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Improving Human Subjects Research Office at RIT's Website

By

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Project submitted in partial requirements for the degree of
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Abstract

You should include an abstract as part of your capstone proposal.

1. Introduction

1.1. Background

All researchers conducting research activities involving human subjects or human material at Rochester Institute of Technology (RIT) must gain approval from Human Subject Research Office (HSRO) before they begin their research. The purpose of the review is to protect the rights, safety, and welfare of every participant taking part in the research. It is a serious matter, so the reviewing process is thorough. Therefore, preparing the application and collecting all required documents could be time-consuming and intimidating for researchers.

HSRO published all information related to human subjects research on their website.

Researchers planning to submit their applications to HSRO would also be recommended to visit the website for guidance. HSRO website plays an essential role in providing information to researchers and research participants. However, the overall design of the website was made more than 10 years ago. The old design could cause issues for users nowadays, and thus causing troubles and hindering their application process. A new design with user experience in mind could help researchers find information on the website more efficiently. HSRO could also benefit from receiving less inquiry from confused users.

1.2. User-Centered Design Procedure

User-centered design is defined as “an approach to design that grounds the process in information about the people who will use the product. UCD processes focus on users through the planning, design, and development of a product.”(Keinonen, 2008) What sets the user-centered design apart from other design methodologies is representative users are welcome to actively participate in the design process(Kemnitzer, 2005). This project used a user-centered design to renovate the HSRO website. Participants were invited to join different design activities to offer feedback.

a. Interview the manager at HSRO

The director of HSRO, Heather Foti, personally handles the website and all application paperwork, so she is an excellent source of the background and structure of HSRO.

b. Develop user personas

Idoughi et al. (2011) defined user persona as “a descriptive model of the user, encompassing information such as user characteristics, goals and needs.” Personas help designers build connections with users to focus on users’ needs and avoid self-referential design (Miaskiewicz & Kozar, 2011). The personas in this project will be developed based on feedback from users and HSRO.

c. Usability test 1 (Current website)

Knowing how users interact with the current website and identifying existing issues provide valuable data, which could help develop the new design.

d. Develop navigation structure

The navigation structure is crucial for a website’s success because, when done properly, it could lead users to the information they seek and make the process easy and smooth(Machlis, 1998).

e. Design document

The design document includes wireframes, audience definition, and competitive analysis. The prototype and website will be built based on this document. It could also become a resource for people who would like to further develop the website in the future.

f. Prototype

One prototype for desktop computers and one for smartphones were made for the following usability tests. The prototype was enhanced after each test.

g. Usability test 2 (on the prototype)

6 participants were invited to perform various tasks on the prototype to uncover issues and provide inputs for the next prototype.

h. Making adjustments

Based on issues found in usability test 2, adjustments and bug fixes were made accordingly. The adjusted prototype was tested in usability test 3.

i. Usability test 3

The usability test was conducted to validate the changes made after usability test 2 and uncover more issues.

j. Making adjustments

Based on usability test 2 and usability test 3, adjustments and bug fixes were made accordingly.

1.3. Goals

- Provide a functioning interface for mobile devices.
- Develop a new navigation structure and limit the number of items in the new menu to under seven.
- Use an interface design that is consistent with the current RIT website style.

2. User Research

2.1. Interview With Human Subjects Research Office

HSRO is currently managed by the director, Heather Foti, who is also in charge of the website and application. She has worked in HSRO for 15 years, so she is experienced in different aspects of the business in HSRO.

The interview was conducted on Zoom.

- About the Director
 - Heather Foti
 - She has been working in HSRO for 15 years.
 - Main content manager of the website
- Website Management
 - The website was last redesigned about 10 years ago.
 - Sometimes ITS would help maintain the website, but Director Foti is in charge of updating content on the website.
 - Director Foti mentioned that she does not always understand how Drupal works, and Drupal does not give her enough control.
 - The website usually needs to be updated (adding news...) 3 to 4 times a year depending on policy changes.
- Possible new features and enhancements
 - Add more video descriptions/slides/presentation recordings/more documentation and materials on the website.

- Restructure the menu
- A block for the latest news on the homepage
- A platform to match researchers and participants since some researchers face trouble finding participants.
- Known issues
 - Broken links
 - Old forms still existed somewhere on the web, so some people could still download the outdated forms, but ITS and Heather could not resolve the issue.
- Goals
 - For Director Foti, the website's goal is to educate people HOW to conduct human subject research and WHY these procedures are essential.

Director Foti mentioned that the control panel of Drupal is not very intuitive, which makes it difficult for her to manage the website. Even though she would like to include more multimedia content on the website, she needs more technical support.

After the interview, it is easy to see the reason behind the current presentation of the website. It was developed 10 years ago when mobile devices were not as prevalent as nowadays, so there was little demand for a mobile version. The default web content management system for RIT's website, Drupal, also caused Director Foti many troubles. Although this project focused more on the user experience of this website's audiences, this issue also needs to be addressed because it stops the content manager from releasing multimedia materials that could benefit target audiences.

2.2. Understand Users

Existing materials, questionnaires, and observations are all common ways to collect data to develop personas (Nielsen, 2013). In this project, users' information was collected through:

- Director Foti's response
- Existing materials
- Qualitative survey

2.2.1. Director Foti's response

- IRB applicants at RIT are from across different departments. They do not come from just one or a few specific professions, and the topics are very diversified.
- Applicants come from undergraduate students, graduate students, and faculty, so the age range was extensive.
- Many researchers would benefit from a platform to recruit participants.
- Their primary form of communication is through emails.

2.2.2. Existing materials about potential users

- Investigators often get the impression that IRBs are slow and cumbersome (Whitney et al., 2008).
- Investigators also bear the responsibility of slowing down the IRB reviewing process by not providing adequate supporting materials (Liberale & Kovach, 2017).
- It is common for investigators to experience anxiety when preparing their IRB applications (Sutton, 2020).

2.2.3. Qualitative survey

The survey focused on getting users' opinions and their experiences on using the HSRO website. Aside from background information questions, the survey consisted of 5 multiple choice questions and four open-ended questions. The survey link was posted on social media such as Facebook groups and WhatsApp for five days to find students who had visited the HSRO website before. Although the response rate was low, the answers were consistent. There was a total of 4 effective responses, excluding unfinished ones.

Even though the number of responses could not provide a statistically significant result, frequent issues in the responses also deserved attention.

When asked about the overall experience of using the website, their responses were mostly negative. None of them thought the HSRO website was easy to use, and 3 out of 4 were somewhat dissatisfied with the website. 3 out of 4 responses described their first impression of the website as "old" or "outdated," and 1 described it as "messy." Only Response 1 was somewhat satisfied with the website and said, "Though seemed outdated, I got all the documents (forms) I needed without too much difficulty. The checklist also helped." The other three

responses did not provide anything they liked about the website. 2 main issues were mentioned more than once in the question about the least likable part of the website. First, two respondents felt the navigation or the side panel was irritating and annoying, especially on mobile devices. Second, the content was described as “wordy” and “complex.” When asked about how this website compared to their expectations, the responses were mostly negative. 2 respondents said HSRO’s website’s style was inconsistent with other RIT websites. 2 respondents complained about how exhausting and time-consuming it was to find information on the website. Response 1 even said, “I wouldn’t want to visit the website again because it’s wordy. Writing IRB application is a tiring task, using the office of human subjects research’s website makes it more tiring.”

