

University of Michigan Medical School
Department Websites:
Health and Information Technology Services

Usability Test Report

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0. Executive Summary

Our client is Health Information Technology & Services (HITS) under Michigan Medicine. Our project goal is to create website guidelines for them to distribute across departments at the University of Michigan Medical School (UMMS) so different programs have consistent and user friendly information structure.

For our usability test, we chose the Molecular & Integrative Physiology (MIP) PhD program website as it is one of the more developed and complete websites within UMMS.

To conduct usability testing, we consulted usability test plan example given in-class (2018) to create our own test plan for the MIP website (Appendix 7.1, 7.2). Afterwards, we conducted 4 usability tests, collected data and analyzed each to form our findings and recommendations.

We found 9 key findings:

- 1. Alphabetical Filters lack needed instructions**
- 2. MIP website search needs to be improved**
- 3. User's want to see "research interest" in the list view**
- 4. Page content has issues that need to be addressed**
 - a. Page structure is not ideal for users**
 - b. Some content doesn't align with user expectations**
- 5. Important financial information is difficult to find, and it's more helpful.**
- 6. Pages with no meaningful content are confusing and affect perception**
- 7. Faculty pages need to provide more and up to date information.**
- 8. The relationship between MIP and PIBS isn't clear**

As a result, we are recommending:

- 1. Include instructions for alphabetical filters**
- 2. Improve search functionality to include more relevant results**
- 3. Add a "research interest" category to the directory view**
- 4. a. Examine pages to determine best content structure**
b. Align content with user expectations
- 5. Move the information in the FAQ to its own page/section**
- 6. Modify/Remove pages with little to no meaningful content**
- 7. Add additional content to faculty pages and make sure they are updated**
- 8. Make the relationship between PIBS and MIP clear**

1. Introduction

Our client is Health Information Technology & Services (HITS) under the Michigan Medicine. Their objective is to provide support for public-facing web presences for various departments including clinical and basic science branches within the University of Michigan Medical School (UMMS). This web presence is primarily intended for prospective students, faculty, researchers, collaborators, and patients ("About HITS," n.d., para. 1).

Our client's problem is each department is responsible for their own webpages and have total freedom in information architecture and content. This resulted in structural inconsistencies across department websites. Thus, our project is to contribute towards creating a guideline for what content should be present on their web pages and how they should organize their webpages. For scoping, since program details and career outlooks for basic science and clinical fields are disparate, we could only focus on one for this project's scope, and we chose basic science departments after discussing with our client.

In this study, we performed usability testing on the Molecular & Integrative Physiology (MIP) website. The purpose is to get feedback from actual users who are subject experts of PhD programs in general, but are not necessarily one in regards to navigating MIP department websites. This gives us additional evidence from usage data on top of previous interviews and survey data, and allows us to glimpse into the users' mind when they perform tasks.

2. Methods

2.1 Target Audience

Even though our preferred target audience is prospective students who are not currently enrolled, we had difficulty recruiting such people. With our client's understanding, we turned to current PhD students at the University of Michigan who are not from the MIP program to ensure they have had no previous exposure. We recruited 4 participants (4 Males, age: 23-28). Each participant was tested independently, and they were each given a 10\$ gift card (provided by our client) for their efforts.

2.2 Tech Setup

To ensure an isolated testing environment, we reserved meeting rooms in North Quadrangle for usability testing. The moderator's laptop was used for each session as the test laptop, a mouse was provided if the participant expressed preference for it. For every session, there was at least 1 data logger available on site, also serving as a technician. To stream the screen capture in real time we used BlueJeans. This also enabled us to keep a private recording for data analysis. For testing, we used Google Chrome to ensure a comparable experience across participants. Each participant was also given a task booklet so they can read the task whilst listening to the moderator's explanation.

2.3 Moderating

Moderator began each session with a brief introduction, which touched on:

- 1) Purpose of the study
- 2) No right or wrong answers
- 2) What participants are expected to do during the tasks
- 3) Moderator will remain a silent observer
- 4) Confirming their confidentiality
- 5) Their right to stop the test at any time

Before each task, the moderator would explain the task, ask the participant if they have any questions, then mostly remain silent for the duration of the task unless clarification regarding what the participant said was needed. In the case where participants stopped 'thinking aloud', the moderator would remind the participants to speak their mind. If the participant was visibly stuck, the moderator would give a small hint (without giving away the solution). After each task, the moderator would ask participants to rate the difficulty of the task they just performed, and give additional comments if any.

After all the tasks finished, the moderator would ask post-study questions including participants' general thoughts about the sites, frustrations, and suggestions; their demographic information was also collected.

When a session ends, the moderator would thank the participants for their efforts, give them the gift card, and affirm their confidentiality.

2.4 Data Logging

With screencast and webcam footage streamed from the test computer, the data loggers would take notes on:

- 1) Paths participants took to complete tasks
- 2) Observations on participant behaviors
- 3) Quotes
- 4) Rated Difficulty
- 5) Time it took to complete the task

After all the tasks were finished and the post-study questions was completed, the data loggers were able to ask follow-up questions to participants to ensure notes accuracy.

2.5 Analysis

We first analyzed at the task level, where we pinpointed commonalities across participants in each task, and generated basic findings. Then, we regrouped these basic findings to discover higher level trends, and used these compiled information to make our findings and recommendations.

3. Findings and Recommendations

3.1 Summary Results

Our usability testing revealed the MIP website has some usability issues in terms of (1) search and filter functionality, (2) information presentation, and (3) content.

Both search engine and filters are useful features to help users locate the information they want. However, we found the Alphabetical filters on the MIP website may cause confusion because the filter mechanism is not explained. Additionally, the search function sometimes doesn't yield desired results in terms of both content and layout (Findings 1&2).

We also found the way the website presents information sometimes doesn't support users' needs to quickly locate information (Findings 3, 4A, 5). For example, looking through paragraphs to find specific information is time-consuming and undesirable especially when applicants are researching multiple PhD programs. Additionally, some information is difficult to find within pages and navigation.

Lastly, current content regarding financial support, curriculum, faculty research, and PIBS are not aligned with prospective students' expectations because the information is absent, lacking, or irrelevant (Findings 4B, 6, 7, 8).

3.2 Findings and Recommendations

Finding 1: Alphabetical Filters lack needed instructions

Alphabetical filters on the MIP website caused confusion because it is not clear how the filter is applied to names at first glance (filtered by first name or last name?). One participant chose to use this filtering method, and was surprised by the results when it filtered by last name rather than first name (Figure-1).

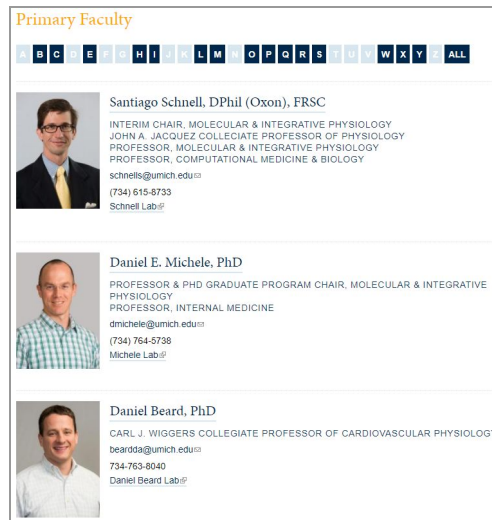


Figure-1: Participant expected the alphabetic filter to sort by first name, but it sorted by last name (url: <https://medicine.umich.edu/dept/molecular-integrative-physiology/faculty/faculty/primary>)

Recommendation 1: Include instructions for alphabetical filters

We suggest all alphabetical filters on the website should include a statement regarding how they filter content. For example, a statement that reads “Filter by first name/ last name,” could help clarify functionality immediately to users and minimize confusion.

Finding 2: MIP website search needs to be improved

We observed several users utilize the search function to accomplish tasks, and noted several instances where search results were either non-existent or unhelpful. These caused some users to try searching multiple times using different terms or abandoning search altogether in favor of the primary navigation.

We heard comments such as, “I would click on these links (google results). I think I can finish that without the help of this page (MIP website).” Another participant added, “I may even just Google [the courses].” These show our users have more confidence using a 3rd party search engine than the built-in search functionality.

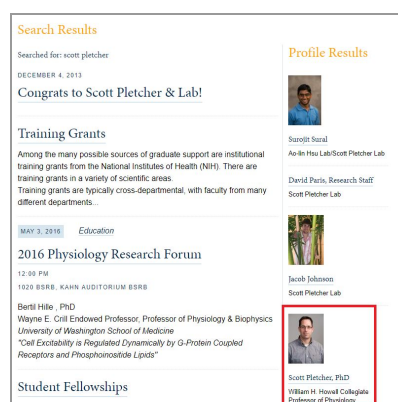


Figure-2: When searching 'Scott Pletcher', the actual Scott Pletcher profile page does not show up first (red).

(url: <https://medicine.umich.edu/dept/molecular-integrative-physiology/search?keys=scott+pletcher&x=0&y=0>)

Recommendation 2: Improve search functionality to include more relevant results

We recommend improvement to the websites' search function. Specifically, relevant results should be at the top for common keywords. Additionally, if technically feasible, the search bar should help users revise their search terms when no results are found. This would make locating information more efficient.

Finding 3: User's want to see "research interest" in the list view

On MIP directories, each faculty member has specific information shown in the list, such as their names, positions, and emails. When participants were asked to locate faculty by research interest, they had frustration performing the task because the information was not listed in the directory and the only way to find it was to either click on each profile, or go to "Research Interest" section which is not located under "Directory"; even then, users still have to use a dropdown to filter for research areas. Two of four participants indicated this was problematic, and explained how it wasted their time and caused frustrations.



Figure-3: No research interest shown in entry

Recommendation 3: Add a "research interest" category to the directory view

We recommend adding "research interest" information in faculty directory entries. This would speed up finding faculty working in a particular research area, and minimize extra clicks.

Finding 4: Page content has issues that need to be addressed

We noticed two page content related issues:

Subfinding 4A: Page structure is not ideal for users

Several pages on MIP website use primarily paragraphs to deliver information to users. We noticed this caused issues for our participants. In particular, they had to read lots of unnecessary information to find what they were looking for. This was seen on: *Training Grants*, *Curriculum*, and *Student Fellowships*.

