CATEGORY 4 RESOURCE DEVELOPMENT

Group 4-021
E-CANTEEN SERVICES

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ABSTRACT

E-Canteen Services involves a web application and modifications to how the Hwa Chong Institution (High School Section) canteen runs to aid the High School student population have more convenience and time-efficient process of ordering and collecting their food in school so that they can have more holistic activities or

more time. It gives students an online platform to order their food in advance, also keeping track of students' orders and make the ordering process more efficient. Other than this, more lines are added to facilitate order and movement in the

canteen, along with a nutrition section to educate students on eating healthily in school and at home. An Instagram page was also made to spread healthy eating facts widely. With new modifications and additions to the service process of the canteen, students can easily navigate the processes of the canteen. Furthermore, food wastage would be minimised as stall owners can view the amount of ingredients required and would not buy an excessive food.

E-Canteen Services Logo

1 INTRODUCTION

1.1 RATIONALE

Many students had complained that the process of ordering and collecting their food was too time-costly and were unable to order the food they wanted or finish their food on time. Furthermore, the canteen was often disorganised and had no queuing etiquette amongst the students. This prevented students from using the time given to them efficiently or to further their holistic education. Lastly, most students were unaware of healthy eating habits. Thus, we decided to help the student population decrease waiting time in the canteen and educate them about eating right.

1.2 OBJECTIVES

The objectives of E-Canteen Services were to

- Decrease food ordering time for students to have more self-development (main)

- Educate students on healthy eating in the canteen (main)
- Increase order in the canteen via more organised lines (secondary)

1.3 TARGET AUDIENCE

Our target audience was the student population of Hwa Chong Institution (High School Section).

1.4 RESOURCES

The resources created for our projects included the online website comprising of the full menu from each stall in the canteen, an ordering system and healthy eating information. It also included information on availability of each food item for each stall. Our resource also included a new line and queuing system to support the process of E-ordering and an Instagram page to post food facts for students to view.

2 REVIEW

The current process of ordering and collecting food in the canteen was too disorganised and time-consuming, moreover the students often did not have a choice of what they want to eat due to a lack of availability. Although there was a wide variety of food in the canteen, the time wasted and the sheer amount of students caused problems to occur. More time could be saved and the canteen could be more organised.
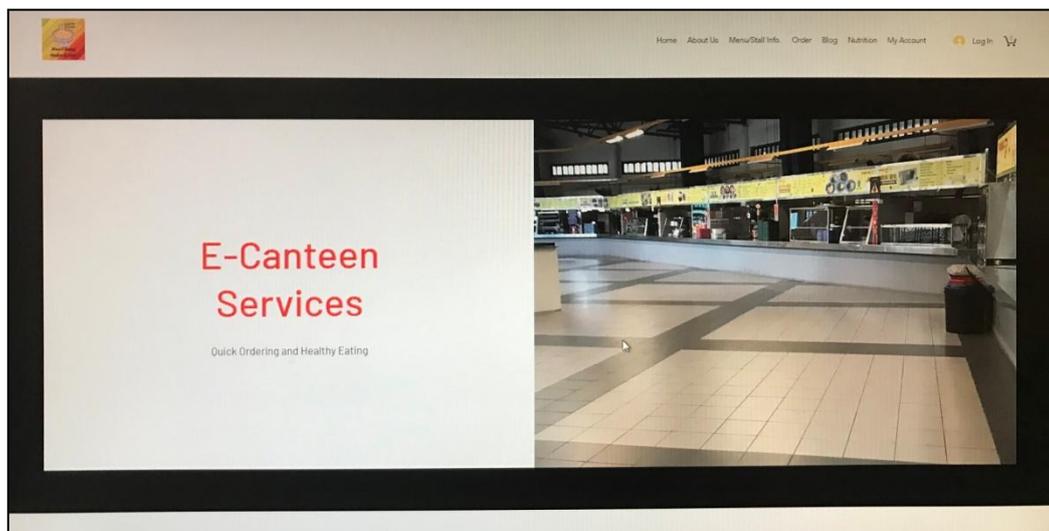
E-Canteen Services Website Home Page
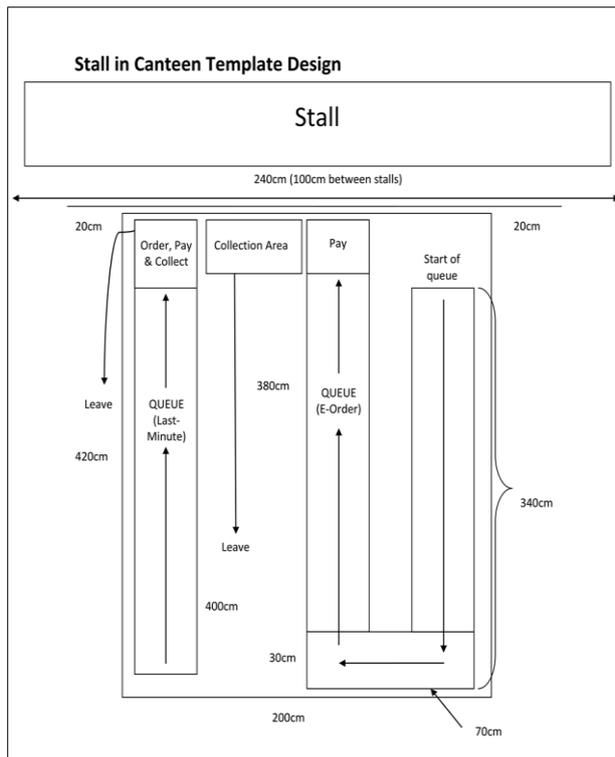
New Line system Design　　　*Instagram Page (Taken on August 5)*
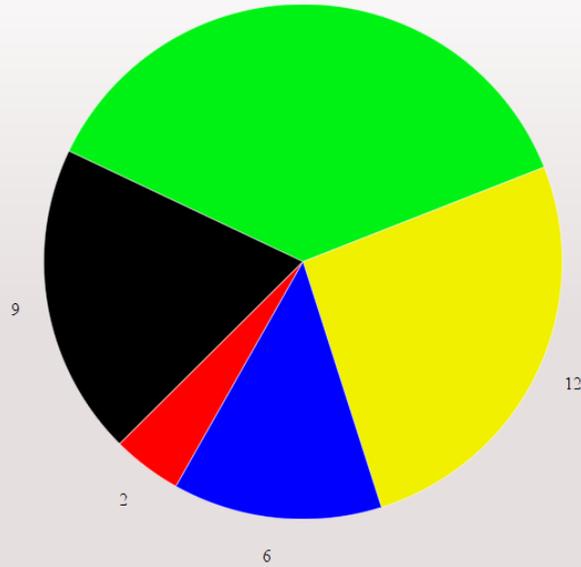
3 METHODOLOGY

