

# **Cat 4: Resource Development**

## **Group 4-074 Project Curatio**

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## **ABSTRACT**

Project Curatio is an online resource package to educate student athletes on how to prevent and treat injuries so as to ultimately boost their athletic performance. Through this online resource package, students are able to learn general tips on injury prevention and treatment, as well as gain insightful experiences from experienced athletes and coaches. Students can also learn and follow basic warm-up and cool-down exercises through the customised tutorials so as to be properly ready for training and recovery.

## **1 INTRODUCTION**

### **1.1 Rationale**

Many student athletes are always training and preparing for the annual National School Games, or the DSA trials for the primary six students. Student athletes not only take part in weekly school training, but some also choose to train at external facilities to maintain their peak performance. This puts their training frequency at one of the highest of any age group. However, at the same time, many are unaware that injuries may occur at any given moment, causing them to neglect their physical condition and prioritise training above everything else, further increasing the risk of injuries.

Furthermore, many are unsure of how to properly prevent injuries and how to treat them should they sustain one, putting them in grave danger. Thus, Project Curatio wishes to aid such student athletes by providing general but crucial information about sports injuries and giving tips on how to prevent and treat them, ensuring that they stay healthy and in tip-top shape.

### **1.2 Objectives**

The objectives of this project are to:

- (a) provide students with useful information about how to prevent and treat common sports injuries that may occur during training

- (b) educate student athletes on the different types, causes and effects of sports injuries to increase awareness
- (c) provide students with insights on experienced student athletes' experiences

