

CAT 4 RESOURCE DEVELOPMENT

Group 4-022

Geocaching@HCI

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1. ABSTRACT

Geocaching@HCI is a useful and user-friendly resource package. It consists of an app, a website, a social media page, video logs and a forum to let Hwa Chong students learn more about Geocaching and help them to participate in this sport through the geocaching app we have created. We aim to raise awareness among the students about the sport of Geocaching, and teach students about the basics of Geocaching. We hope that through our resource package, more students would have been sparked to have grown an interest in Geocaching and also have more sporting students from Hwa Chong Institution in more physical activities to maintain a healthy lifestyle. Our resource can also be used as an introduction the the school campus for new Secondary One students, as it will allow them to travel around the school and get to know the names of different places as they look for the geocaches we have planted.

2. INTRODUCTION

2.1 Rationale

In our current day and age, the prevalence of such technological advancements as the Internet and social media have led to a rise in sedentary lifestyles; many adolescents would rather remain in their comfort zones and engage in such online activities. This leads them to miss out on more meaningful pursuits outside of the comfort of their homes, and hence are unable to reap the benefits of such activities. For one thing, teenagers who fail to participate in sufficient amounts of outdoor activities may receive an extremely small amount of exercise; this is insufficient to keep them healthy and maintain an active lifestyle, and can lead to health issues like heart disease and obesity. Hence, it is extremely important that students are exposed to sports and activities that may pique their interest, and allow them to enjoy such outdoor activities, thereby enabling them to cultivate the habit of engagement in regular physical activities. This would allow them to ensure that their health is in good condition, and prevent them from solely remaining within their comfort zones, enabling them to forgo on-screen activities for meaningful outdoor pursuits.

2.2 Objectives

The objectives of this project are:

1. To raise awareness about the sport Geocaching among Hwa Chong students.
2. To teach students about the basics of Geocaching.

3. To engage Hwa Chong students in more physical activities so that they can maintain a healthy lifestyle.
4. To allow Secondary One students to familiarise with the school campus.

2.3 Target Audience

Secondary One to Secondary Four students from Hwa Chong Institution

2.4 Resources

- App
- Website
- Social Media Page
- Video Logs
- Forum



In this website, you will find various tutorials for you to explore before you go geocaching yourself. These videos will help you have a better understanding of the sport and will also teach you how to find caches with ease. There will also be a forum for you to post your views and experiences as these experiences will be extremely valuable to first-timers. Do also visit and follow our Instagram page by clicking the small logo on the top right-hand side of the page. It will include more details about Geocaching and our own personal experiences when we go out to find caches.

Forum

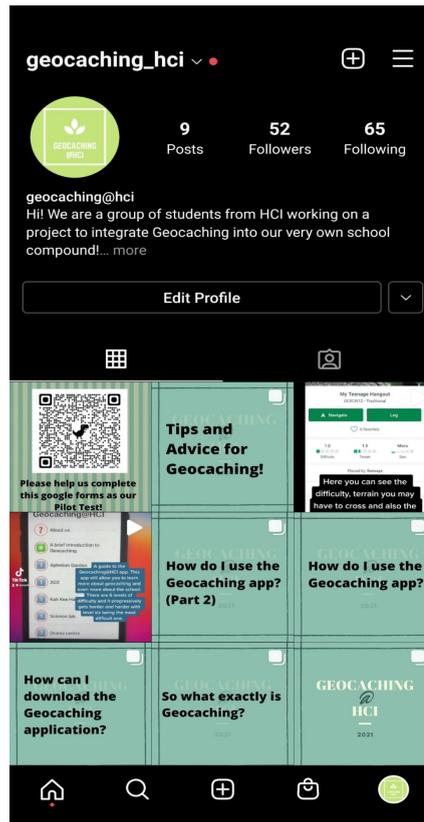


Tutorial



Geocaching@HCI

-  About us >
-  A brief introduction to Geocaching >
-  Aphelion Garden >
-  202 >
-  Kah Kee Hall >
-  Science lab >
-  Drama centre >



3. REVIEW

3.1 Existing Resources

At the moment, there are a few apps which can be found online including the original Geocaching app and GCDroid etc. They have many features such as Global Positioning System and features to aid you on your Geocaching journey but they do not have a web page which tells useful information that you need to know before starting to take part in Geocaching. The apps may not be friendly towards new users, as their tutorials are not detailed enough. Users who are trying to learn more about Geocaching and pick it up as a hobby may face many struggles and have unresolved concerns and questions.