	Response 1	Response 2	Response 3	Response 4
How easy was it to use HSRO’s website?	Neither easy nor difficult	Somewhat difficult	Somewhat difficult	Somewhat difficult
How satisfied were you with HSRO’s website?	Somewhat satisfied	Somewhat dissatisfied	Somewhat dissatisfied	Somewhat dissatisfied
What was your first impression when you entered the website?	It looks outdated. I was worried whether it’d be difficult to find the information I needed.	Messy, hard to read on mobile	The information seemed outdated based on the design of the page as compared to the rest of the RIT website	Old, lots of text
What do you like the most about this website?	Though seemed outdated, I got all the documents (forms) I needed without too much difficulty. The checklist also helped.			
What do you like the least about this website?	The outdated look made me wonder if it was deprecated and the “real” website was somewhere else. This kind of things often happens. Also, it’s wordy.	Irritating side panel, complex information	Navigation, especially on mobile, is annoying. The contents are pushed to the side and one has to scroll horizontally to see all the information.	I hope there are shorter answers

<p>How did your experience on this website compare to your expectations?</p>	<p>"It was okay. I got the information I needed and completed my application. But I wouldn't want to visit the website again because it's wordy. Writing IRB application is a tiring task, using the office of human subjects research's website makes it more tiring. "</p>	<p>Unsatisfactory. Took very long to figure out what I needed to send</p>	<p>I expected a more mobile friendly and updated appearance that follows the more common RIT design encountered on www.rit.edu</p>	<p>This website does not look like other RIT websites at all.</p>
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TABLE 1 USER SURVEY RESPONSES

2.3. Personas

2.3.1. Persona 1: Ronald Brown: An experienced professor

Professor Ronald Brown has been teaching politics for 25 years, during which he conducted and supervised multiple human-subject research. Many students in the politics department are also doing human-subjects research, and they would come to him for advice. Even though Professor Brown is quite familiar with the IRB application process, he usually would advise his students to check out the website for information. He, himself, also has a habit of making sure all information is up to date before telling his students.

Professor Brown is 58 years old. He noticed he had presbyopia in recent years. He could not read clearly when the books were close, but when he moved the book further away, the letters became too small. A bigger font size could help him read more comfortably.

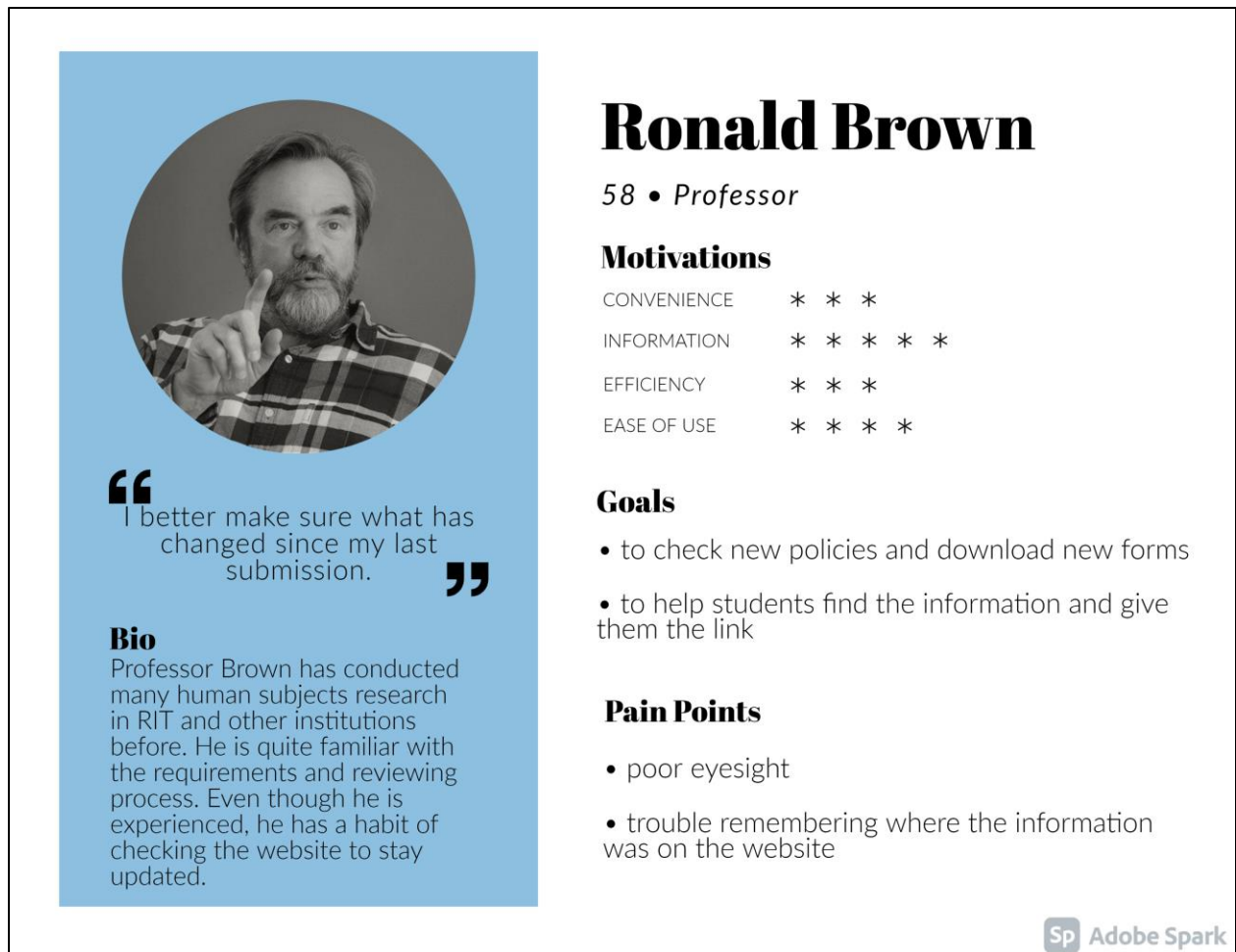


FIGURE 1 RONALD BROWN: AN EXPERIENCED PROFESSOR

2.3.2. Persona 2 Varun Kapoor: a time-conscious graduate student

Varun Kapoor is a second-year graduate student in Human-Computer Interaction. He is busy working on his capstone project about how students use their smartphones to participate in an online class. He is planning to interview ten students on campus, but before that, he needs to get approval from HSRO.

Varun gained knowledge about IRB from his research methods class, but he has never interacted with HSRO or IRB before. Although he has little experience submitting his application to HSRO, he is really good at searching for information on the internet. However, the application process differs from institution to institution. He has to visit the HSRO website to make sure he does not make any mistakes that would hinder his project. He wants to get this project done and

graduate as soon as possible, so he could not afford any delays. He hopes that the information on the HSRO website is up-to-date and correct.



FIGURE 2 PERSONA 1 VARUN KAPOOR: A TIME CONSCIOUS GRADUATE STUDENT

2.3.3. Persona 3: Ngoc-Bich Nguyen: A diligent research assistant

Ngoc-Bich is a fifth-year senior student. She is an excellent student and frequently makes it to the dean’s list. She plans to keep pursuing a graduate degree in the future, so she got a research assistant job on campus, trying to gain more experience in scholarly work. She is excellent at her work, and her professors trust her with different tasks.

Ngoc-Bich sometimes will assist a professor working on human subjects research. Since she holds herself to a high standard, she would like to educate herself more about human subjects research. As a Gen Z student, she is used to watching video tutorials and infographics. She finds visual and audio inputs help her understand content more efficiently. For Ngoc-Bich, the mobile

phone is not only a device for communication and entertainment, but also is a great tool for education. She would appreciate a more mobile-friendly website.