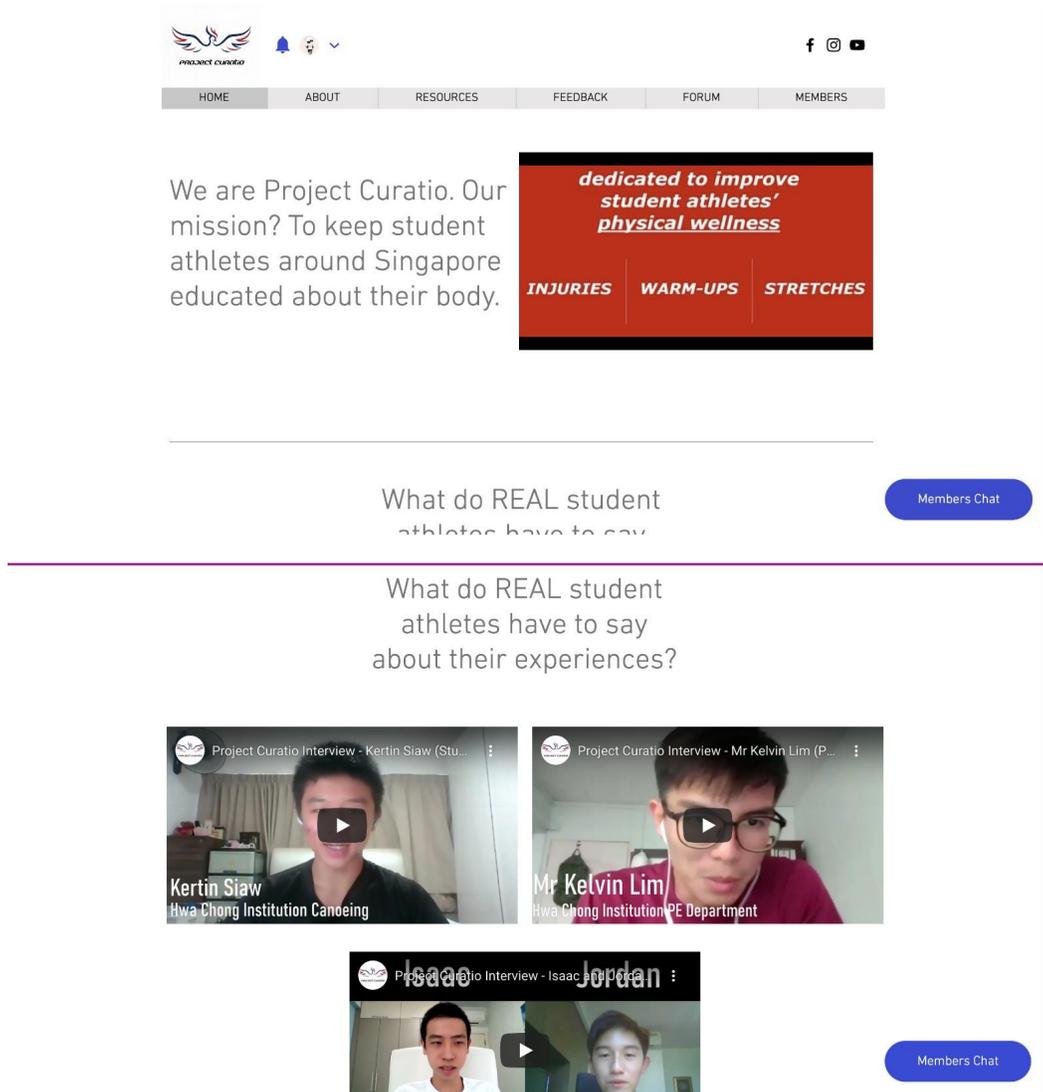
### **1.3 Target audience**

Our main target audience is upper primary and lower secondary student athletes. We have specifically chosen this group of students because we feel that students of this particular age group do not have sufficient knowledge about sports injuries, their impacts and consequences, and how to prevent them. Furthermore, many students from this age group lack the awareness of sports injuries, leading to them undermining and not taking precautionary steps towards sports injuries. However, at the same time, students around this age are usually stepping up their training so as to prepare for their Direct School Admission (DSA) trials or the annual National School Games. Hence, it is crucial that upper primary and lower secondary student athletes are educated on the severity of sports injuries and how to properly prevent and treat them, ensuring that they stay safe and fit enough to partake in training and competitions.

### **1.4 Resources**

The resources that we have created is a website that contains everything one needs to know about sports injuries. The resources portion of the website is divided into several categories - types of sports injuries, causes and consequences of sports injuries, prevention and treatment methods and other resources such as our interviews and info-posters. Each category contains information that is condensed into shorter paragraphs, videos, pictures or infographics so that it is easier to read and understand. We also created a few of our own resources, such as interviews with experienced athletes, exercise videos and info-posters. We also implemented a discussion forum so that student athletes can share their experiences with each other and gain deeper insights on top of the factual information that we have provided them. As such, our website aims to allow student athletes to have easy access to resources that will give

them a better understanding of their own physical condition and learn more about the different types of sports injuries.



*Website's home page (Introduction video + Interviews)*



## Hamstring strains

A hamstring strain, sometimes called a pulled hamstring, happens when one or more muscles get stretched too far and start to tear. Hamstring strains can be mild, with little pain and a short recovery time. On the other hand, they can be severe and need surgery and crutches for weeks.

## Achilles tendon rupture

The Achilles tendon is a thin, powerful tendon at the back of your ankle. During sports, this tendon can break or rupture. If your Achilles tendon ruptures, you might hear a pop, followed by an immediate sharp pain in the back of your ankle and lower leg. You may experience frequent pain in your leg and difficulty walking.



## Fractures

Bone fractures are also known as broken bones. This usually happens when your bones run into a stronger force, possibly a hard surface or maybe even an opponent in contact sports.

