

CATEGORY 4 RESOURCE DEVELOPMENT

Group ID 4-093

Hwa Chong Pathfinder

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ABSTRACT

Hwa Chong, being one of the biggest schools in the country, cause some confusion for many of the freshmen and new staff of the school when it comes to navigating it. So to help them, we have created a website specially designed to help them get from one site to another with as little hassle as possible. When they launch the website, an interactive map will appear. A simple click on the destination on the map will provide directions to get them to their destination. If the user does not know where that place is on the map, they may use the search bar provided. Furthermore, there are multiple trails that the user can explore to get to know the school better. To increase the map's effectiveness, pictures of the destination will be displayed to give the user a brief idea of what the place will look like.

1 INTRODUCTION

1.1 Rationale

52.4% of freshmen reported to have gotten lost before in Hwa Chong and 57.1% of them had troubles navigating around Hwa Chong. Using this data, we inferred that other newcomers to the school, such as parents and new staff could also face some troubles when travelling from one place to another in this large school. With over 20 buildings, each being spread out across 72 acres of land, we can say that Hwa Chong is a massive school and it will not be easy to know at first glance how to get from one place to another. Map reading is a skill that one must take a few months to learn before they are able to master it and it is clear that most of the newcomers do not have that skill.

1.2 Objectives

The objective of Hwa Chong Pathfinder was to:

- Enable freshmen and new staff to familiarize themselves with the school and not get lost.
- Educate people to learn more about Hwa Chong's landmarks and buildings' history and brief description of how it looks like.

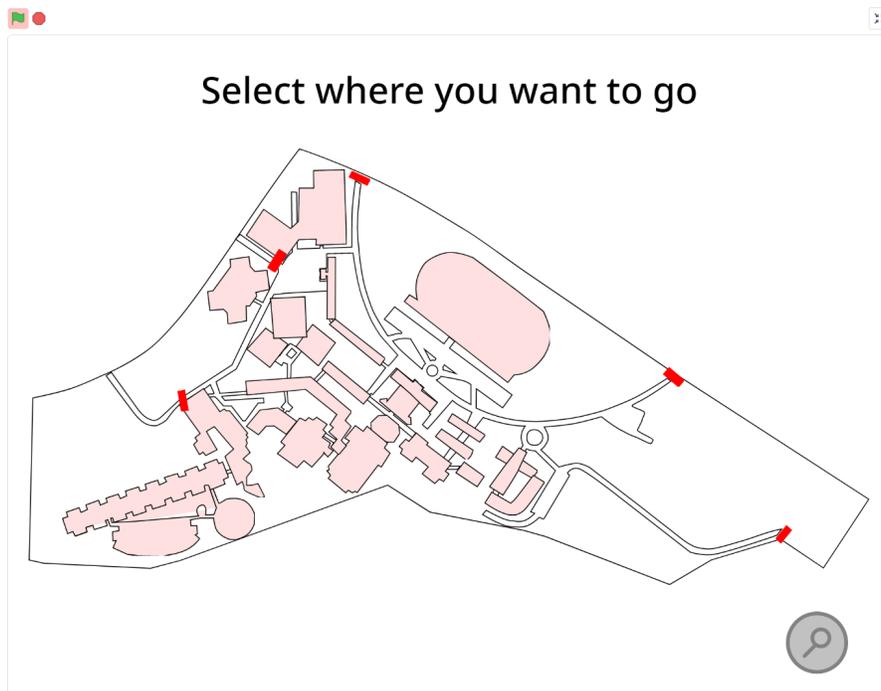
1.3 Target Audience

The target audience was HCI secondary 1 to 4 students and new staff where we observed that the loss of sense of direction was especially prevalent.

1.4 Resources

The resources created for this project were:

- 1) A Website



2 REVIEW

Current resources like the existing school map are not directly based enough to show the user how to get from one place to another and also would not show pictures of the places the user wants to go to. The map provided by the General Office is not interactive and did not provide directions. Furthermore, it did not provide pictures to enhance the guidance. Map reading is a skill that takes time to learn and master, and most of the students and staff do not have that skill and require some time to learn.