This Is Your Program!	
Curriculum	
Meet Our Students	
Student Handbook	
Training Grants	<p>▼ Systems and Integrative Biology T32-GM008322</p> <p>Overview:</p> <p>This program is designed to train doctoral students in contemporary Systems & Integrative Biology. For details see: Goals of the Program. Our NIH funded program is now in its 26th year and supports 6 students each year. Malcolm Low is the program director, Santiago Schnell is the Associate Director and Michele Boggs provides student services. The Training Faculty includes 54 individuals from 15 departments who share an interest in SIB. The <u>course requirements</u> are designed to allow students from different backgrounds and PhD programs to participate. Trainees also will participate in a monthly Systems Biology Workshop and an annual Spring Research Symposium.</p> <p>Priority is given to students in their 2nd and 3rd year of graduate study and funding is normally for two years. To be considered for membership in the program students must make a formal application to the Training Grant Operating Committee; applications are considered yearly in the spring. We value and encourage students from underrepresented minority or ethnic groups and those with disabilities to apply to our program. However, funding is limited to U.S. citizens and permanent residents.</p>
Student Awards	
Student Fellowships	
Graduate Education Fund	
Annual Research Forum	
FAQ	
Apply	
Masters Program	
Undergraduate Opportunities	

Figure-4: *Training Grant* is presented in paragraphs which is taxing for participants to parse (e.g. information on how to apply (red) is not salient)

Recommendation 4A: Examine pages to determine best content structure

We recommend evaluating each page to see if styling the content as a list or table is more appropriate. This would help reduce needed time to locate information, and relieve users from unnecessary information.

Subfinding 4B: Some content doesn't align with user expectations

Unlike 4A which focused on page layouts, we noticed there were several comments about the actual content on certain pages such as *Curriculum* and *Apply*. For instance, *Curriculum* contains loose description about what students will learn from the program, but does not contain information about required or elective courses. For *Apply*, the users do not expected the information to be on the page instead of a short statement and a link (Figure-5). From our tests, this problem happened for the following pages:

- Curriculum
- Apply
- Student Fellowships
- Student Awards
- Graduate Education Fund

Recommendation 4B: Align content with user expectations

We recommend evaluating the listed pages above and modify them to contain content users would expect. For example, *Curriculum* should contain lists of classes; and *Student Fellowships* should contain information about what fellowships students are eligible for. These changes would help users locate information quickly and easily. As an aside, we found the Master's MIP Program does a good job for their *Apply* page (Figure-6).

Curriculum

Overview

The MIP PhD Program is very flexible and each student's experience is individually tailored. The first two semesters of the program are designed to provide students with a broad background in the basics of biomedical research and physiology, including exposure to molecular, cellular and integrative approaches, research ethics and practice at oral communication.



Physiology PhD students are required to take courses in Cell Signaling, Cell Physiology and Systems and Integrative Physiology, beyond that we invite you to select courses from a wide array offered at the Medical School and throughout the University. Our only requirement is that the course helps you meet your educational goals. Also during the first two terms, you'll take student seminar to learn how to effectively present your research, and attend small group discussions on the responsible conduct of research and rigor and reproducibility in research. Finally, you will select at least two labs in which to perform research rotations; these can last either a half (7wk) or full term, giving you opportunity to sample several research areas and mentoring styles. Course requirements for the PhD in Physiology can be finished in the first academic year; certain training grants may have additional requirements and students often take additional electives later in their training (for example statistics is important but usually more fun once you have your own data to play with!).

At the end of your second term, you'll choose a dissertation mentor and lab. This usually occurs in May of the first year. You'll work with your mentor to develop a research proposal in the form of an NIH NRSA application that is presented as your preliminary exam before the end of your first year.

After prelims, you'll devote most of your time to research and career development, as well as complete your teaching requirements and any additional courses of interest. Many students choose to enhance their rigorous research training with one of several Certificate Programs offered through the Rackham Graduate School. These programs are designed to dovetail with graduate education and provide specialized training in a variety of career paths, such as education, translational research, public policy and entrepreneurship.

Apply

Students interested in the MIP Graduate Program [apply through PIBS](#), selecting Molecular and Integrative Physiology within that application.

Figure-5: Content on *Curriculum* and *Apply* page don't align with participants' expectations.

[Home](#)
[About Us](#)
[Directory](#)
[Education](#)
[Ph.D. Program](#)
[Masters Program](#)
[Application Information](#)
[How to Apply](#)
[Program Class Schedule](#)
[Course Descriptions](#)
[Mentors & Projects](#)
[FAQ](#)
[Contact Us](#)
[Undergraduate Opportunities](#)
[Postdoctoral Training](#)
[Career Development](#)
[Outreach](#)
[Research](#)
[Events](#)
[Giving](#)

Application Information

Applications for the Class of 2018-2019 are now OPEN.

This program considers applications on a *modified rolling admission* basis. Some early decisions will be sent out before the final review*, but the class will not be filled until all completed applications have been considered. Please note the following deadlines:

1. In order to be considered for the first review, ALL MATERIALS must be received by 9:00 AM on Monday, February 26th, 2018.
2. For INTERNATIONAL applicants and those willing to be considered during the second review, ALL MATERIALS must be received by 9:00 AM on Monday, April 23rd, 2018.
3. In order to be considered during the final review, ALL MATERIALS must be received by 11:59 PM on Tuesday, May 15th, 2018. This is the final deadline. No new materials will be accepted after this date. Updates to previously submitted materials are accepted.

*Please note: Early completion of the application does not guarantee an early decision. The earliest decisions may be received by late-March. Acceptances, denials, and waitlist notifications following the final review will be received in early-June.

[Application Requirements](#)
[Application Process](#)

Downloads

[Checklist of application materials for applicants.pdf](#)
pdf (386.3 KB)

[CV-Template&Instructions_MSPPhysiology.docx](#)
docx (20.81 KB)

Figure-6: The *Masters Program* does a good job of including Application Information on the website.

Finding 5: Important financial information is difficult to find, and it's more helpful.

For the task of locating funding information, students first located *Student Fellowship*, *Training Grants*, *Graduate Education Fund*, or *Student Awards*; but these pages simply did not contain expected information. Yet, such information do exist on the website, specifically in the FAQ section. Unfortunately, three out of four participants were unable to locate this information for two reasons: 1) having this information only in the FAQ was unintuitive. 2) after locating those four pages, participants assumed those were the only source of financial support information.

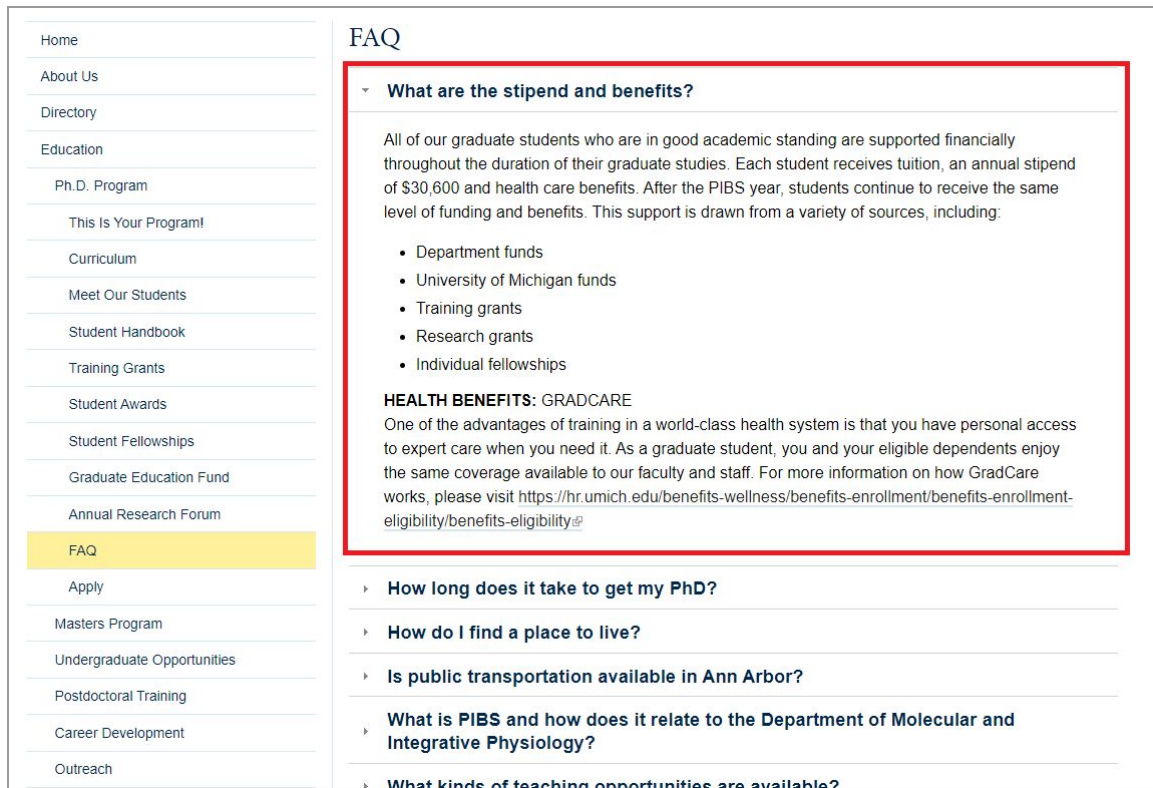


Figure-7: The information is available on the FAQ, but it was extremely hard to locate.

Recommendation 5: Move the information in the FAQ to its own page/section

Due to the importance of the funding information presented in FAQ, we recommend placing the same information under a tab beneath the "PhD Program". This would minimize frustrations for students with funding concerns

Finding 6: Pages with no meaningful content are confusing and affect perception

The MIP website contains pages with little or no meaningful content on them, examples include:

- *Directory*
- *Apply*

During testing, these pages became an issue for two participants. One commented, "When I click on *Directory*, there is nothing here, so I immediately think it is not working." Another participant said, "If I just click on *Directory*, I should see everyone." Additionally, users had similar reactions to the *Apply* page; they felt it should contain more content related to application admissions rather than just a link to another page.