Members Chat

One of the website's resource pages (Types of Injuries)

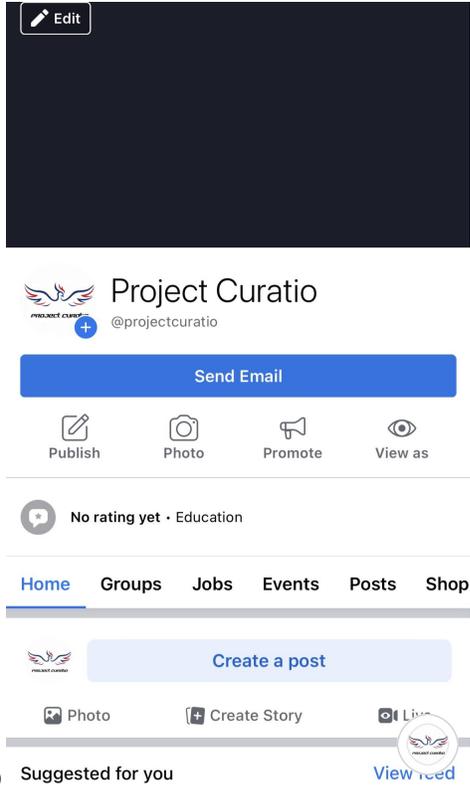
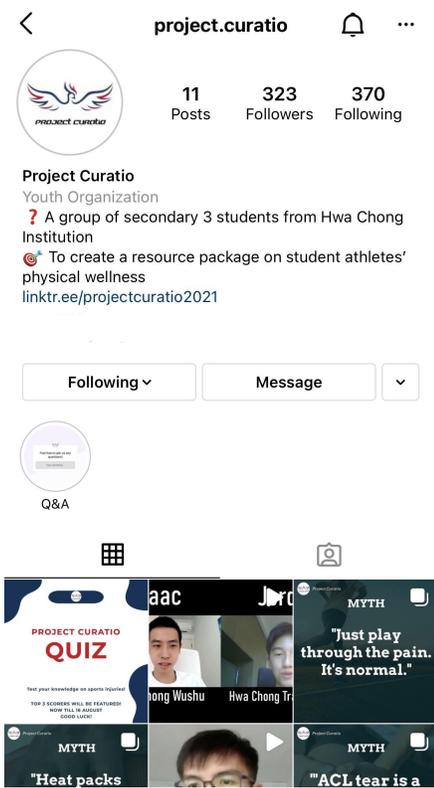
Members Chat

Discussion forum

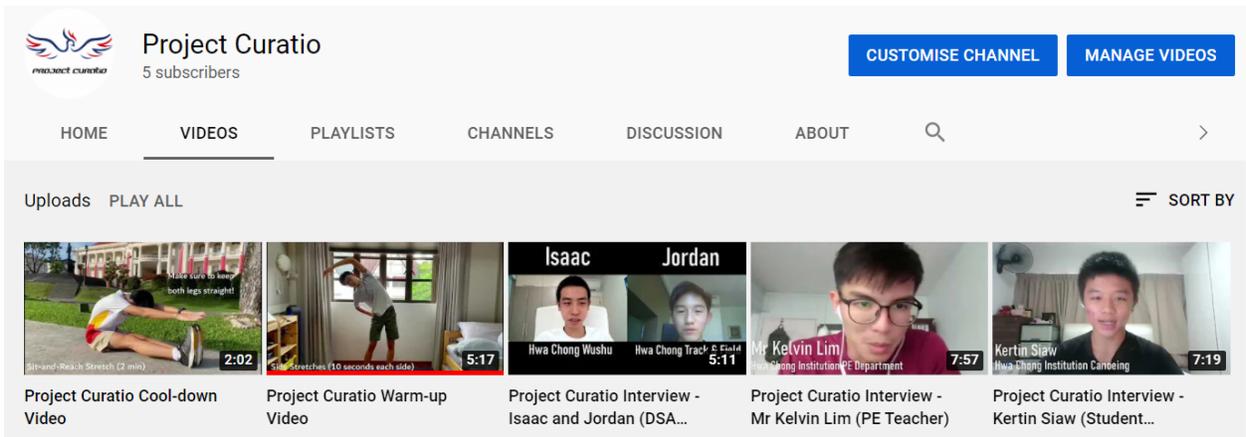
Project Canata logo and navigation menu (HOME, ABOUT, RESOURCES, FEEDBACK, FORUM, MEMBERS) are at the top. The main heading is "Give Us Your Feedback". The form includes input fields for "First Name", "Last Name", "Email", and "Phone". Below these is a "Rate Us" section with five stars. A text area is labeled "Write your feedback here". A "Send Feedback" button is centered at the bottom of the form, and a "Members Chat" button is in the bottom right corner.