3.2 Past Projects

Past Project: “Healthy is the new “Happy” (2020)

Past Project: Heal-thy Living

These past projects are projects that encourage secondary school students to exercise regularly by exposing them to the consequences of not exercising sufficiently, as well as ways to keep fit. They also encourage healthy living in Hwa Chong by educating them on the harmful effects of not living healthily. They comprise

informative websites. infographics/posters and a social media page. After studying the projects, we felt that although it may be able to teach students about why exercise is important, the content in the website was too wordy and may not be easy to comprehend and read, and might not be able to pique an interest in readers to start exercising. The project also does not guide the students enough in knowing where to start, and they may feel lost or overwhelmed by the amount of information they are given. Additionally, the projects only had 2 resources, and we feel that it would not be able to gain sufficient outreach so as to gain an effective outcome and influence more students to engage in a healthy lifestyle.

3.3 Literature review

Article 1: Three-quarters of Singapore adolescents are not active enough: WHO study

According to an article reporting that three-quarters of Singapore adolescents are not active enough, it shows that most Singaporean children do not get enough exercise regularly due to the amount of schoolwork students have. It can also mean that not many teens are motivated to get enough exercise and would rather stay at home to play video games. Therefore, our project may help and encourage teenagers to get sufficient exercise.



By Nicole Chang

22 Nov 2019 02:13PM
(Updated: 22 Nov 2019 02:20PM)



Bookmark



Singapore

Three-quarters of Singapore adolescents are not active enough: WHO study

SINGAPORE: The majority of Singapore adolescents do not get enough physical activity, with a widening gap between boys and girls from 2001 to 2016, according to the results of a new World Health Organization (WHO) [study](#) released on Friday (Nov 22).

About 76 per cent of Singapore adolescents aged between 11 and 17 years old do not get at least one hour of moderate-to-vigorous activity every day, said the study, which examined the issue among adolescents globally.

Article 2: Geocaching regains popularity during COVID

According to this article, the COVID-19 pandemic has not stopped the sport Geocaching from gaining popularity. This is due to the fact that this sport can still be carried out effectively while complying with safety measures. It is different from most sports due to its flexibility, convenience, hence there is no need for any equipment or skill.

The year of 2020 has been a challenge but one thing it has given us is a new appreciation for our outdoor areas. Families are spending more time together exploring local parks and utilizing conservation areas.

Geocaching, which according to [Geocaching.com](https://www.geocaching.com) has been around since 2000, has regained some popularity recently as families search for fun activities to do outside.

Article 3: The Benefits of Exercise for Children’s Mental Health

This article proves to us about the importance of adequate exercise during adolescent years, as it brings benefits to their mental health which would even be carried on to adulthood. This emphasizes the importance of exercise and shows that it does not only keep your physical health in check but also your mental health.

The Benefits of Exercise for Children’s Mental Health

Even light physical activity among adolescents was linked to better mental health as they got older, new research shows.



