

MTU IT Service Management Client Portal

Usability Report

Colton Sitts, Maddie Nass, Case Brophy, Megan Cole, Liam Houston
HU4628: Usability Evaluation and User Experience Design

Table of Contents

Executive Summary	Page 2
Introduction	Pages 4-5
Methods	Pages 5-6
Results	Page 6
1. Background Questionnaire	Page 6
2. Scenario 1	Pages 7-8
3. Scenario 2	Pages 8-9
4. Scenario 3	Pages 9-10
5. Scenario 4	Pages 10-11
6. Scenario 5	Pages 11-12
7. Scenario 6	Page 13
8. Debriefing interview	Pages 14-15
Discussion	
1. Scenarios 1–6 usability issues	Page 16
2. Post-task ratings	Page 16
Recommendations	Pages 17-19
Appendix A: Background Questionnaire	Pages 20-21
Appendix B: Quantitative Data from Usability Test	Pages 22-25
Appendix C: Qualitative Data from Debriefing	Page 25
Appendix D: Product Reaction Cards Data	Pages 26-28
Appendix E: Heuristics Evaluation	Pages 29-33

Executive Summary

To: Matt Bryan
From: Team 1
Subject: Executive Summary of Usability Test
Date: 3/4/2023

This executive summary shares an overview of the purpose and research question, methodology, results, and recommendations from our team's usability test on the MTU IT client portal.

Methods

There were four methods used to gather information from the participants in the study. The background questionnaires gathered information on the participant's familiarity with technology and demographics.

During testing, participants were presented with six different scenarios. The scenarios were tasks that a user of the IT Ticket portal may need to complete on a day-to-day basis. The scenarios all contained post-task questions that were intended to gauge the difficulty of each task. When all of the test scenarios were completed the user was given an exit survey. The final method of information gathering is the product reaction cards presented to the user at the very end of the test. The product reaction cards were used to gather the participants' feelings toward the IT ticket portal.

Results

Users completed most of the scenarios, for an average 77% completion rate. Individually, three users completed 4 out of 6 tasks, one user completed 5 out of 6 tasks, and only one user accurately completed all 6 tasks.

Time-on-task ranged between 8 seconds (Scenario 2) and 4 minutes 14 seconds (Scenario 5). Most scenarios were completed in under 60 seconds.

Feedback from participants was generally positive, with users finding many of the tasks to be easy to complete. The most common feedback word that users selected was *simple*, with all other common words only being chosen twice. The only negative term that was chosen multiple times was *jargon-filled*.

Discussion

Keeping with our research question, "How usable is the Michigan Technological University IT Website when users are using the IT Ticket Portal?", we discussed the areas that worked well and the areas that did not work well. We found that our participants, generally, had an easy time using the MTU IT Ticket Portal. There were a few aspects that were challenging and at times the

wording wasn't as clear as we thought it would be. Participant 1 initially had a problem finding the "submit a ticket" button. We believe that with a change in design, this may become more clear to users. Participant 1 also had a difficult time finding a task due to unclear titles and overgeneralization of information. If the language was more specific and tailored to each category in a less general way it may be easier for each user to find the category they are looking for. Participant 2 had the easiest time out of all the participants. They were also the only participant that had used the program before. We believe due to their familiarity with the Portal, they were able to use the website with more accuracy. Participant 3 was unable to figure out the fifth scenario. This scenario had to do with finding a "bug" and reporting it to Michigan Tech. The language on the IT Ticket Portal was not clear for the user and the category they thought this issue would be under was not clear. Again, we believe the categories could use better language and specificity. Participant 4 suggested that if there was more color on each page it may be easier to search through the categories. They also suggested that there should be fewer pages to click through to get to the exact category they were looking for. We suggest that each category be more condensed to make it easier for each user to find the category they are looking for without having to do as many "commitment clicks". Participant 5 had a problem with the sixth scenario. They thought it was easy to find but they were unaware that the category they found was not the correct one. There are many categories that are similar to one another but not next to each other. If the categories are reorganized it may be easier for the user to find the correct category the first time.

Recommendations

1. Make technical language clear by providing definitions for jargon terms in a user-friendly manner.
2. Improve category descriptions by rewriting them in a clear and concise manner that accurately captures the range of services in the next menu.
3. Improve navigation with drop-down menus to reduce the number of actions required to navigate through the menu system.
4. Provide clear instructional material for first-time users in the form of tooltips or a beginner's guide that provides step-by-step instructions for using the site's various features.

Intro

Our usability test was designed to evaluate the Michigan Technological University's TeamDynamix Ticketing System. It was specifically designed to test the user submission of tickets and if they were able to find what they were searching for. The usability test involved the observation of five participants who completed six curated tasks. The purpose of these tasks was to gauge how difficult finding information on the ticketing system is.

Overall, the goals of usability testing include establishing and validating user performance and preference measures by addressing efficiency, ease of use, and user satisfaction. Our usability test focuses specifically on user submission of IT tickets among faculty and students on Michigan Technological University's campus. We chose this focus because Matt Bryan, our IT representative, suggested this area would benefit from usability testing. Matt Bryan mentioned they would like to learn more about the usability of their ticketing system as well as how to increase the use of their service. In response, we are addressing user submission of tickets through the IT Ticket Portal and we hope to learn the following things:

- Why don't clients use this system feature over email?
- What are the challenges clients face with this system feature?
- What features can be added to benefit users most?
- What current features can be improved?
- Do the categories provided make sense to users?

Our specific research question is as follows: What are the obstacles users face when attempting to submit a ticket through the portal for already itemized issues?

