

# English UX/Usability Design

Dr. Katlynn Davis

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Amy Banken, Lexi Basil, Maddie Schutte, Jacie Stanoch

# Tommie Tech Services Usability Report

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## Executive Summary

Our Usability/UX Design course at St. Thomas partnered with the university's Tommie Tech Services (TTS) team to conduct usability testing on their website. TTS has made a lot of changes to their website over the last few years, and they want to know if the changes have made a positive impact on how the students of St. Thomas are getting tech help.

We tested three students of different grade levels in our study, using a recording method to adequately collect data from the sessions. Due to the time constraints of a semester-long project, like many other usability practices, one of our weaknesses includes the amount of people we were able to test (Wright, 2020) Our tests involved a pretest, a guided scenario test involving printing and wifi connection, and a post test. The data we collected is where they went first on the TTS website, how long it took the participant to do their tasks, and how they felt during the process. Because our group only tested 3 participants, we will weigh the value of qualitative and quantitative data together closely to come up with the best conclusions and recommendations that we can.

Our study found that the participants reported the task difficulty a 2 out of 5 on the likert scale, which suggests that the test did not add any level of difficulty to navigating the website. We can also conclude that what could make the Tommie Tech Services webpage a poor experience does not have to do with the hardness of the tasks, but rather the layout and way in which the information is presented. During the tests, we found that all of our participants had never used the TTS website before, meaning that 100% of individuals learned about the ticket-making process through the scenario test.

At the end of the scenario testing section, we gave our participants each a piece of paper and asked them to draw out their ideal Tommie Tech Services webpage. As a result, we found that every individual suggested having a more prominent search bar and more accessible service buttons. It was found in the post test that these individuals would probably not use the website again due to its poor layout and design, and the confusion that comes with using it.

Overall, our participants indicated that Tommie Tech Services website is not difficult to use, but the layout and way that information is offered is not efficient. There is also no obvious way of finding the website, leading us to infer that students who don't know it exists beforehand would

never try to use it. Based on final feedback, we concluded that students would look for a different way to get tech help due to the frustration of navigating the information presented to them.

## Introduction

User experience design aims to create a design process that allows us to consider all nuances that come with a product, its design, its users, and their lived experiences. A well-designed and very “usable” product would address all potential biases in the design of a product and the experience of the user with that product. Overall, usability design and design justice are searching for ways to make designs and products work for as many people as possible, and combat the idea of a universal user (Costanza-Shock, 2020). The truth is, we all have different backgrounds, identities, and limitations that affect how well we can interact with a design, but that doesn’t make inclusive design impossible – that makes it even more necessary.

In order to gain experience in usability testing, user-experience design, and human-centered design (Norman, 1988) , our Usability/UX Design course at St. Thomas partnered with the University's Tommie Tech Services team to conduct usability testing on their website. Within the last couple of years, Tommie Tech Services created and updated their website with the goal of being an information and help hub for students, staff, and faculty. Chris McDaniels and Charles Schuman from ITS, who were responsible for much of the design on the website, spoke with our class about their intentions with the design, their successes with the design, but also the shortcomings of the website as well. Through our conversations with them, we were able to better understand the goals of the Tommie Tech website, and how we can help them to improve.

Story-telling is essential in the research and testing for UX design, as well as the outcome of planned UX/Human-Centered Design based processes (Quesenbery & Brooks, 2010). The stories of both our own, and our users’ experience with Tommie Tech services help us to gather a full picture of how we can make proper recommendations for Tommie Tech. The Tommie Tech services website presented us with a plethora of problems that would prevent students from accessing the tech help they need. In a post-COVID world, technology accessibility in education is one of the most important factors in students’ success. The Tommie Tech website is difficult to navigate, and their ticketing and help process presents several problems to students. Not only could information be difficult to find on the website based on our initial research, but the ticketing process can be confusing and insensitive to timely manners.

The information on the Tommie Tech services website can also be overwhelming, and not always specific enough to direct students, staff, and faculty in the right direction. Many pages, such as the “Find Answers” page, list tech help that are too complicated for average users to understand, and many hyperlinks within the pages will send you in a loop back to the previous page you started on. These issues listed are just a few introductory problems initially found with the Tommie Tech services website, but through testing, we were able to find both more issues, and also some successes with the website.

As a class, we discussed and decided on three central research questions to pair with our individual testing, in order to establish a common goal with our procedures. Each group in our class tested different people in different ways, but focused on these important questions.

