

Category 4 Resource Development

Group 4-059

Project Anti-Food Waste

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Abstract:

Project Anti-Food waste aims to raise Hwa Chong students' awareness of food wastage and reduce their amount of food wastage by highlighting the negative impacts brought about by this problem. By instilling proper habits via exposing them to various ways which they can play a part in reducing food waste generated, we hope that with the cooperation of students, the problem of food wastage can be successfully tackled, especially within HCI. Project Anti-Food provides students with a comprehensive guide to significantly reduce wasted food. It contains both information on food wastage as well as simple yet impactful tips to reduce food waste which students can conveniently browse during their leisure time. It can easily be shared among students with smartphones. Additionally, we have included an educational card game which serves as an element of interactivity.

1 Introduction**1.1 Rationale**

Food wastage is a major problem that is faced by the world with many negative impacts on the world such as contributing to greenhouse emissions which hastens climate change. Hwa Chong Students contribute to food waste by generating it. They might have done so as they may feel that the bad impacts of food waste do not affect them very much. This may result in the students continuously wasting their food in and out of school without a second thought, leading to a large amount of food being wasted.

1.2 Objectives

- To raise awareness on food wastage and emphasize to people the negative impacts of food wastage.
- To convince and show students how to control and reduce their amount of food wastage via a resource package

1.3 Target Audience

HCI High School Students (Sec 1-4)

1.4 Resources

The resources created for this project was an integrated online platform consisting of a page with information on food wastage, as well as a page with tips on how to tackle it. There is also a page containing our card game and an about us section.



Tips on Reducing Food Waste

Banana is an example of a foodstuff that produces ethylene.

Tip #1
Store food appropriately:
Storing food improperly might cause premature ripening and lead to rotten foodstuff.
For example, keep foods that produce ethylene gas away from foods that don't. Ethylene promotes ripening in foods and could lead to spoilage

The complex block contains a diagram and a tip. The diagram shows a row of fruit: two yellow bananas, a green apple, and two more yellow bananas. A red circle highlights the bananas, with a blue arrow pointing to the text 'Banana is an example of a foodstuff that produces ethylene.' A red 'X' is placed over the green apple, indicating it should be kept away from the ethylene-producing bananas. To the right, a dark grey box contains the text for 'Tip #1: Store food appropriately', explaining that improper storage can cause premature ripening and spoilage, and providing an example of keeping ethylene-producing foods away from other foods.

For our card game:

Instructions:

- 1) 2-4 players can play this game at one time
- 2) There are 3 areas where a player can play a card during his/her turn:
 - 2a) A player can play **Red** or **Green** action cards into the discard pile
 - 2b) A player can play **Blue** cards into the habits section
 - 2c) A player can place **Donuts** into their personal **Donuts** pile
- 3) The game begins with each player having 3 cards
- 4) When a player runs out of cards, he/she will wait until the next turn and draw 3 cards
- 5) Play clockwise around the table
- 6) There is 75 cards in this card game
- 7) When out of cards in the draw pile, place the cards from the discard pile back into the deck.

Rules:

- 1) You can draw 2 action cards and do 3 actions each turn (place down a card = 1 action)
- 2) You can trade a blue action card with another player (Counts as an action)
- 3) You can force players to trade a blue action card if you pay them 2 donuts (Counts as an action)
- 4) If you get 3 of the same blue action card, it is a habit
- 5) When you draw a red action card, play it immediately. (Counts as an action)
- 6) Used red action cards are moved to the bottom of the draw pile
- 7) If you have more than 7 cards at the end of a turn, place any card into bottom of draw pile until you are left with 7

Legend:

Donuts: Currency of the game

Red cards: Makes you lose **Donuts** to the discard pile.

Green cards: Collect **Donuts** from players

Blue cards: Allows you to form Habits. It can also be used with **Green cards** to collect donuts.

There are information and instructions on how to play the game.