Our target participant characteristics were Staff, Faculty, and Students who were currently attending/working at Michigan Technological University. Unfortunately, recruiting our target participants was more difficult than we had anticipated. We ended up with mostly students and a single faculty member.

Methods

Four methods were used to gather information from the study participants. Firstly, background questionnaires were used to collect information on participants' familiarity with technology and demographics. The questionnaire included questions such as the participant's age, gender, and experience using IT ticketing systems. For more detailed information on the background questionnaires, see Appendix A.

Then, participants were presented with six different scenarios that a user of the IT Ticket portal may encounter. The scenarios were designed to simulate tasks that the participants might encounter in their day-to-day use of the system. Following each scenario, participants were asked post-task questions that aimed to gauge the level of difficulty of the task. Once all scenarios had been completed, participants were given an exit survey to gauge their overall reaction to the IT Ticket Portal

Lastly, product reaction cards were presented to participants at the end of the test. These cards were used to gather the participants' feelings toward the IT ticket portal. Participants were asked to rate their overall satisfaction with the system, as well as provide feedback on specific aspects such as ease of use, functionality, and design.

Overall, these methods allowed the collection of a comprehensive set of data on participants' experiences with the IT ticketing system and helped to gain valuable insights into areas where improvements could be made.

Results

Background Questionnaire

Our background questionnaire told us that all of the participants were comfortable with technology. They all use computers several times a day for a variety of activities like communication and school work. Four of the five participants said they felt they could troubleshoot their own computer problems if something ever came up. Participant 5 was the only one who said they weren't comfortable solving their own computer problems. A different four out of five participants also said that they had never used the MTU IT Client Portal before these tests. Participant 2 said they have used the website several times. This means that most of the participants were brand-new users of the website.

Tests

We asked participants to complete specific tasks and rate their experience. We recorded the completion rate, completion time, and specific comments that users had. See Appendix B for details on each task and the user results.

Scenario 1

Participant 1 (P1): P1 started the task on the main catalog page of the IT website. After reading out the scenario, they scrolled up and down the page to find a category relating to the task. P1 then chose to click on *request IT help*, then selected *computer support* and *support and*

repair on the resulting pages. P1 accurately completed the task with a completion time of 1 minute and 57 seconds, rating the task 5.

Participant 2 (P2): P2 started the task from the main catalog page of the IT website. After reading through the available options they clicked on *computer support*. After which they quickly clicked on the *support and repair* option and then clicked on *request service*. P2 accurately completed this task with a completion time of 1 minute. They rated their experience a 5.

Participant 3 (P3): From the service catalog page of the IT client portal, P3 scrolled through the whole page to get a good look at the categories before choosing the *Computer Support* category. They then chose the *Support and Repair* subcategory but failed to choose a ticket after examining the list. They opted for a general request form instead. They finished the scenario in 1 minute 32 seconds and rated it a 4.

Participant 4 (P4): From the service catalog page of the IT client portal, P4 chose the *Computer Support* category quite quickly. But after that they were unsure. They contemplated doing a general request form instead. But they didn't struggle for long before eventually landing on the right ticket option. They successfully completed the scenario fairly quickly in 24 seconds and rated the experience a 4.

Participant 5 (P5): From the service catalog page of the IT client portal, P5 chose the *Computer Support* category pretty quickly. The pictures helped them find the direction of which category they needed to choose. This participant also mentioned that everything was very compartmentalized and could become overloaded for someone who may not know the jargon. P5 completed the scenario in 1 minute 20 seconds and rated the experience 5 out of 5.

Scenario 2

Participant 1 (P1): P1 started from the main catalog page of the IT website. They quickly scrolled down and selected *printing services*. After scanning the resulting page they selected the *order paper* button. P1 accurately completed this task with a completion time of 18 seconds. They rated the experience a 5.

Participant 2 (P2): P2 started from the main catalog page of the IT website. After reviewing the task, they quickly found and clicked on the *printing services* button. After which they selected the *order paper* option on the resulting page. They then selected *order paper*. P2 accurately completed this task with a completion time of 16 seconds. They rated the experience a 5.

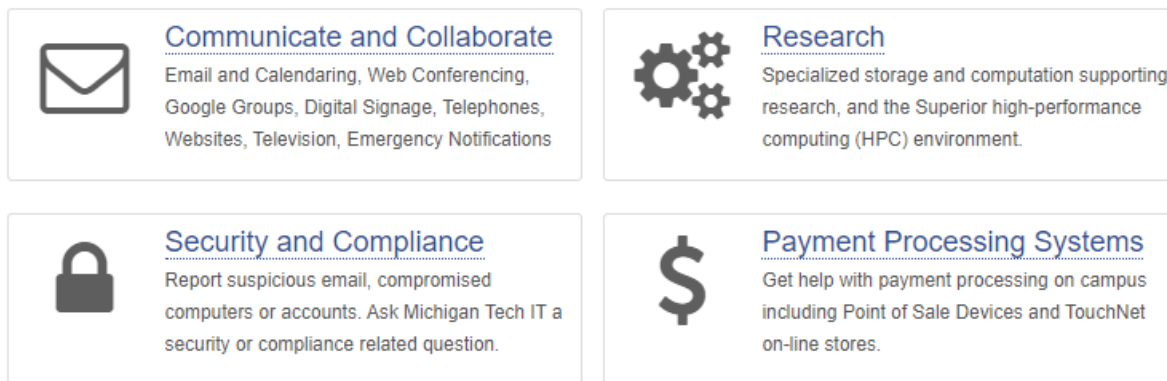
Participant 3 (P3): From the service catalog page of the IT client portal, P3 immediately found the *Printing* category and the correct ticket to complete the task. There was no hesitation or confusion. They finished this task with the fastest time among all participants and all tasks, 8 seconds. They rated the experience a 5.