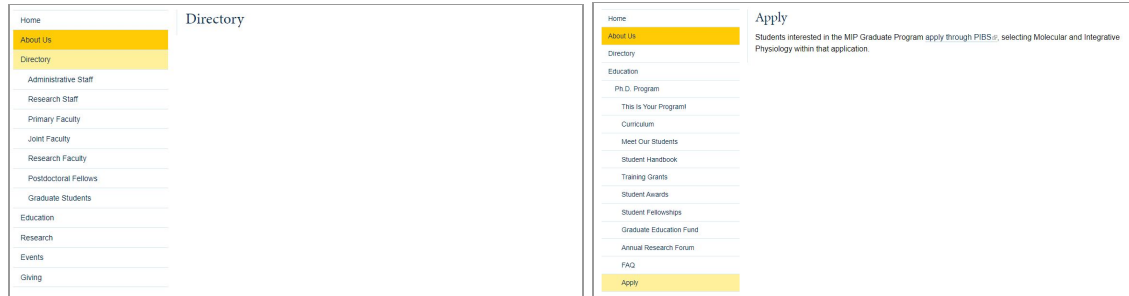


Figure-8: Blank pages under “Directory” and “Apply”.

Recommendation 6: Modify/Remove pages with little to no meaningful content

We recommend removing these pages or replacing them with pages that have content users expect to see to minimize confusion. See recommendation 4B for additional details.

Finding 7: Faculty pages need to provide more and up to date information.

Faculty pages are crucial to prospective students because they contain specific research focus. While no participants had issues locating the faculty page in our tests, they had dissatisfactions regarding content and status of those pages. One participant said, “Typically what I would do is look at all of them to see if this is up to date.” Another participant added, “My definition of a good website is to contain all the faculty’s personal websites and CV.” These comments align with what we heard throughout this project.

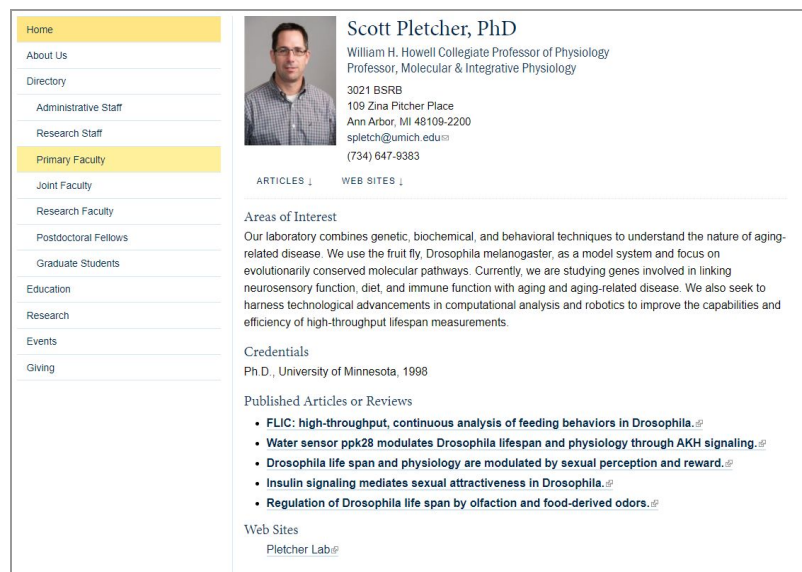


Figure-9: An example of a faculty page, it has enough information for the tasks we gave, but participants felt it could contain more information.

Recommendation 7: Add additional content to faculty pages and make sure they are updated

We have two sub-recommendations for keeping faculty pages up-to-date. First, create a system that ensures content is updated frequently (e.g., periodic reminder to faculty). Second, add “timestamp” for when the page was last updated. This could stop users from

unnecessary work to locate updated information. Additionally, if professors are comfortable sharing their CV's, including them on profile pages might be convenient for prospective students as they list previous researches clearly.

Finding 8: The relationship between MIP and PIBS isn't clear

To complete the admission requirements task, participants intuitively went to *Apply* under PhD Program. However, instead of showing admission information, the page only contained a link to another PIBS website. Several users were confused because they had not encountered "PIBS" previously. We heard comments such as, "It seems this page only contains information...for me to apply for PIBS." and, "The apply button will probably take me to something where the requirements are, but it's confusing."

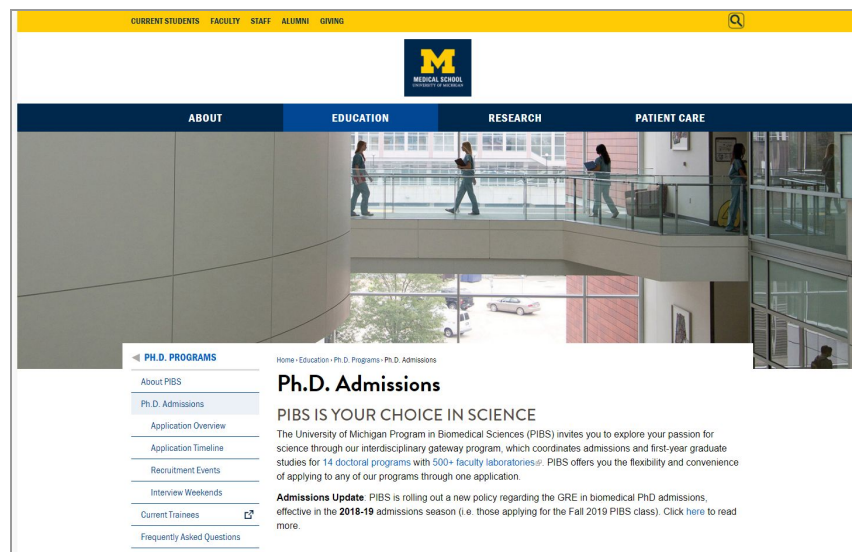


Figure-10: The page linked to from 'Apply' page. The style is completely different and the connection between MIP and PIBS is not very clear.

Recommendation 8: Make the relationship between PIBS and MIP clear

We recommend adding additional information to the "apply" page that explains what PIBS is, and how it related to the MIP program.

4. Discussion

While we discovered several findings, there are limitations to our study we need to address. First, we only had 4 participants for this test; it is possible their views do not generalize to the rest of the PhD student population. Second, we only had access to current PhD students (only 1 from related medical field), which infringed our ability to gather data from prospective PhD students. Third, international and domestic students are not equally represented in our pool of participants (3 international), therefore certain feedback may be limited to international student population. Lastly, after our first 2 tests, we made minor revisions to our test plan and success criteria due to opportunities we saw to better facilitate the test (The changes are highlighted in orange in [Appendix 7.1](#)).

5. Conclusion

In this study, we evaluated the Molecular & Integrative Physiology website at UMMS by conducting 4 usability tests. We discovered: 1) Alphabetical Filters lack needed instructions, 2) MIP website search needs to be improved, 3) User's want to see "research interest" in the list-view, 4a) Page structure is not ideal for users, 4b) Some content doesn't align with user expectations, 5) Important financial information is difficult to find, and it's more helpful, 6) Pages with no meaningful content are confusing and affect perception, 7) Faculty pages need to provide more and up to date information, and 8) The relationship between MIP and PIBS isn't clear.

Based on these, we recommend: 1) Include instructions for alphabetical filters, 2) Improve search functionality to include more relevant results, 3) add a "research interest" category to the directory view, 4a) Examine pages to determine best content structure, 4b) Align content with user expectations, 5) Move the information in the FAQ to its own page/section, 6) Modify/Remove pages with little to no meaningful content, 7) Add additional content to faculty pages and make sure they are updated, and 8) Make the relationship between PIBS and MIP clear.

6. References

About HITS. (n.d.). In *Health Information Technology & Services'* website. Retrieved March 11, 2018, from <https://hits.medicine.umich.edu/about-hits>
Anonymous. (2018). Slack on Mobile In-Class Usability Test Document.

7. Appendices

7.1 Usability Testing Plan (Internal Use Only) Version 1_with modifications

(The changes from version 1 to version 2 are highlighted in orange)

Some of the following will go into Methods, some will go into Appendix

Site to be evaluated: <https://medicine.umich.edu/dept/molecular-integrative-physiology>

RECRUITING

The target audience we are looking for are **prospective PhD students going through the application process**. Even though the participant demographic can be very broad, we did not want to limit our sampling by employing too many screening dimensions other than those necessary because we have no reliable access to people that fit this description.

Criteria: Age, Comfortable with Computer (PC or Mac fine), Education (At least Senior year in undergrad)

TECHNICAL PLAN

Overview: Due to schedule conflicts, our usability test sessions will be run by 2 people (or 3) per session. We will have a test moderator and a technician/note taker.

To keep the test room condition more or less consistent, we reserved meeting rooms in the North Quad building basement for our purpose.

Test Login Information: Because the site is open to public, and we are not testing any intranet functionality, no logins will be required.

Room Setup

MODERATOR SCRIPT

Hi, I'm _____, and this is _____, we are students at the School of Information conducting a Usability Study for Health and Information Technology Services (HITS). The goal of our research is to gather insights about interacting with the website we are evaluating from potential users.

Throughout this test session, I will introduce you to scenarios and give you tasks. Throughout these tasks, it is very important you think aloud and describe what you are thinking and why you are doing certain things. This will really help us understand what's going on. By "thinking aloud", we expect you can just tell us anything on your mind even they are just trivial things like things you notice on a webpage, and things you like or dislike.

Keep in mind that there are no right or wrong answers because we are evaluating the system and not you. There is absolutely nothing wrong that you can do. All honest feedback is appreciated, nothing you say will hurt anyone's or the system's feelings. Additionally, all information gathered from this testing is confidential and will not be shared with anyone outside of the team.

During the study, I will be a silent observer. At any point, if you get confused, try to figure out how to move forward just as you would on your own. If you ask questions, I may not answer you or provide hints. Please know that I'm not being unfriendly, I am being neutral so that we can understand what your experience is like without help. However, if you say that **you're stuck**, I will help you out. When you believe you have completed a task, **please say "I'm done."** I may ask clarification questions as we go along and remind you to think aloud. If at ANY POINT you need to stop the test please let us know and we will end the test, please know there is no penalty if you choose to do this.

Do you have any questions before we begin?