*Website's feedback page*

We also started a social media campaign by uploading some of our resources, such as the info-posters and interviews, onto social media platforms like Instagram, Facebook and YouTube. We chose these platforms as the youth are more commonly found browsing these apps in their free time, making them more convenient and easily accessible. They are more likely to stumble upon our page and feel enticed to look through our plethora of resources, gaining some basic knowledge along the way.



Instagram Page (left) and Facebook Page (right)



Youtube Channel

## **2 REVIEW**

There are a few existing resources and guidelines available for student athletes to learn about the prevention and treatment of sports injuries. Most resources discussing sports injuries are normally targeted at a very wide audience and do not target a specific age group, making the information not very reliable or not very effective. Furthermore, some websites are very wordy or do not explain the information very well, making it aesthetically unappealing and difficult to understand. Our website enables student athletes to easily access all the information they need all in one place, and the resources are easy to read and digest, as the information is presented in different forms such as videos and infographics, making the overall experience more smooth and enjoyable.

## **3 METHODOLOGY**

### **3.1 Needs Analysis**

In February, we conducted a survey with 54 upper primary and lower secondary students. The aim of this survey was to find out whether students and student athletes today are taking the right precautions to prevent sports injuries, and are aware of how to properly treat one. This was done by finding out whether students were investing enough time in warming up and cooling down before and after exercise respectively. We also asked if they were aware of how to deal with a sports injury should they encounter one. Lastly, we got a few respondents to share with us their past experiences with sports injuries to get a better understanding of how they felt, both physically and emotionally.

The following questions were asked:

Q1. I stretch sufficiently (~10 minutes) before and after partaking in physical activities.  
(Strongly Agree/Agree/Disagree/Strongly Disagree)

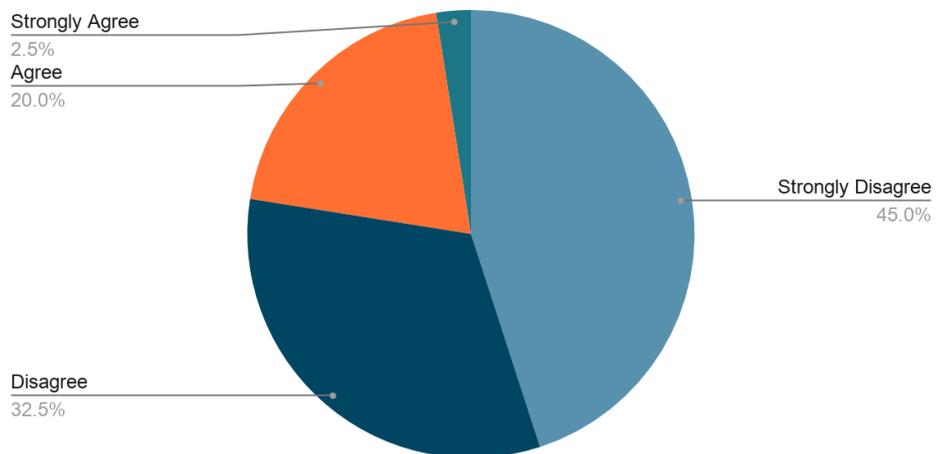
Q2. Should I encounter a sports injury, I am sure I know what to do. (Strongly Agree/Agree/Disagree/Strongly Disagree)

Q3. For those who have had experiences with sports injuries, on a scale of 1-5, with 1 being not at all and 5 being very clear, did you have a clear idea on how to deal with your injury?