Participant 4 (P4): From the service catalog page of the IT client portal, found the *Printing* category rather quickly as well after a little bit of scrolling. P3 had the longest time for this scenario, finishing in 42 seconds. Still a good time, there was little to no confusion or hesitation. They rated this as a 4.5.

Participant 5 (P5): From the service catalog page of the IT client portal, P4 found the *Printing* category pretty quickly getting to the final destination of *order paper*. This participant mentioned that this scenario was a bit easier and if one got lost they could easily use the search bar to find it. P5 took 22 seconds to complete this scenario and rated it 5 out of 5.

Scenario 3

Participant 1 (P1): P1 started from the main catalog page of the IT website. They scrolled through the different options in the catalog and clicked on *security and compliance*. P1 then re-read the task to make sure they had found what they were looking for and then selected the *security incident* form in the security catalog. P1 accurately completed this task with a completion time of 26 seconds. They rated the task a 5.



Screenshot of the catalog page of the IT website

Participant 2 (P2): P2 started from the main catalog page of the IT website. P2 immediately selected the *security and compliance option*. Shortly after they selected the *security incident* option. P2 accurately completed this task with a completion time of 16 seconds, rating the task a 5.

Participant 3 (P3): From the service catalog page of the IT client portal, P3 scrolled through the page before deciding to click the *Network* category. After realizing they made the wrong choice they backed out and clicked on the *Security and Compliance* category, where they found the correct ticket. They finished this task successfully in 42 seconds and rated it as a 5.

Participant 4 (P4): From the service catalog page of the IT client portal, P4 quickly chose the *Security and Compliance* category and the correct ticket, *Security Incident*. There was no confusion and they completed the task in 22 seconds, rating it a 5.

Participant 5 (P5): From the service catalog page of the IT client portal, P5 went to the *Security and Compliance* category. After reading the options, they decided that *Security-Related Questions* option was the best for the scenario but quickly realized that it wasn't right. After more deliberation, they chose the correct ticket. When looking through their options they initially thought "that security incident meant something different". They finished the task in 1 minute 50 seconds and rated it as a 4.5.

Scenario 4

Participant 1 (P1): P1 started from the main catalog page of the IT website. After reading through the task they quickly scrolled down and clicked on *servers and storage*. On the resulting page, they immediately selected *request storage device*. P1 accurately completed this task with a completion time of 24 seconds. They rated the task a 5.

Participant 2 (P2): P2 started from the main catalog page of the IT website. After reading through the task, P2 selected the *payment processing system*. P2 commented that they misclicked and returned to the main catalog page. This time P2 clicked on *servers and storage*. On the resulting page, they quickly selected *request storage device*. P2 accurately completed this task with a completion time of 42 seconds. They rated this task a 5.

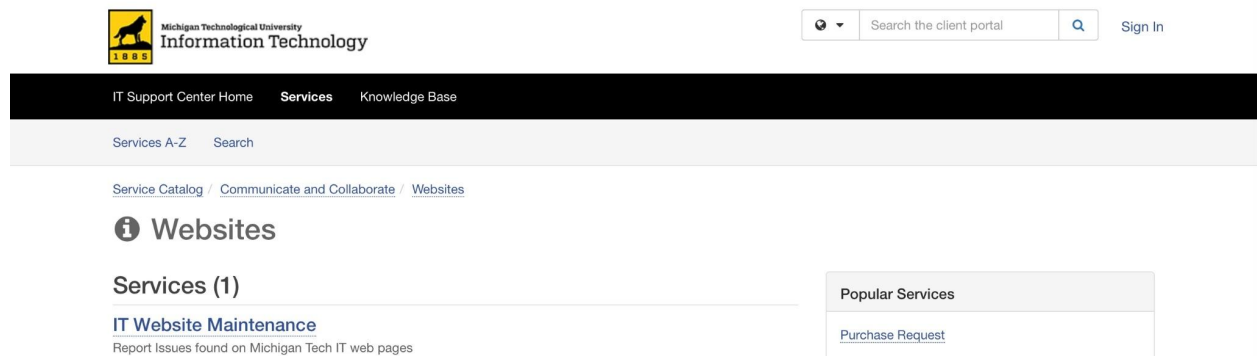
Participant 3 (P3): From the service catalog page of the IT client portal, P3 quickly scrolled through the page and decided to click the *Servers and Storage* category. From here they

navigated to the correct ticket to request a multidrive. They successfully completed the task in 24 seconds. They rated the task a 5.

Participant 4 (P4): From the service catalog page of the IT client portal, P4 took a bit more time looking through the categories and choosing an option. Eventually, they landed on the right one, completing the task in 38 seconds. They did express some confusion, thinking the ticket might have been in the *Research* category. They rated the scenario a 4.

Participant 5 (P5): From the service catalog page of the IT client portal, P5 scrolled through their options and chose the correct category, *Service and Storage*, which led them to Request Storage Device. They completed the scenario quickly in 52 seconds, rating it 5 out of 5.

Scenario 5



Participant 1 (P1): P1 started from the main catalog page of the IT website. P1 scrolled through the catalog page searching for a related section. After some thought they selected *computer support*, and then *software* on the resulting page. Being unsatisfied with where they ended up, P1 returned to the main catalog page. After reading through a few more options, they selected the *request IT support* option at the top right of the page. P1 did not complete this task, with a time of 3 minutes and 37 seconds. They rated this task a 3.