TASKS

For each of the follow tasks, please imagine that you are a prospective PhD student that is currently looking for information about the Molecular Integrative Physiology degree offered at the University of Michigan.

Task 1:

You met professor, **Scott Pletcher**, at a conference who's research area was **aging-related disease**. You know he's a professor in the MIP department at the University of Michigan (UM). You'd like to see ~~his bio page on the department website, as well as his lab website if he has one. How would you find out more about professor Scott Pletcher?~~

- (1) his **bio page** on the department website,
- (2) his **lab website** if he has one.

How would you find out more about professor **Scott Pletcher**?

SUCCESS CRITERIA:

- Participant finds Prof. Scott Pletcher's bio page
- Participant finds Prof. Scott Pletcher's lab page

ESTIMATED TIME TO ACCOMPLISH:

within 3min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1

2

3

4

5

Very Easy

Very Difficult

Task 2:

After finding Professor Scott Pletcher, you are interested in seeing what other professors currently do work regarding **aging-related disease**. You would like to send them each an email to ask them a question related to aging. Please find the contact information for 3 other professors whose research focus is aging-related disease.

SUCCESS CRITERIA:

- Participant finds three faculty with area of interest in aging-related disease.
- Participant find contact information of those three faculty.

ESTIMATED TIME TO ACCOMPLISH:

within 3min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1	2	3	4	5
Very Easy			Very Difficult	

Task 3:

After you found the professors' information, you realized they might be busy and would probably be slow with replies. You believe people currently working in their laboratory would be good to contact for questions. Please find **1 member** working in Scott Pletcher lab, and locate his/her **contact information**.

SUCCESS CRITERIA:

- Participant finds 1 current student currently working in the Pletcher lab.
- Participant finds contact information of the student.

ESTIMATED TIME TO ACCOMPLISH:

within 3min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1	2	3	4	5
Very Easy			Very Difficult	

Task 4:

After learning more about the professors in your area of interest, you are interested in applying for the PhD program at the Department of Molecular & Integrative Physiology and would like to find out the graduation requirements. ~~Specifically, you are looking for required classes and lab rotation information. How would you find this information?~~

Specifically, you are looking for:

(1)required classes

(2)lab rotation information.

How would you find this information?

SUCCESS CRITERIA:

- Participant finds the relevant information either on a web page or in the student handbook

Required Classes

- Webpage:

<https://medicine.umich.edu/dept/molecular-integrative-physiology/education/phd-program/curriculum>

Or

- Student Handbook:

<https://medicine.umich.edu/sites/default/files/content/downloads/Sept2017FinalMIPHHandbook.pdf> - page 11 - 15

Lab Rotation:

- Webpage:

<https://medicine.umich.edu/dept/molecular-integrative-physiology/education/phd-program/curriculum/curriculum-guide>

Or

<https://medicine.umich.edu/dept/molecular-integrative-physiology/education/phd-program/curriculum>

Or

- Student Handbook:
<https://medicine.umich.edu/sites/default/files/content/downloads/Sept2017FinalMIPHandbook.pdf> - mainly on page 13

ESTIMATED TIME TO ACCOMPLISH:

within 10 min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1

2

3

4

5

Very Easy

Very Difficult

Task 5:

Aside from just being a student, you want to learn more about Ann Arbor and what it's like to live there. How would you do this?

SUCCESS CRITERIA:

- Participant finds the "Live in Ann Arbor" link in the FAQ and clicked into it.
<https://medicine.umich.edu/medschool/education/md-program/our-community/ann-arbor>

Home
About Us
Directory
Education
Ph.D. Program
This Is Your Program!
Curriculum
Meet Our Students
Student Handbook
Training Grants
Student Awards
Student Fellowships
Graduate Education Fund
Annual Research Forum
FAQ
Apply
Masters Program

FAQ

› **What are the stipend and benefits?**

› **How long does it take to get my PhD?**

› **How do I find a place to live?**

› **Is public transportation available in Ann Arbor?**

The University as well as the Ann Arbor Transportation Authority run extensive bus systems. Although many graduate students have their own cars, they are not necessary to get around the University of Michigan and Ann Arbor. Biking is very popular -- the City of Ann Arbor was recognized by the League of American Bicyclists for its bicycle friendly policies. Most graduate students live within walking or biking distance of the University and shops and services and find that they don't need to have a car. More information about getting around campus and the City of Ann Arbor can be found at [Life in Ann Arbor](#).

› **What is PIBS and how does it relate to the Department of Molecular and Integrative Physiology?**

› **What kinds of teaching opportunities are available?**

› **How does the training grant differ from a graduate program?**

ESTIMATED TIME TO ACCOMPLISH:

within 5 min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1

2

3

4

5

Very Easy

Very Difficult

Task 6:

After looking at work and life, you decided that you feel interested enough to apply. ~~How would you find the admission requirements for the MIP program?~~ Please locate the application requirements.

SUCCESS CRITERIA:

- Participant finds the "[apply through PIBS](https://medicine.umich.edu/medschool/education/phd-programs/phd-admissions/application-overview)" link on this web page:
<https://medicine.umich.edu/medschool/education/phd-programs/phd-admissions/application-overview>

ESTIMATED TIME TO ACCOMPLISH:

within 3 min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1

2

3

4

5

Very Easy

Very Difficult

Task 7:

Aside from applying, you also want to go to a seminar hosted by the department to broaden your connections. Because of your current work/schooling, you are only free on the 2nd week of May (May 7-11). How would you find a seminar you can attend between this time period?

SUCCESS CRITERIA:

- Participant finds out one of the following two events.

<https://medicine.umich.edu/dept/molecular-integrative-physiology/events/calendar/week>

	Month	Week	Day	Year							
	« Prev		Week of April 8, 2018							Next »	
	Sun	Mon	Tue	Wed	Thu	Fri	Sat				
All day											
12pm			MIP Candidate Seminar Series - Andrew Schwartz &								
1pm											
2pm											
3pm											
4pm				MIP Seminar Series - Ling-Gang Wu, MD, PhD							
5pm											

ESTIMATED TIME TO ACCOMPLISH:

within 3 min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1

2

3

4

5

Very Easy

Very Difficult

Task 8:

Now that you've applied to the university, you are wondering about what kind of financial support is ~~needed~~ offered throughout the program. How would you find this information?

SUCCESS CRITERIA:

- Participant locates any of the "Training Grants", "Student Fellowships" or "Graduate Education Fund" web pages.
- (## Add a new criteria) Or they locate the stipend & benefits question on the FAQ page <https://medicine.umich.edu/dept/molecular-integrative-physiology/education/phd-program/faq>

ESTIMATED TIME TO ACCOMPLISH:

within 3 min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1

2

3

4

5

Very Easy

Very Difficult

Post-questions

Q1: Overall, what did you think about the MIP website? How confident did you feel about completing the tasks?

Q2: If you had frustrations, can you share some of them?

Q3: Do you have any suggestions for improving the website?

Q4: Is there any information not currently present on the website that you wish was there?

Q5: Any other thoughts or comments you'd like to share?

Flexible question: I noticed that you were kind of struggling with the task # x, could you tell me what was difficult/ what went wrong?

Demographic Questions:

Age:

Area of Specialty:

7.2 Usability Testing Plan (Internal Use Only) Version 2_after changes

Site to be evaluated: <https://medicine.umich.edu/dept/molecular-integrative-physiology>

RECRUITING

The target audience we are looking for are **prospective PhD students going through the application process**. Even though the participant demographic can be very broad, we did not want to limit our sampling by employing too many screening dimensions other than those necessary because we have no reliable access to people that fit this description.

Criteria: Age, Comfortable with Computer (PC or Mac fine), Education (At least Senior year in undergrad)

TECHNICAL PLAN

Overview: Due to schedule conflicts, our usability test sessions will be run by 2 people (or 3) per session. We will have a test moderator and a technician/note taker.

To keep the test room condition more or less consistent, we reserved meeting rooms in the North Quad building basement for our purpose.

Test Login Information: Because the site is open to public, and we are not testing any intranet functionality, no logins will be required.

MODERATOR SCRIPT

Hi, I'm _____, and this is _____, we are students at the School of Information conducting a Usability Study for Health and Information Technology Services (HITS). The goal of our research is to gather insights about interacting with the website we are evaluating from potential users.

Throughout this test session, I will introduce you to scenarios and give you tasks. Throughout these tasks, it is very important you think aloud and describe what you are thinking and why you are doing certain things. This will really help us understand what's going on. By "thinking aloud", we expect you can just tell us anything on your mind even they are just trivial things like things you notice on a webpage, and things you like or dislike.

Keep in mind that there are no right or wrong answers because we are evaluating the system and not you. There is absolutely nothing wrong that you can do. All honest feedback is appreciated, nothing you say will hurt anyone's or the system's feelings. Additionally, all information gathered from this testing is confidential and will not be shared with anyone outside of the team.

During the study, I will be a silent observer. At any point, if you get confused, try to figure out how to move forward just as you would on your own. If you ask questions, I may not answer you or provide hints. Please know that I'm not being unfriendly, I am being neutral so that we can understand what your experience is like without help. However, if you say that **you're stuck**, I will help you out. When you believe you have completed a task, **please say "I'm done."** I may ask clarification questions as we go along and remind you to think aloud. If at ANY POINT you need to stop the test please let us know and we will end the test, please know there is no penalty if you choose to do this.

Do you have any questions before we begin?

TASKS

For each of the follow tasks, please imagine that you are a prospective PhD student that is currently looking for information about the **Molecular Integrative Physiology degree** offered at the **University of Michigan**.

Task 1:

You met professor, **Scott Pletcher**, at a conference who's research area was **aging-related disease**. You know he's a professor in the MIP department at the University of Michigan (UM). You'd like to see :

- (1) his **bio page** on the department website,
- (2) his **lab website** if he has one.

How would you find out more about professor **Scott Pletcher**?

SUCCESS CRITERIA:

- Participant finds Prof. Scott Pletcher's bio page
- Participant finds Prof. Scott Pletcher's lab page

ESTIMATED TIME TO ACCOMPLISH:

within 3min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1

2

3

4

5

Very Easy

Very Difficult

Task 2:

After finding Professor Scott Pletcher, you are interested in seeing what other professors currently do work regarding **aging-related disease**. You would like to send them each an email to ask them a question related to aging. Please find the contact information for 3 other professors whose research focus is aging-related disease.