3.1 NEEDS ANALYSIS

A needs analysis was conducted before the production of the website and before trials of the prototype. First, we conducted a round of needs analysis in February among 46 students ranging from Secondary One to Secondary Four. A survey among the stall vendors was also carried out. In July, a second round of needs analysis was conducted between those who participated in the pilot tests. Within it, it asked about how students rate the current speed of ordering and collecting food, as well as their knowledge about healthy eating and how important they view it. The quiz was to test their knowledge on healthy eating and foods. The results are below.

3.2 SURVEY RESULTS

March Survey results:

How convenient do you find the current way of ordering food in the canteen?

- ■ Very inconvenient and time-consuming
- ■ Inconvenient and slightly time-consuming
- ■ Appropriate convenience and time-consumption
- ■ Convenient and time-efficient
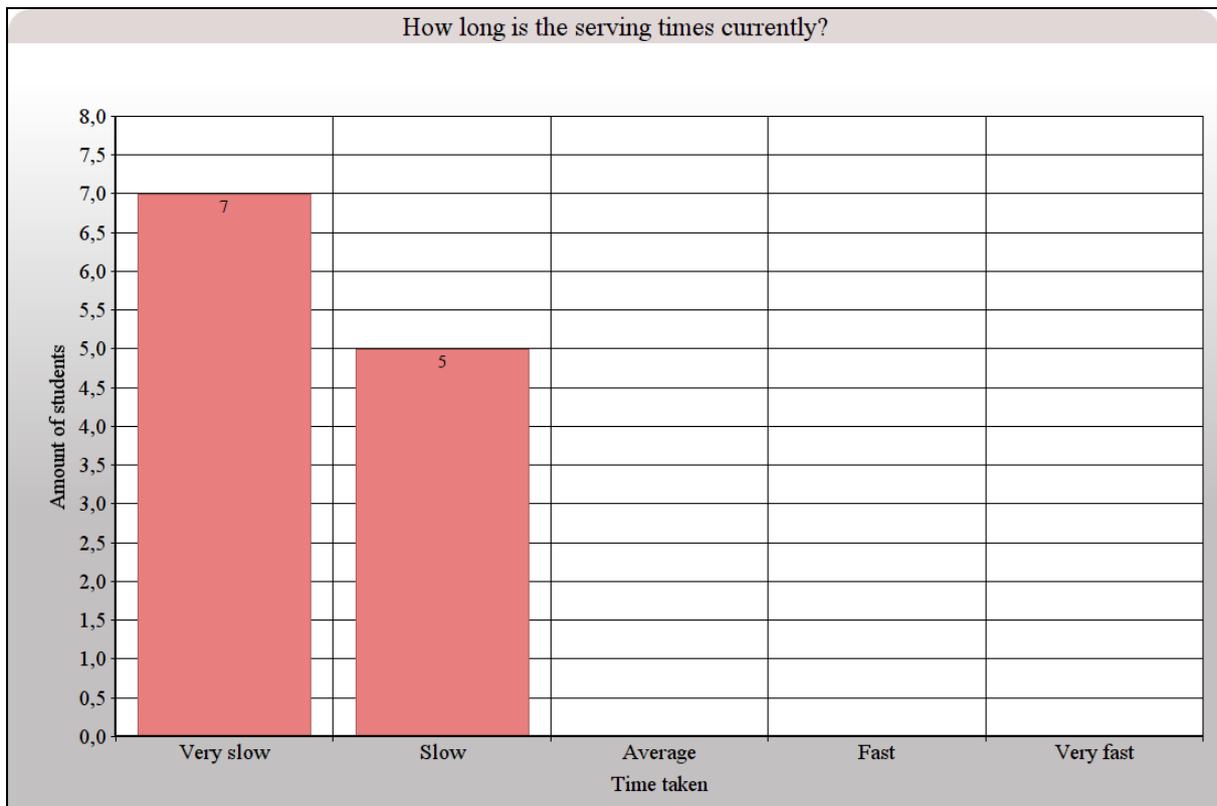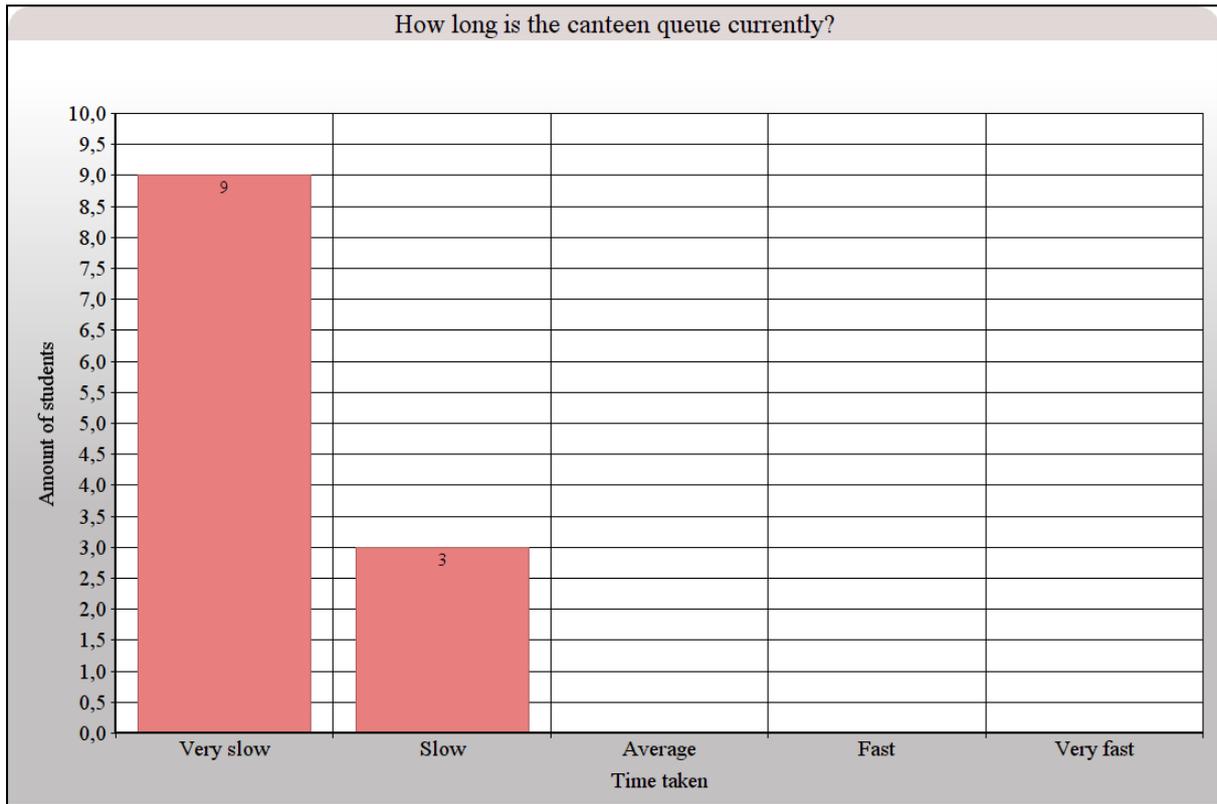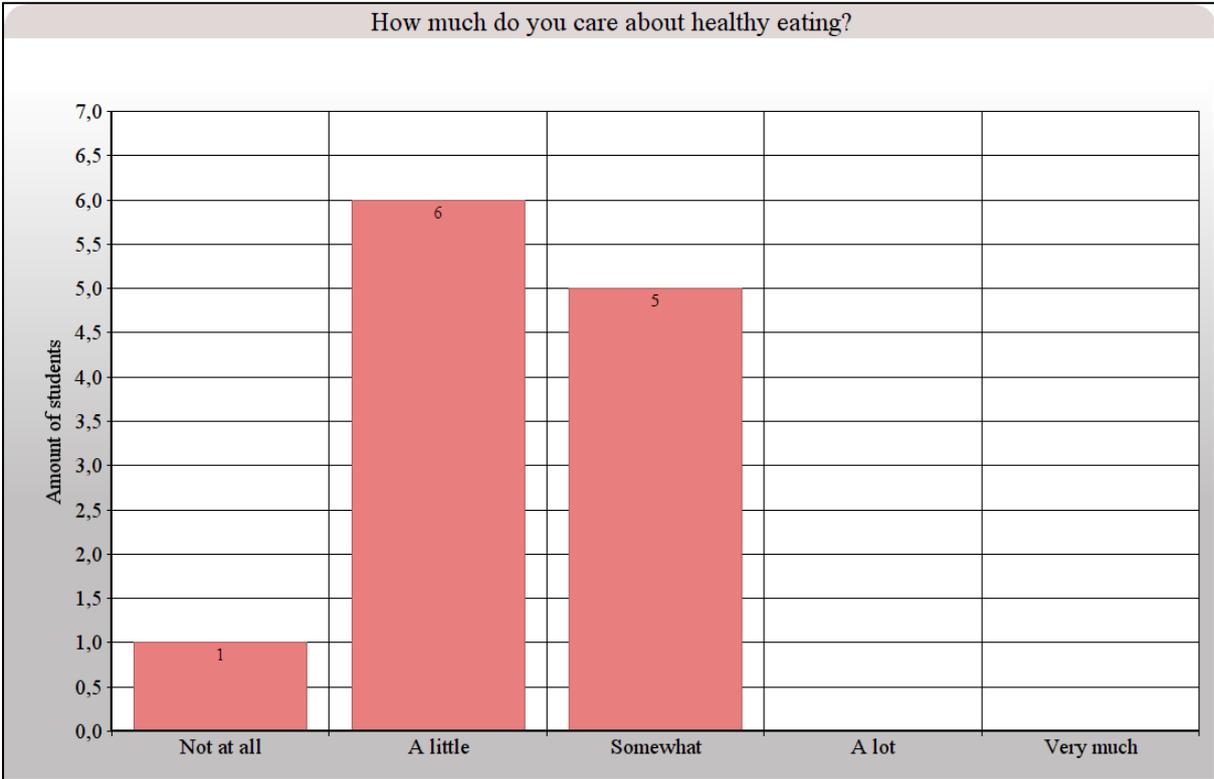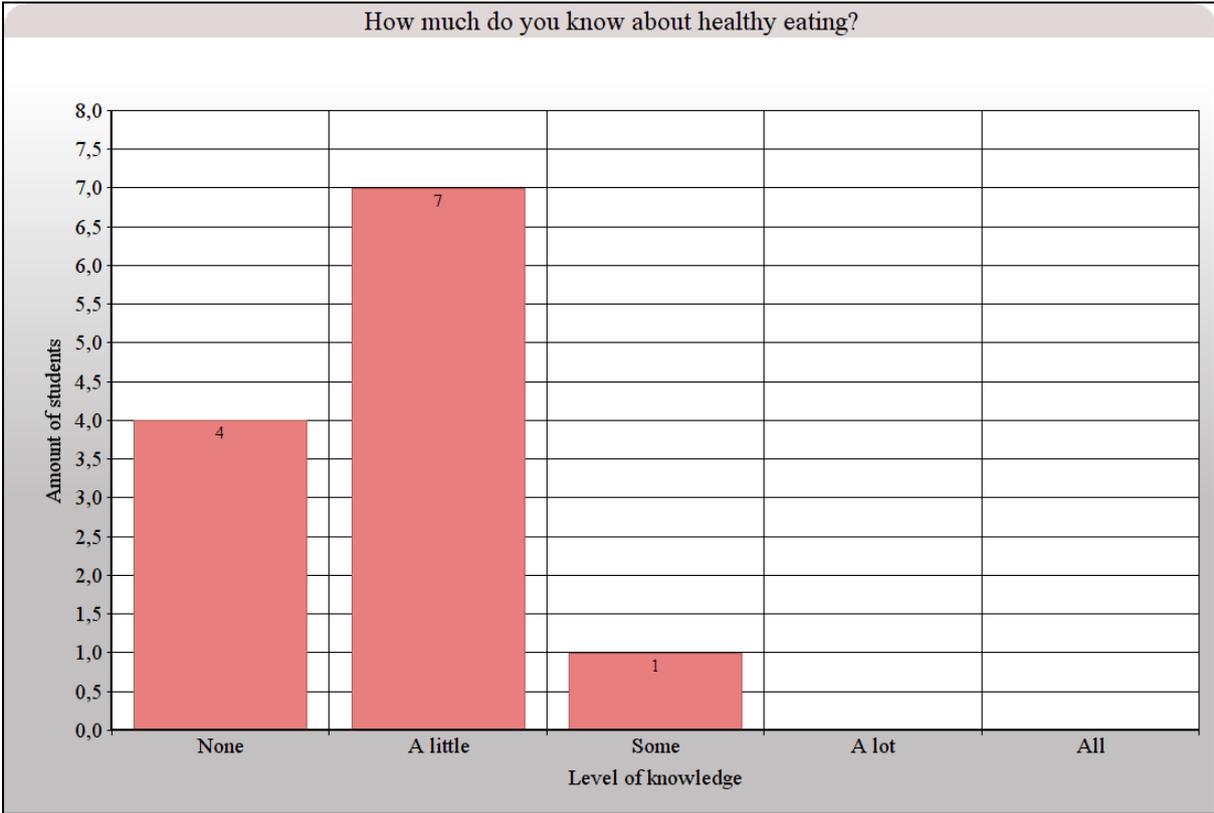- ■ Very convenient and time-efficient