Participant 2 (P2): P2 started from the main catalog page of the IT website. After carefully considering their options, P2 considered selecting *computer support*. After some consideration, they instead selected *communicate and collaborate*. After scanning the resulting page, P2 selected *IT website maintenance*. P2 accurately completed this task with a completion time of 57 seconds. P2 thought that the *IT website maintenance* service was ill-fitting in its current location, they could not think of a better place for it and rated their experience a 2.

Participant 3 (P3): From the service catalog page of the IT client portal, P5 first looked at the *Popular Services* category. They were the first person to look there. After being unable to find the correct ticket, P5 chose to use the search bar, also being the first person to use that feature. After searching with keywords like “report” and “bug,” they didn’t find the right ticket. They opted for a general request, finishing the task at 2 minutes 46 seconds. They rated the experience a 1.

Participant 4 (P4): From the service catalog page of the IT client portal, P4 scrolled through the page and decided to look at the *Enterprise Application Services and Support* category. But after looking around, they decided that none of the tickets fit and decided to end the scenario, stating that they would just email someone about the problem. They failed the task, finishing in 38 seconds. They rated the task a 1.

Participant 5 (P5): From the service catalog page of the IT client portal, P5 took their time and scrolled through their options within the service catalog. They were unable to find the correct category (*Request IT Report*) and decided to end the scenario. They failed the task, finishing in 39 seconds, and rated this scenario 5 out of 5.

Scenario 6

Participant 1 (P1): P1 started from the main catalog page of the IT website. P1 quickly clicked on *computer support* and then *support and repair*. On the resulting page, they read through the available options, from which they chose *request computer rebuild*. When informed that the destination they had gotten to was not the correct one, P1 returned to the main catalog page but did not choose a new category as they did not think there were any that were applicable to the task's goal. P1 did not complete this task, with a time of 26 seconds. They rated this task a 3 out of 5.

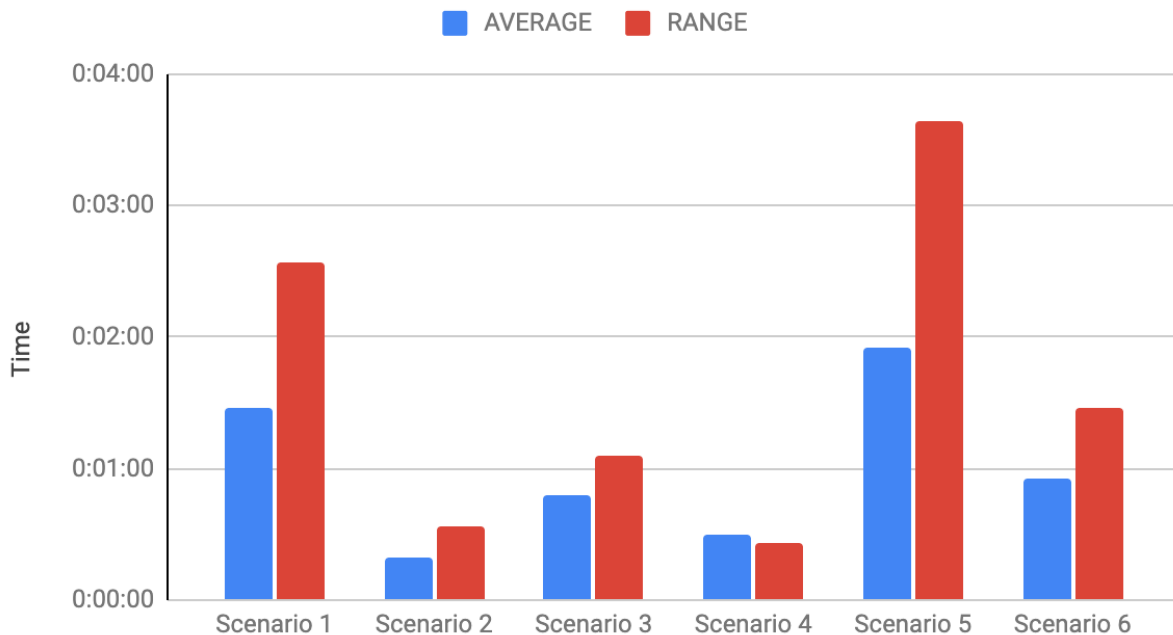
Participant 2 (P2): P2 started from the main catalog page of the IT website. P2 quickly clicked on *procurement and asset management* and *computer accessories purchase* on the next page. P2 then selected the *request service* button. P2 accurately completed this task with a completion time of 37 seconds and rated their experience a 3 out of 5.

Participant 3 (P3): From the service catalog page of the IT client portal, headed straight for the *Procurement and Asset Management* category and quickly found the correct ticket option from there. They finished this task in about 22 seconds. They rated the scenario a 5.

Participant 4 (P4): From the service catalog page of the IT client portal, P4 initially went to the *Computer Rebuild* option. But after realizing it wasn't what they wanted, they found the right category after. They finished in 56 seconds and rated it a 4.

Participant 5 (P5): From the service catalog page of the IT client portal, P5 was able to find the correct category, *Support and Repairs*, which led them to the final answer, *Computer Rebuild*. The participant mentioned that the wording could be better so it would be easier for people who may not know or understand the jargon to find the correct category. This participant finished in 1 minute 38 seconds and rated it a 3 out of 5.