iStock by Getty Images

4. METHODOLOGY

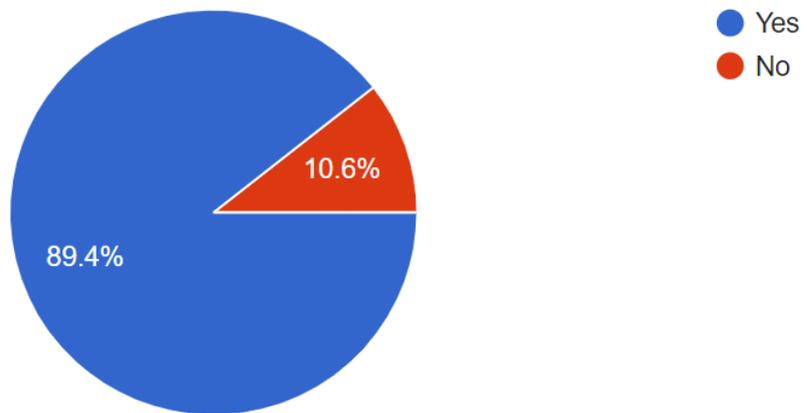
4.1 Needs Analysis

A needs analysis was conducted in order to find out the relevance of our project, we have conducted a survey on Google form. We managed to get around 66 participants and the results showed that there was indeed a need for this project as the majority of the participants did not have at least 60 minutes of moderate - vigorous intensity exercise per day. It is clearly shown that adolescents are not getting sufficient exercise, and our project would help to increase the number of students who lead healthy lifestyles and engage in adequate physical activities.

4.2 Results

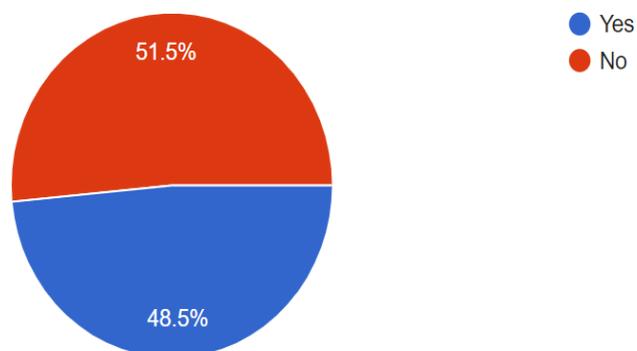
Q3. Do you think it is necessary for youths to exercise sufficiently?

66 responses



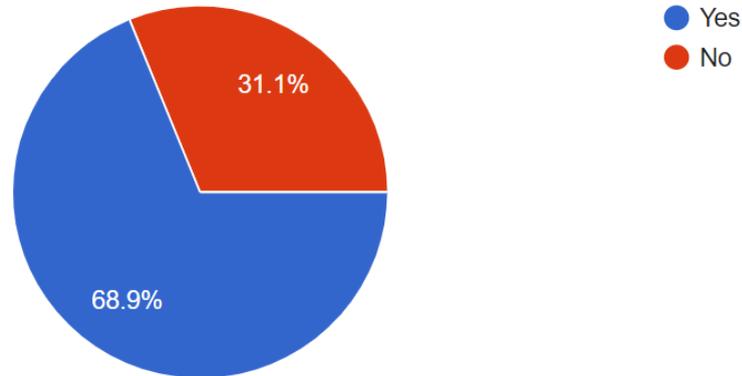
Q5. Do you get at least 60 minutes of moderate-vigorous intensity exercise per day? (e.g. running/swimming)

66 responses



Q6. Would you be interested to take up Geocaching?

61 responses



4.3 Development of Resources

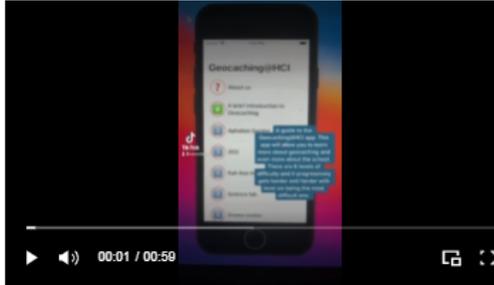
The content featured in our resources were useful online sources we have found on the internet that we feel would benefit our audience, but there are also . We presented the different parts of our content in three sections, the Home page, Forum and Tutorial. The home page introduces users to our project and our website, and the forum is a platform for fellow Geocachers and participants to pen down their thoughts and share their experiences. We hope the forum will allow people who are new to Geocaching to be able to know what to expect and make necessary precautions before beginning their journey. The tutorial would also allow our users to understand and know more about how to use the official Geocaching app, and also the app we have made for the Hwa Chong Institution school campus. For our app, we had 6 levels of difficulty for the caches we hid around the school with 1 being the easiest and 6 being the hardest. As the level progressively gets harder, the amount of clues and hints that they receive decreases and they also become more vague so students need to put in more work in figuring out where the location of the cache is. Through this, students would not only be able to learn more about geocaching and how it can be carried out on their own, but will also be able to get a better understanding of the school through finding these caches.