### How do UST students find tech help?

1. **Do UST students find the Tommie Tech Services site satisfying or enjoyable to use?**
2. **Can UST students find what they need on Tommie Tech Services to get help?**
3. **Does design of the TTS website impede how students are able to:**
  - a. **Submit a ticket?**
  - b. **Use self-serve help options (the knowledge base)?**

## Methods

Throughout our testing of the Tommie Tech Services website, we made a few decisions in order to successfully evaluate the users experience of using the website. Some of these decisions included taking notes as each participant scrolled through the website, as well as recording the computer screen so we could go back and further analyze what moves each participant made.

### Testing

We began by finding three students from the University of St. Thomas to participate in the testing of the Tommie Tech Services website, using task-based scenarios. Task-based scenarios are efficient for research that is focused on the user’s goals (Barnum, 2018), which is the case here, where we are searching to find ways to improve the Tommie Tech website, for our participants. Below are the scenarios and tasks we used for our testing:

**Scenario #1: Printing**

- Navigate to the Tommie Tech Services website from One St. Thomas
- Have participant describe the path they would take to find printing help on their own
- Search for information on color printing on ITS website

**Scenario #2: Connecting to WiFi**

- Search for information on Tommie Tech website for WiFi connection help on campus
- Submit a ticket on Tommie Tech website for WiFi help
- Check the status of submitted tickets

Check the status of submitted tickets For the sake of time, we reached out to friends that are students at UST. We recruited one senior, one junior, and one sophomore to participate in our testing. With our first participant we were all together as a group for testing, allowing one person, Maddie, to be the moderator and the other three people, Amy, Jacie, and Lexi, to watch the participant and take notes. We also recorded the participants' screen so we could go back at a later time to follow the steps they took in each scenario. For the final two participants we thought it would be most efficient to run the tests individually. In order to assist in data collection and to make sure we were tracking everything we should, the participants screen was recorded like before.

To begin the test, each participant was thanked for taking the time to volunteer for our study and was ensured they could end the testing at any time. The moderator then instructed the participant to take a pretest in which we asked a few general tech questions, such as "how adept are you at using technology" and "does the school provide tech help to students." After this, the moderator began reading the scenarios and each task associated with that. As the testing was taking place the moderator would ask the participant questions about their thought process as they were navigating the website and encouraged the participant to think aloud as they were working. At the end of testing the participant then took a post test to see if their thoughts had changed about tech help at St. Thomas. Along with the post test, participants were presented with a blank piece of paper and were instructed to redesign the website in a way they thought would provide maximum efficiency.

## Test Plans

We chose the specific scenarios mentioned above because we felt as though many students at UST reach out for tech help when it comes to printing or wifi issues. We thought these scenarios and tasks would help us answer our research questions because of how relevant they are to the students. Since more students look for printing or wifi help than any other tech help, we thought there would be the most information on these situations allowing for the participants to really be able to express their experience. Each participant was given the detailed scenario describing their hypothetical situation, then followed along and completed each task for each scenario. Participants were allowed to ask questions, converse with moderators, and speak out loud during their process to understand their thinking.

Three things we tested for included how participants submit and check the status of a ticket for either wifi or printing help, how they find certain information in different sections, and how they redesigned the Tommie Tech Website in a way that would be more useful for users. One of the main things we hope these scenarios would help us understand is where the participants went first on the website and whether that was straight to the search bar or to the area specific icons. This showed us what each participant thought would be the most helpful. From this we were able to come to a conclusion about our first research question. Although each participant could find the information they were looking for, it took longer than necessary as they had to click through several articles before finding the most relevant information.

## Data Collection

We also made the decision to time each participant in their tasks on the Tommie Tech website in order to decipher how long certain tasks took in comparison to others, or to notice if there were any discrepancies between tasks and how long they take. Participants were aware of the running time, but not given a window of time to complete the task. Because we also recorded the screens of the last two participants, we were able to go back and specifically find how long participants spent on different parts of the website. The data we collected from each participant included:

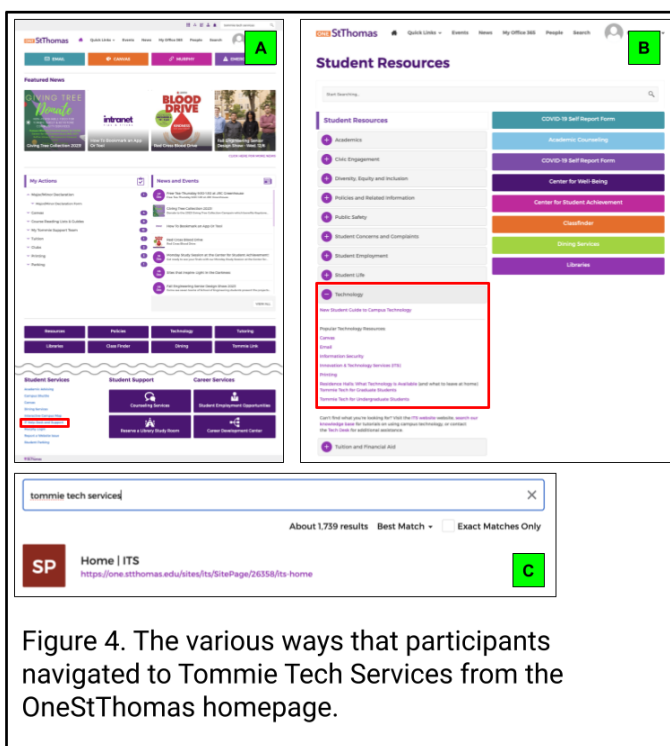
- Notes taken by the observers to record the participant as they talked out loud
- The screen recording of the website
- A time stamp of how long it took each participant to do each task

Qualitative data was also incredibly important during this process, which is why we concluded each testing session with exit interview questions to understand how they felt in the process. These exit interview questions helped us to understand any thoughts the participants had while testing that they didn't speak out loud or make known to us, and also for us to understand what aspects of the website were easiest and hardest for them to use, more specifically.

## Testing Results

### Testing difficulty

When asked about the difficulty of the tasks presented to them, participants reported the difficulty of the tasks presented as an average of 2 out of 5 on a likert scale (one being extremely easy, five being unable to complete). This suggests that the difficulty of testing did not present a factor of how individuals are experiencing the Tommie Tech Services webpage throughout these tests. Because they deemed the tasks to be relatively easy, we can conclude that when participants revealed their dislike for the webpage or confusion they experienced during testing, a poor experience does not have to do with confusion or hardness of tasks, but to do with layout and the way in which information is presented.



### Previous and new knowledge

The majority of individuals self-reported an intermediate level of technological proficiency. This implies that individuals are not impeded by their lack of previous technological knowledge when using the Tommie Tech Services webpage. Additionally this means

During the pre-testing, all individuals reported that they had never used Tommie Tech Services before. A lack of experience in navigating this webpage means that participants were not relying on their previous experience and knowledge in



completing the tasks, and that this was a novel occurrence for each individual resulting in no confounding variables in regards to previous experience. Additionally, this means that their responses to the webpage were first-impressions. This point is important because we were able to learn how they felt about the site without the impact of prior experience.. When asked what the participants learned about during this experience, everyone noted that they had learned about at least one of the following: Tommie Tech Services, the Tech Desk, ticket creation, and knowledge base articles. The indicated lack of knowledge on acquiring help from ITS through ticket-making is explained by our test results, which showed that **100% of individuals learned about the ticket-making process through this exercise. In the student population, there is a lack of knowledge surrounding what tickets are and how to create them.**

## Navigation

At a starting point of OneStThomas, participants showed no 'standard' way of navigating to an ITS landing page, using a variety of pathways to land on the home Tommie Tech Services webpage. These included using the search bar, utilizing the 'My Tommie Support Team' service menu as well as the link to ITS in the footer of the webpage.

## Redrawing the Tommie Tech Services Webpage

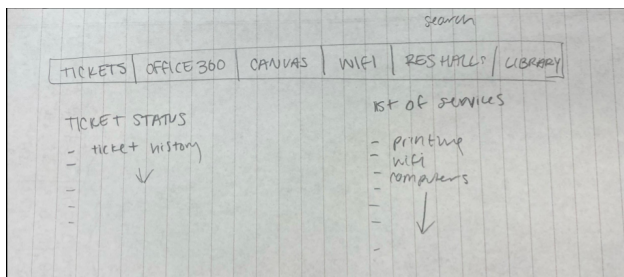


Figure 1. Participant #1's drawing of the Tommie Tech Services webpage. Note that the search bar as well as the quick links to popular topics is at the top and prominent for users.