Average and Range of Time on Task



Debriefing Interview

After each session, we asked the participants a few questions about their overall experience. The following are the questions that were asked:

- What was your first impression of the site?
- Did this impression change over the course of testing the site?

- What was the best part of the experience using the site? What was the most frustrating part of the site experience?
- Is there anything you would change with regard to receiving help from IT?
- Is there anything you would change about the ticket submission process?

To summarize participant responses, most participants said that while the website was fairly straightforward, the labels and descriptions were confusing at times. Most people liked the layout of the categories. They said they were fairly simple to understand. But again, sort of contradictory to these statements, they also said that the wording could have been better, possibly more beginner friendly.

A few mentioned the possibility of adding some instructive material to help the user navigate the service catalog. Participants were sometimes overwhelmed by the number of options available and didn't even think to use the popular services category or the search bar to help themselves out. Some users also expressed how deep some of the categories go with subcategories, making it more confusing to find a ticket and encouraging them to take the easy way out and just use a general request form instead of digging for the right ticket option. Overall the website worked fairly well, with most users finishing tasks in less than 60 seconds and giving decent ratings and compliments.

Another part of the post-test survey was a sheet of reaction words. Participants were asked to circle the five words that they thought best described their experience with the website overall. Each of these words was assigned a value, either positive or negative. From the answers participants gave, a rudimentary sentiment analysis was conducted. While sentiment analysis normally requires a much larger sample size, for our purposes it serves to summarize the overall user experience and pinpoint what aspect of the website users found the most frustrating, which gives us additional context to other results.

Once all our data had been collected, the sentiment analysis results were put in a table where their positivity value was assigned. The frequency of each word being chosen was also recorded in this table (see appendix D.2). From this table a word plot visual was created to summarize user sentiment (see appendix D.3). The results of this section of our testing showed that, despite experiencing some frustrations with specific tasks, participant's experience with the IT client portal was overall more positive than negative.

Discussion

Scenarios 1-6: Usability Issues

During our usability testing, we had a few recurring issues that seemed to give our users some trouble. Specifically with scenario 5 and scenario 6. Scenario 5 seemed to cause confusion with the word "bug". All 5 of our participants either gave up or didn't seem to understand exactly what they were looking for. In scenario 6, while most participants understood what they were attempting to look for, they had difficulty finding the correct category. Some participants choose a completely different option than the one we were intending them to find. The participants believed that they had chosen the correct category to fix their problem when they had not.

Both of these issues seem to bring the concern of language, organization, and efficiency regarding the TeamDynamix Ticketing System.

Post Task Ratings

During our usability testing, we asked each participant to rate their experience and ease of each task. In general scenarios, 1-4 seemed relatively easy or effective for each participant. Most of our participants rated these scenarios at a 5 on a 1-5 scale. While scenarios 4 and 5 caused more of an issue. In these scenarios, our participants gave 3 or lower.

This gave us better insight into the specific problems of the TeamDynamic Ticketing System and what categories caused the most difficulties for users.

Recommendations

Recommendation 1: Make Technical Language Clear

During usability testing, a common issue that arose was users' lack of understanding of technical terms used in the service descriptions. Specifically, certain jargon terms such as "rebuild" caused confusion among users. Some participants thought it referred to a hardware rebuild, while others were unsure what a software rebuild entailed.

To address this issue, it is recommended that definitions for jargon be provided in a user-friendly manner. One approach could be implementing pop-ups that appear when a technical word is hovered over, providing a brief definition or explanation of the term. Another option is to highlight technical words in a specific way that prompts users to click on them to view a definition or explanation. Additionally, including a technical glossary or dictionary that users can access easily could be helpful.

By providing definitions for technical terms, users will be able to understand the service descriptions better and use the system more effectively. This will ultimately lead to a better user experience and increase the system's overall usability.

Recommendation 2: Improve Category Descriptions

During testing, users found the category descriptions helpful in finding the information they needed. However, when the descriptions were unclear or incomplete, users had difficulty finding the right service. The category descriptions are the main way for users to understand what a service category will contain. Not including an area of responsibility or an unclear description can result in users skipping over the category, which leads to missed tasks or longer search times.

To address this issue, it is recommended that the categories be re-examined, and the descriptions be rewritten in a clear and concise manner that accurately captures the range of services in the next menu. Ideally, the descriptions should be presented as a bulleted list that can expand upon hovering to avoid increasing the size of each category's box. By improving the category descriptions, users will be able to more easily find the services they need, reducing search times and missed tasks.

Recommendation 3: Improve Navigation with Drop-Down Menus

During testing, users frequently found the menu depth to be too much, leading to frustration as they navigated through multiple levels of categories to find what they needed. To address this issue, it is recommended that the high-level menus be changed to drop-downs that show the subcategories without requiring users to navigate into the sub-menu.

By using drop-down menus, users can explore what is within a category and quickly move on to the next one if it does not contain what they are looking for. This would reduce the number of actions required to navigate through the menu system, ultimately leading to a better user experience.

Recommendation 4: Provide Clear Instructional Material

During usability testing, several users expressed frustration at the lack of clear instructions on how to use the website and access its features. Many users were unaware of basic functionality, such as the search bar, and struggled to navigate the site effectively.

To address this issue, it is recommended that clear instructional material be provided for first-time users. This material could take the form of tooltips or a beginner's guide that provides step-by-step instructions for using the site's various features. By improving users' understanding of the site's functionality, this instructional material can enhance the overall user experience and encourage more ticket submissions through the portal.