Link to our website: <https://202379j.wixsite.com/my-site-1/>

Below are our video tutorials and forum:

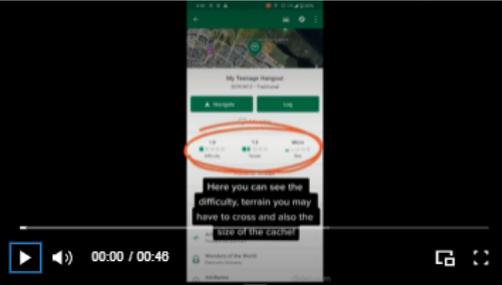
Videos

Geocaching@HCI



Watch this video to learn how to use our Geocaching@HCI application as we guide you through our app and its features!

Official Geocaching



Watch this video to learn how to use the official Geocaching application so that you can engage in Geocaching near your neighborhood and also understand its interface!



A brief introduction of Geocaching, including the basics of the sport, what it comprises of and the different types of caches in the world.



After understanding Geocaching, here is a video providing you with tips and tricks on how to find a Cache.

Create New Post

General Discussion
Share stories, ideas, pictures and more! 2 5 Follow

Questions & Answers
Get answers and share knowledge. 0 0 Follow

New Posts

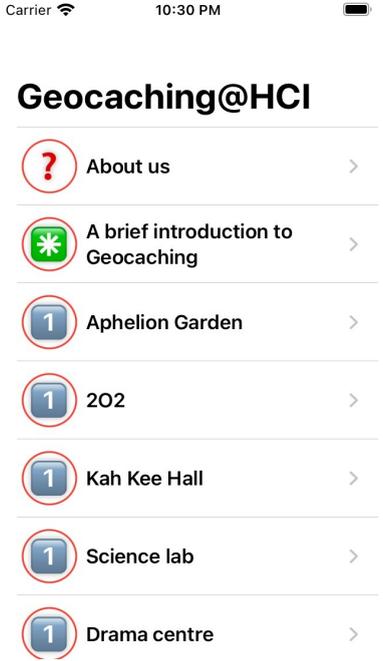
Hayden Lau 19m
My Geocaching Experience
General Discussion
Going Geocaching has been a very fun and enriching experience for me. I cycl...

DESTON NG YONG LAM HCI 1d
My experience on Geocaching
General Discussion
I recently went Geocaching in a few different places near my housing estat...

MATTHEW TING EN RONG HCI Jul 29
Welcome to the Forum
General Discussion
Share your thoughts. Feel free to add GIFs, videos, #hashtags and more to y...

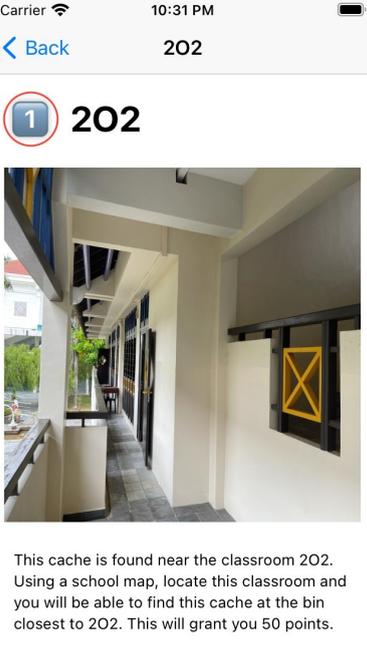
Link to our instagram page:
https://instagram.com/geocaching_hci?utm_medium=copy_link

Below are a few images of our application:



Geocaching@HCI

- ? About us >
- * A brief introduction to Geocaching >
- 1 Aphelion Garden >
- 1 202 >
- 1 Kah Kee Hall >
- 1 Science lab >
- 1 Drama centre >