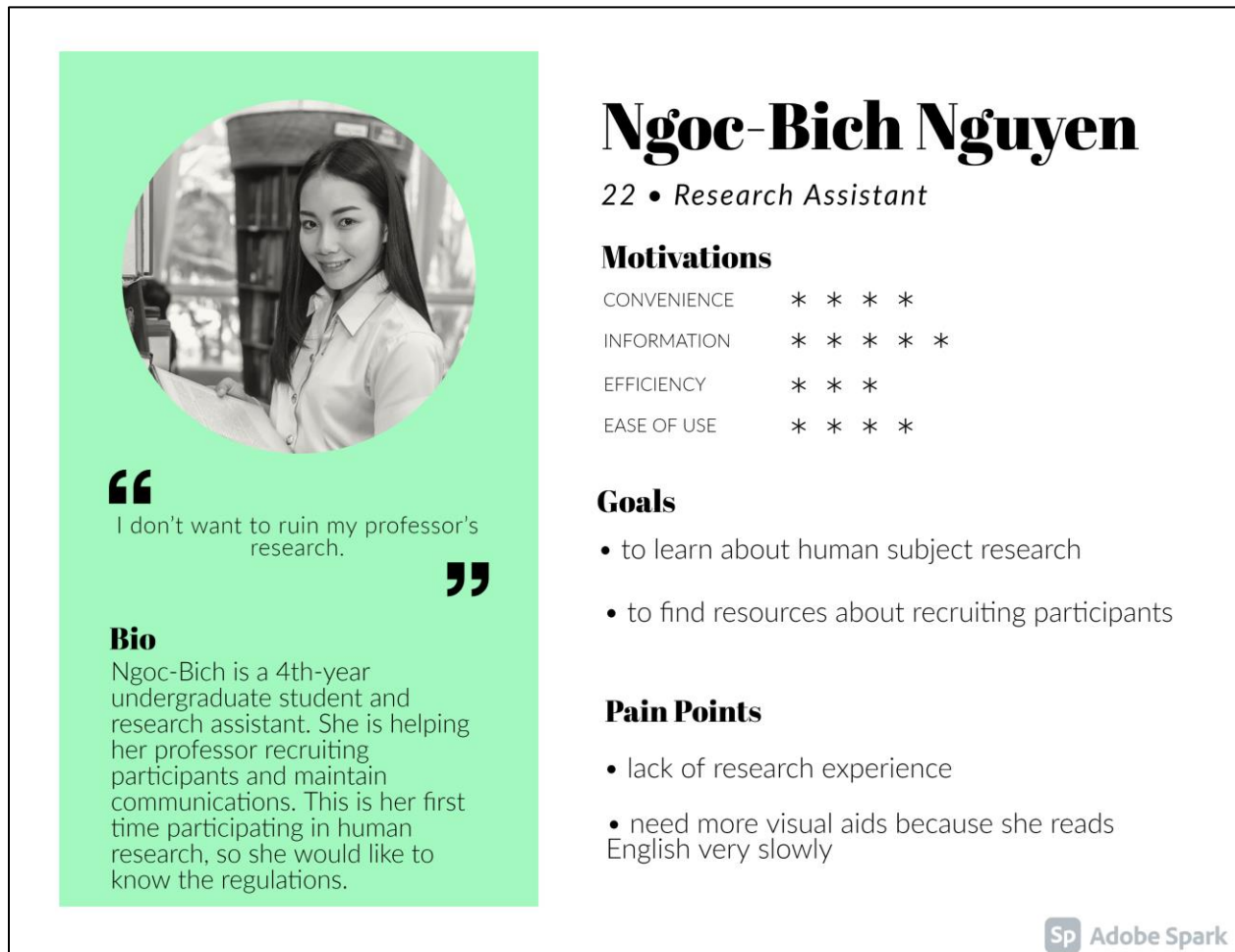


FIGURE 3 PERSONA 3: NGOC-BICH NGUYEN: A DILIGENT RESEARCH ASSISTANT

3. Develop Navigation Structure

3.1. Unmoderated Open Card Sorting

Card sorting is used by information architects to organize information items, features, and functions in a way that is easy for users to find. An open card sorting usually starts by asking participants to sort the cards prepared by researchers into piles that make sense for the participants. And then, the participants will be asked to name each pile. A closed card sorting is when participants are invited to sort the cards into a set of pre-existing categories or structures (Wood & Wood, 2008).

In this study, the card sorting was unmoderated. Participants were asked to complete the activity on their own through UX Metrics. The recruitment message was posted on social media.

Twenty-eight cards were created based on the original menu items on the HSRO website. Descriptions were provided to some terminologies to help users understand the content.

3.2. Card sorting result

Five responses were collected. The medium time to complete is 24 minutes 3 seconds. Thirty-five unique groups were created. After merging conceptually similar groups, such as sample and samples, informed consent and consent, there were twenty-five unique groups left. One participant did not name his/her groups, so eight groups were simply named G1 to G8.

Group Name	Created by	Cards added	Frequency
Informed consent	3 Participant	Assent Tips	2 time
		Sample Assent Form	2 time
		Documentation of Research	1 time
		Waiver of the Requirements to Obtain Informed Consent	2 time
		Consent Form Requirements for Non-Exempt Research	3 time
		The Informed Consent Process with Children	2 time
		Informed Consent Sample for Non-Exempt Research	2 time
		Submission Checklist	1 time
		Exempt Informed Consent Samples	2 time
Application processes	3 Participant	Documentation of Research	2 time
		Submission Checklist	3 time
		Tips for completing the application form	3 time
		IRB Application Forms	1 time
		Training Information	3 time
		Procedures for submitting application	3 time
Definition	3 Participant	Definition of NIH-Funded Clinical Research	3 time
		Principles for Reviewing Research	1 time
		Review Categories	1 time
		Types of Review	1 time
		Exempt Research	1 time
		Information for Single IRB (sIRB) Requirement	1 time
		Definition of research and human subjects	3 time
		Identifying risks in research	1 time
IRB	2 Participants	Information for Single IRB (sIRB) Requirement	2 times
		IRB Application Forms	2 times
		Review Categories	1 time

Group Name	Created by	Cards added	Frequency
		Background of IRB Committees	1 time
I don't know.	2 Participant	Definition of research and human subjects	1 time
		Exempt Research	1 time
		Identifying risks in research	1 time
		RIT's Federalwide Award Number	1 time
		Definition of NIH-Funded Clinical Research	1 time
HSRO	2 Participant	HSRO's responsibilities	2 time
		Types of Review	1 time
		Background of HSRO	2 time
		Background of IRB Committees	1 time
		Principles for Reviewing Research	1 time
SAMPLE	2 Participant	Waiver of the Requirements to Obtain Informed Consent	1 time
		Exempt Informed Consent Samples	2 time
		Exempt Research	2 time
		Consent Form Requirements for Non-Exempt Research	1 time
		The Informed Consent Process with Children	1 time
		Informed Consent Sample for Non-Exempt Research	2 time
Background information	2 Participant	Background of IRB Committees	2 time
		RIT's Federalwide Award Number	1 time
		Background of HSRO	2 time
		Contact Information	1 time
		News	1 time
		HSRO's responsibilities	2 time
		FAQ	1 time
Information	1 Participant	FAQ	1 time
		Contact Information	1 time
		RIT's Federalwide Award Number	1 time
Assent	1 Participant	Assent Tips	1 time
		Sample Assent Form	1 time
News	1 Participant	News	1 time
The informed Consent Process with Children	1 Participant	Waiver of the Requirements to Obtain Informed Consent	1 time
		Sample Assent Form	1 time
		The Informed Consent Process with Children	1 time
		Assent Tips	1 time
METHOD	1 Participant	Principles for Reviewing Research	1 time
		Identifying risks in research	1 time
		Training Information	1 time
		Tips for completing the application form	1 time
		Review Categories	1 time