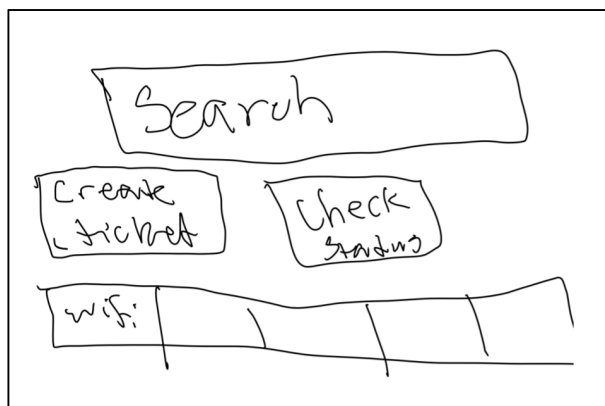


Figure 2. Participant #2's drawing of the Tommie Tech Services webpage. This redesign features the search bar as its key element, as well as ticket creation and quick links to popular topics.

On every redraw of the Tommie Tech Services webpage, each individual suggested having a more prominent search bar as well as more accessible service buttons. The rationale for this change was because participants viewed these aspects of the home page to be the most important and were previously less prominently featured. Additionally, this provides insight to the user's thought process of preferring to use the search feature to find information.

Participant 1 put emphasis on the featured links and search list. They expressed that these changes would aid users in accessing helpful features.

In participant 2's drawing, the most obvious element on the page is the search bar. They also had included a clear way to create and check tickets. They deemed these features to be important because of how much they would use them.

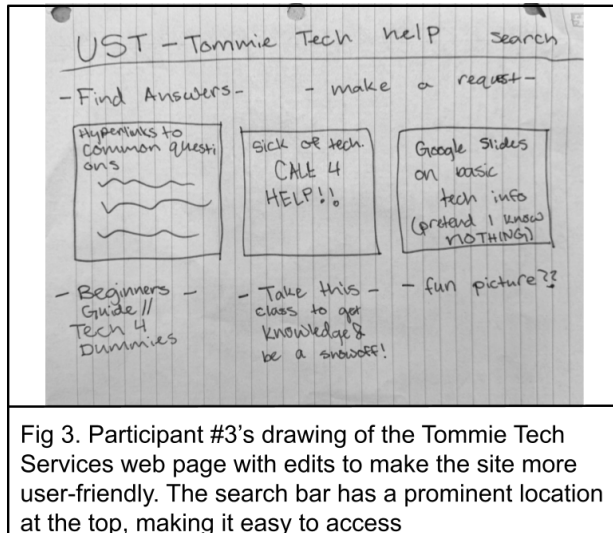


Fig 3. Participant #3's drawing of the Tommie Tech Services web page with edits to make the site more user-friendly. The search bar has a prominent location at the top, making it easy to access

Participant 3's drawing emphasized the search bar and a help request button. They expressed that these features need to be prominent in order for them to get used.

The likelihood of individuals either using the site in the future or recommending it to other students was, on average, a 2 out of 5 on a likert scale, one being that they would absolutely not use it in the future, and 5 being that they would definitely use it in the future.

When asked why they would rate it that, the

results varied. Participants noted that they would not use the webpage because of layout and confusion understanding how the information on the webpage was presented. These two major concerns indicate that there are a number of design issues that are necessary to solve to improve the experience of the webpage as opposed to the functionality of the webpage.

### Impeded by design

Results support the hypothesis that individuals who use the Tommie Tech Services webpage are impeded by the design and layout resulting in a poor experience for users based on feedback provided by participants and observations made by researchers.

### Navigation efficacy

Overall, students indicated an apathy towards the Tommie Tech Services webpage not because of the difficulty of use, but because of confusion with layouts or information offered. A lack of standardization surrounding the navigation to the Tommie Tech Services webpage could indicate a few points. One of which being that there is no best, most obvious way to find the webpage, or two, that there are a plethora of paths that one could take in an effort to make it as easy as possible to find the webpage. More testing on this specific topic would be useful in discerning the efficacy of navigation to the webpage.

Regardless of year in school, individuals tended to report similar experiences, indicating that difficulties related to Tommie Tech Services are not related to experience with the St. Thomas Intranet, but are inherent flaws of the webpage.