9

12

2

6

In your opinion, would E-Ordering improve ordering time in the canteen?

- ■ Yes
- ■ No

41

5

July Survey results:

How long is the canteen queue currently?

A bar chart titled "How long is the canteen queue currently?" The y-axis is labelled "Amount of students" ranging from 0,0 to 10,0. The x-axis is labelled "Time taken" with categories: Very slow, Slow, Average, Fast, Very fast.

- Very slow: 9
- Slow: 3

How long is the serving times currently?

A bar chart titled "How long is the serving times currently?" The y-axis is labelled "Amount of students" ranging from 0,0 to 8,0. The x-axis is labelled "Time taken" with categories: Very slow, Slow, Average, Fast, Very fast.

- Very slow: 7
- Slow: 5

How much do you know about healthy eating?

Bar chart showing "Amount of students" versus "Level of knowledge":
- None: 4
- A little: 7
- Some: 1
- A lot: 0
- All: 0

How much do you care about healthy eating?

Bar chart showing "Amount of students":
- Not at all: 1
- A little: 6
- Somewhat: 5
- A lot: 0
- Very much: 0

Food Fact Quiz Results
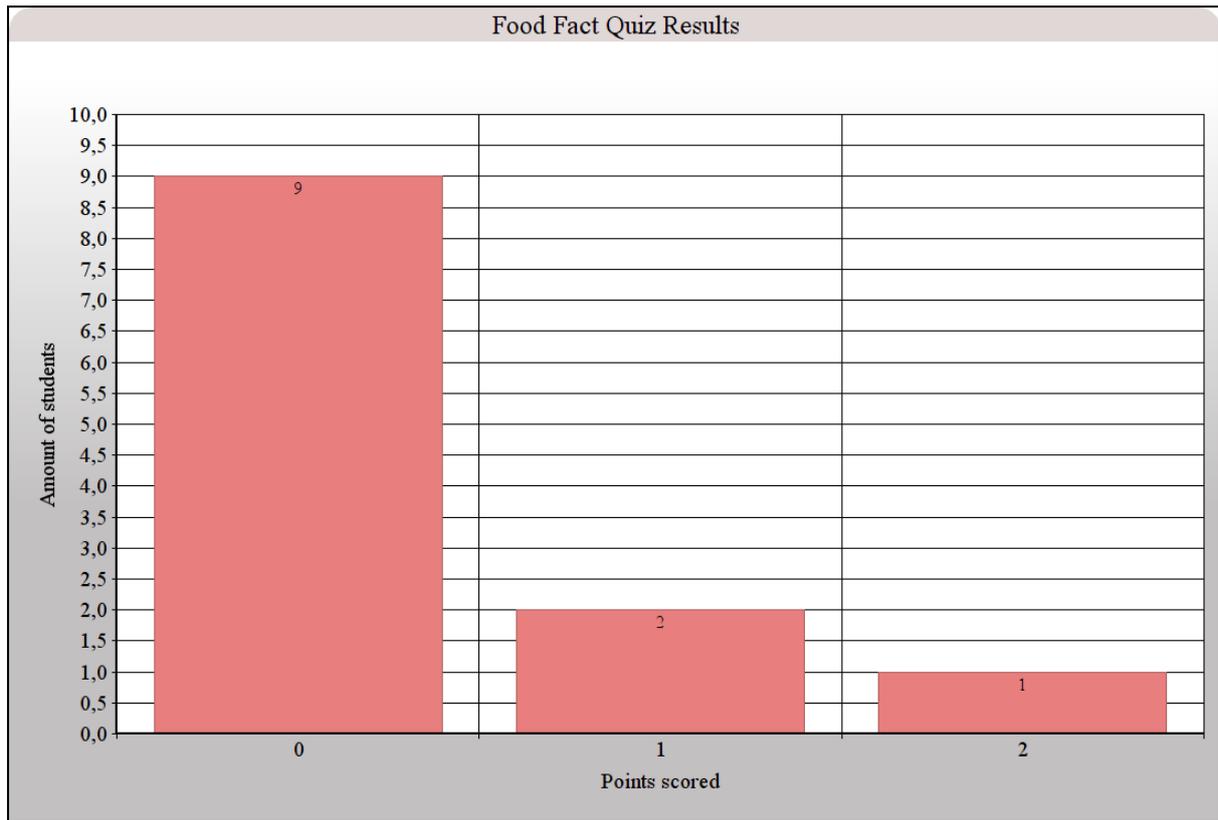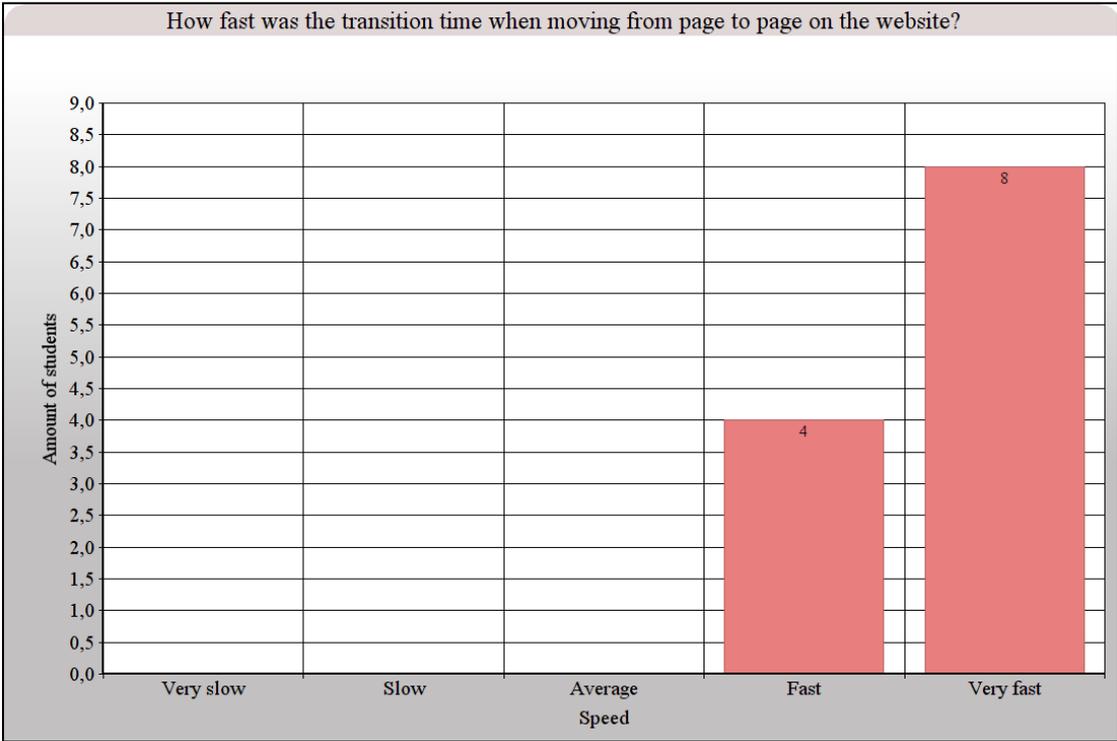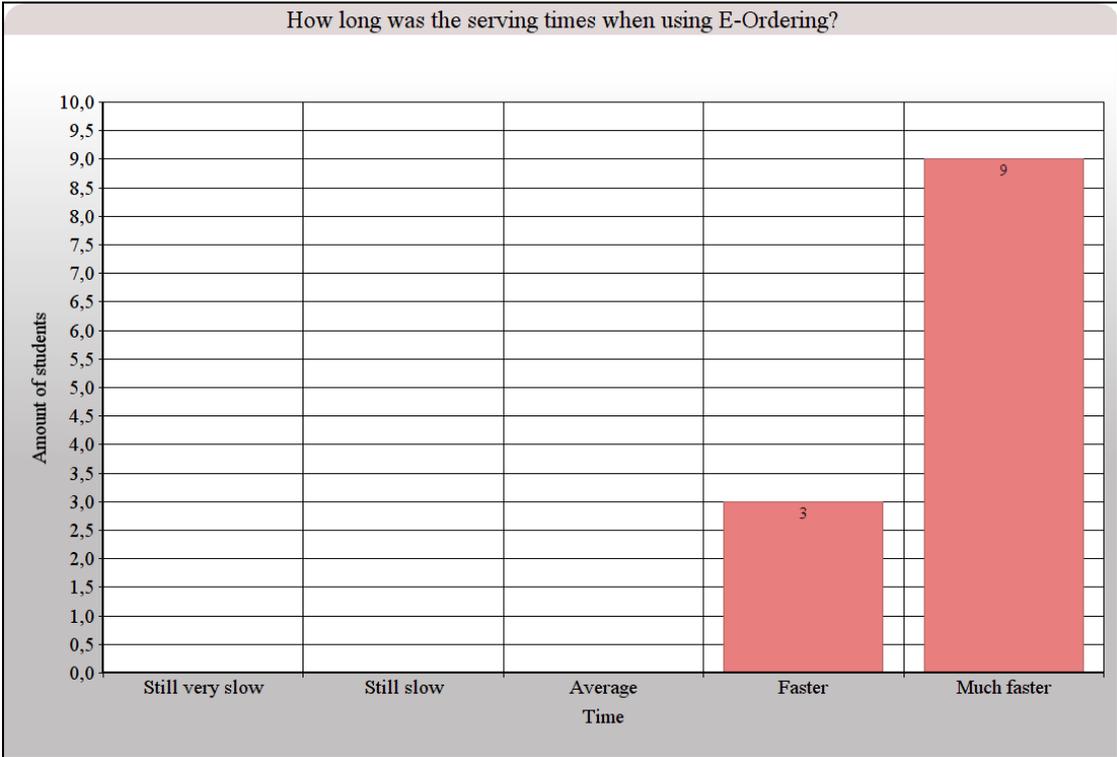
3.3 DEVELOPMENT OF RESOURCES

