulation of Canteen Use among Employees and Students

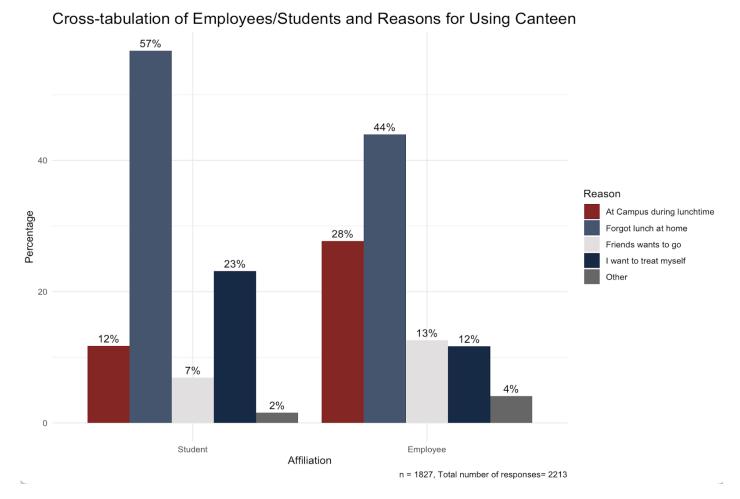
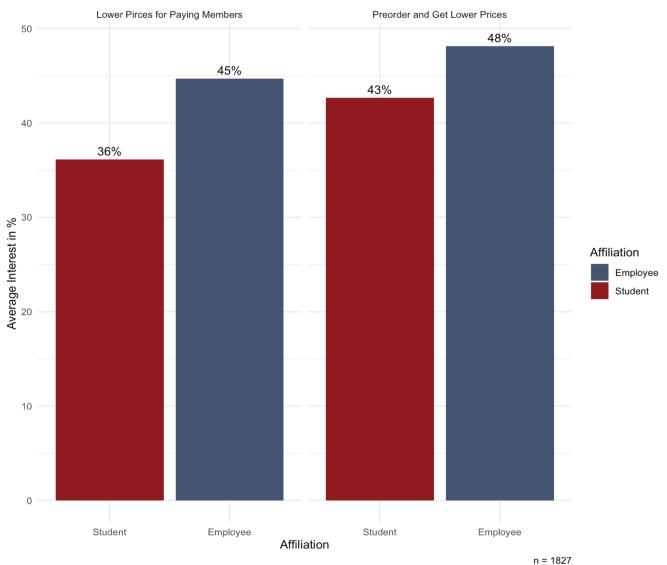


Figure. 12. Comparison of Subscription Likelihood between two Membership Versions Average Likelihood of Choosing the Memberships



Note: Participants were asked the question "On a scale from 0% to 100%, how likely would you be to subscribe to this option?" on two memberships versions. Version 1: Preorder a month in advance and get a lower price. Version 2: Lower prices for paying members. - Monthly membership cost: 100 kr. for students, 150 kr. for employees.

Appendix C: Design and methods

This appendix provides a walkthrough of how the survey was conducted, as well as a brief discussion of the resulting data set.

The design of the survey

The survey was conducted using SurveyXact. Due to a predominant focus on preferences and attitudes among existing investigations of the canteens at UCPH (and to a certain degree, in the scientific literature on university canteens), the survey questions focus mainly on different aspects of canteen *use*, i.e. how often people use the canteens, in which situations etc. These were supplemented with questions about (the students') income and campus presence, as well as some hypothetical questions about potential future canteen use. The analysis presented in the report from this pilot project focuses on differences between employees and students, but there are many other ways this data set could be analyzed.

