



HWA CHONG INSTITUTION (HIGH SCHOOL)

Project Work 2020

Group: 4-094 The Reformists
Category: Resource Development
Total Word Count (excluding title): 1382 words

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Abstract: The Reformists is a project group that aims to create a food pre-ordering system to reduce the long queue and waiting time for HCI staff and students. The payment mode is easy and convenient, allowing everyone to transact online via PayLah and PayNow. This means students will no longer need to pay cash at the food stalls, thus saving a lot of time in the process. This system will definitely benefit all HCI staff and students.

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Acknowledgement

We would like to thank Ms Pek Ru Heng for her invaluable help in guiding us through this project.

We would also like to thank the Hwa Chong administration and teachers for creating opportunities for us to carry out such project work.

Chapter 1 - Introduction

1.1 Rationale

During mealtime, especially lunch, students have very little time to have a decent meal. They are often stuck in long queues, and have to gobble up their food quickly before making their way to afternoon classes or CCA.

Because of this rush they are often not able to finish their food, and for those who do, they run the risk of indigestion.

We have found a solution to this problem - Creation of a convenient food pre-ordering system to reduce queueing time and thus increase eating time.

1.2 Target Audience

This system mainly targets the staff and students of Hwa Chong Institution (High School).

1.3 Objectives

The objectives of our system are to:-

- Improve the efficiency of food ordering
- Use as an emergency food ordering system during this pandemic
- Reduce the time to queue for food
- Reduce the need for students to rush when consuming their food

Chapter 2 - Literature Review

2.1 Findings From Experts

According to an online article "Chew on this - 7 reasons not to gobble up your food", the harmful effects of gobbling up the food are mentioned below:

1. Your stomach does not have teeth. If you don't chew your food properly, your digestive system won't be able to break it down.
2. Undigested food takes more space in your stomach than digested food and creates bloating, thus slowing down the entire digestive process.
3. Chewing not only breaks down your food for your stomach, it actually is the beginning of the digestion process. Enzymes are released as you are chewing that actually begin to "prepare" the food so that your stomach has an easier job.

(Acknowledge source under "reference")

4. Chewing slowly also helps increase the alkalinity of the food, which is extremely important. Many people suffer from acid reflux, heartburn and indigestion, and while some foods – even if chewed well – trigger these problems, it is important to note that the longer you chew, the less acid is formed.
5. Eating fast leads to a lot of air being swallowed, causing unnecessary bloating, regardless of what you are eating, whether a fruit salad or chocolate bar.
6. Eating slowly means that your body is more relaxed, which is essential for efficient digestion and a feeling of lightness.
7. Gobbling your meal quickly under stressful circumstances – such as during a meeting at work – means diverting energy away from your digestive system, thus leading to fewer calories burnt, slower metabolism and a bigger waistline.

2.2 Why is Our Project Necessary

With the rising trend of students not being able to buy their food in time due to very long queues, we feel that a pre-ordering system is the only feasible solution that will benefit students, teachers and non-teaching staff.

Please note that the system will only be implemented after the Covid-19 pandemic to avoid confusion with the current ordering system.

We have included the survey results of both canteen vendors and students with this report, and sample questions for the pre-ordering form.

Chapter 3 - Methodology

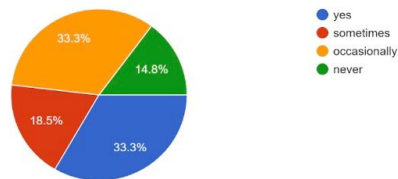
3.1 Needs Analysis

Students and canteen vendors were asked to complete a Google survey form and they feedback that they are very supportive of the food pre-ordering system.

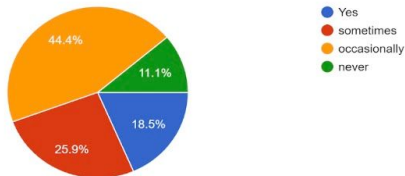
We have approached 27 students from high school to do the survey.

STUDENT SURVEY-RESULTS

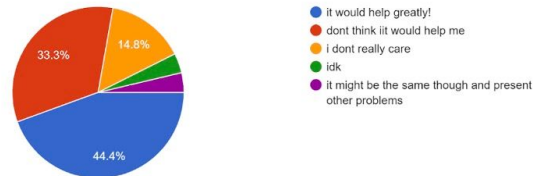
Do you always have to rush back to class just because you got your food too
27 responses



Do you face the problem of not being able to order your food on time?
27 responses



How do you think a pre-ordering food app would/would not help?
27 responses



When asked if they have to rush back to classrooms after recess or lunch, two-thirds of the students surveyed responded that they “occasionally or always have to rush back”.

63% of students occasionally or always cannot buy their food in time, while 44% of them think our system will greatly improve their situation.

3.2 Construction of Resources

Food pre-ordering form



Name of Student:
Class:
Level:
Order for recess/lunch

Order(from which stall)

- Noodles
- Chicken Rice
- Western Food
- Muslim Food
- Green Plate Economic Rice
- Purple Plate Economic Rice
- Drinks
- Snacks

What is your order?

Amount Paid:
Pay By :
If no order, please state nil

*This form is also applied
for lunch.

<https://docs.google.com/presentation/d/1xI8ayLZwnyJJL0Vq2oUepqbDgKHCecdO5WagdNJT9-s/edit?usp=drivesdk>

3.3 Procedures and Support

Trial Run

The system will be implemented after covid as we do not want them to be confused with the current system. We intend to do a trial run where only the Sec-2 students will use this system to get food. If it works out well for them, we will open it to the Sec 3 students the following term. If all goes well, we will gradually open it to the whole school so that everyone can benefit from it.

As for the canteen vendors, we will brief them on the procedures and take turns to help them out in the initial stage of implementation.

We will also have a few sessions to review on the food pre-ordering system. Steps will be taken to improve on the system.

Chapter 4 - Outcome & Discussion

4.1 - Limitations of Project

The food that is pre-ordered might end up becoming cold as we do not know how long in advance they are being prepared.

The canteen vendors might also find it difficult to store all the food if the demand is high. They may also find it difficult to keep up with the orders as most of them are not tech-savvy.

There might also be a problem of people spamming the order list to create redundant orders.

4.2 - Outcome

We will conduct a trial test with the secondary 2 students, and let them try out our system so as to offer us feedback based on their experience, but as we have not conducted this trial test and survey of them yet, we have not had others to rate our resources.

However, The feedback of this plan for the system is shown in chapter 3, and the results are shown there.

Chapter 5 - CONCLUSION

In conclusion, though this food pre-ordering system will only be implemented after the Covid-19 pandemic to avoid confusion with the current ordering system, we are confident that our product will be well received as the feedback from the survey to push through it is very positive.

We are glad that we have embarked on this interesting journey to explore new ways to solve existing problems. Though we disagreed at times, we had learnt how to resolve disputes and our friendship is strengthened.

Until next time, The Reformists.

References

<https://www.thenational.ae/lifestyle/food/chew-on-this-7-reasons-not-to-gobble-up-your-food-1.456600>

- This is the source of the information we used for chapter 2.2

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We would like to acknowledge that we referenced the above sources for information to prepare for our preparation and report.