Action Card You shopped smart and only bought what your family needed. 1 card: 2 donuts 2 cards: 5 donuts 3 cards: 7 donuts Collect 3 to get a habit	Action Card You shopped smart and only bought what your family needed. 1 card: 2 donuts 2 cards: 5 donuts 3 cards: 7 donuts Collect 3 to get a habit	Action Card You shopped smart and only bought what your family needed. 1 card: 2 donuts 2 cards: 5 donuts 3 cards: 7 donuts Collect 3 to get a habit
Action Card You confirmed your family's orders	Action Card You confirmed your family's orders	Action Card You confirmed your family's orders

The cards also have information on what effects that they would provide upon play. The aim of this card game is to instil positive habits in the players by exposing them to various ways to reduce the amount of food wastage throughout the game,

2 Review

Most websites just listed out the ways in which food could be saved. It was useful, but we felt it would not be able to engage people that simply did not care wanting to save food. Thus we have more interactive activities to engage the audience, like a card game and videos. Posters regarding food wastage were also unable to catch the eye of most students and fail to give them an effective method in reducing food waste.

3 Methodology

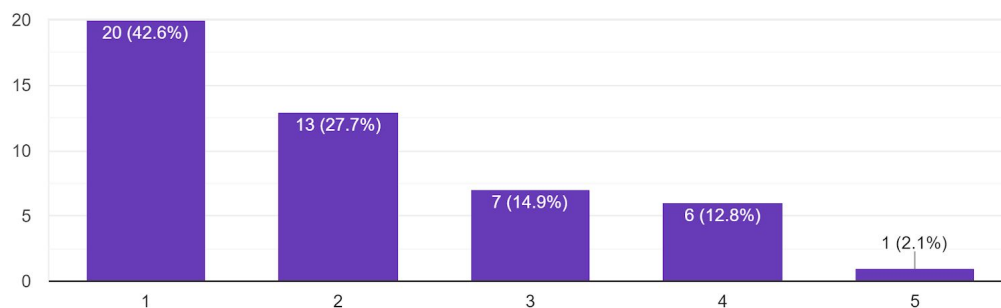
3.1 Needs analysis

A needs analysis was conducted to ascertain the relevance of such a project. A survey was conducted with around 50 Hwa Chong students to clarify that the students do generate food wastage. Indeed, there is some level of food wastage produced by Hwa Chong students. Next we questioned if people wants a resource to tackle food wastage

3.2 Survey results

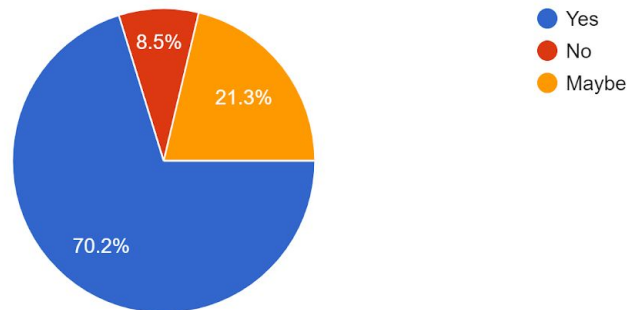
How often are you unable to finish your food?

47 responses



Do you think having a resource to help people reduce food wastage is useful?

47 responses



3.3 Development of resources

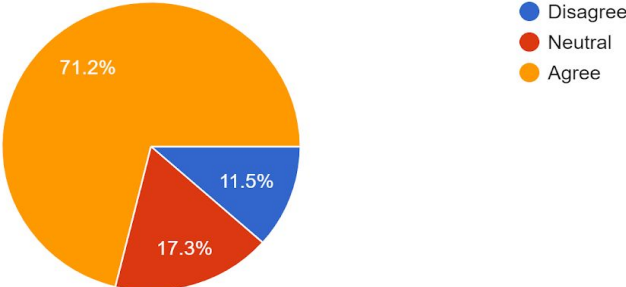
We reviewed some effective methods for tackling food wastage and included the solutions that are more feasible and simple to perform to our website. We have also brainstormed about the potential ideas for a game and eventually settled for a card game as it is portable and requires little space to be played. Finally, we showed our online platform to our target audience for feedback.

3.4 Pilot test

A pilot test was administered to around 50 of our target audience. A demonstration of our product was conducted where we had shown them our website and sought for their feedback. Generally the feedback was positive, with people also saying that they may share our resource with their friends.

