

# **CAT 4 RESOURCE DEVELOPMENT**

**Group 4-051**

## **COUNT THE CALORIES!**

Evan Lye Wen Kai 2P2 (07)

Tan Li Yu 2P2 (30)

Wang Shi Chao 2P2 (31)

Aldrick Chai Ming Rui 2P2 (04)

## **ABSTRACT**

Our project, Count The Calories! (CTC), is a project-based in Hwa Chong Institution, and it is aimed at promoting healthy living and encouraging the students to eat healthily in our school canteen, through several interactive online platforms, such as the CTC website, or the Calorie Calculator. We know that obesity in students nowadays is an extremely prominent problem, and thus we hope to prevent such a problem from occurring here in Hwa Chong. The CTC website gives detailed information on our canteen food and food nutrition, providing a comprehensive guide on what foods to avoid and what foods we should eat, hoping to allow students to choose their foods wisely and observe healthy eating. Similarly, the Calorie Calculator allows students to see how many calories they are consuming in their meal, allowing them to gauge how many calories they should burn after their meal, or hopefully encourage them to eat less and reduce their calorie intake. We also have info posters, which provides a hard-copy based source of information on food nutrition and calories, instead of the usual online form. In conclusion, Count The Calories! is a project which hopes to help reduce the overall student obesity levels, and ward off the problem of student obesity in Hwa Chong, through creating different online platforms which provide thorough information on the food nutrition and calories in our canteen foods.

## **1 INTRODUCTION**

### **1.1 Rationale**

The problem of child obesity in schools, especially in Singapore, is an extremely prominent issue, and this issue most definitely includes Hwa Chong too. According to The Straits Times, despite adults getting fitter, students are getting increasingly overweight, and this was further supported by the figures shown by the Ministry of Health. Furthermore, students eating unhealthily will also pose a huge threat to their health, and will have not only short-term but also long-term effects which will negatively affect them in the long run. Moreover, our school does not place enough emphasis on the importance of healthy eating and staying healthy, and as such Hwa Chong is very prone to such a problem of unhealthiness and obesity in students. If this problem were to occur in Hwa Chong, it will have many serious repercussions, and this will be extremely undesirable for students and the school alike. This clearly shows why there is a need for our project, and how this will help our school out in this aspect.

### **1.2 Objectives**

The objectives of our project, "Count The Calories", were to...

- further, educate the Hwa Chong Students about the food that they are consuming at the high school canteen and the nutritional value of these foods

- promote healthy living among students, making Hwa Chong a role model for students in other schools
- build a website to help educate and inform the patrons that buy food from the canteen to make healthier choices for a better lifestyle
- implement a “Calorie Calculator” where Hwa Chong students can select their choice of food, to see how many calories all their food accumulates up to
- create hard copy infographics and posters to put up around our school campus, which will boost our website’s popularity, increasing its user base.

### **1.3 Target Audience**

Our target audiences were Hwa Chong students from Secondary 1 - 4, aged 13-16, who have their meals at the Secondary School Section canteen.

### **1.4 Resources**

The resources which we created for this project was an online website with in-depth information on our canteen food and food nutrition, an interactive “Calorie Calculator” which students can use to calculate how many calories they are consuming in their meal and info posters which guides students on what foods to choose, also providing valuable knowledge on food nutrition.

## **2 REVIEW**

There were already existing websites and places that could be used to find out this information which we were going to provide, such as the Health Promotion Board websites. However, these websites were unattractive, wordy and vague, and our target audience would not look this information up on their own. As such, they could be improved by making the website more personalized and help give students a better understanding of their current health and how they can improve it, which was what we did in our products.

## **3 METHODOLOGY**

### **3.1 Needs Analysis**

At the beginning of the year, we surveyed to find out the feasibility of our project and whether such a project would be relevant in our school. Through the results of this “Needs Analysis” survey, which we have collected from 31 students all of the different levels. We asked them about their existing knowledge of their canteen food and they have little to no existing knowledge of the nutritional value of the canteen food showing that our project would be useful to them. We also consulted with a food scientist, Dr Tay Mia Eng, who works at Nanyang Polytechnic on the usefulness of our project and she

said that our project would indeed help students our age group and also gave us new ideas and ways we could make our project more effective.

### 3.2 Survey Results

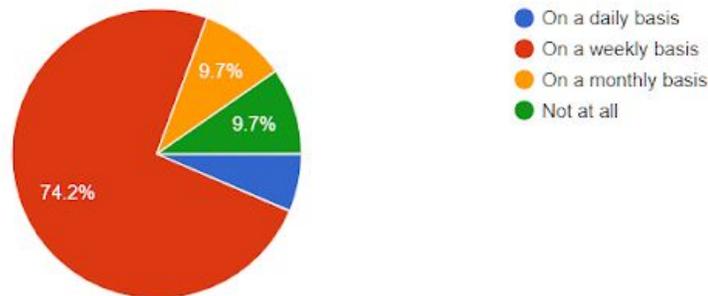
Do you think our project is useful, and will encourage the HCI students to eat healthily?