### 3.2 Survey Results

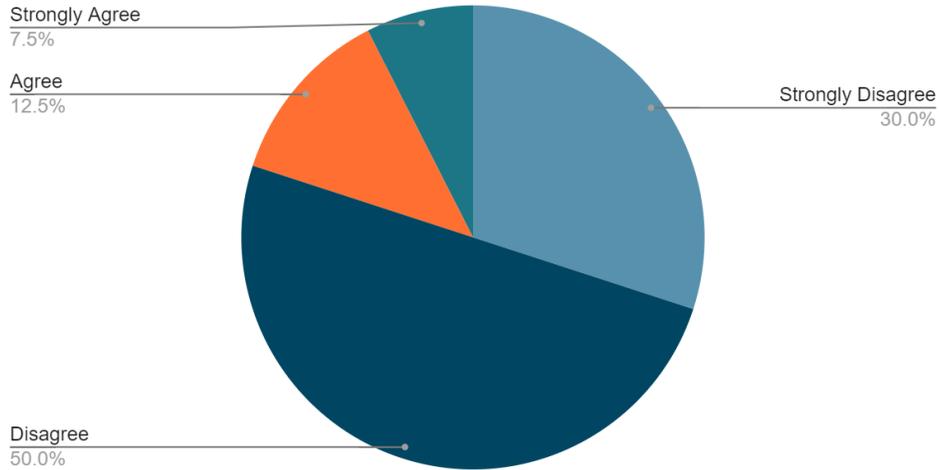
75.6% mentioned that they do not stretch sufficiently before and after partaking in physical activities.

“I stretch sufficiently (~10 minutes) before AND after partaking in physical activities.”



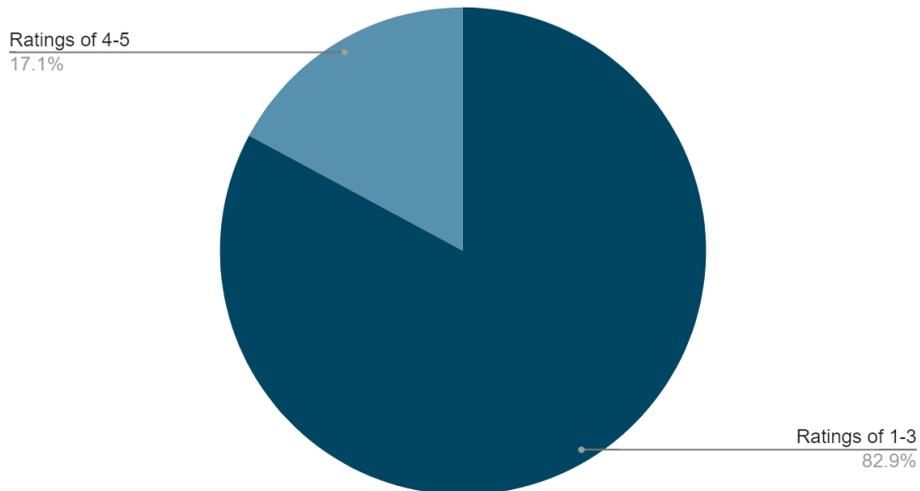
80.0% said they would be unsure of what to do if they were to encounter a sports injury.

“Should I encounter a sports injury, I am sure I know what to do.”



On a scale of 1-5, with 1 being not sure at all and 5 being very sure of how to deal with their previous sports injuries, 82.9% of those who said they have encountered an injury before responded with ratings of 1-3.

“Did you have a clear idea on how to deal with your injury?”



On an open-ended question asking students to share their experiences on sports injuries, several students elaborated on different injuries but more notably, how they were unsure of how to treat them, which in some cases, led to them continuing their training and their injury getting worse. Below is the question and some of the responses:

Question: "Have you experienced any sports injuries before? If yes, please state your injury history."

1. "Yes. I injured my elbow and did not know what to do and tried to continue training, making it worse."
2. "Yes, I got a serious hip injury that lasted over 2 months. It was my right hip that got injured. I couldn't run or even do basic jumps when having this injury. I have also sprained my ankle twice from training and soccer."