3 Methodology

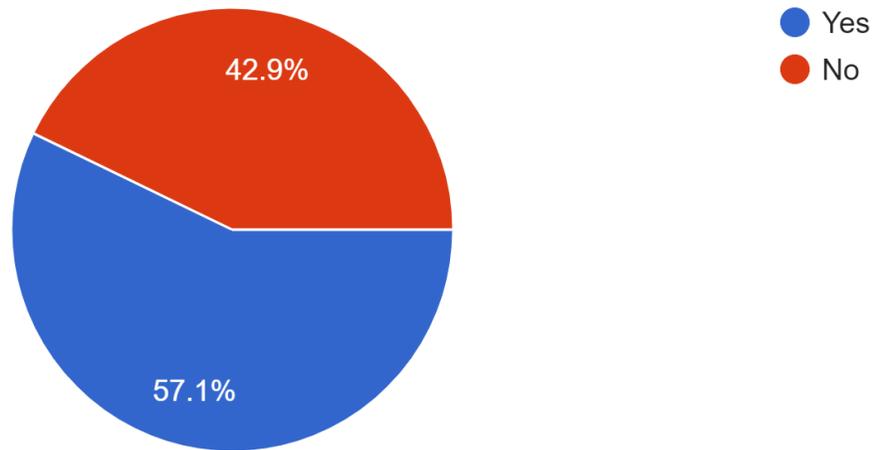
3.1 Needs Analysis

A survey was conducted to find out more about the navigation problems the surveyees faced when navigating throughout Hwa Chong. Of the 21 students from different levels surveyed, 55% said that they have gotten lost in Hwa Chong before. 81% of the respondents also voted that it would be either moderately hard or harder for future freshmen to navigate throughout the campus. The survey results had clearly shown the need for a map to help the freshmen and new staff navigate throughout the school.

Needs Analysis - Survey Results

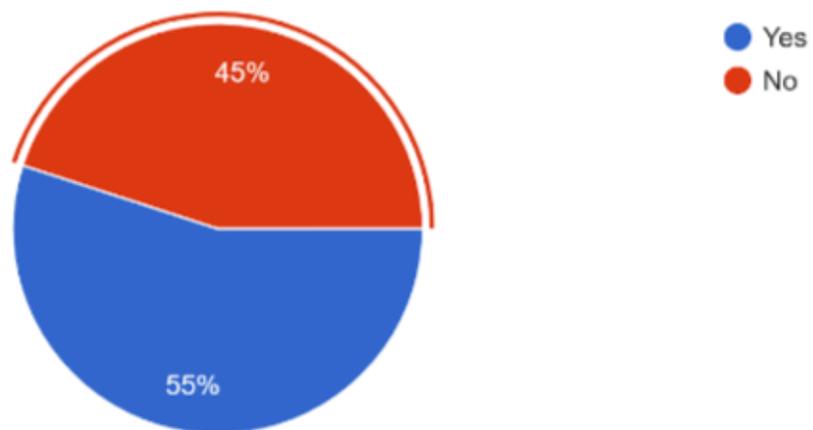
Did you ever have trouble getting around in HCI.

21 responses



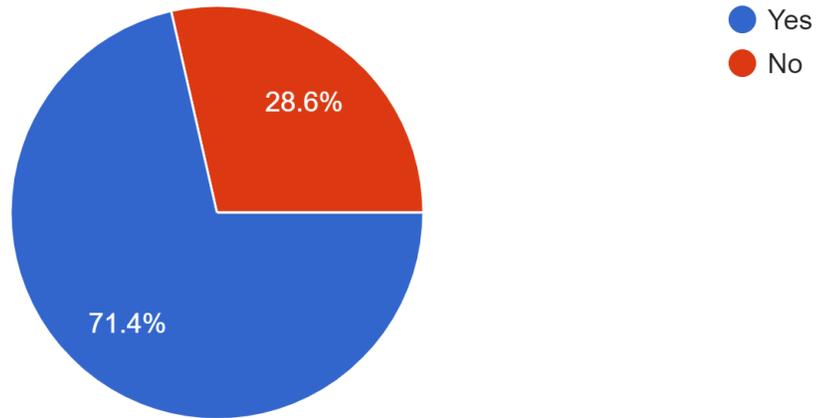
Have you got lost in HCI before?