Group Name	Created by	Cards added	Frequency
		Types of Review	1 time
INFORM	1 Participant	IRB Application Forms	1 time
		Contact Information	1 time
		Information for Single IRB (sIRB) Requirement	1 time
		Procedures for submitting application	1 time
		News	1 time
QUESTION	1 Participant	FAQ	1 time
		Documentation of Research	1 time
		RIT's Federalwide Award Number	1 time
basic information	1 Participant	Contact Information	1 time
		News	1 time
		FAQ	1 time
Review	1 Participant	Review Categories	1 time
		Identifying risks in research	1 time
		Types of Review	1 time
		Principles for Reviewing Research	1 time
G1	1 Participant	Submission Checklist	1 time
		RIT's Federalwide Award Number	1 time
		Review Categories	1 time
G2	1 Participant	Background of IRB Committees	1 time
		Background of HSRO	1 time
G3	1 Participant	Training Information	1 time
		Contact Information	1 time
		FAQ	1 time
		News	1 time
		Principles for Reviewing Research	1 time
G4	1 Participant	Sample Assent Form	1 time
		Waiver of the Requirements to Obtain Informed Consent	1 time
		IRB Application Forms	1 time
		Documentation of Research	1 time
G5	1 Participant	Tips for completing the application form	1 time
		Assent Tips	1 time
		Identifying risks in research	1 time
G6	1 Participant	Procedures for submitting application	1 time
		Definition of research and human subjects	1 time
		Definition of NIH-Funded Clinical Research	1 time
G7	1 Participant	The Informed Consent Process with Children	1 time
		Exempt Informed Consent Samples	1 time
		Consent Form Requirements for Non-Exempt Research	1 time
		Informed Consent Sample for Non-Exempt Research	1 time

Group Name	Created by	Cards added	Frequency
		Exempt Research	1 time
G8	1 Participant	HSRO's responsibilities	1 time
		Information for Single IRB (sIRB) Requirement	1 time
		Types of Review	1 time

TABLE 2 CARD SORTING RESULT

Some cards are frequently grouped together, although under different group names.

Five participants grouped these cards.

Informed Consent Sample for Non-Exempt Research

Exempt Informed Consent Samples

Definition of Research and Human Subjects

Definition of NIH-Funded Clinical Research

Assent Tips

Sample Assent Form

Four participants grouped these cards.

1. Background of IRB Committees
2. Background of HSRO
3. HSRO's responsibilities

1. FAQ
2. Contact Information

1. Consent Form Requirements for Non-Exempt Research
2. The Informed Consent Process with Children
3. Informed Consent Sample for Non-Exempt Research
4. Exempt Informed Consent Samples

Three participants grouped these cards

1. Submission Checklist
2. Tips for completing the application form
3. Training Information
4. Procedures for submitting application

-
1. Types of Review
 2. Principles for Reviewing Research
 3. Identifying Risks in Research
-
1. Exempt Informed Consent Samples
 2. Waiver of the Requirements to Obtain Informed Consent
 3. Consent Form Requirements for Non-Exempt Research
 4. The Informed Consent Process with Children
 5. Informed Consent Sample for Non-Exempt Research
-

The reason why the results did not seem quite conclusive could be because 1) Not enough responses 2) participants were not given a specific context. When the participant was sorting with a mindset that was different from real-world tasks or they only considered surface characteristics, such as similar wordings, the result may not be usable (Spencer & Warfel, 2004).

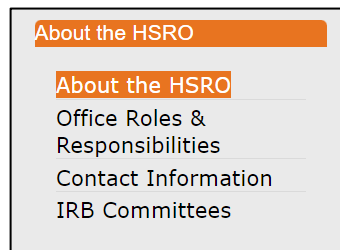


FIGURE 4 THE SUBMUNE OF ABOUT THE HSRO ON THE WEBSITE

On the current HSRO website, *About the HSRO*, *Office Role and Responsibilities*, *Contact*, and *IRB Committees* were in the same submenu. However, according to the card sorting result, only one out of five participants grouped *Contact* with the other three cards, and four out of five participants grouped *Contact* with *FAQ*.

4. Usability Test (on the current HSRO website)

4.1. Task Design

The scenario set is an inexperienced student trying to submit an IRB application from determining what kind of project is required to be reviewed by HSRO to actually submit an application. The participants were asked to think aloud while completing the tasks, so there were encouraged to share their thoughts, feelings, or even suggestions with the moderator. Total 6 participants were invited to the test. All tests were held remotely on Zoom or Google meet; 3 used their laptop or desktop to test; 3 used their mobile device.

Imagine you are a freshman who has minimal knowledge of research or human subjects research...

#	Task description	Task goal
1	Do you need to submit your project for review? You want to study a topic about how digital products affect kindergarten children. You want to observe and interview 10 children. You are not sure if your project needs to be reviewed by HSRO, so you go to Human Subjects Research Office website to find out.	Users can find information about if they need or need not submit their research for review when they have a research idea in mind.
2	What if, after reading the definition of research and human subjects, you still have some doubts. What would you do next?	Users can find contact information and seek help.
3	Now, you know you need to submit your research for review. What will you do next?	Users can find submission information.
4	You are working on the application form, and you see this question on the application form: “If you believe your project qualifies for Exemption, which exemption number(s) apply? *The RIT Institutional Review Board (IRB) categorizes Human Subjects Research into three Risk Types (Exempt, No Greater than Minimal Risk, and Greater than Minimal Risk). The IRB makes the final determination of risk type. For classifications, please see the RIT HSRO website Types of Review.” Please find the exemption numbers on the website.	Users can find the information to fill out the application form based on the instruction provided.
5	You realized that you need to collect parental informed consent; how would you start?	Users can find instructions on how to draft a parental informed consent.
6	You have all your application forms, consent forms, and supporting materials ready. You would like to check if any document is missing. What could you do?	Users can find the submission checklist.
7	Great! You have everything ready. Where would you send your application to?	Users can find the email to send their applications to.

TABLE 3 USABILITY TEST TASKS

4.2. Usability Test 1 Result

	P1	P2	P3	P4	P5	P6
	Desktop	Desktop	Desktop	Smartphone	Smartphone	iPad
1	<p>448 seconds</p> <p>Fail</p> <p>P1 clicked <i>Home</i>, <i>Types of Review</i>, <i>Institutional Review Board</i>, but she could not find the information, so she started to click the menu one by one. P1 found <i>Submitting your research</i>, but P1 was still not sure. P1 said, “At this point, I think I would be inclined myself to contact somebody in the office.”</p>	<p>492 seconds</p> <p>Success</p> <p>P2 clicked <i>Home</i>, <i>About HSRO</i>, <i>Institutional Review Board</i>, <i>Checklist</i>, and then he found “How do I know if my project needs to be reviewed?” in <i>FAQ</i>.</p>	<p>692 seconds</p> <p>Fail</p> <p>P3 clicked <i>Types of Review</i> and spent some time <i>Exemption Category</i>, <i>Expedited Category</i>, and <i>Review Categories</i> but still unsure.</p>	<p>515 seconds</p> <p>Success</p> <p>P4 clicked <i>Institutional review board</i> and was frustrated with the menu showing up when unneeded. P4 was not happy that the website was not responsive, so she switched to landscape view. She clicked <i>Submitting your research</i> and found a line on the page with an answer.</p>	<p>605 seconds</p> <p>Fail</p> <p>P5 first clicked <i>Training</i> but did not find anything useful. She then clicked <i>Types of Review</i>. After reading the information on the <i>types of review</i> page, P5 thought a review would be needed, even though P5 was still not sure.</p>	<p>99 seconds</p> <p>Success</p> <p>P6 read the bullet points on the home page and then went to <i>FAQ</i>. He immediately found “How do I know if my project needs to be reviewed?” on the page.</p>
2	<p>6 seconds</p> <p>Success</p> <p>P1 clicked <i>Contact</i> on the menu and found the email and numbers.</p>	<p>54 seconds</p> <p>Success</p> <p>P2 scrolled down because he expected the contact information would be at the bottom. He did not notice <i>Contact</i> in the menu, but he remembered seeing the information in <i>About</i></p>	<p>5 seconds</p> <p>Success</p> <p>P3 clicked <i>Contact</i> on the menu and found the email and numbers.</p>	<p>12 seconds</p> <p>Success</p> <p>P4 clicked <i>Contact</i> on the menu and found the email and numbers.</p>	<p>10 seconds</p> <p>Success</p> <p>P5 clicked <i>Contact</i> on the menu and found the email and numbers.</p>	<p>3 seconds</p> <p>Success</p> <p>P6 clicked <i>Contact</i> on the menu and found the email and numbers.</p>