31 responses



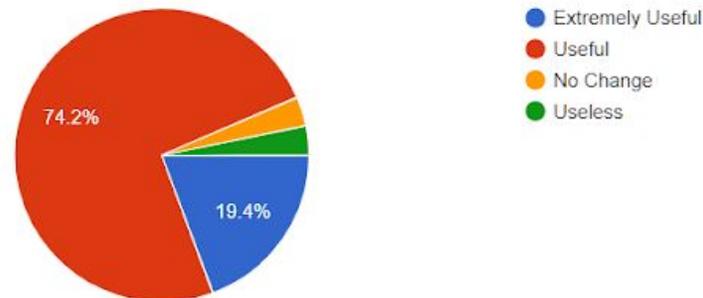
How likely are you to use this website and/or refer to the amount of calories displayed before making your food choice?

31 responses



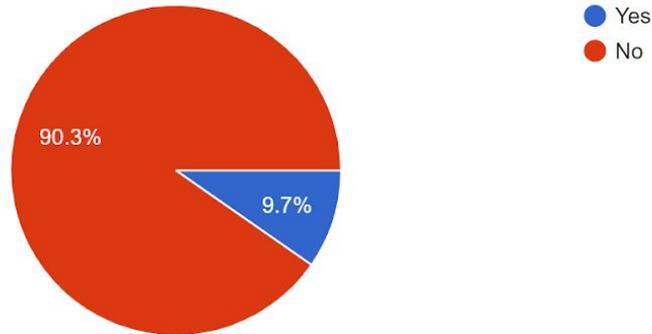
If you were to use this website and/or refer to the amount of calories displayed before making your food choice, how useful do you think it will be to making your choice of food?

31 responses



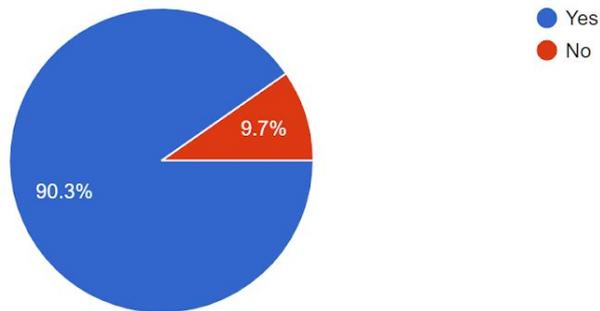
Are you aware of the nutritional value of the food you eat in the canteen?

31 responses



Will knowing the nutritional value and calories help you make more healthier choice in your eating habits?