SUCCESS CRITERIA:

- Participant finds three faculty with area of interest in aging-related disease.
- Participant find contact information of those three faculty.

ESTIMATED TIME TO ACCOMPLISH:

within 3min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1	2	3	4	5
Very Easy			Very Difficult	

Task 3:

After you found the professors' information, you realized they might be busy and would probably be slow with replies. You believe people currently working in their laboratory would be good to contact for questions. Please find **1 member** working in Scott Pletcher lab, and locate his/her **contact information**.

SUCCESS CRITERIA:

- Participant finds any member who are currently working in the Pletcher lab they would like to reach out to.
- Participant finds contact information of the person.

ESTIMATED TIME TO ACCOMPLISH:

within 3min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1	2	3	4	5
Very Easy			Very Difficult	

Task 4:

After learning more about the professors in your area of interest, you are interested in applying for the PhD program at the Department of Molecular & Integrative Physiology and would like to find out the graduation requirements. Specifically, you are looking for:

(1)required classes

(2)lab rotation information.

How would you find this information?

SUCCESS CRITERIA:

- Participant finds the relevant information either on a web page or in the student handbook

Required Classes

- Webpage:

<https://medicine.umich.edu/dept/molecular-integrative-physiology/education/phd-program/curriculum>

Or

- Student Handbook:

<https://medicine.umich.edu/sites/default/files/content/downloads/Sept2017FinalMIPHandbook.pdf> - page 11 - 15

Lab Rotation:

- Webpage:

<https://medicine.umich.edu/dept/molecular-integrative-physiology/education/phd-program/curriculum/curriculum-guide>

Or

<https://medicine.umich.edu/dept/molecular-integrative-physiology/education/phd-program/curriculum>

Or

- Student Handbook:
<https://medicine.umich.edu/sites/default/files/content/downloads/Sept2017FinalMIPHHandbook.pdf> - mainly on page 13

ESTIMATED TIME TO ACCOMPLISH:

within 10 min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1

2

3

4

5

Very Easy

Very Difficult

Do you have a clear understanding of graduation requirement in terms of required classes and lab rotation information? If not, what could make it clearer?

Task 5:

Aside from just being a student, you want to learn more about Ann Arbor and what it's like to live there. How would you do this?

SUCCESS CRITERIA:

- Participant finds the "Live in Ann Arbor" link in the FAQ and clicked into it.
<https://medicine.umich.edu/medschool/education/md-program/our-community/ann-arbor>

Home
About Us
Directory
Education
Ph.D. Program
This Is Your Program!
Curriculum
Meet Our Students
Student Handbook
Training Grants
Student Awards
Student Fellowships
Graduate Education Fund
Annual Research Forum
FAQ
Apply
Masters Program

FAQ

› **What are the stipend and benefits?**

› **How long does it take to get my PhD?**

› **How do I find a place to live?**

› **Is public transportation available in Ann Arbor?**

The University as well as the Ann Arbor Transportation Authority run extensive bus systems. Although many graduate students have their own cars, they are not necessary to get around the University of Michigan and Ann Arbor. Biking is very popular -- the City of Ann Arbor was recognized by the League of American Bicyclists for its bicycle friendly policies. Most graduate students live within walking or biking distance of the University and shops and services and find that they don't need to have a car. More information about getting around campus and the City of Ann Arbor can be found at [Life in Ann Arbor](#).

› **What is PIBS and how does it relate to the Department of Molecular and Integrative Physiology?**

› **What kinds of teaching opportunities are available?**

› **How does the training grant differ from a graduate program?**

ESTIMATED TIME TO ACCOMPLISH:

within 5 min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1

2

3

4

5

Very Easy

Very Difficult

Task 6:

After looking at work and life, you decided that you feel interested enough to apply. Please locate the application requirements.

SUCCESS CRITERIA:

- Participant finds the "[apply through PIBS](https://medicine.umich.edu/medschool/education/phd-programs/phd-admissions/application-overview)" link on this web page:
<https://medicine.umich.edu/medschool/education/phd-programs/phd-admissions/application-overview>

ESTIMATED TIME TO ACCOMPLISH:

within 3 min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1	2	3	4	5
Very Easy			Very Difficult	

Task 7:

Aside from applying, you also want to go to a seminar hosted by the department to broaden your connections. Because of your current work/schooling, you are only free on the 2nd week of May (May 7-11). How would you find a seminar you can attend between this time period?

SUCCESS CRITERIA:

- Participant finds out one of the following two events.
<https://medicine.umich.edu/dept/molecular-integrative-physiology/events/calendar/week>

Month

Week

Day

Year

« Prev

Week of April 8, 2018

Next »

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
All day							
12pm			MIP Candidate Seminar Series - Andrew Schwartz &				
1pm							
2pm							
3pm							
4pm				MIP Seminar Series - Ling-Gang Wu, MD, PhD			
5pm							

ESTIMATED TIME TO ACCOMPLISH:

within 3 min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1 2 3 4 5

Very Easy Very Difficult

Task 8:

Now that you've applied to the university, you are wondering about what kind of financial support is offered throughout the program. How would you find this information?

SUCCESS CRITERIA:

- Participant locates any of the "Training Grants", "Student Fellowships" or "Graduate Education Fund" web pages
- Or they locate the stipend & benefits question on the FAQ page
<https://medicine.umich.edu/dept/molecular-integrative-physiology/education/phd-program/faq>

ESTIMATED TIME TO ACCOMPLISH:

within 3 min

FOLLOW-UP QUESTION:

How would you rate that task on a scale from 1 to 5, with 1 being very easy and 5 being very difficult.

1 2 3 4 5

Very Easy Very Difficult

Post-questions

Q1: Overall, what did you think about the MIP website? How confident did you feel about completing the tasks?

Q2: If you had frustrations, can you share some of them?

Q3: Do you have any suggestions for improving the website?

Q4: Is there any information not currently present on the website that you wish was there?

Q5: Any other thoughts or comments you'd like to share?

Flexible question: I noticed that you were kind of struggling with the task # x, could you tell me what was difficult/ what went wrong?

Demographic Questions:

Age:

Area of Specialty:

7.3 Usability Testing Plan (Participant Use Only)*

*adapted from 7.2 Usability Testing Plan (Internal Use Only) Version 2 (After changes)

UMMS USABILITY TESTING

[FOR PARTICIPANT USE ONLY]

Open when instructed.

Task Scenarios

For each of the follow tasks, please imagine that you are a prospective PhD student that is currently looking for information about the Molecular Integrative Physiology degree offered at the University of Michigan.

Task 1:

You met professor, **Scott Pletcher**, at a conference who's research area was **aging-related disease**. You know he's a professor in the MIP department at the University of Michigan (UM). You'd like to see :

- (1) his **bio page** on the department website,
- (2) his **lab website** if he has one.

How would you find out more about professor **Scott Pletcher**?

Task 2:

After finding Professor Scott Pletcher, you are interested in seeing what other professors currently do work regarding **aging-related disease**. You would like to send them each an email to ask them a question related to aging. Please find the contact information for 3 other professors whose research focus is aging-related disease.

Task 3:

After you found the professors' information, you realized they might be busy and would probably be slow with replies. You believe people currently working in their laboratory would be good to contact for questions. Please find **1 member** working in Scott Pletcher lab, and locate his/her **contact information**.

Task 4:

After learning more about the professors in your area of interest, you are interested in applying for the PhD program at the Department of Molecular & Integrative Physiology and would like to find out the graduation requirements.

Specifically, you are looking for:

(1) required classes

(2) lab rotation information.

How would you find this information?

Task 5:

Aside from just being a student, you want to learn more about Ann Arbor and **what it's like to live there**. How would you do this?

Task 6:

After looking at work and life, you decided that you feel interested enough to apply. Please locate the application requirements.

Task 7:

Aside from applying, you also want to go to a **seminar** hosted by the department to broaden your connections. Because of your current work/schooling, you are only free on the **2nd week of May (May 7-11)**. How would you find a **seminar** you can attend between this time period?

Task 8:

Now that you've applied to the university, you are wondering about what kind of financial support is offer throughout the program. How would you find this information?

7.4 Blank Data Logging Form

Path Taken	Time Taken	Observations	Quotes	Rating/Reason
Task 1				
Task 2				
Task 3				
Task 4				
Task 5				
Task 6				
Task 7				
Task 8				
Q1: Overall, what did you think about the MIP website? How confident did you feel about completing the tasks?				
Q2: If you had frustrations, can you share some of them?				
Q3: Do you have any suggestions for improving the website?				

Q4: Is there any information not currently present on the website that you wish was there?
Q5: Any other thoughts or comments you'd like to share?
Flexible question: I noticed that you were kind of struggling with the task # x, could you tell me what was difficult/ what went wrong?
Age: Major:

7.5 Detailed Logging Notes

Participant 1

Path Taken	Time Taken	Observations	Quotes	Rating/Reason
Task 1				
Search "Scott Pletcher" —> Research Areas —> Directory —> Research Faculty —> Primary Faculty —> filter with letter "S" —> filter with "P" —> Scott's bio page —> Scott's lab website	02:41	<ul style="list-style-type: none"> - Participant expected the alphabetic filter to be applied to first name: Participant used the alphabetic filter on the primary faculty page to find Scott Pletcher but he was not sure whether it was for first name or last name. He first thought it was for first name so he filtered with "S" but it turned out to be last name. - Participant missed Scott Pletcher's profile on the right side of the search result page. 		<p>3</p> <p>Used search function to find a person but didn't see people directory in the search result</p>
Task 2				
Quickly scroll through Scott's bio page —> research —> research interest —> filter: aging —> locate Scott Pletcher on the result page —> randomly click on three of them: Ao-lin Hsu —> Scott Leiser —> Geoffrey Murphy	01:53	<ul style="list-style-type: none"> - Participant didn't expect the inconsistent tab issue: when he clicked on Ao-lin Hsu, it automatically opened a new tab while when clicking Scott Leiser and Geoffrey Murphy, the tab remained the same. 	"Why they didn't open in a new tab. It's kind of confusing..."	1