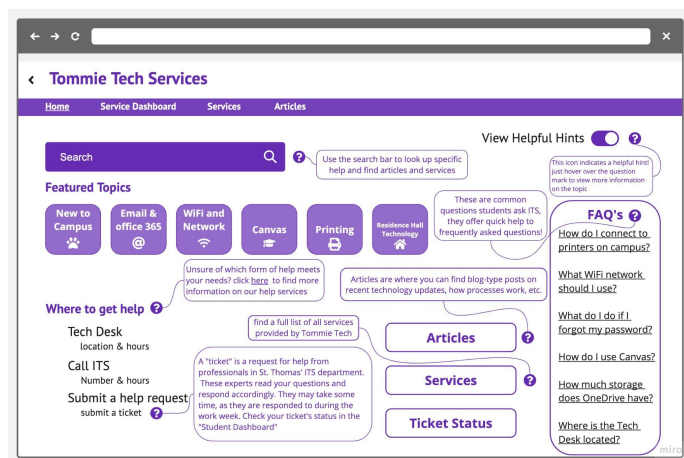
## Preference against Tommie Tech Services

Based on feedback of tested individuals, the Tommie Tech Services webpage was not a preferred way to find help for technology due to the content provided not being obvious help and the frustration of navigating through the content provided. Users would have liked a more prominent search bar as well as clear links to most-visited topics. More testing regarding why individuals would prefer to use another way to find tech help would be helpful in ascertaining the reasons why Tommie Tech Services is not students first-choice for getting help.

## Wireframes

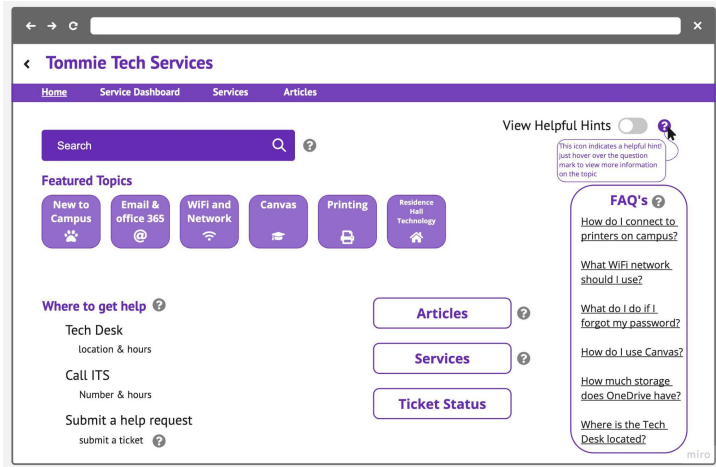
Wireframes are a vital part of the implementation of results found during usability testing, they are a rendering of design and content solutions used to visualize what is possible for solving a problem (The Interaction Design Foundation). Three wireframes were created using Miro, each re-designing a section of the Tommie Tech Services web page and implementing concepts that would aid users in better utilizing the site and providing an enhanced experience for users.

## Tommie Tech Services Home Page



This redesign of the home page features elements that were featured in our participant's drawings like the larger search bar, increased visibility of the featured topics, and a quick access button to create a ticket. In addition to this, we have suggested the implementation of a help view that provides further explanation of potentially confusing aspects of

Tommie Tech Services in order to account for users who may not be familiar with the verbiage or processes to get the help that they need. Turning on the 'helpful hints' button causes all of the hints on the page to show up. If this view is off, hovering over the question marks will provide

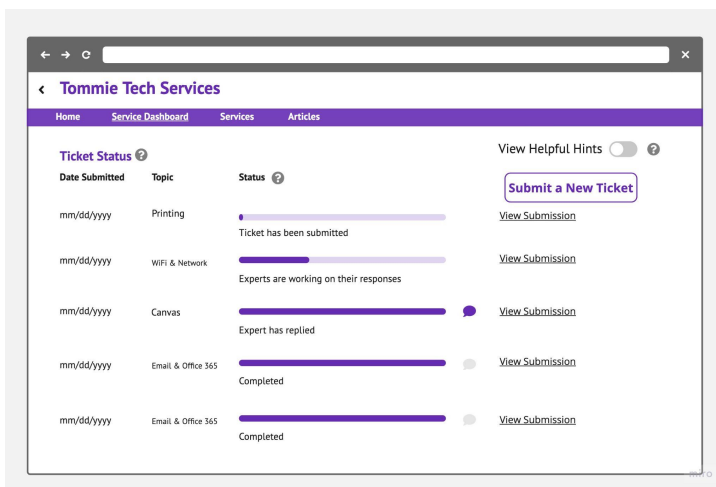


users with the hint related to that specific aspect of the webpage. This feature continues throughout the entire website, providing users with relevant explanations as they naturally occur during use.

