

# User Study Plan

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Group 3: Thon, Sina, Shannon  
76487

# Overview

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## Objectives

This user study examines the overall effectiveness of the Health Professions Program (HPP) website by analyzing how users interact with the website. The user study focuses on the ease of use of the website, as demonstrated by various users of different technical backgrounds.

The HPP website provides information for students and faculty interested in the Pre-Med program at Carnegie Mellon University. Its primary objective is to attract users to the program through the website and assist current program members by providing technical information.

To improve the HPP website's effectiveness, the user study will enable us to get real-time feedback on various interactions between users and the website. This user assessment is categorized into different primary objectives listed below:

- Learn how users interact with the site's navigation to find information.
- Observe how users prioritize information based on the site's user interface.
- Assess the effectiveness of the site's layout based on user reviews.

## Methodology

- Three participants will complete the study using their computer connected to the CMU Students Network.
- Each participant will be assigned an interviewer to ask a set of pre-study questions, explain the think-aloud protocol, and introduce the study's scenario.
- The participants will be given time to find the specific piece of information as prescribed by the scenario, using the think-aloud process to verbalize their thoughts as they navigate the HPP website.
- A post-study interview will be conducted, whereby the participant will provide feedback on their experience and possible improvements on the website.

## Participants

- Three CMU undergraduate students
  - Different majors

## Scenario Tasks

1. Locate general information about the HPP and evaluate how it aligns with students' career goals.
2. Explore how the HPP assists students with the medical school application process and identify key resources available
3. Find out how to enroll in the HPP and review the steps involved in the application process.
4. Search for available mentorship opportunities within the HPP, including ways to connect with past students who can share their experiences.

## When and Where

This user study will be conducted on Zoom, with the specific date and time to be determined.

## Methods

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Three participants will be selected to complete the study, each a CMU undergraduate student with a different technical background (engineering, business, arts, etc.). Participants will complete the study individually using their personal computers connected to the CMU Students Network to control network connectivity and speed.

Each participant will be assigned an interviewer. Before the study begins, the interviewer will conduct a pre-test interview to determine demographics, familiarity with the Internet, average Internet usage, and familiarity with CMU department websites.

The interviewer will then explain the study procedure to the participant, including the think-aloud protocol. After this, the interviewer will then read the scenario and ask the participant to complete it using the think-aloud protocol.

The scenario consists of four tasks. The interviewer will direct participants to <https://www.cmu.edu/hpp/index.html> and instruct them to find the scenario's specified information starting from the homepage.

Throughout the study, the interviewer will follow the script written for the pre-test interview, test introduction, and scenario instructions. As the participant completes the task, the interviewer may speak to them only to clarify protocol-related questions or to prompt them to verbalize their thought process if they fall silent. The interviewer will also document any observable successes, failures, or frustrations experienced by the participants as they navigate the website. The participants will only have a certain amount of time to complete each scenario. If finished early, the time taken will be recorded.

Once the participants have completed the scenario, the interviewer will conduct a post-study interview. The interviewer will ask questions regarding the usability of the website and whether the participant felt the information retrieved was sufficient for the scenario's needs. The questions asked by the interviewer are included in the 'Post-Test Questions' section of the scenario. During this interview, the participant will also have the opportunity to provide feedback on their experience and suggest possible improvements to the website.

## Scripts

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### Pre-Test Interview

*All participants will be asked these questions.*

[The interviewer should greet the participants and introduce themselves. The interviewer should explain that they will be the one conducting the test and elaborate that the purpose of the study is to assess the effectiveness of a CMU webpage.]

Before we begin, I would like to ask a few questions to get to know you better.

- What year are you in (freshman, sophomore, etc.)
- What do you major in?
- How often do you use the Internet?
- Would you say that you are familiar with using the Internet?

[After the participant is done answering the questions.] Thank you. I will now introduce and explain the study.

### Test Introduction

*All participants will be asked these questions.*

For this study, I would like you to use the think-aloud protocol while you are navigating through a preselected website. The think-aloud protocol requires you to say out loud what you are thinking while doing the tasks. For instance, imagine you are shopping for a new pair of sneakers. Using the think-aloud protocol you would say:

"Okay, there's a search bar on top. I'm going to type in 'running shoes' and then press Enter. I see a lot of options come up, so I'm going to go to the filter button here and try to organize it by color." And so on.