Task 3				
Lab Page (opened in task 1) > Members > locate three members' email address	00:33	Test went very smoothly.	/	1
Task 4				
Homepage > Education > PhD program > Curriculum > click on "Student Handbook" link > use browser search function search and find out required information	03:08	<ul style="list-style-type: none"> Participant expected to see a list of required classes under Curriculum but there were only links. Participant said the student handbook was not very well organized. Participant clicked on Student Handbook nav, and said he expected to see some multiple links leading to different information (multiple sections displayed). But he saw the same PDF. 	<p>" I think the font (of title in Student Handbook) should be larger. "</p> <p>"I think the links (on curriculum page) should be highlighted. They are very hard to recognize."</p>	<p>3</p> <p>"It's hard to find the information if I don't see the links (on Curriculum page)."</p>
Task 5 Ann Arbor Life				
<p>Starts on curriculum page > Goes to google > searches ann arbor</p> <p>Talks for a second</p> <p>Moderator let the user try to find Ann Arbor</p>	<p>Start - 16:50</p> <p>End- 18:54</p> <p>Potentially ended 18:23</p>	<p>Participant preferred to use google for locating information about living in ann arbor.</p> <p>Additionally he told us he was unable to find information about living in ann arbor on the MIP website.</p>	<ul style="list-style-type: none"> - "I would use google" - I don't know if this (google search) is related to the website so if I use this website (MIP) I think can see there are some 	<p>N/A</p> <p>Google: 1</p> <p>"It's easy"</p>

<p>related info on the website("What if I tell you there is a way to find out Ann Arbor related information on the website? How would you find the information?") after the participant finished all the tasks.</p> <p>Participant: Home > About Us > Education > Research > Events</p> <p>Moderator: "Where would you expect " Participan: "It should be visible on the main nav" Moderator: (Hint 1) It's in the main nav.</p> <p>Participant then spent a lot of time on the About Us page to look for the information. Moderator</p> <p>Moderator: (Hint 2) It's under "PhD Program" section.</p> <p>Handbook page> Handbook pdf > Apply >FAQ > FAQ-Is public transportation</p>	<p>Time - 2:04</p>	<p>*Speculation* it seems like he didn't expect it to be on the website.</p> <ul style="list-style-type: none"> - After the moderator told him the information was under the "PhD Program" section, the participant went through the tab list under that section and saw the handbook. "It should be in the handbook" he said. 	<p>events"</p> <ul style="list-style-type: none"> - I thought there could be some extra curricular events, but it seems this website didn't provide any - "I would click on these links... (google results) I think I can finish that without the help of this page (MIP website)" 	
---	--------------------	---	--	--

available in Ann Arbor? (didn't see the link in the answer to this question) > This is Your Program > Curriculum > Meet Our Students > (went back use the return control of the browser) > Graduate Education Fund > This is Your Program

Moderator "What are you thinking now?"

Participant: "I am thinking about a direct link that tells "Life in Ann Arbor"" or "Events in Ann Arbor" or "Our Location" something like these. None of the current tabs are related to life in Ann Arbor. I would say my best guess is that it's in student handbook. Other than that, I don't think they are atrievable."

Moderator: Revealed the answer to the participant and asked the participant's feeling

Participant: I would rather use Google rather than looking through all the questions in the FAQ.				
Task 6				
<p>Goes home > education > phd program > apply > PIBS website link > admission overview</p> <p>After talking for a bit</p> <p>Clicks back to MIP website to read the sentence on the apply page > then goes back to the PIBS tab he opened and confirmed these were the requirements.</p>	<p>Start 19:46</p> <p>End 21:50</p> <p>Time taken - 1:56</p>	<p>Participant had no real difficulties completing the tasks</p> <p>While they had no difficulty, they had to flip between the MIP and PIBS website just to make sure they were locating the correct requirements, which means there is an opportunity to present the information in a better way so users don't have to second guess themselves.</p> <p>Additionally, the participant feels it would be better if the application requirements on PIBS were also listed in the same way on the MIP website, he felt it would be "more intuitive"</p>	<ul style="list-style-type: none"> - When looking at the PIBS link "I think that's the department" - "It seems this page only contains information that...for me to apply for PIBS, I believe its larger than the MIPS program" - "...I will assume that the requirements will be the same as the PIBS and when I apply I need to choose that option" - "I think it's short, but clear" (The apply page) 	<p>2</p> <p>"I hope that there would be one page inside MIPS program so you can maybe copy or whatever...so just put them here not in PIBS, I think its a more intuitive way if they don't have to transfer to another website"</p>
Task 7				
<p>Starts on Apply Page → Events → scrolls up and down a bit → Click 'Month' tab → Click 'next' to get to May → located the event on</p>	<p>00:45</p> <p>from 23:16 to 24:05</p>	<p>Didn't take long to notice the Month/Week/Day/Year tabs</p>	<p>"For seminars, I think I'll just explore the Events Tab"</p>	<p>1</p> <p>"It's easy"</p>

May 8th and May 9th → Complete				
Task 8				
Event Page → Education → PhD Program → Student Fellowships → Scrolls down → Education → PhD Program → Student Awards → Home (To explain) → Education → PhD Program → Graduate Education Fund → (clarifies task) → Student Fellowships → Complete	06:00 from 24:30 to 30:30	<p>From cursor movement, there was a hint of surprise with the closed nav when accessing Student Fellowships</p> <p>Feels past awards or fellowships are more intuitive to be under News along with Faculty awards.</p> <p>Even though gave task a 2, he definitely struggled to find the information useful to him.</p>	<p>“It seems like this page [Student fellowship] is just listing all the students that received fellowship, so not useful to me.”</p> <p>“So yeah, [Student Awards] are just past awards, not current awards”</p> <p>“It’s more intuitive to have these [past awards] posted under the [general] department website, not under the PhD programs because for me is more for prospective students”</p> <p>“I prefer tabs under ‘home’ where you can see news, awards, events; right now they are just separated sections on the same page”</p> <div> Home News Past awards /Department Awards Events </div>	2 “I don’t think it’s very hard to find this information”

			<p>"I don't expect to find this information on this website"</p> <p>"[expects to find] once you get it, how many years are guaranteed"</p>	
<p>Q1: Overall, what did you think about the MIP website? How confident did you feel about completing the tasks?</p> <p>I think the website is well structured, in most of the cases I can find the information I want easily; however, there are some issues, like the site search, basically if I input some people's name I'm expecting the Bio page to show up in the first row.</p> <p>The other thing is they kind of separated these faculties, so when I want to look for one faculty I have to go through these 3 times. I think there are trade-offs because these categorizations are accurate.</p> <p>In general, the website is well structured, I can easily find the information I want.</p> <p>Follow up: do you understand the differences between all the different kinds of faculties?</p> <p>Join Faculty is clear. Primary Faculty and Research Faculty I just have to guess. Primary Faculty are the ones the one that show up in the department. Research Faculty may be retired...</p>				
<p>Q2: If you had frustrations, can you share some of them?</p> <p>no</p>				
<p>Q3: Do you have any suggestions for improving the website?</p> <p>Include more diverse events in the "Event" page, e.g. seminars, extracurricular, student events, student organizations, job talks, etc.</p>				
<p>Q4: Is there any information not currently present on the website that you wish was there?</p> <p>"I don't expect to find Ann Arbor info on this website."</p>				

Q5: Any other thoughts or comments you'd like to share?

no

Flexible question: I noticed that you were kind of struggling with the task # x, could you tell me what was difficult/ what went wrong?

(The notes for participant's respond to this question, "What if I tell you there is a way to find out Ann Arbor related information on the website? How would you find the information?" , has been added to the notes for task)

27

Major: industry operation

Participant 2

Path Taken	Time Taken	Observations	Quotes	Rating/Reason
Task 1				
Directory > Search Bar "Scott Pletcher" > Clicks on Scott Pletcher under "profile results" > clicks the "website tab" > click on "pletcher lab"	01:20	The task went pretty smoothly.	- "A lot of times directories are not updated"	2 - "When I clicked on directory, there is nothing here, so I immediately think it is not working"
Task 2				
Directory page > research > examines page > research interests > drop down menu > aging	02:03	<ul style="list-style-type: none"> Read the paragraph on the "research" page for several seconds before realizing it was not the correct location, then he went on to click research interests Participant was not expecting the "research interest" page to be a faculty page, he was expecting a list of research areas instead Not sure whether it was a filter or not because it didn't say "filter by" After filtering the faculty, participant said he typically would check whether the information was updated or not by searching a faculty in one of the following sites: Web of Science/ Web of Knowledge, Google Scholar 	"I was not expecting the drop down" "This is not clear that this is a filter....it doesn't say filter by" (When looking at the professors) "Typically what I would do is look at all of them to see if this is up to date"	2
Task 3				
Research interest > Searches "Scott Pletcher" > clicks	00:58	<ul style="list-style-type: none"> Task went very smoothly, participant had no struggles or issues. 		1 "Pretty Easy, I've done that a lot"

under "profile results" > clicks the "website" tab > clicks "pletcher lab" > clicks "members" > finds an email				
Task 4				
Starts on the lab website > goes home > clicks on education > clicks on phd program, > clicks on curriculum > clicks on this is your program > clicks on student handbook > searches handbook for information with Ctrl+F "required"	04:24	<ul style="list-style-type: none"> • (Curriculum Page) <Information format> Participant was unsatisfied with the information provided on the "Curriculum" page because he was expecting to see a list or a table of classes. He didn't want to read the paragraphs on the page to find out the information ---> After seeing the course info on page 12 of student handbook, participant said that was actually he wanted. • (Student Book p13) <PIBS's relationship with the department> Participant speculated that the PIBS lab rotation requirement could be confusing for applicants who were not familiar with the PIBS program. <i>"If i was applying to this program, then I wouldn't go through PIBS"</i> 	<ul style="list-style-type: none"> • (Curriculum Page) "This somewhat answers my question about the program...but I am unsatisfied with that" • "I'm basically looking for a bulleted list or table with classes" • "This paragraph (on the curriculum page) is not clear to me." • "If i was applying to this program, then I wouldn't go through PIBS" 	<p>4</p> <ul style="list-style-type: none"> - "That took more time than it would take on other websites" - "It took longer than I would like it too"
Task 5				
Originally: Goes to google and	02:47	<ul style="list-style-type: none"> • Participant would like to use Google to search life in Ann Arbor and 	<ul style="list-style-type: none"> • "My first thought would be to google life in ann 	5