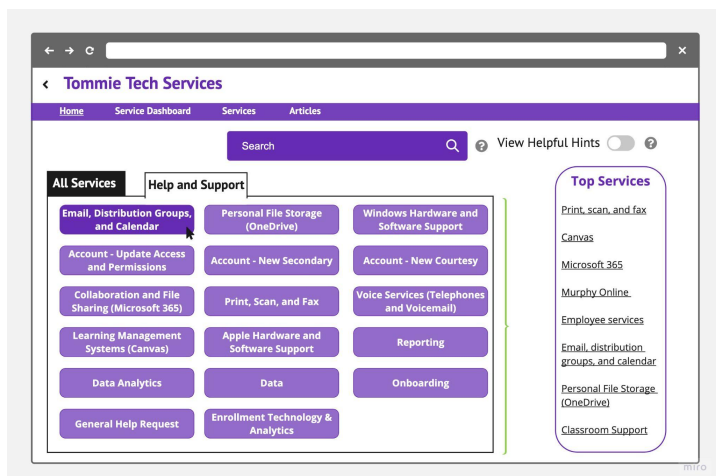
### Ticket Dashboard

At present, when a user wishes to check their ticket status, they must sort their tickets using filters in order to view them, in this design, tickets are sorted for the user by most recently submitted. Additionally, there will be a

secondary identifier of the topic the user submitted the ticket for. The status of the ticket will be visualized using a progress bar. This is a way for users to be able to understand what point in the process they are currently in. After experts send back comments, there will be a conversation bubble that shows up, allowing the user to view the feedback they received.



### Service Menu



We split the service menu into two sections, one of which has help and support services, the other has all other services Tommie Tech provides (i.e. event support). The current system has all help and support subsections amongst all services. We observed a number of participants that spent an increased amount of

time clicking through various services before they could find the help and support section. The separation of the help and support services streamlines the process and allows users to quickly glance at topics.

## Recommendations

### First Year Experience Class

We recommend creating a section for the UST freshman FYEX class that gives students a thorough guide to how Tommie Tech Services works. This section of the class would start off by telling the students what TTS is and the services that they offer. It would then go through how to locate the website, how to find the information they need, and how to contact TTS via ticket submission if they need further help. This will help solve the issue of many students not knowing that Tommie Tech Services exists by giving students a good foundation of knowledge on how to get tech service help at St. Thomas.

### Test how students get to the Tommie Tech Services webpage

Having more testing done on a widespread level would give Tommie Tech Services a better idea of how students are navigating to the website. We found during our testing that there was no specific or clear way to reach the TTS website, which made the process very confusing at first for our participants. We found that the majority of them ended up searching for it on OneStThomas, but it could be much more beneficial for students if there is a clearer method of getting to the website. This further testing could consist of focus groups and group testing to better understand how the students are initially looking for the website, in order to give TTS an idea of where to put an obvious Tommie Tech Services link.

### Help View

Seen in our wireframes, a help view could be very beneficial to the general user experience of the Tommie Tech Services website. For anyone who is using the site for the first time or hasn't visited in a while, this option could be very helpful. It shows the user every function of the buttons from the home page, as well as what to do if the user is confused at what option of further help they need. The help view would give users a complete guidance through the website and would assist in a better overall user experience.

## Conclusion

Through testing the Tommie Tech Services webpage's usability for St. Thomas Students, we found that the design of the website does impede participant's experience of the website because of how the website is laid out as well as confusion due to the layout of information. Additionally, we found that students are generally unaware of Tommie Tech services and how to utilize it when they are looking for technology help. Overall, the Tommie Tech Services webpage has high-quality content and a number of resources to improve student's technological literacy, but lacks some of the finesse that students are searching for. In order to remedy some of these challenges, we suggest a Tommie Tech Services section in the freshman FYEX class, a specific "help" option, and more testing on how students initially look for the Tommie Tech Services webpage. These changes would improve awareness for the web page as well as improve user's experience on the site.

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