Activations and filters

A number of questions and answer-options were filtered, using the "activation"-function in SurveyXact. This was done to avoid situations where respondents are asked questions that are irrelevant to them. This is why the number of answers vary throughout the dataset. This is not a complete overview, but here are some of the important filters built into the survey:

- 1. Only students were asked questions about income (since it was assumed that employees on average have a much higher income and disposable income than students).
- 2. Respondents from Frederiksberg Campus were not asked questions about canteens at North Campus and vice versa.
- 3. Vegetarians and vegans were not asked questions about how canteens influence their meat consumption.
- 4. A couple of questions were only asked to Gumle-users (since that is the only Wicked-Rabbit Canteen, which was of special interest to the pilot project).
- 5. A couple of questions were only asked to people who answered that they 'never' use any of the canteens at their campus.

Recruitment of respondents

An open link to the survey was created through Survey-Xact. Every time someone clicked on this link, a new respondent was created. The link was shared in several ways:

- 1. The communication department on UCPH Science added a news-post to the UCPH-science intranet. The news-post was also part of the weekly newsletter "SCIENCE-news" which is sent to all student and employee emails.
- 2. Green Solutions Centre had 50 posters and 500 flyers printed, which included a QR-code based on the survey link. These posters and tabletop flyers were placed in and near the six canteens at Frederiksberg and North Campus on the same day as the newsletter was sent out. Digital copies of the posters were shown on TV screens all over both campuses.
- 3. Green Solutions Centre arranged six "Survey-promos" in collaboration with the canteen vendor, Compass Group. On six separate dates, MWJ and two student helpers handed out 100-

150 pieces of free cake (provided by Compass Group) to anyone who answered the survey. At every survey-promo, a table was set up in the near vicinity of the canteen, and canteen users were then invited to answer the survey. In quiet periods, the student helpers were sent "scouting" for potential respondents in nearby study- and hang-out spaces on campus.

To encourage people to respond to the survey, Green Solutions Centre, in collaboration with Compass Group, decided to offer a free sandwich to the first 500 people who completed the survey. At the end of the survey, respondents were asked to leave their KU-ID (a unique combination of three letters and three numbers) and to choose in which canteen they wanted to pick up their sandwich. If they chose to leave their KU-ID, these were shared with the canteens, so they could identify who was entitled to a free sandwich. In this way, the respondents didn't have to leave any contact information or sensitive personal data. At the same time, it was a way to avoid that people other than students and employees could answer the survey and pick up free sandwiches. The KU-IDs were subsequently deleted and are not part of the final dataset. After 500 people had answered the survey, the option to sign up for a sandwich was removed from the survey, and instead at the end of the survey, respondents were met with a message stating that 500 people had already answered the survey.

Pros and cons of the recruitment strategy

There were both clear pros and cons of the recruitment strategy described above. The biggest 'pro' is arguably that the strategy was immensely effective. A few hours after the newsletter was shared (with the headline "Help the canteen and get a free sandwich) the survey exceeded 500 responses. Through the ability to track the timing of responses to the survey, it is also clear that each survey promo coincided with large spikes in the number of survey answers. When the survey was closed, the link had been clicked more than 2300 times, and the survey had been completed more than 1800 times. Besides the incentives, the fact that the UCPH SCIENCE communication department included the survey-invitation in the newsletter was likely a big part of what made people aware of the survey.

When it comes to cons, there are also several, all of which relate to issues of representativity and bias. These are discussed below.

- 1. The incentive of sandwiches and free cake may have created a bias in that this strategy may attract specific parts of the intended population.
- 2. A related potential issue is the combination of the open-link format of the survey and the offer of a free sandwich. In principle, people other than employees and students of UCPH SCIENCE could have clicked the link and answered the survey in order to receive a free sandwich. Our best guess is that in reality this wasn't that much of an issue. Besides from the news-post and newsletter (which is only available to students and employees), the survey was advertised only on UCPH premises. While some of these are in principle open to the public, it seems safe to assume that the large majority of people who saw and reacted to the posters and flyers were in the intended population.
- 3. Finally, and perhaps most crucially, since the survey-promos, posters and flyers were all placed in the near vicinity of the canteens, it is likely that non-users of the canteens are underrepresented in the sample. In other words, it is hard to know how representative the numbers of e.g. campus presence and frequence of canteen use are to the actual intended population.