A collation of all food items sold in the canteen was carried out before being collated into a large organised menu. Photographs of each food item were also taken to boost visual aid of each food item. The website was lastly made after duties were divided and all collated information was added in to complete the first version of the web application. The Instagram page began posting food facts on July 5.
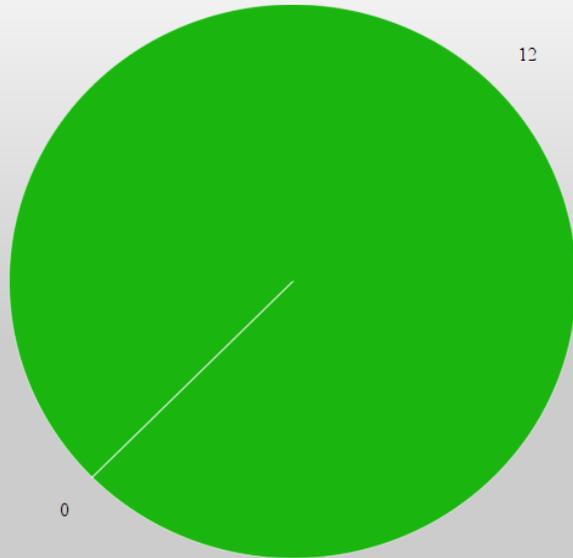
3.4 PILOT TEST / TRIAL RUN