Appendix A: Background Questionnaire

A	B	C	D	E	F
Background Questionnaire Worksheet	Adapt this sheet to document your team's background profile, questions, ratings, and feedback.				
Questions	P1	P2	P3	P4	P5
What is your age?	21-29	40-29	21-29	21-29	18-20
How do you most often use a computer?	Work, Word processing, Personal Email, Entertainment and games, Music, Photo/video, Internet	Work, Word processing, Personal Email, Entertainment and games, Music, Photo/video, Internet	Work, Word processing, Personal Email, Photo/video, Internet	Work, Word processing, Personal Email, Entertainment and games, Photo/video, Internet	Work, Word processing, Personal Email, Entertainment and games, Music, Photo/video, Internet
How often, on average, do you use a computer?	Several Times a day	Several Times a day	Several Times a day	Several Times a day	Several Times a day
Which of the following statements best describes your relationship with technology?	I like technology, and I can mostly troubleshoot any problems that occur on my own.	I like technology, and I can mostly troubleshoot any problems that occur on my own.	I feel comfortable with technology, and I feel I now know the basics.	I like technology, and I can mostly troubleshoot any problems that occur on my own.	I feel comfortable with technology, and I feel I now know the basics.
Have you used the IT Client Portal before?	No use	Some Use	No use	No Use	No use

The Background questionnaire exists as a google form accessible from the link below.

[Background questionnaire](#)

- Age*
- ☐ 18 - 20
- ☐ 21 - 29
- ☐ 30 - 39
- ☐ 40 - 49
- ☐ 50 - 59
- ☐ 60+
- How do you most often use a computer?

(please check all that apply)

- ☐ I don't use a computer
- ☐ Work
- ☐ Word processing
- ☐ Personal Email
- ☐ Entertainment and games
- ☐ Music
- ☐ Photo/video
- ☐ Internet
- ☐ Other:

If you chose other, please specify

How often on average do you use a computer?

- ☐ Once a month
- ☐ Several times a month
- ☐ Once a week
- ☐ Several times a week
- ☐ Daily
- ☐ Several times a day

Which of the following statements best describes your relationship with technology?

- ☐ I avoid using technology wherever possible, and I rely on other people to help me.
- ☐ I use technology, and I am still learning how best to incorporate it into my life.
- ☐ I feel comfortable with technology, and I feel I now know the basics.
- ☐ I like technology, and I can mostly troubleshoot any problems that occur on my own.
- ☐ Technology is a real passion of mine, and people come to me for help with technical issues when they get stuck.

Have you used the IT client portal before?

- ☐ I have used it a few times
- ☐ I have used it several times
- ☐ I have never used the client portal

Appendix B: Scenarios / Tasks with Post-Task Questions

Session	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5		Scenario 6	
	Duration	Post-Task Rating	Duration	Post-Task Rating	Duration	Post-Task Rating	Duration	Post-Task Rating	Duration	Post-Task Rating	Duration	Post-Task Rating
Session One	0:02:00	5	0:00:10	5	0:00:26	5	0:00:22	5	0:04:14	3	0:00:52	3
Session Two	0:00:48	5	0:00:16	5	0:01:00	5	0:00:20	5	0:00:48	2	0:00:38	3
Session Three	0:01:32	4	0:00:08	5	0:00:42	5	0:00:24	5	0:02:46	1	0:00:22	5
Session Four	0:00:24	4	0:00:42	4.5	0:00:22	5	0:00:38	4	0:01:10	1	0:00:56	4
Session Five	0:02:34	5	0:00:22	5	0:01:28	4.5	0:00:46	5	0:00:36	5	0:01:50	3
AVERAGE	0:01:28	4.6	0:00:20	4.9	0:00:48	4.9	0:00:30	4.8	0:01:55	2.4	0:00:56	3.6
RANGE (MAX - MIN)	0:02:10	1	0:00:34	0.5	0:01:06	0.5	0:00:26	1	0:03:38	4	0:01:28	2

Scenario 1

The user enters their office in the morning and finds that their computer is no longer turning on. They need to submit a ticket to have IT pick their machine up.

Tasks, Scenario 1

The user's task is to find and fill out the form to get their computer fixed.

1. Start at the MTU IT Portal website homepage at <https://servicedesk.mtu.edu/TDClient/1801/Portal/Home/>
2. Find the *Service Catalog* button underneath “Submit a Ticket”
3. Find the service that best fits this description
4. Hover over the *Request Service* button and say, “I’m done”
5. Return to MTU IT Portal homepage

Post Task Question, Scenario 1

If you were able to find and complete the task, did the category in which this was located make sense? Please rate on a scale of 1 to 5, with 5 being the most sense.

Made No Sense ①—②—③—④—⑤ Made the Most Sense

If you were unable to complete the task, where would you have expected to find the service you were looking for.

Is there any way the process of finding the form could have been made easier?

Scenario 2

In this scenario the user works for a department of MTU and has the responsibility of making sure that the printers are filled. They need to order more paper for their department

Tasks, Scenario 2

1. Start at the MTU IT Portal website homepage at <https://servicedesk.mtu.edu/TDClient/1801/Portal/Home/>
2. Find the *Service Catalog* button underneath “Submit a Ticket”
3. Find the service that best fits this description
4. Hover over the *Request Service* button and say, “I’m done”
5. Return to MTU IT Portal homepage

Post Task Question, Scenario 2

If you were able to find and complete the task, did the category in which this was located make sense? Please rate on a scale of 1 to 5, with 5 being the most sense.

Made No Sense ①—②—③—④—⑤ Made the Most Sense

If you were unable to complete the task, where would you have expected to find the service you were looking for?