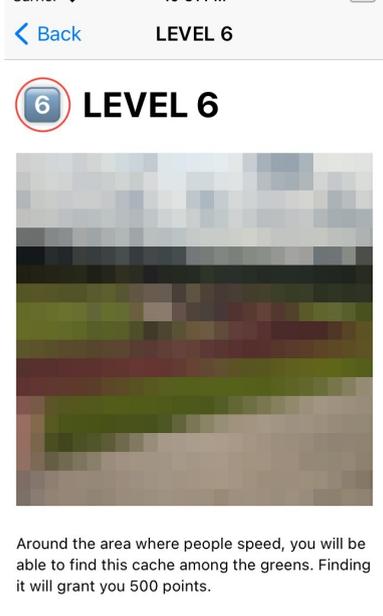
1 202

This cache is found near the classroom 202. Using a school map, locate this classroom and you will be able to find this cache at the bin closest to 202. This will grant you 50 points.



4 Salt center

This cache can be found at the salt center and people near this cache are constantly 'burning'. Finding it will grant you 150 points.



6 LEVEL 6

Around the area where people speed, you will be able to find this cache among the greens. Finding it will grant you 500 points.

4.4 Construction of Resources

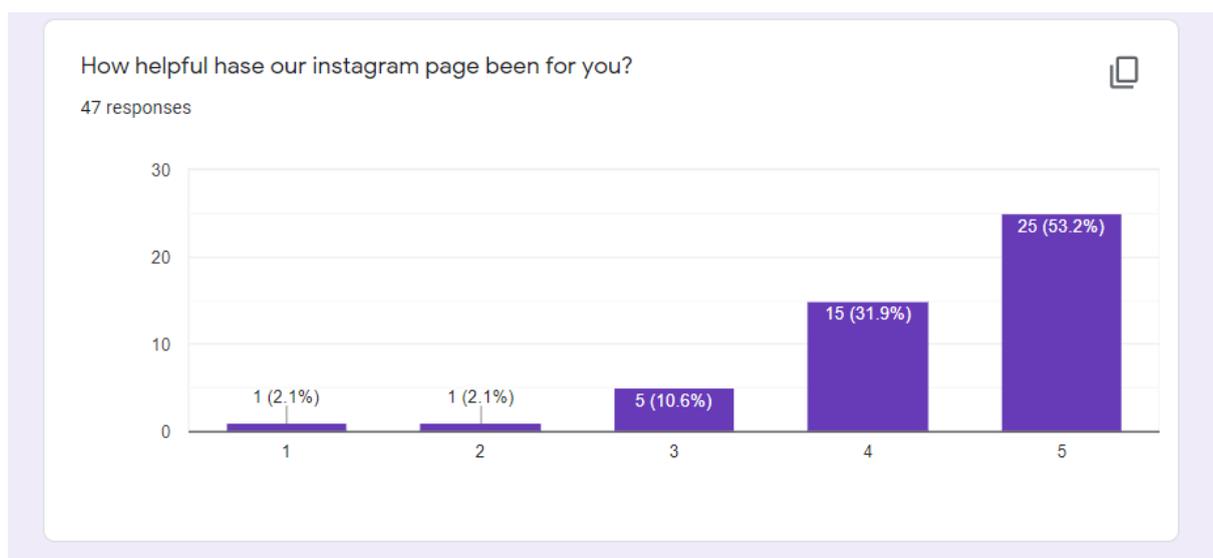
Since our project consisted of three components, the social media page, app and website, and we had four members, we decided to split the workload and have two people doing the website, one person working on the app and one person dealing with the social media account and its posts. Social media posts were also made on the Canva design platform, as they have a wide array of features that allow us to make our posts more presentable and appealing to our target audience. Video tutorials had also been crafted on the TikTok application since their video The website was completed on the Wixsite platform as it is cost-effective and also has a pleasant interface. Our app is also coded on Xcode, an app development software and environment. We regularly reviewed each others' work and provided each other with constructive feedback and improvement suggestions, to ensure our project resources would be desirable.