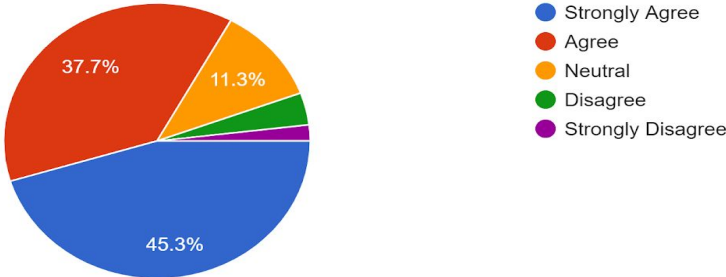
The website has increased my awareness on food wastage and the negative impacts that come with it.

52 responses



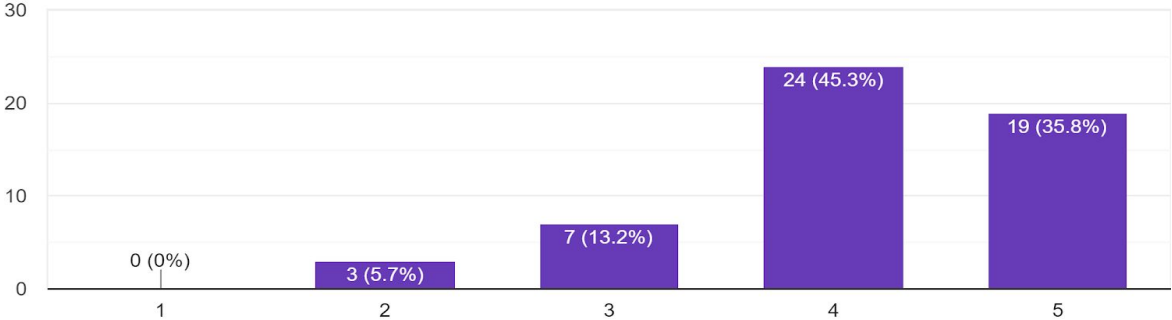
I am now aware of how i can reduce food wastage

53 responses



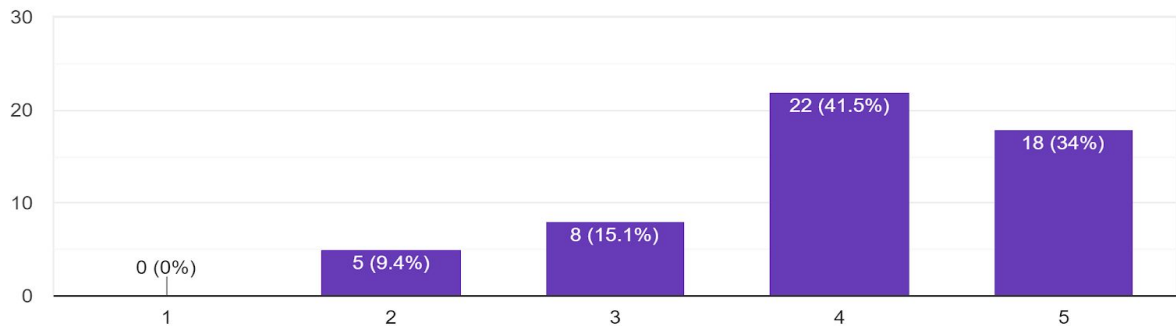
How likely are you to recommend this website to friends who face the problem of food wastage?

53 responses



How educational did you find the card game?

53 responses



4 Outcome and discussion

Final Outcome

In conclusion, our resource package mainly consists of a website and a card game. The pilot test revealed that both were well-received by the target audience and was able to effectively engage and equip users with knowledge on what they can do to reduce food wastage.

Limitations

Due to covid-19 safety measures, we were unable to confirm the effectiveness of the resource package in reducing the amount of excess food thrown away by HCI students in the canteen as students have their meals in class. Therefore, only online surveys could be carried out.

Further works

If possible, we hope to collaborate with the canteen vendors in curbing food wastage as well as not confining the resource package to solely HCI students, allowing the website to have a wider reach.

5 Conclusion

Overall, our project has allowed us to learn new skills, like learning how to link situations in real life to the card game in the form of habits after one has played the same card multiple times, simulating us doing things in real life. The project has better allowed us to understand the severity of food wastage, and the many ways we can go about trying to cut down food wastage. It has also taught us ways to encourage and engage an audience, for our case in the form of a card game. Finally, determination enabled our group to eventually push through the ordeals despite the presence of covid-19 which hindered our progress.

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