<p>searches “living in ann arbor”</p> <p>After being instructed it could be done with the website</p> <p>Clicks on about us > clicks on events > clicks on home > looks down at the footer and examines the links > clicks on education > clicks on outreach > clicks on PhD program > clicks on “this is your program”...task interrupted</p> <p>Task was interrupted because of a moderator interjection</p>		<p>seasonal events (events related to makerspace, theaters, plays, musicals, recreational events)</p> <ul style="list-style-type: none"> Participant neither expected to find that information from the department website nor did he wanted to refer to that information even when he knew the information was there on the website because he didn't want to get biased information – “The people making the website are specifically targeting me, so anything they tell me will be very biased and pro ann arbor” 	<p>arbor”</p> <ul style="list-style-type: none"> “I would absolutely not go to this website for that information...that’s not what I really want from this website.” “The people making the website are specifically targeting me, so anything they tell me will be very biased and pro ann arbor” 	<p>“I have no idea where I would go to find that “</p>
Task 6				
<p>PhD program > Apply > PIBS website</p> <p>After talking for a bit</p> <p>> Back to Curriculum</p>	00:30	<ul style="list-style-type: none"> Participant felt like the relationship between PIBS & MIP was not clearly presented on the website which could be an issue for people who were not familiar with PIBS Participant guessed there might be other application requirement somewhere else on the website. He checked the "Curriculum" page and found nothing and then 	<ul style="list-style-type: none"> “When I click on this apply button, I expect to see what the requirements are, and a direct link to the application” (On the current apply page on MIP) “This is very unsatisfactory” 	<p>4</p> <p>“The apply button will probably take me to something where the requirements are, but its confusing”</p>

		stopped.	***Watch Video for context***	
Task 7				
Apply > Home > Event page>Scroll through the webpage to find out an event that worked with his schedule	00:49	<ul style="list-style-type: none"> - Participant skipped using the filter and just scrolled through the page because he assumed that the event was listed in a chronological order - Participant said he was worried the filters wouldn't work correctly, because a lot of times these websites usually don't work correctly - Also indicated he hates the calendar view, because he always assumed they are out of date. - <Missed images>"The only thing that confuses me about this is some of these have pictures and some don't, so the information doesn't line up" 	<ul style="list-style-type: none"> - "I would assume they are in order calendar wise (by date)" - "The only thing that confuses me about this is some of these have pictures and some don't, so the information doesn't line up" - 	1
Task 8				
Events > home > clicks on education > phd program > opens " Training Grants Student Awards Student Fellowships Graduate Education Fund" pages all in different tabs	06:00	<ul style="list-style-type: none"> - Participant didn't like the fact that funding related information were separated into four different tabs so that he had to click into each tab to find the information. - (Training Grants Page) <Content & Format> Participant felt it was hard to find out the 	<ul style="list-style-type: none"> - "I don't like that...I don't like that there are 4 different pages I have to look at" - "If I was looking for the information, I'd have to open up 4 different pages" 	5 "My question is not answered, I actually have more questions now"

Participant switched between the different pages several times.		<p>information about how to apply for grants in the "Training Grants" page because he didn't want to read the whole paragraphs to find out the information especially when he had a lot of programs to apply for</p> <ul style="list-style-type: none"> - (Student Awards Page & Student Fellowship) The information is not helpful for the participant. - Participant expected to see a statement on the website telling him funding would be guaranteed for PhD students and what kind of fellowship, teaching assistant or research assistant opportunities would be available. 	<ul style="list-style-type: none"> - "I am confused...I do not know how I would be funded" 	
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Q1: Overall, what did you think about the MIP website? How confident did you feel about completing the tasks?

"It was okay, my initial reaction is that it is a mediocre website, it's not bad, it's not good, it's not the worst website that I've seen in this field but there is definitely better, in the sense of organization, and clear layout"

Q2: If you had frustrations, can you share some of them?

- I really don't like the funding
- I don't like that there are multiple tabs I have to click through
- I don't like the calendar on the front page, vs the events on the left side
- Doesn't like that he has to go to another web page to see what else is in the navigation, wants to know exactly what is there from a first glance.
- I don't like the blank directory page, "it's the last thing I want to see"
 - "If I just click on directory, I should see everyone"
 - Said its why he went to the search bar
- Said that when he clicked on directory, and it was blank, he didn't even notice the other links to the side, and felt the webpage was unfinished.

Q3: Do you have any suggestions for improving the website?

- Likes that it's simple, its not resource intensive or flashy

- If I was designing this website, said he would ditch that calendar, would never have an empty page, also said he would make it so the new content on the left nav would become visible when he hovers over a link
 - Participant seems very frustrated with the navigation
- Funding should have one header, and all the information should be laid out on one page. It's important for the student.

Q4: Is there any information not currently present on the website that you wish was there?

- Website doesn't refer to its relationship to PIBS, so they should find ways to include information about PIBS
- Said it would be helpful for him

Q5: Any other thoughts or comments you'd like to share?

- Like how its not full of videos or animations.

Flexible question: I noticed that you were kind of struggling with the task # x, could you tell me what was difficult/ what went wrong?

23

Major: biophysics, developmental neuroscience research and genetic engineering

Participant 3

Path Taken	Time Taken	Observations	Quotes	Rating/Reason
Task 1				
Google: "Scott Pletcher Umich" > Bio Page > click on "pletcher lab"	00:54	The task went pretty smoothly.	"It's fast. And sometimes department websites don't include personal websites based on my past experience."	1 "Done this for a lot of times."
Task 2				
Search in Pletcher Lab first Directory page > Research Faculty > examines page > research > research interests > drop down menu > aging > detailed bio page > look for rank and titles	11:52	<ul style="list-style-type: none"> Ask for the definition of "professors" Search in Pletcher Lab website first. And after moderator's further explanation, the Participant turned to use department website. Scroll down the page and said there was no research interest shown for each person on list view Look for rank and titles to find out exactly which department the person belong to. Find a CV and click it for more information 	<p>"If I want a MIP degree, I would want a professor who's primarily in MIP"</p> <p>"Professor rank is very important"</p> <p>"CV is always good because it's structured well"</p> <p>"Department websites contain a lot of information I don't need"</p> <p>"My definition of a good website is to contain all the faculty's personal websites and CV"</p>	<p>3</p> <p>"Definition not so clear"</p> <p>"Expect link to website, CV, but not there"</p>
Task 3				
Research Interest > Apply "Aging" filter > Scroll down to find Scott Pletcher and click into his bio page > click on "WEB SITES" >	00:30	Task went very smoothly, participant had no struggles or issues.		1 "All the emails are listed"

Direct to bottom of the page >click link "pletcher's lab"				
Task 4				
Education > PhD Program > Curriculum > Click on Student Handbook link on curriculum page > Look at table of contents to get page number > scroll down to certain page to find required information	02:10	<ul style="list-style-type: none"> Participant looked for a list of courses when he clicked on Curriculum Participant use Google to search for detailed course description after he found the course name in student handbook. 	<p>"What is lab rotation?"</p> <p>"I'm looking for a list of courses"</p> <p>"I may even just Google [the courses]"</p>	<p>1</p> <p>"This website is pretty clear"</p>
Task 5				
<p>Google in Chinese "Life in Ann Arbor" > browse and google in Chinese for "Ann Arbor student handbook" > find a handbook and related information</p> <p>Department website > student handbook > meet our students > undergrads > (hint: phd program) meet students > curriculum > student fellowship > apply > (hint: faq) found the link under two questions.</p>	<p>Google: 2:00</p> <p>In-Site : 5:10</p>	<ul style="list-style-type: none"> Participant said he would go to google handbook written by Chinese student association in UofM. 2 hints had to be given for the In-site part. (PhD program, FAQ) When told to find information on department website, participant went to student handbook first but found nothing. Participant clicked on Meet our Students because he found some departments put student story talking about life on website. Participant clicked on undergrads nav and hope to find life in ann arbor. Nothing there. 	<p>"I trust the opinions [on living in Ann Arbor] more from people who are from the same ethnicity as me"</p> <p>"Within the department probably no one cares about PhD's life, and don't want to spend time writing a handbook on it"</p> <p>"If it's [clearly visible] on the website, then would look at it"</p>	<p>Google: 1</p> <p>In-Site: 5</p>

		<ul style="list-style-type: none"> Participant found living in ann arbor and directed to target page after get hint of FAQ. Participant was satisfied about the living in AA page. 		
Task 6				
Navigation → under PhD → Apply → PIBS application site → Overview → Done	42s	<ul style="list-style-type: none"> Participants spotted the word 'apply' quickly on the nav bar, and had no visible problem with going to another site for the application. Participant was directed to another website, and he said he expected to see information on the same page. But he was alright for being redirected. 		1
Task 7				
Events → Browse(Scroll down) → Found May 9th Seminar	47s	Participant saw the filters but he didn't use them, because he said department events were usually not that many so he could just scroll to find them directly.	"I saw [the tab], but to use it you'd have to understand how to use the filter, so scrolling down is faster"	1
Task 8				
Education → PhD Program → FAQ → Located "Stipend and Benefits"	2:01s	<ul style="list-style-type: none"> Clarified what is meant by "Financial Support needed" The participant didn't expect any exact number of stipend posted on department websites. The participant found the information under FAQ directly. Participant said at the application stage he 	<p>"Don't think it helps based on experience"</p> <p>"Can just email the administrative people"</p> <p>"I'm not in it for money, but it's not that I don't need it, it's just not the primary concern."</p>	1 "Pretty Easy"