A pilot test was carried out amongst 12 students from Secondary One to Four who did the second round of surveys. They were given the prototype of the web application and had to read the food facts on the website, as well as follow the modified processes of the canteen. When later asked to do a post-test feedback session, these were their responses:
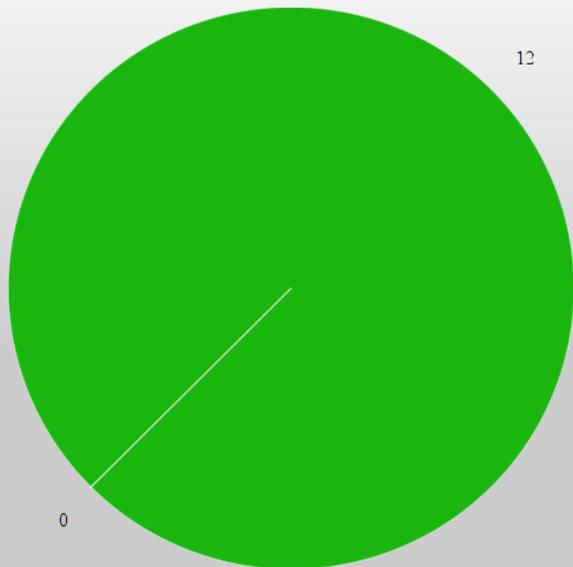
How long was the serving times when using E-Ordering?

Amount of students (y-axis: 0,0 to 10,0)

Time	Amount of students
Still very slow	
Still slow	
Average	
Faster	3
Much faster	9

How fast was the transition time when moving from page to page on the website?

Amount of students (y-axis: 0,0 to 9,0)

Speed	Amount of students
Very slow	
Slow	
Average	
Fast	4
Very fast	8

The colour scheme for the website is readable

■ Yes   ■ No

12

0

Would you use the website on a daily basis for easier convenience?

■ Yes   ■ No

12

0

How you view the importance on healthy eating now?