The sample versus the intended population

In addition to the potential biases created by the recruitment strategy (see the former section), the representativity (or lack thereof) of the survey sample is discussed in this section.

A central limitation in the ability to judge the representativity of the sample compared to the intended population is that we have limited information about what the intended population looks like. However, the UCPH Faculty of Science were able to provide some numbers:

Employees and students

According to the most recent numbers from UCPH, there were <u>3918 employees</u> at UCPH SCIENCE in January 2024 (not counting the 131 student workers at science, who count as students in this survey) and <u>9550 students in Oktober 2023</u>. In other words, the survey reached approximately 13,6% of the total intended population of employees and students on SCIENCE (1827/(9550+3918) = 0,1356).

This also means that according to the numbers from UCPH, in the actual population there are 71% students and 29% employees at SCIENCE. Among the respondents, there are 30% employees and 70% students (when the 2% "other"-answers has been re-coded or removed). In other words, at least in terms of affiliation, the survey has almost the same distribution as the intended population.

Gender

According to the latest numbers from UCPH SCIENCE, in October 2023 there were 49,1% female students and 50,1% male students at SCIENCE, as well as 46,6% female employees and 53,4% male employees. In the survey, there was 58% female students, 40% male students and 1% non-binary students (+ 1% prefer not to say). Among the employee respondents, there were 50% females, 47% males and 2% non-binaries (+ 1% prefer not to say). In other words, there is a likely overrepresentation of female respondents, especially among the students.

Dietary habits

As part of the survey, the participants were also asked about their dietary habits related to meat consumption (see answer categories in App. A, p. 10). Here, 11% of the total sample self-identified as vegetarians, 7% as pescetarians and 3% as vegans. This is a much higher level of meat-excluders than what is usually reported in surveys of the adult Danish population. To name an example, numbers from COOP and the Danish Vegetarian Association from 2022 report that 3% of their respondents are vegetarians or vegans. However, the same survey shows that among young people (ages 18-34) 7,4% are vegetarians or vegans. In other words, high shares of vegetarians of vegans were expectable in this survey, considering that the sample consists of college students and adult with high education levels, many of whom must be assumed to live in urban areas (which are all likely to boost shares of meat abstention).

The high levels of meat-excluders in the sample could also be explained by a response bias: perhaps people who are already interested in plant-based food were more likely to answer the survey. However, the survey was not framed in terms of sustainability, but rather as a survey about canteen use in general. Neither in the posters, flyers, in the news post on KU intranet or in the introduction of the survey itself were sustainability or plant-based food mentioned as a special focus. In other words, a bias such as the above is unlikely to have been boosted by the survey framing.

A note on outliers and data cleaning

According to SurveyXact, the survey resulted in 1811 completed responses and 288 partial responses. The analysis behind the pilot project report is based on two sources:

- An overview of completed responses (App. A). The figures in this report were generated using SurveyXact. This saved a lot of time and freed up time to do additional analysis. However, as far as I could determine, SurveyXact did not have the functionality required to clean the dataset for outliers. In addition, SurveyXact counted responses as "partial", even if the respondent had answered all questions, but didn't press the "finish" button – there were around 40 of these.
- 2. A selection of crosstabulations of the dataset. For this analysis, it was possible to remove some obvious outliers (e.g. people above the age of 100), as well as some respondents who were outside the intended population (e.g. there were a few respondents below the age of 16). In addition, we could include the around 40 extra responses in the analysis.

The above is the reason why, in appendix A the overall N=1811, while in Appendix B, the overall N=1827¹. We recommend that anyone who wants to work with the survey data do additional data cleaning.

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¹ In most cases, the different N's does very little to alter the overall results. However, especially the age and income variables are deemed to be more precise in the cleaned dataset used in App. B – since these two variables were how we found most of the outliers.