		the HSRO and found it.				
3	287 seconds Success P1 clicked <i>Submitting Your Research</i> and read the procedures. Then, she found the application forms and training info successfully.	288 seconds Success P2 saw <i>Form A</i> in the <i>Checklist</i> but was not sure what <i>Form A</i> was. He went to <i>IRB Forms</i> and used ctrl+f to find <i>Form A</i> . P2 found two different <i>Form As</i> , so he downloaded both to see the difference.	600 seconds” Fail P3 clicked <i>Submitting Your Research</i> . P3 expected to see clear Step 1, 2, 3, but the information was in blocks of texts. “It is not easy for me to quickly scan the page.” When I told P3, “there is an application form on the website,” P3 clicked the directory on top, which is actually for RIT’s website, not HSRO. Then P3 found the checklist and <i>Form A</i> .	747 seconds Success P4 clicked <i>Submitting Your Research</i> in the hamburger menu. The submenu did not show properly on mobile devices, so P4 did not notice a submenu. And then she went to <i>Checklist</i> . P4 saw <i>Form A</i> and expected a link to it, but links were not provided. P4 went to <i>Resources</i> and then <i>IRB Forms</i> to find <i>Form A</i> . P4 eventually found 2 <i>Form As</i> but did not know the difference.	418 seconds Fail P5 clicked <i>IRB Forms</i> and then downloaded <i>Submission Checklist</i> . P5 went to download <i>Form A</i> according to the checklist but did not know what NTID <i>Form A</i> was. P5 believed that the checklist did not provide enough guidance for her to complete the submission.	199 seconds Success P6 clicked <i>Submission Checklist</i> . P6 saw <i>Form A</i> on the checklist and went to <i>IRB Forms</i> to find download links.
4	30 seconds Success P1 clicked <i>Types of Review</i> and then <i>Exemption Categories</i> .	83 seconds Success P2 clicked <i>Types of Review</i> and then <i>Exemption Categories</i> .	37 seconds Success P3 clicked <i>Types of Review</i> and then <i>Exemption Categories</i> .	26 seconds Success P4 clicked <i>Types of Review</i> and then <i>Exemption Categories</i> .	158 seconds Fail P5 went to <i>About the HSRO</i> and couldn’t find the exemption numbers, so P5 decided to give up and contact the office.	112 seconds Success P6 clicked <i>Types of Review</i> and then <i>Exemption Categories</i> .
5	138 seconds Fail	147 seconds Success	83 seconds Fail	106 seconds Success	122 seconds Fail	98 seconds Success

	P1 found general guidelines about informed consent but did not find parental informed consent samples.	P2 google searched “RIT parental informed consent.”	P3 first checked <i>Informed Consent</i> and found <i>Exempt Research Informed Consent Example</i> . P3 thought this could be useful for drafting a parental consent and did not continue looking for the parental informed consent sample.	P4 clicked <i>IRB Forms</i> but did not find anything. She then went to <i>Resources</i> and found the information.	P5 clicked <i>Informed Consent</i> , but the information was too general. P5 thought there was no sample on the website and was frustrated.	P6 clicked <i>Informed Consent</i> and then <i>Informed Consent Process with Children</i> . After I told P6 that there was a sample on the website, P6 went to <i>Resources</i> and found samples.
6	3 seconds Success P1 clicked <i>Submission Checklist</i> in the menu.	5 seconds Success P2 clicked <i>Submission Checklist</i> in the menu.	8 seconds Success P3 clicked <i>Submission Checklist</i> in the menu.	5 seconds Success P4 clicked <i>Submission Checklist</i> in the menu.	3 seconds Success P5 clicked <i>Submission Checklist</i> in the menu.	5 seconds Success P6 clicked <i>Submission Checklist</i> in the menu.
7	120 seconds Success P1 went to <i>Submitting Your Research</i> and then <i>Institutional Review Board</i> , where she found a broken link. She went to <i>Standard Operation Procedures</i> . It took P1 30 seconds to locate the email address on this page.	186 seconds Success P2 first went to <i>Checklist</i> , expecting submission detail, but it was not there. Finally, P2 found the email in <i>IRB forms</i>	200 seconds Success P3 remembered seeing the information before but could not find it anymore. Finally, P3 found the email in the <i>FAQ</i> .	220 seconds Success P4 clicked <i>Submitting Your Research</i> and expected to see a submit button. P4 noticed the submenu at the bottom and found the email in <i>Standard Operation Procedure</i> .	10 seconds Fail P5 decided to send the application to the person in <i>Contact</i> .	209 seconds Success P6 clicked <i>Submitting Your Research</i> but could not find a link to submit the research. He then clicked <i>Institutional Review Board</i> and then <i>Home</i> , where P6 found the email for submission.

Note		<p>P2 expected to see a download link when seeing Form A. P2 preferred to see clear step1,2,3 instructions.</p>	<p>P3 said the font size is too small. “Too wordy. I don’t know where to start.”</p> <p>P3 found 2 “Types of Reviews” in the menu and was confused.</p>	<p>P4 said, “Information is hidden in wordy paragraphs.” P4 did not want to download the checklist. When P4 saw the checklist, she immediately asked, “Where is Form A? What is Form A?”</p>	<p>P5 complained about how difficult it was to browse the website on her phone and felt irritated.</p> <p>P5 preferred to see the checklist on the website, not on a pdf document.</p> <p>P5 was expecting a page for all downloadable content on the website.</p>	<p>P6 said, “Probably helpful if there was a link to Form A.”</p>
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TABLE 4 USABILITY TEST 1 NOTE

4.3. Issues Found in Usability Test 1

All 6 participants were aged between 20 to 40 years old and had not visited the HSRO website before. Three of them were RIT students, and the other three were recent college graduates and school faculty. Three participants successfully completed seven tasks.

#	Task description	Number of participants who failed
1	<p>Do you need to submit your project for review?</p> <p>You want to study a topic about how digital products affect kindergarten children. You want to observe and interview 10 children. You are not sure if your project needs to be reviewed by HSRO, so you go to Human Subjects Research Office website to find out.</p>	3
2	<p>What if, after reading the definition of research and human subjects, you still have some doubts. What would you do next?</p>	0
3	<p>Now, you know you need to submit your research for review. What will you do next?</p>	2
4	<p>You are working on the application form, and you see this question on the application form:</p> <p>“If you believe your project qualifies for Exemption, which exemption number(s) apply?”</p> <p>*The RIT Institutional Review Board (IRB) categorizes Human Subjects Research into three Risk Types (Exempt, No Greater than Minimal Risk, and Greater than Minimal Risk). The IRB makes the final determination of risk type. For classifications, please see the RIT HSRO website Types of Review.”</p> <p>Please find the exemption numbers on the website.</p>	1
5	<p>You realized that you need to collect parental informed consent; how would you start?</p>	3

#	Task description	Number of participants who failed
6	You have all your application forms, consent forms, and supporting materials ready. You would like to check if any document is missing. What could you do?	0
7	Great! You have everything ready. Where would you send your application to?	1

TABLE 5 USABILITY TEST 1, NUMBER OF PARTICIPANTS WHO FAILED

- **The website is not responsive.**

P4 and P5 used their smartphone to test the website. They both showed frustration when reading on the website because they had to scroll left and right to see the full content (Figure 5), and the menu would slide open unexpectedly.