4.5 Administration of Pilot Test

Since we were unable to publish the app onto the apple app store, we decided to send out photos of the app along with the link to our website to our friends and family. Along with that, we sent out a form for them to fill up if they had any feedback for our resources. We also sent out a few levels of our app to our classmates for them to attempt so that we will know if the level of difficulty is appropriate.

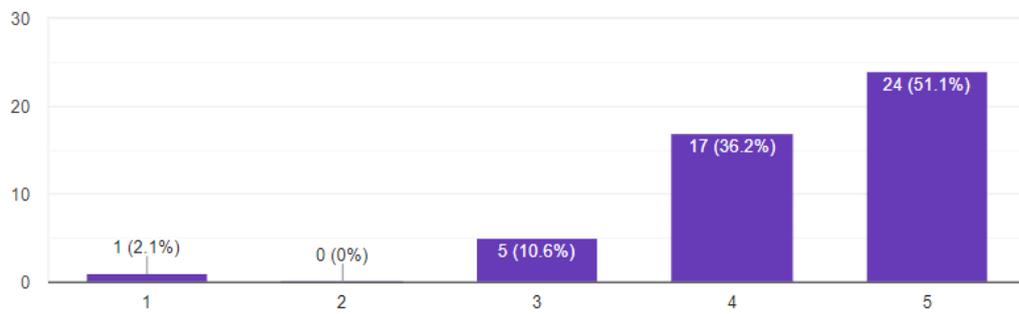
4.6 Feedback

After the completion of our resources, we have conducted a survey and requested feedback and areas for improvement so as to further improve our resources and enable our users and audience to have a smoother experience during the use of our resources.



How helpful is our website, forum and video tutorials?