		<p>didn't care too much about amount of money.</p> <ul style="list-style-type: none"> Participant said he would prefer to use email to contact department if he wanted to know about funding information. 	<p>"The Offer states how much money you get usually"</p>	
<p>Q1: Overall, what did you think about the MIP website? How confident did you feel about completing the tasks?</p> <p>It's alright, not very good, but it's accessible, I've definitely seen worse.</p>				
<p>Q2: If you had frustrations, can you share some of them?</p> <p>"Life in Ann Arbor", no other frustration.</p>				
<p>Q3: Do you have any suggestions for improving the website?</p> <p>Put CV and personal website on the Bio pages.</p>				
<p>Q4: Is there any information not currently present on the website that you wish was there?</p> <p>no</p>				
<p>Q5: Any other thoughts or comments you'd like to share?</p> <p>They have a list of seminars which is actually pretty good. Some departments don't have it, mine doesn't have it. Depending on the purpose, sometimes you need to know who to talk to over there.</p>				
<p>Flexible question: I noticed that you were kind of struggling with the task # x, could you tell me what was difficult/ what went wrong?</p> <p>Wasn't asked</p>				
<p>Age: 28</p> <p>Major: Operations Management under Ross Business School</p>				

Participant 4

Video Recording:

<https://bluejeans.com/s/Vw6Vx/>

Path Taken	Time Taken	Observations	Quotes	Rating/Reason
Task 1				
<p>Goes to google and types scott pletcher umich > clicks on the first results which leads him to the MIP website > Scrolls through the page a bit, and reads the information</p> <p>Small break</p> <p>Clicks on the pletcher lab link at the bottom of the screen > then clicks on research > then research opportunities, >then publications >then untitles, then protocols, then members</p> <p>When asked to use the website: Starts home > searches scott pletcher > clicks on scott pletcher under profile results</p>	<p>2:56(Google search)</p> <p>00:20 (Search with department website)</p>	<ul style="list-style-type: none"> - Participant used Google to search Scott Pletcher as his most natural way. The first search result led him to the bio page of Prof.Pletcher on the department website. - Participant thought the professor's personal page on the department website was not his bio page in the first place because his definition of a "bio page" was one that included a full record of professors' publications - Moderator asked the participant what he would do if he used the department website to search for the same information. The participant then used the built-in search function to look for the professor's name 	<ul style="list-style-type: none"> - "I cannot find the bio page" - "When I'm looking for a bio page, I'm looking for a full biography...with studies and achievements" - 	<p>1 For Google search</p> <ul style="list-style-type: none"> - "It's easy and it's well connected with google search systems." -

Task 2				
<p>Starts on the bio page > goes to site search and types in "aging related disease" > No results > Goes back to search and types in "aging" > Not the right results > Goes back to search and types in "aging disease" > clicks on several of the professors pages such as "Ken Inoki"</p> <p>At this point, the participant went back and forth between several different staff pages, going back to search each time</p>	06:20	<ul style="list-style-type: none"> - The search functionality didn't work well: The prof. Scott Petcher didn't show in the search results after participant searched with keywords "aging-related disease", "aging", "aging disease" even though the professor was in that field. - When looking at the bio pages for each faculty member, the participant was expecting to see what their research area was somewhere on the page, instead of having to read through all the text on their bio pages to figure it out. This made it very difficult for the participant to tell who was and who wasn't related to aging/aging-related disease, which forced him to do a lot of reading on each page. 	<ul style="list-style-type: none"> - "I typed the keyword aging, and I'm seeing if that professor is coming out (in the results)" - "Since I'm not part of this field, I'm not sure if aging related disease is consistent with this guy" 	<p>3</p> <ul style="list-style-type: none"> - "The area of interest...they don't have key words" - "It's pretty common to use key words at the top of any page"
Task 3				
<p>Starts on search results > goes to search and types in scott pletcher > clicks on his bio > clicks on his lab > clicks on members</p>	1:59	<ul style="list-style-type: none"> - Participant was looking for lab members whose level were not lower than researchers (eg. he would not reach out to a postdoc) because he wanted to find someone who worked very closely 	<ul style="list-style-type: none"> - "I would say if you think the professor is busy, probably a researcher who works with him is more likely" - 	<p>1</p> <ul style="list-style-type: none"> - "I remembered the info from the first task and it was very easy"

		with professors.		
Task 4				
scott pletchers page > home > education > phd program > this is your program (tab) > FAQ (tab) > this is your program > student handbook (bottom of the page)	03:53	<ul style="list-style-type: none"> - Participant used "ctrl+F" in the handbook to search for "class" and "lab rotation" - Participant talked about using a lot of "keywords" when doing this task, essentially they served as the terms he used to try and find information when searching, such as "lab rotation" and "class requirements" 	<ul style="list-style-type: none"> - "I am trying to..oh there is a handbook" - "I started to look through the tabs and I found out there is a handbook I can download" 	<p>1</p> <ul style="list-style-type: none"> - "You just need some time...I think it's acceptable"
Task 5				
<p>1st way</p> <p>Google > life in ann arbor > 1st result</p> <p>2nd way</p> <p>MIP home > search "life in ann arbor" > no results > goes to page footer > scrolls up and down the page > back to footer > clicks on "university of michigan" in the footer - takes him to umich.edu > search bar "life in ann</p>	<p>00:30 (Google "Ann Arbor life UMich")</p> <p>02:54 (Searchwith department website)</p>	<ul style="list-style-type: none"> - **Moderator's asked this question "I noticed you go to the search function a lot. Could you clarify why?" which may bias the participant's following behavior because what he was used to do was called out by the moderator. - Participant was the only one who used the footer nav to find a link. 	<ul style="list-style-type: none"> - "I tried to find a link to that page (the one he got through googling)...but apparently there is no link"(When using MIP website) 	<p>1 for using Google search 5 for using the department website</p> <p>"I think it's the fastest way since I usually have specific keywords and I'm not just going around to familiarize with the web page"</p>

arbor" > clicks on life in ann arbor international center				
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Task 6 Application Requirement

<p>Home > education > phd program > this is your program > curriculum > this is your program > student handbook > searches 'admission' using ctrl f</p> <p>Looks for info</p> <p>> Changes his term to "apply" > scrolls to the index after not finding the information > scrolls down to "preliminary examination" > goes back to the index > uses "page down" to scroll > MIP education page > phd program > student education fund > apply > PIBS > application overview</p>	6:55	<ul style="list-style-type: none"> - Participant used "ctrl+F" in the handbook to search for "apply"- related information because there were 45 pages in the handbook and he was trying to locate the information in a faster way rather than read it page by page. - Participant spent a lot of time (~5 minutes) on searching for application information in the student handbook. He thought the info should be there in the handbook. 	<ul style="list-style-type: none"> - (when using ctrl f) "Im looking for the keyword inside the text" - "I'm trying to locate very quickly the apply keyword and find out..." - "To find out the application requirement...I'm just reading the index" - "I'm scrolling the document to find the admission requirements" - Paul asked if it(application requirements) should be here ("I think it should since its a handbook") - "The handbook is probably meant for students that are already admitted" 	<p>2 **</p> <p>Participant thought the application info should be there in the handbook so he took a long time to look for the information in that handbook but once he finally realized it was probably not there and went back to the website to find the info, he said it was not difficult for him to find the "Apply" page</p> <p>**We feel as though the rating given by the participant is not accurate given the amount of time and frustration he experienced in completing the task.</p>
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Task 7

Starts on apply > clicks on home >	00:47	<ul style="list-style-type: none"> - Participant used the calendar on the left 	<ul style="list-style-type: none"> - Nada 	1
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<p>events > uses the ">" on the calendar > may, clicks on the "8" > see's there is a seminar</p> <p>Goes to check if there's another seminar</p> <p>Goes to home > calendar ">" may > clicks on the 9</p>		<p>side of the events page to accomplish this task, he was the only one to use this method.</p>		<p>"I just remembered the events page from before"</p>
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Task 8

<p>Education > phd program > student awards, fellowships, and training grants</p>	00:24	<p>- Participant accomplished this very quickly, but the task was ended before we did a check for understanding</p>	<p>- "I think I would find everything here"</p>	<p>1</p> <p>"I still remember this before from when I was looking"</p>
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Q1: Overall, what did you think about the MIP website? How confident did you feel about completing the tasks?

- a. I feel comfortable...I think...if you want to apply to a phd program for example, you have to take some time for this...but its required so its acceptable"
- b. Paul asked what he means by time is acceptable, asked for a range
 - i. Participant: "it depends how close you are to applying, then hours is okay"
- c. Paul asked about confidence
 - i. "I was feeling pretty confident"

Q2: If you had frustrations, can you share some of them?

No

Q3: Do you have any suggestions for improving the website?

"No."

(After the moderator asked again) "I am not sure"

Q4: Is there any information not currently present on the website that you wish was there?

- a. "I'm not sure..."
- b. Clicks to about us, then directory...then primary faculty
 - i. "I think it's pretty good, you cannot expect more than that, and if you don't find anything you can use google"
 - ii. Paul asked if he would use google or the department
 - 1. "For some tasks I would have used google, like how to apply"
 - a. Any more examples?
 - i. "I'm pretty comfortable with google, so using google is okay for me"
 - ii. "If you're looking for events it's better to use the website"

Q5: Any other thoughts or comments you'd like to share?

Other comments:

- "No I think I'm good"

Paul asked if he's looked at other phd websites, how does it compare

- I think its pretty comparable, other websites split the information about phd programs"
 - "I'm not sure if its better or worse, its just a different way of finding things"
 - Paul asked if he prefers the handbook
 - "The handbook document is important in any case"

Chen asked if he had a preference

- "If you want an in depth analysis, then the handbook is best"

Chen asked him to go to the nav and if he noticed curriculum

- Goes to the curriculum page
- "I think I noticed"
- Chen asked if he expected to find that info there
 - Participant reads it for a bit..."it seems surprising to find the information like this, I wouldn't trust it...it's not very well presented"
 - Chen asked why
 - "It doesn't really pop out from the page, you need to carefully read"
 - "Reading the handbook is still better"
 - Chen asked if the handbook provides more specific info
 - "Yes, wider and more detail"

- Chen asked the details he's looking for
 - Showed us the courses in the appendix, can also see what courses are and aren't mandatory...
 - "I think it's just more detailed...if your interested in that information its better"
 - Chen asked if the handbook is common
 - "Yes"
 - Paul asked if they present it that way too
 - "Its really similar"
 - Paul asked him to pull it up
 - Couldn't find it
 - Paul asked what preference he has...handbook or filter system
 - I think its just a different way of doing the same thing...I'm moe familiar with having a single document with more information.

Flexible question: I noticed that you were kind of struggling with the task # x, could you tell me what was difficult/ what went wrong?

Age: 27

Major: aerospace engineering phd student