FIGURE 5 THE WEBSITE IS NOT RESPONSIVE.

When users clicked the hamburger menu icon, a black sidebar menu would appear. However, the menu did not show all items (Figure 6). Missing items in the mobile menu contained crucial information for users. Although a complete menu could be found at the

bottom of the page (Figure 7), the placement was not consistent with most users' experience, so both P4 and P5 did not notice the menu at the bottom.

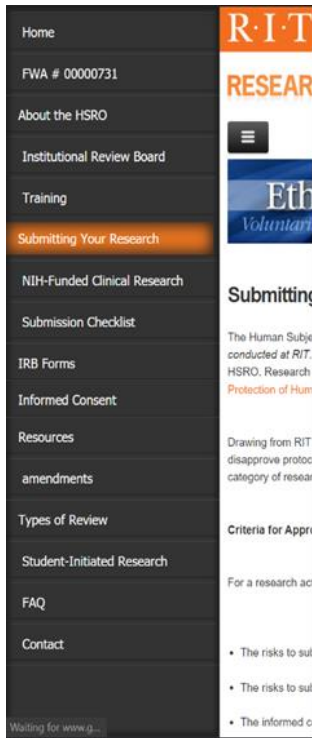


FIGURE 6 THE SUBMENU OF SUBMITTING YOUR RESEARCH WAS NOT DISPLAYED IN THE SIDEBAR MENU.

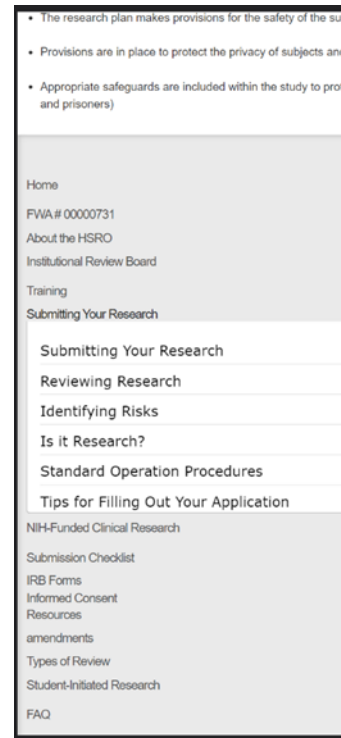


FIGURE 7 THE SUBMENU WAS SHOWN AT THE BOTTOM OF THE PAGE, WHICH WAS NOT EASILY NOTICEABLE.

- **Unclear names of menu items**
 - P3 found two different *Contact* in the menu and was confused.
 - P4 saw “FWA # 00000731” in the menu and clicked on it, and still had no idea what it was.
 - P1 and P3 failed to find the sample of parental informed consent because they thought parental informed consent would also be on the *Informed Consent* page. However, the sample was in *Resources*.

- **Links were not provided when needed.**

P2, P4, and P6 saw *Form A* in different places on the website, but they all expected to see a link directing them to *Form A*, so they would not have to spend extra effort to find it.

- **Lack of visual hierarchy**

All participants, at some point during the test, complained that there were too many words. P2 specifically said that without bullet points and large headings, it was hard to

locate information. P4 also said, “Submission link or email is essential information. They should be more obvious and easier to find.”

- **Font Size**

P3 complained that the font size was too small. According to Accessibility at Penn State | Font Size on the Web, 12pt (=16px) is generally recommended for body text. However, the font size on the HSRO website was 13px, which was smaller than recommended.

- **Lack of clear step-by-step instructions.**

P2 and P3 both expected to see clear step-by-step instructions in the Submitting Your Research tab. They felt they read a lot but still had no clue where to start.

- **Unclear names of downloadable files.**

All 6 participants did not know what *NTID Form A* was when they saw two different *Form As* at first sight. The orange links quickly grabbed their attention because they were looking for download links, so they missed the descriptions on top.

- **Similar contents were not grouped together.**

Information about informed consent was in both the *Informed Consent* page and the *Resources* page. When users read the content in *Informed Consent*, they might think that was all the information about informed consent on this website. However, the samples and templates were in the *Resources* tab.

5. Develop Prototype

The user survey revealed that the HSRO website did not conform to the RIT website’s style and looked outdated. Therefore, the new design will adopt the RIT website’s style and follow RIT branding’s style guide.