31 responses



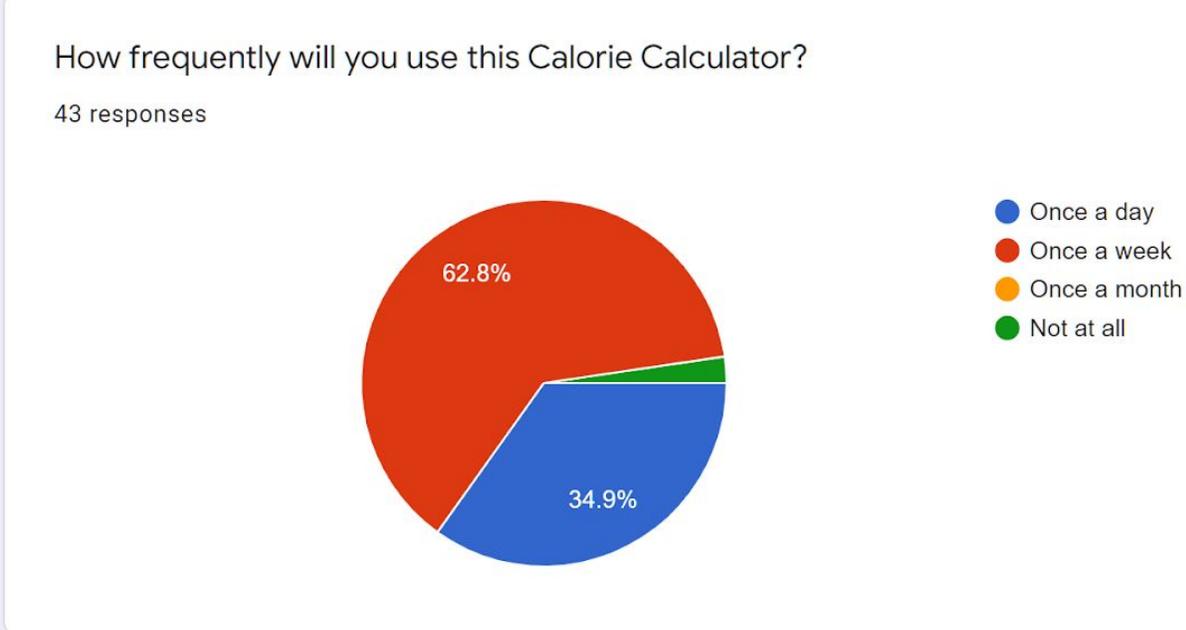
### 3.3 Development of Resources

Firstly, we collated all the food products in the High School Section canteen through the purchasing of a few food items and also reviewing food menus of each stall. We then proceeded to develop our CTC Website which was personalised to fit our target audience through our research and surveys. We also started our Calorie Calculator which we utilised the food list to create. Thereafter, we also approached Dr Tay, the food scientist, to help improve our end products further. In which she gave plenty of user input. We also conducted surveys to give us helpful insight.

### 3.4 Pilot Test

On the 29th of May, 2020, we carried out a pilot test on our Calorie Calculator as we wanted to find out what Hwa Chong students felt about our Calorie Calculator and this information would aid us in improving this application. We managed to garner 43

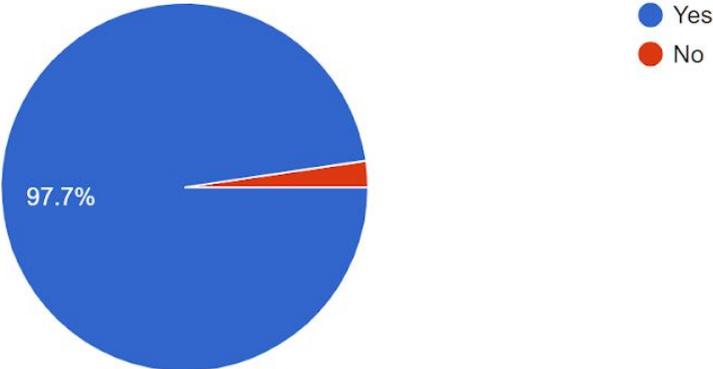
responses from different Hwa Chong students shortly after we released this to our Hwa Chong friends and classmates. This pilot test shows how well-accepted our application is among the HCI students. We collected the responses and results of the pilot test survey on the 23rd of July, 2020. In general, the responses were rather positive and allowed us to infer that our project was rather well-accepted by Hwa Chong students, most of them having positive opinions regarding our project and that they felt this Calorie Calculator would benefit their lives.



*42 students said that they would use this Calorie Calculator either once a day or once a week, showing that students will most probably frequently utilize this.*

Did you find the Calorie Calculator useful?

43 responses



*Another 42 students found that the Calorie Calculator was useful and beneficial to them, highlighting the need for such an application.*

Are there any improvements that we can make to this Calorie Calculator?

Background quite plain, can make it more visually appealing.

Introduction a bit long

*When asked what improvements could be made to our Calorie Calculator, some students said that our introduction was too long, whereas some said that the background of our Calorie Calculator was too plain.*

#### **4 OUTCOME & DISCUSSION**

Overall, positive feedback was received from the respondents through the pilot test. However, since some respondents felt that our Calorie Calculator could be further improved in some aspects, we edited and improved our Calorie Calculator based on individual responses. The first response was that our Calorie Calculator's background was too plain. In response to this, we changed the background to make it more visually appealing. Another response said that the introduction was too long. As such, we added a "skip" button where you can skip the introduction. The last response said that adding other nutritional values would be better. However, our calculator aimed to allow students to track their calories and thus estimate how many calories to burn, and it was to not show students the nutritional value of their food. This will also cause the aim of this application to drift off course.



*As shown here, the background was changed to look more visually appealing. we added based on the feedback.*



*As you can see, there is a skip button on the bottom right of the display, which was added to allow students to skip the intro.*

## **5 CONCLUSION**

Although we felt that Count the Calories! was a challenging project to carry out and we faced many problems along the way, I feel that our hours of hard work and perseverance had finally paid off. Even though our project was greatly affected by this Global Pandemic, as we could not collaborate with the stall owners, we still were able to find our way around this and develop our even better end products. Despite one of our group members, Aldrick, not displaying any interest at all in our project and not doing his fair share of work, I felt that the rest of us have greatly benefited from this learning experience. We have also learned a lot of new interesting facts about nutrition and the ins and outs of our canteen food which will hopefully change our health and other students' health for the better.

## **6 REFERENCES**

*All images shown above were all taken from our products and websites, no external images or references were used.*