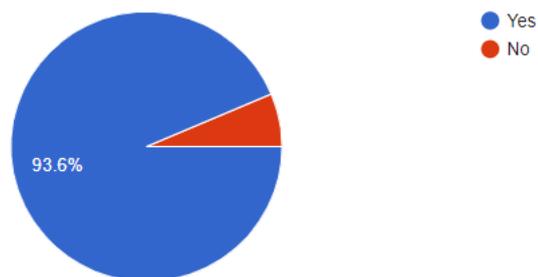
47 responses

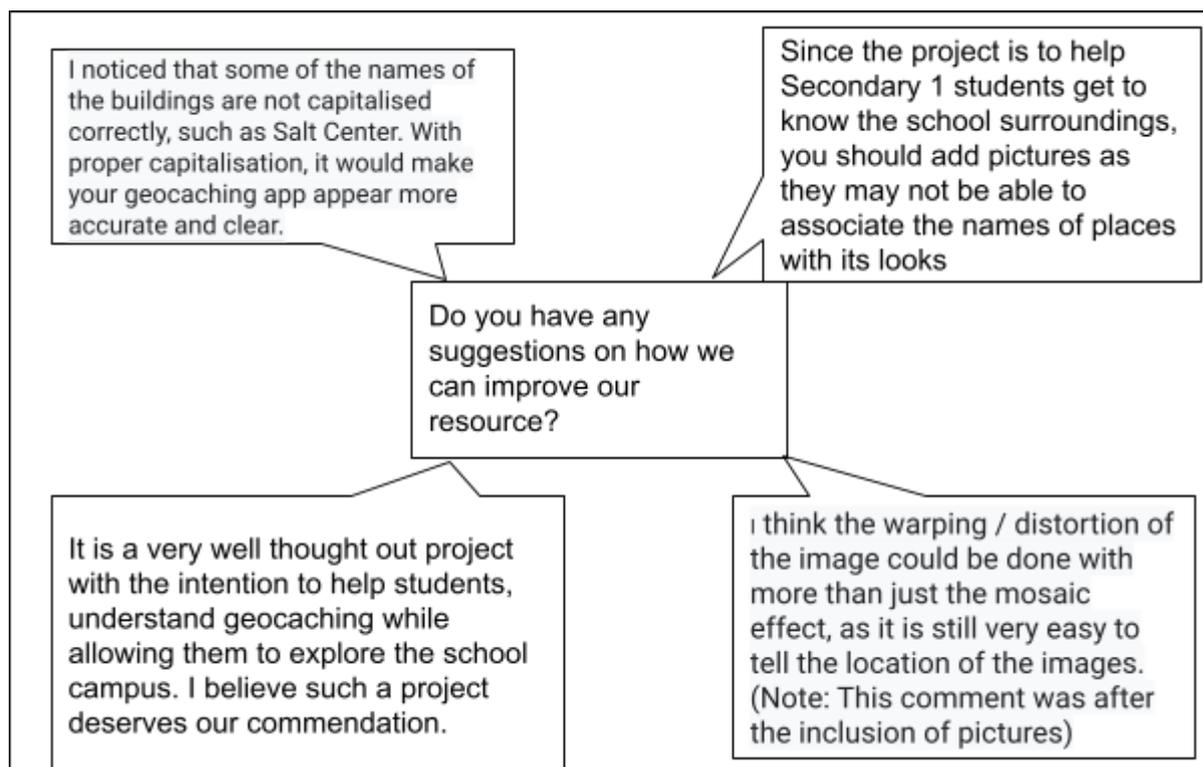


We had also asked questions on our app and its usability.

Do you think this interface is user-friendly?

47 responses





5. Outcome and Discussion

After receiving the feedback, we had decided to employ these suggestions onto our resources accordingly and make them easier to use, more concise and presentable, and also suitable for our motive of having different levels in the multiple Geocaches. We made the necessary changes and edits on the text of our app to make it more presentable and accurate. After going around the campus to take pictures of each location, we included them in the interface of our app and distorted them accordingly. We followed the suggestion by one of people who had responded to our survey, and have also adjusted the concentration of distortion in each image according to the level of difficulty; Level 1 caches will have images that are less pixelated where Level 6 caches will have images that are more pixelated.

5.1 Limitations

Our app only caters to a small group of students and a restricted audience, since one of our objectives is also to allow Secondary One students of Hwa Chong Institution to familiarise with the school compound. Our outreach and engagement can only be achieved within Hwa Chong Institution and its High School section. This may mean that our objective of allowing students to lead healthier lifestyles and adopt a habit of exercising regularly would be on a restricted scale, and be unable to be effective on a large scale as we hope to achieve.

5.2 Suggestion(s) on further work that can be done

The project can be integrated and adapted to fit more schools and serve as an orientation for new students who have just been admitted in the school. This way,

they can engage in Geocaching to get to know the school compound, and perhaps work with the new people around them to forge more friendships. In the process, more students may have become interested in the sport Geocaching and thus develop a habit in engaging in Geocaching, even outside of school by using the official Geocaching app. Doing so will allow more students to start developing beneficial habits of exercising regularly and also may integrate into their school more smoothly.

6. CONCLUSION

In conclusion, we hope that students may be able to reap multiple benefits from our project: ultimately cultivate habits of regular physical activity and therefore be healthier in the long run and also feel more comfortable and confident during their first few experiences in school. Through the creation and process of completing this project, we have also been able to learn more and pick up more skills. The video tutorials we had made involved us editing them, and we had learnt how to use such video editing software effectively. This is extremely useful as it can be applied into future presentations. We had also learnt about how to make a website more appealing and presentable to our audience, so they are able to view the content online clearly. One of the more difficult parts was to create a forum on our site that allowed multiple users to leave comments or questions. It was a challenging feature to integrate into our site as it involves user to user interaction and is not purely text or images. Lastly, the creation of the application also allowed us to master more skills and gain more experience in the area of infocomm knowledge. The coding allowed us to apply our infocomm skills learnt from lessons into our project. This experience had benefited us greatly as all of us had never attempted to create an application, and it is a fresh encounter. Moreover, some of us have also started to engage in Geocaching and enjoy participating in it. All in all, this project has been an extremely fruitful learning experience for all of us, and we enjoyed the process of creation of this project, and we hope it will also be able to benefit our target audience.

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