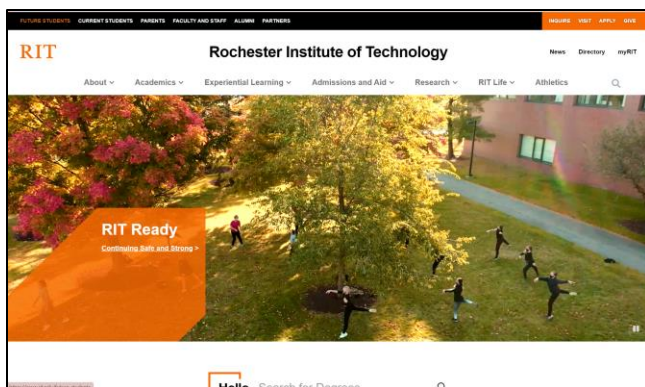


FIGURE 8 RIT HOME PAGE

5.1. Design example

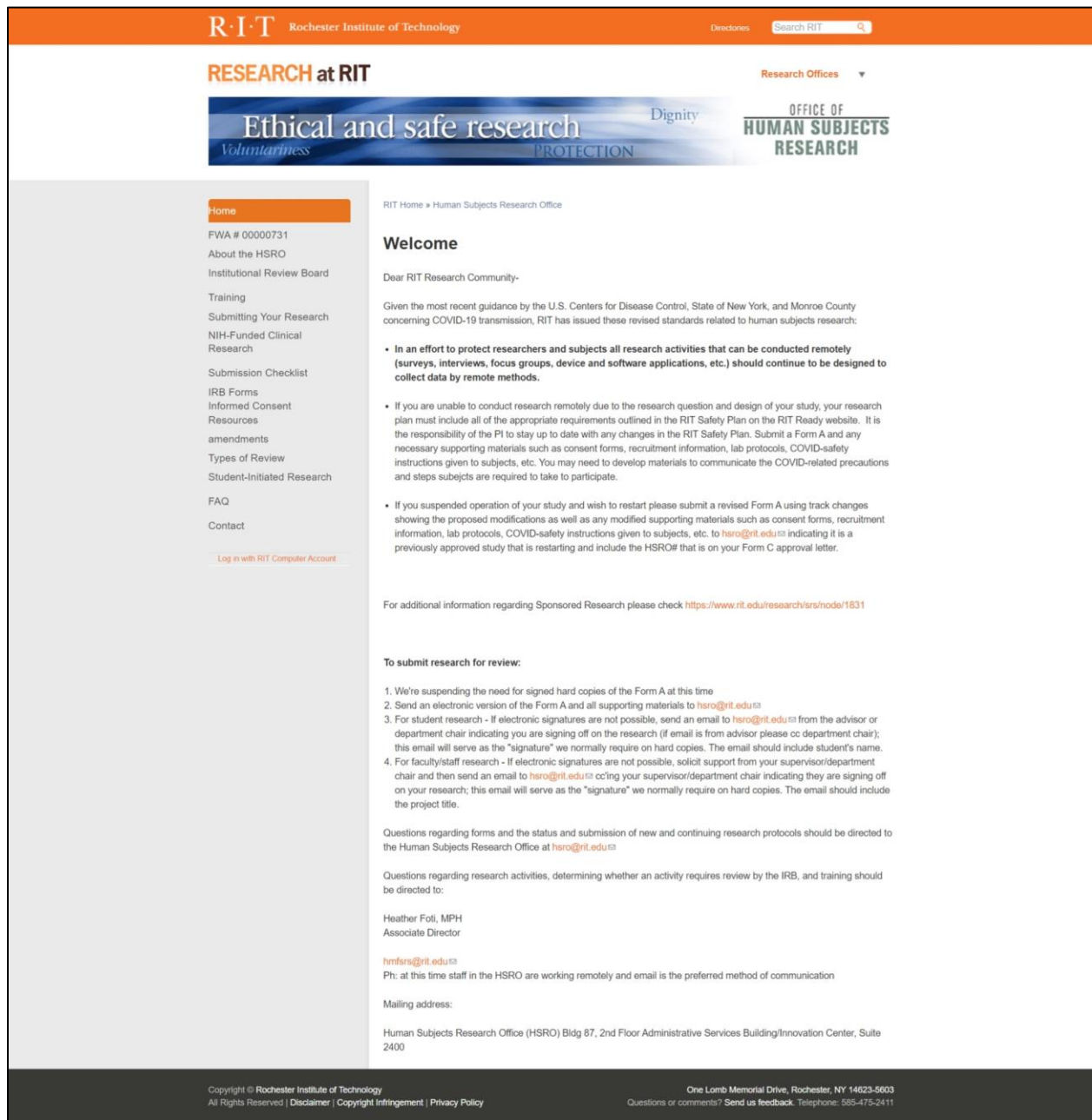


FIGURE 9 SCREENSHOT OF THE ORIGINAL HSRO WEBSITE

Figure 10 is a new design of the same content from the original HSRO website (Figure 9).

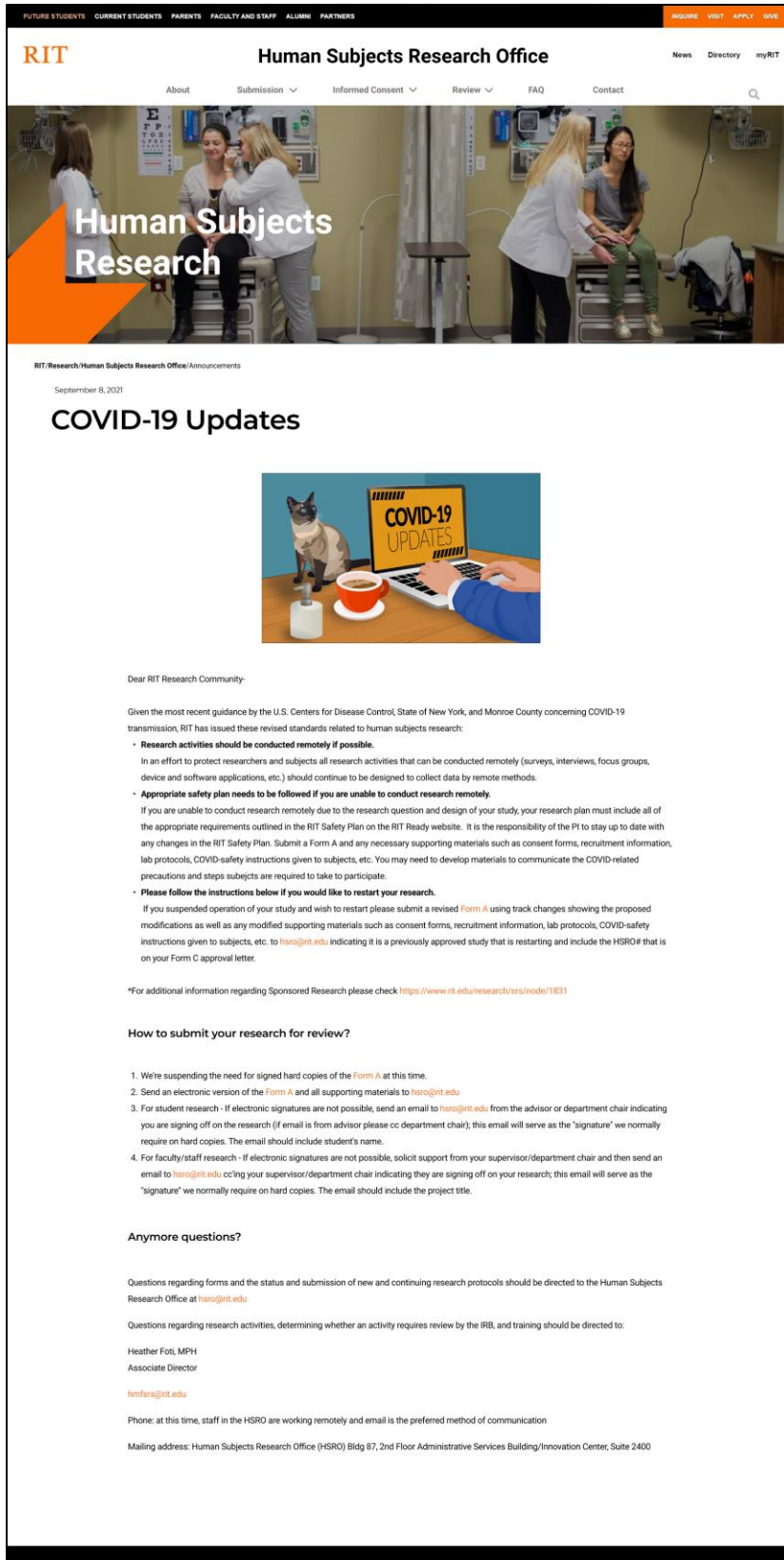


FIGURE 10 SCREENSHOT OF THE PROTOTYPE

A clear and descriptive title and a relevant image of *COVID -19 Updates* were added to the page. The first part of this page was about three revised standards. Instead of simply listing them out with bullet points using the same font, the new design includes a bolded summarize line after each bullet point, so users could read the bolded line then decide if they need to read the whole paragraph. Every *Form A* on this page has turned into a hyperlink to help users locate the application form. On the old website, contact information stuck right after the submission process, so the paragraph looked long. Separating contact information and the submission process into two different sections could help users locate the information more easily.

6. Usability Test 2 (on the prototype)

In usability tests 2 and 3, participants were asked to perform the same tasks as in usability test 1. 6 participants were invited to each test. Just like usability test 1, 3 participants were asked to test the desktop version, and the other 3 participants were asked to test the mobile version.

Participants' think-aloud processes were recorded on zoom or google meet, and participants interacted with the prototype through Maze. Maze determines a task is successful or not by if the user reaches specific destinations on the website. However, in this usability test, the goal was not only to reach certain contents on the website; the goal was for the users to actually see the information. Therefore, some adjustments needed to be made to have the test run smoothly. A green finish button (Figure 11) was added on the upper right corner of the prototype where no content was blocked. When the participants found the key information or they would like to give up, they could click the green finish button, and it would lead to the next task.