The needs analysis has assured us that there is a dire need for resources regarding sports injuries for student athletes in Singapore, as many are unaware of how to properly prevent and treat sports injuries, such as by investing enough time into warming up before exercise and applying the appropriate recovery methods. Due to this lack of knowledge, some who have had injury experiences in the past did not know what to do, which in some cases, led to the injury getting worse. This affirms that our project's resources are needed.

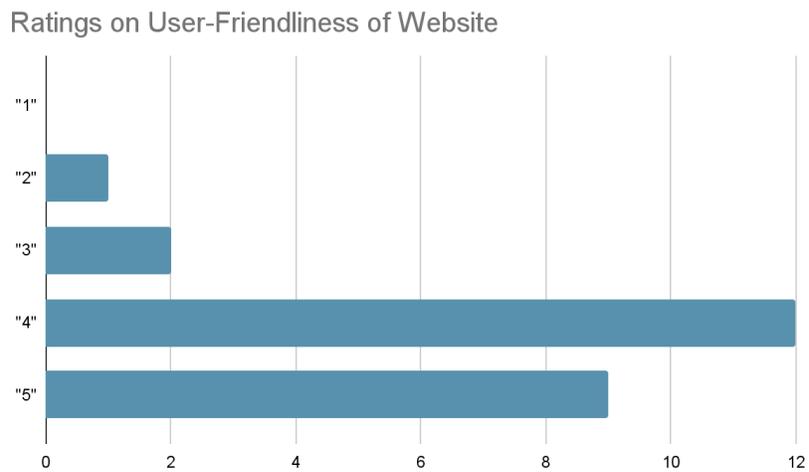
### **3.3 Development of Resources**

With the information gathered from existing resources and websites, we have collated and compacted the information into a resource package that is very accessible to our target audience, easy to understand, attractive and enjoyable for viewers. The interviews that we conducted gave us a deeper insight on the experiences of sports injuries from different perspectives, since we interviewed different demographics of athletes. The open-ended question in the survey also allowed us to have a better understanding on the specific needs of student athletes, particularly the areas that they lacked knowledge in when it comes to sports injuries.

### 3.4 Pilot Test

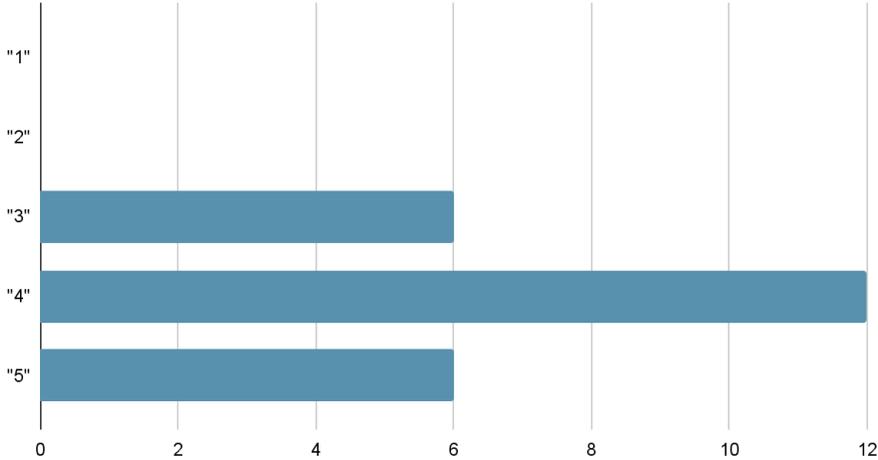
In order to assess the usefulness and review the users' experience of the website, we conducted a pilot test to find out if the students found the content on our website sufficient and whether they enjoyed using the website as a whole. All in all, the results collated are positive and indicated that we had achieved our project's objectives via the website.

87.5% of 24 respondents said that the user-friendliness of the website, that is the ease of navigating the website, deserved ratings of 4-5, which were the highest scores.