If there is anything that I don't understand or want to know more about, I will ask you about it. If it's not a good time to interrupt, just let me know. Do you have any questions about the think-aloud protocol?

[If the participant has no questions or comments, continue on to the scenario.]

## Scenario

*All participants will complete four tasks within one scenario. Participants will be directed to the HPP website and have **seven minutes** to complete each task. At the end of the scenario, participants will have **ten minutes** to discuss the outcomes with the interviewer.*

I'll direct you to a specific website and ask you to locate the information there. I won't be able to assist you in finding the information. Please remember to think aloud as you go through the tasks. I will remind you if you forget.

## Situation

You are a first-year student at CMU with a strong interest in pursuing a career in healthcare. However, you're unsure how to do this, since CMU does not offer a dedicated pre-med major. A friend of yours recently mentioned that CMU has a Health Professions Program, HPP for short, that provides advising and resources for students planning to apply to medical school after graduation. Wanting to learn more, you decide to visit the program's website to learn what the program entails.

[Direct the participant to the Health Professions Program website.]

**Task 1:** From the homepage, please find information about what the HPP is and how it will assist you.

[If they finish the task before the 7 minutes, move on to the next question.]

Now that you've found the page, please find information on when the HPP begins preparing CMU students for medical school applications.

[Observe the participant as they complete the task and take notes. *7 minutes.*]

### Expected Outcomes:

- Participants click on "Current CMU Students & Alumni" or, click on "Prospective Students" and end up on the "Information for Prospective Students" page.

- If the latter, they then download the informational PowerPoint presentation.
- Participants read and understand what the HPP is and how it can help students interested in a health profession.
- Participants evaluate whether or not the HPP aligns with their career goals.
- Time permitting, participants learn that the HPP prepares CMU students for medical school applications by January before the upcoming application cycle.

[Direct the participant back to the homepage.]

**Task 2:** After learning what the HPP is, you want to find out how the program will help you with medical school applications. Please show me how you would find this information.

[If they finish the task before the 7 minutes, move on to the next question.]

Now that you've found the page, please show me how you would find information about mock interviews.

[Observe the participant as they complete the task(s) and take notes. *7 minutes.*]

**Expected Outcomes:**

- Participants click on the "Active Applicants" tab and scroll down to "Main components of the HPP application process".
- Participants will understand all the components of the medical school application process.
  - Time permitting, participants will find information on how the HPP conducts mock interviews during the application process.

[Direct the participant back to the homepage.]

**Task 3:** Now that you know more about the HPP, you've decided that you want to apply. Please find information about the application requirements and deadline.

[Observe the participants as they complete the task and take notes. 7 minutes.]

**Expected Outcomes:**

- Participants click on “Current CMU Students & Alumni” and then click on “Enroll in the HPP”.
  - Participants may also note the contact information on the front of the homepage and reach out to the specified advisors for further instruction.
- Participants understand they have to fill out and submit a Google Form to apply to the HPP.

[Direct the participant back to the homepage.]

**Task 4:** You want to connect with past students of the HPP to learn about their experiences and the program’s impact. Please find the link to the CMU alumni network group for HPP students.

[Observe the participant as they complete the task and take notes. 7 minutes.]

**Expected Outcomes:**

- Participants click on the “MSAMP” tab.
- Participants learn how the MSAMP works and obtain a list of names of MSAMP mentors.

## Post-Test Questions

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*After completing the scenario, all participants will be asked these questions. They will then have ten minutes to discuss them with the interviewer. Interviewers can also ask questions based on their observations.*

- Do you feel like this website helps you better understand the HPP program and how it help students prepare for medical school?
  - What is working well and what needs improvements?

- Would you be comfortable explaining the program to a friend based on the information you were able to find?
- Were you able to adapt to the website's layout as you went through the tasks?
  - Was it easy or difficult to orient yourself?
- Do you regularly use any other university department websites? If so, how does their usability compare to the HPP website?
- Do you have any suggestions for how this website can be improved?