Is there any way the process of finding the form could have been made easier?

Scenario 3

You have been alerted that there has been suspicious activity on your device. You want to make sure that your device is safe to use so you request the help of MTU IT Portal

Tasks, Scenario 3

1. Start at the MTU IT Portal website homepage at <https://servicedesk.mtu.edu/TDClient/1801/Portal/Home/>
2. Find the *Service Catalog* button underneath “Submit a Ticket”
3. Find the service that best fits this description
4. Hover over the *Request Service* button and say, “I’m done”
5. Return to MTU IT Portal homepage

Post Task Question, Scenario 3

If you were able to find and complete the task, did the category in which this was located make sense? Please rate on a scale of 1 to 5, with 5 being the most sense.

Made No Sense ①—②—③—④—⑤ Made the Most Sense

If you were unable to complete the task, where would you have expected to find the service you were looking for?

Is there any way the process of finding the form could have been made easier?

Scenario 4

You are a graduate student working on a project and get a notification that your computer is out of storage. You would like to contact MTU IT to acquire a multidrive M to assist with your storage.

Tasks, Scenario 4

1. Start at the MTU IT Portal website homepage at <https://servicedesk.mtu.edu/TDClient/1801/Portal/Home/>
2. Find the *Service Catalog* button underneath “Submit a Ticket”
3. Find the service that best fits this description
4. Hover over the *Request Service* button and say, “I’m done”
5. Return to MTU IT Portal homepage

Post Task Question, Scenario 4

If you were able to find and complete the task, did the category in which this was located make sense? Please rate on a scale of 1 to 5, with 5 being the most sense.

Made No Sense ①—②—③—④—⑤ Made the Most Sense

If you were unable to complete the task, where would you have expected to find the service you were looking for?

Is there any way the process of finding the form could have been made easier?

Scenario 5

You found a bug in Michigan Tech’s website and would like to report it to the school.

Your task is to find and fill out the form to submit a bug or issue.

Tasks

1. Start at the MTU IT Portal website homepage at <https://servicedesk.mtu.edu/TDClient/1801/Portal/Home/>
2. Find the *Service Catalog* button underneath “Submit a Ticket”
3. Find the service that best fits this description
4. Hover over the *Request Service* button and say, “I’m done”
5. Return to MTU IT Portal homepage

Post Task Question 5

If you were able to find and complete the task, did the category in which this was located make sense? Please rate on a scale of 1 to 5, with 5 being the most sense.

Made No Sense ①–②–③–④–⑤ Made the Most Sense

If you were unable to complete the task, where would you have expected to find the service you were looking for.

Is there any way the process of finding the form could have been made easier?

Scenario 6

In this scenario the user is a Faculty member at Michigan Tech and their computer has stopped working. It is an older computer and they would like to purchase a new computer through IT instead of trying to fix it.

Tasks, Scenario 6

1. Start at the MTU IT Portal website homepage at <https://servicedesk.mtu.edu/TDClient/1801/Portal/Home/>
2. Find the *Service Catalog* button underneath “Submit a Ticket”
3. Find the service that best fits this description
4. Hover over the *Request Service* button and say, “I’m done”
5. Return to MTU IT Portal homepage

Post Task Question, Scenario 6

If you were able to find and complete the task, did the category in which this was located make sense? Please rate on a scale of 1 to 5, with 5 being the most sense.

Made No Sense ①–②–③–④–⑤ Made the Most Sense

If you were unable to complete the task, where would you have expected to find the service you were looking for?

Is there any way the process of finding the form could have been made easier?

Appendix C: Debriefing Script

The debriefing script contains the following five questions.

1. What was your first impression of the site?
2. Did this impression change over the course of testing the site?
3. What was the best part of the experience using the site? What was the most frustrating part of the site experience?
4. Is there anything you would change with regard to receiving help from IT?
5. Is there anything you would change about the ticket submission process?

Appendix D: Product Reaction Cards

D.1 Product Reaction Cards for The IT Ticket Portal

Please choose and select five words that best describe the IT Client Portal you visited today, based on your experience using it.

Entertaining	Reliable	Instructive	Slow
Trendy	Easy to Use	Insufficient	Straightforward
Cumbersome	Efficient	Intuitive	Time-Consuming
Simple	Familiar	Jargon-Filled	Simplistic
Complicated	Fast	Stupid	Technical
Confusing	Frustrating	Modern	Trustworthy
Sensory Overload	Hard to Use	Outdated	Unhelpful
Discouraging	Inconsistent	Overwhelming	Useful
Distracting	Informative	Robust	Wordy

D.2 Results of Sentiment analysis of Reaction Cards

Positive	#	Negative	#	Both	#
Informative	1	Slow	1	Simple	3
Reliable	1	Insufficient		Technical	1
Instructive	1	Cumbersome		Entertaining	
Trendy		Time consuming			
Easy (to use)	2	Jargon-filled	2		
Straightforward	2	complicated			
Efficient	2	stupid			
Intuitive		confusing			
Familiar	2	Frustrating			
Simplistic	1	Sensory overload	1		
Fast		Hard to use			
Modern		Outdated	1		
Trustworthy	2	Unhelpful			
Useful	2	Inconsistent			
Robust		Discouraging			
		Overwhelming			
		Distracting			
		Wordy			

Total positive	Total negative	Total either
16	5	4

D.3 Word cloud representing sentiment results



Appendix E: Heuristic Evaluation

Heuristic 1: Visibility of System Status

Why does this heuristic matter?

The system should always keep users informed about what is going on, through appropriate feedback within a reasonable time. The Nielsen-Norman group has a full article about [visibility of system status](#).