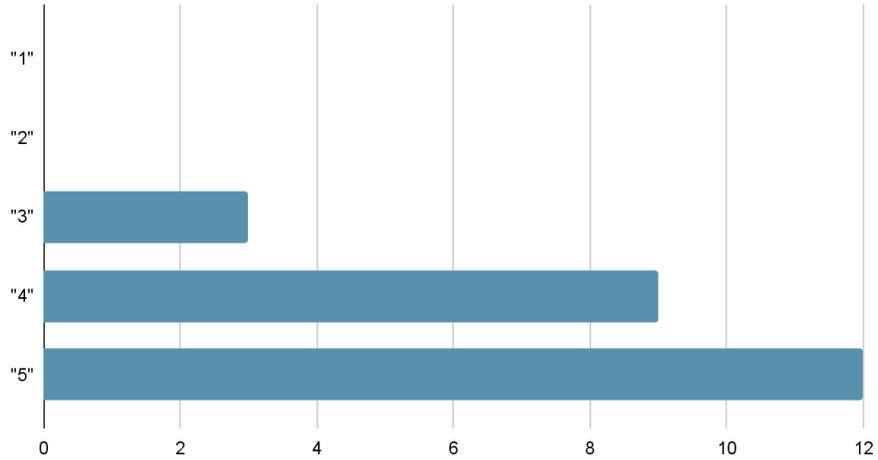
75% of the respondents said that their experience, which includes ease of navigation, useful guides for beginners and the speed of the website, deserved a score of 4-5

Ratings on User Experience

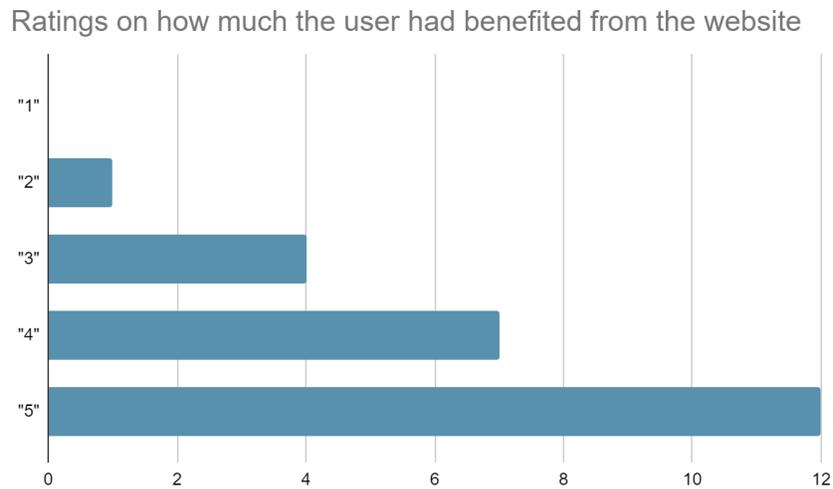


87.5% of respondents said that the notes and guides given were also sufficient and gave high ratings of 4-5.

Ratings on Sufficiency of Website Guides



79.2% of respondents said that they had benefited from the website with high scores of 4-5.



#### **4 OUTCOME AND DISCUSSION**

In general, our website has gathered positive feedback. Nevertheless, there were some minor improvements that needed to be done. Based on the suggestions given during the pilot test, we reduced the number of words on the website. We instead summarised bits of information into bullet points and removed some parts that may be unnecessary or too complicated for our target audience to understand. We also did some fine adjustments such as changing the homepage aesthetics and adding a feedback section for any comments or suggestions our users may have. These minor changes helped to improve the general outlook of the website.

#### **5 CONCLUSION**

Project Curatio was an extremely enjoyable project to work on for all of us. At the start of the year, some of us were confident in it, while others were reluctant to join the project as we lack the experience needed in doing a resource package. It took us time and effort to execute our plan. Loads of research were needed, time was needed to record the interviews, and video editing was a challenge. With help from our mentor,

and several students who took part in our project, we were able to come up with a resource package that all of us are proud of with the common goal of serving our target audience. Ultimately, all of us took away a lot of knowledge and experience from the project and gained a lot of satisfaction from the end product.

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