20 responses



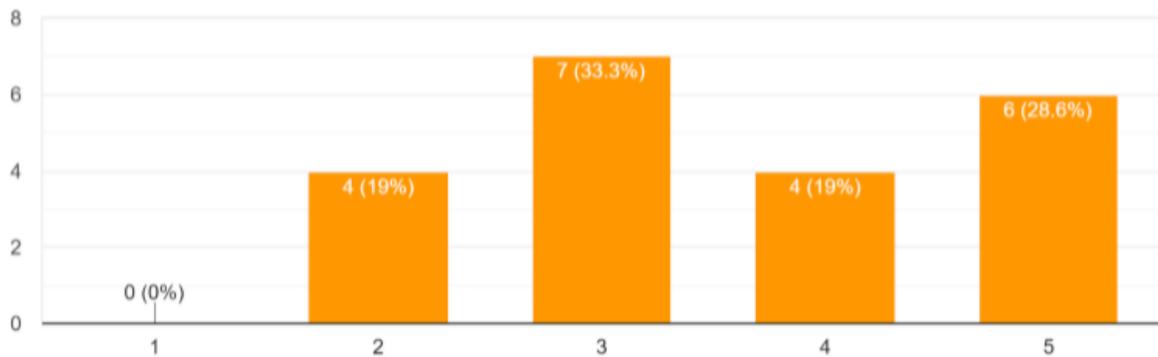
Would you be interested in a 3d map of the school that gives you directions?

21 responses



How hard do you think it will be for the future freshmen/staff to navigate throughout the school

21 responses



3.2 Development of Resources

At the start of the year, we had originally planned to use Blender to make the 3d model of the school, but that planned was scrapped as we felt that it would take too much time, so we decided to use Scratch and embedded the script into the website successfully. We also went around the school to take pictures of the landmarks and buildings of the school and put it in the script such that when the user wants to go to somewhere, he will receive an image of the location and a brief description of it.

3.3 Pilot test

The pilot test consisted of only one phase, which was the testing of the map on our classmates. Several of our classmates volunteered to help in the pilot test of the map. Our criteria when choosing who should do the test was whether they were familiar with navigating Hwa Chong or not. If they were not familiar with the place, we would agree on a time to meet up with them and conduct the test. They would be placed in random locations and were asked to go to a certain location using the map. 4/5 of the trial runs were successful and we concluded our map to be at least 80% effective.

One of the reviews was sent by Class 1A3 Darryl Tai, "I feel that the map is really user friendly and it is really easy to understand. I highly recommend using it during SOO."

4 Outcome and discussions

The outcome of the project was quite successful as the multiple trial runs were taken with some of our classmates who were not used to navigating around the school went well. Luckily, even though we could not create a 3D map due to time constraints, the final product still met our expectations.

There were several limitations, however, such as the lack of experience of working with a map and because the mid-term evaluation was cancelled, we were not sure of how much progress we have made, and that led to some confusion.

Suggestions for further work include extending the pathfinder to include

the boarding and international schools and making the map 3 Dimensional to enhance the efficiency of guiding students and new staff around the school, we can also make the website more user friendly by turning it into an app so that mobile users find it more comfortable to use.

5 Conclusion

As this was a project about creating a map designed to help people who were not familiar with the school, we had to go around the school to take pictures of buildings and routes and coding was needed to implement the pictures into the map we had interactive. We also had to trouble some of our friends to help us with the pilot test which took up some time as they had given us many feedbacks and we tried our best to adhere to them. After all the thorough tracing of the old map and making it as user friendly as possible, we finally completed the map and achieved what we had envisioned at the start.

6 References

The skill of map reading:

<https://www.hillwalktours.com/walking-hiking-blog/read-a-map/>

How a high percentage of people are not good at reading a map:

<https://360.here.com/2014/10/06/people-better-map-reading-others/>

Why interactive maps are better than physical maps:

<http://fearlessflyer.com/interactive-maps-websites-helpful/#:~:text=Interactive%20maps%20are%20an%20incredibly,around%20with%20a%20map%20layout.>