Food Fact Quiz Results 2
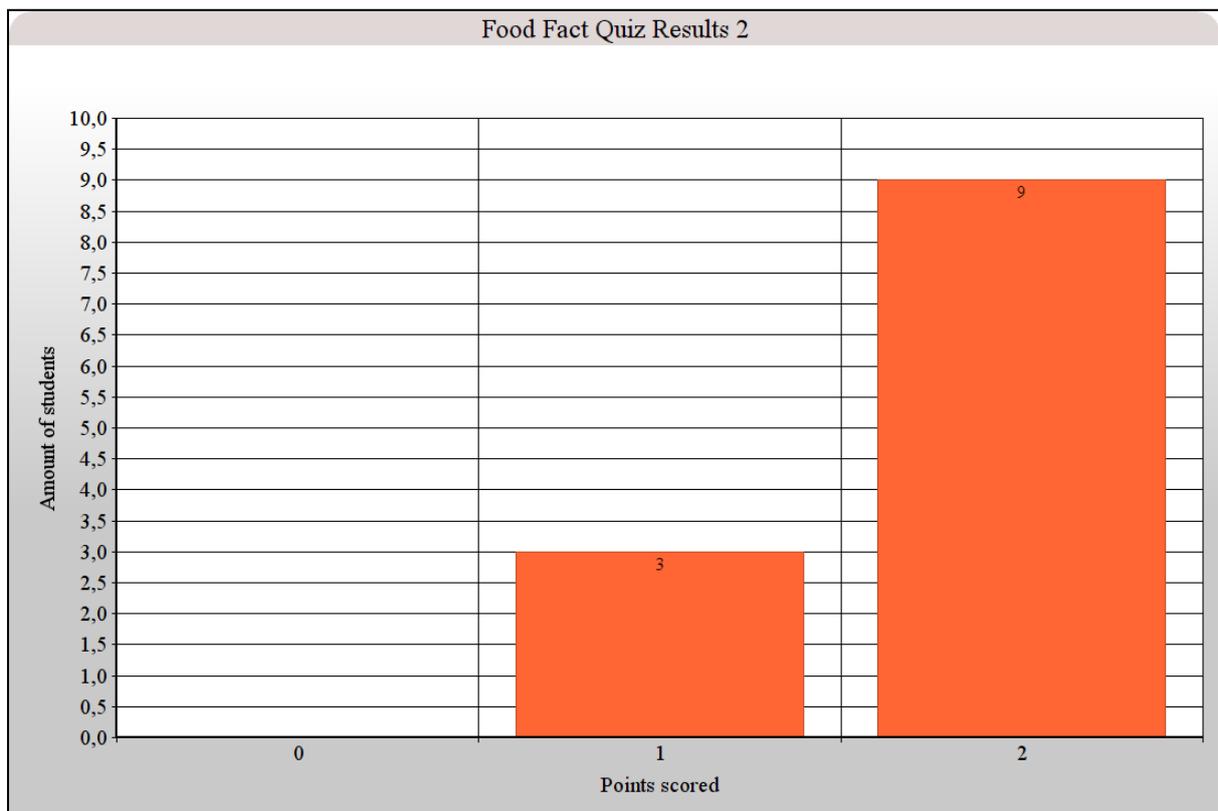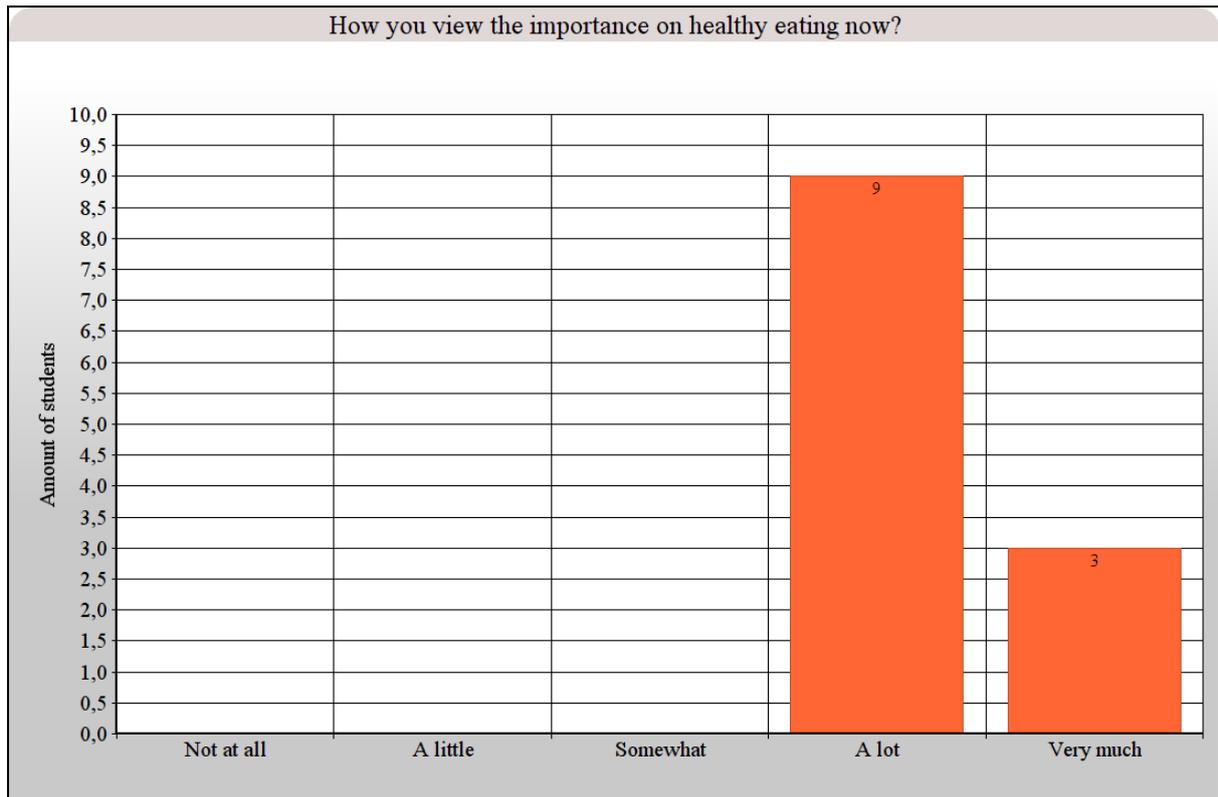
Overall, the pilot test showed that students felt that the website was convenient and efficient at decreasing waiting times while queuing and also educated them on healthy eating.

4 OUTCOME & DISCUSSION

According to the feedback given by stall vendors that it was hard to identify which student ordered which food item, we decided to give each order a number and the number would be shown clearly in big font on the website during collection to aid the stall owners. The web application ran through other updates and modifications as well before being finalised.

This web application was available to students with smartphones or a computer. The web application comprised of 9 parts – Home, About Us, Menu/Stall Info., Order, Blog, Nutrition which split into Calories Section, Canteen Food Facts Section and Superfoods section. The blog was for students to review and comment on the food they ate or place their suggestions on the web application or more. About Us provided information about our group and the Nutrition section provided compiled information on eating healthily for students to view. All this proved to be a success during the pilot test and it shortened the ordering time in the canteen and encouraged students to eat healthily. Thus, our project benefited the High School student population of Hwa Chong Institution.

Although the website was not able to accept e-payments and may not have benefited all stalls in the same way and amount, such as the drinks stall where food items were already prepared, modifications and personalised settings for each stall could help boost ordering time reduction as much as possible. For example, drinks could be ordered in lesser amounts after E-Ordering to reduce wastage further.

5 CONCLUSION

E-Canteen Services was a useful package that helped to shorten ordering time and queue time in the HCI(HS) canteen and also educated students on healthy eating. The pilot test showed positive results, with drastic improvements on ordering and the students' knowledge on healthy eating. Overall, our package, consisting of an Instagram page, an online ordering website and a new line system to complement the website in the canteen was successful.

6 REFERENCES

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