Visibility of the system status on the IT ticket portal lets users know what subsection of the service catalog they are in.

Assessment of IT Ticket Portal

The ticket portal has a breadcrumb map [Appendix A, Figure 1] that shows users where they are on the website, this lets users return to categories above the current one. This gives the user a decent amount of information about their location.

Rating: 3

Heuristic 2: Match between System and the Real World

Why does this heuristic matter?

The system should speak the users' language, with words, phrases, and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order. The Nielsen-Norman group has a full article on the [match between system and the real world](#).

Users that are in need of assistance with a technical problem, may not be technologically literate, and should be able to browse the website without much knowledge of IT-specific terminology.

Assessment of IT Ticket Portal

There are many instances on the IT ticket portal where language that the user may not understand appears

The description shown [Appendix A, Figure 2] calls for a “rebuild” which to a nontechnical user may sound like a change in hardware, but in reality, this term means to re-install an operating system on a computer. Things like this make it much more difficult for users to find what they are looking for.

Rating: 1

Heuristic 3: User Control And Freedom

Why does this heuristic matter?

Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

Users may want to be able to browse around without fear of messing up, this is supported by the breadcrumb menu listed [Appendix A, Figure 3].

Assessment of IT Ticket Portal

If a user decides to start submitting a ticket under a certain category, and then believes that they may not have chosen the correct category, they can go back to other menus to continue. This will remove all progress they have made in submitting tickets, and there is no way to get the progress back. This could frustrate users as they would then need to restart the process of submitting a ticket.

Rating: 2

Heuristic 4: Consistency and Standards

Why does this heuristic matter?

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow [platform conventions](#).

Consistency leads to a cohesive user experience on a website, a user should feel as if they are browsing something that has been created with an experience in mind. This keeps the users engaged and minimizes confusion

Assessment of IT Ticket Portal

The IT ticket portal does a good job of using consistent language, even if it may be a bit technical. There are a few instances where one-off language is used, like the service pictured [Appendix A, Figure 4]. A computer is described as a “graduate student productivity machine” which may leave the user confused as to what service they are getting by submitting this request.

Rating: 3

Heuristic 5: Error Prevention

Why does this heuristic matter?

Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action. The Nielsen-Norman Group has a full article on [preventing user errors](#).

Error prevention is important, because a user may not fully understand how to work within a system, and make an incorrect action. If this causes them to lose their progress, there is a much higher chance of frustration and users giving up on submitting their requests.

Assessment of IT Ticket Portal

In the ticket submission process, required fields are indicated by asterisks [Appendix A, Figure 5] The request forms cannot be submitted without all necessary fields. However, there are other areas where error prevention is lacking. If a user is filling out a ticket and leaves the page, there is no warning that the progress will be lost or confirmation that they want to lose their progress. If a user accidentally leaves a page, they have to restart from the beginning.

Rating: 2

Heuristic 6: Recognition Rather than Recall

Why does this heuristic matter?

Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate. The Nielsen-Norman group has a full article on [recognition vs. recall in UX](#).

A system that works in an intuitive and straightforward manner does not need to be memorized, as the required steps to complete an action are self-explanatory. This leads users to have a higher rate of success when completing a task as they do not have to remember all of the steps in order to be successful.

Assessment of IT Ticket Portal

Once a user finds the correct category for their problem there is a “request service” button [Appendix A, Figure 6], that allows them to create a ticket. Users do not have to remember how to do this, as the fields they need to fill out are marked as required, and there is only one way to submit a ticket. The only aspect of memorization that the portal requires, is remembering where services are located within subcategories.

Rating: 3

Heuristic 7: Flexibility and Efficiency of Use

Why does this heuristic matter?

Accelerators — unseen by the novice user — may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

A user that is familiar with the system and uses it often will want to be able to operate within the system more quickly than a novice user will. This is important because, without this option, experienced users may end up frustrated with having to jump through the same hoops every time they need to do something.

Assessment of IT Ticket Portal

The only accelerator that the IT Ticket portal provides is the “My Favorites” [Appendix A, Figure 7] tab where users can save their “favorite” services. This allows users to quickly submit a certain type of ticket if they have it favorited.

Rating: 2

Heuristic 8: Aesthetic and Minimalist Design

Why does this heuristic matter?

Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Minimalist designs are intended to streamline the process of finding the necessary information. Users value this because it saves them time, and frustration if things are laid out well and easy to find.

Assessment of IT Ticket Portal

The screenshot [Appendix A, Figure 8] shows the layout of the homepage for the IT Ticket portal. It is rather cluttered with lots of text descriptions of subcategories, and other tabs that contain relevant, but not pertinent information. The clutter of the website may leave users unsure of where to navigate in order to find desired services.

Rating: 2

Heuristic 9: Help Users Recognize, Diagnose, and Recover from Errors

Why does this heuristic matter?

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

Assessment of IT Ticket Portal

The IT Portal doesn't have the most obvious recognition when it comes to error messages. When the user makes an error there is no indication that they have done so. This means a user may believe that they have successfully completed a task, when in fact they have no.

Effectiveness Rating: 1

Heuristic 10: Help and Documentation

Why does this heuristic matter?

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Users may need help completing tasks. The information to complete any task should be easy to find.

Assessment of IT Ticket Portal

There is no documentation for the IT Ticket portal, the only help provided to users, is through clarification of fields during ticket submission. The clarification is provided with a blue question mark, [Appendix A, Figure 10], which can be clicked to reveal more information about fields.

Rating: 2