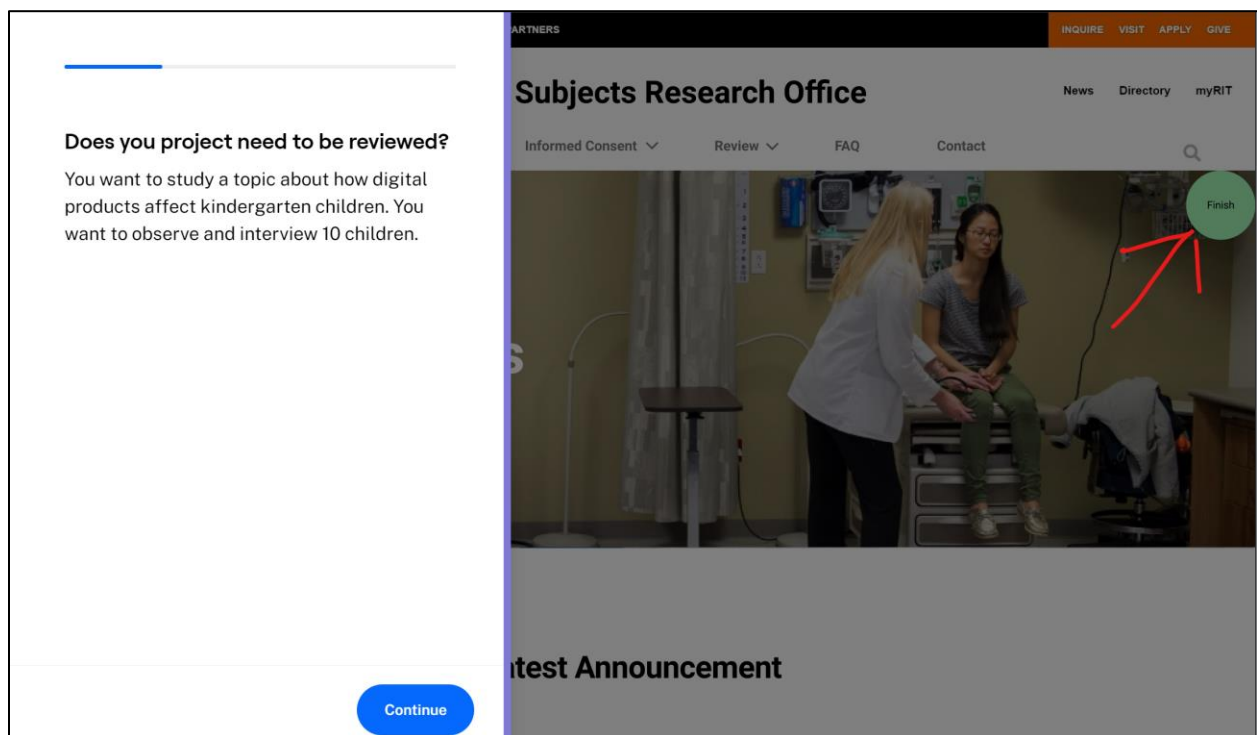


FIGURE 11 THE GREEN FINISH BUTTON ON THE PROTOTYPE

6.1. Usability Test 2 Result

	P7	P8	P9	P10	P11	P12
	Desktop			Smartphone		
1	685.3 seconds Success P7 spent some time exploring the website before she began. Her first instinct was to click <i>About</i> because she thought if she knew what this office was doing, then she would know if her project was part of their business.	482.1 seconds Fail P8 clicked on every item in the main menu. She thought <i>Submission</i> could help her with the submission process but not to decide whether she needed to submit or not.	100.6 seconds Success P9 used the popular resources on the home page and clicked <i>FAQ</i> to find the answer.	254.1 seconds Success When P10 visited a new website, he usually would scroll around to see big titles on the page. He did not find the information in <i>Informed Consent</i> and <i>Submission Overview</i> , so he said he would use ctrl+F or search to find the keyword.	170.4 seconds Success P11 clicked the menu to see what was in there. P11 thought the font was too small, so he enlarged the window. He clicked the <i>Step-by-Step Guide</i> and found the answer in Step 1.	40.5 seconds Fail P12 scrolled to the Popular Resources section and said, “They don’t seem relevant to this question.” She then clicked <i>Finish</i> because she did not realize the hamburger menu was working.
2	22.9 seconds Success P7 clicked <i>Contact</i> immediately, but she spent some time reading the descriptions on the page.	548.4 seconds Success P8 would rather carefully read everything in the <i>About</i> section before reaching out for help. When I asked her to contact the office, she immediately found the Contact page. She felt that the purposes for the two emails could be more precise.	117.7 seconds Success In the beginning, P9 could not find his way back to the home page. After a short while, he found <i>Contact</i> .	60.6 seconds Success P10 usually would go to <i>FAQ</i> or <i>Contact</i> when he has questions, and he found both.	27.1 seconds Success P11 went to <i>Contact</i> and found the phone number. He preferred a phone number because it was faster to get an answer from a person.	122.5 seconds Success P12 preferred to read everything on the website before reaching out for help. When I asked her to call the office, she immediately found the contact information.
3	26.0 seconds Success P7 went for the <i>Step by Step Guide</i> .	21.5 seconds Success P8 read the submission overview and then went to the <i>Step by Step Guide</i>	139.3 seconds Success P9 found links to the application forms on the home page.	54.3 seconds Success P10 quickly clicked Step by Step Guide in the menu.	68.3 seconds Success P11 went to <i>Forms and Tips</i> . Since he has seen the <i>Step by Step Guide</i> in previous tasks. He would	63.2 seconds Success P12 tried to click <i>Apply</i> on top of the menu, but that was for RIT admission. She clicked <i>Submit Your Research</i> in <i>Popular</i>

	P7	P8	P9	P10	P11	P12
					choose to download the forms now.	<i>Resources</i> and found the <i>Step by Step Guide</i> .
4	197.2 seconds Success P7 clicked <i>Submission</i> at the beginning. After I reminded her to read the prompt, she found the information on the <i>Review</i> page.	61.9 seconds Success P8 saw <i>Types of Review</i> in the prompt, so she clicked <i>Review</i> in the menu and then <i>Types of Review</i> and finally <i>Exempt categories</i> .	46.8 seconds Success P9 quickly found <i>Types of Review</i> in the popular resources section.	82.7 seconds Success P10 found “Types of Review” in the menu, but he spent some time looking for the “Exempt” section on the page.	344.3 seconds Success P11 spent some time in the “Informed Consent” section. Later, he realized what “Review” means and found the exemption numbers.	179.9 seconds Success P12 would like to figure out what IRB means, so she clicked “Do you need an IRB?” and then she found “Types of Review” in “Popular Resources.”
5	285.2 seconds Success P7 went to <i>Documentation of Research</i> because she assumed this page would contain comprehensive information of informed consent.	19.9 seconds Success P8 remembered seeing this while completing previous tasks, so she found the information instantly.	20.2 seconds Success P9 clicked <i>Informed Consent</i> on the menu and found parental informed consent guidelines in <i>Research with Children</i> .	43 seconds Success P10 clicked <i>Informed Consent</i> on the menu and found parental informed consent guidelines in <i>Research with Children</i> .	98.7 seconds Fail P11 clicked <i>Informed Consent</i> . He saw too many words on the Exempt page, but he believed the answer was somewhere in the paragraph.	573.1 seconds Success After P12 read <i>Informed Consent Overview</i> and <i>Documentation of Research</i> , she still couldn’t find the information, so she said she would choose to use the magnifying glass to search on the website. Later, she found <i>Research With Children</i> on the menu.
6	202.5 seconds Success P7 remembered seeing the checklist but could not remember where it was.	91.7 seconds Success P8 did not understand the prompt at the beginning. After some explanation, she remembered seeing the checklist during previous tasks and found it.	139.1 seconds Success P9 used the link on the home page and found the checklist.	30.4 seconds Success P10 found the <i>Submission Checklist</i> in the menu.	16.2 seconds Success P11 remembered seeing the checklist in previous tasks, so he found it immediately.	39.3 seconds Success P12 found the <i>Submission Checklist</i> in the menu.
7	334.9 seconds	179.0 seconds	143.2 seconds	42.4 seconds	32.0 seconds	109.1 seconds

	P7	P8	P9	P10	P11	P12
	<p>Success P7 immediately went to <i>Contact</i> for the email address. She did not find a clear answer, so she went to <i>About</i>. She eventually found the information in <i>Step by Step Guide</i></p>	<p>Success P8 first tried <i>Apply</i> on the upper-right corner, but that apply button was for RIT's admission. She went to the <i>Contact</i> page and found the email.</p>	<p>Success P9 clicked <i>Submit Your Research</i> link in popular resources on the home page and found the email in the <i>Step by Step Guide</i>.</p>	<p>Success P10 clicked <i>Submit Your Research</i> link in popular resources on the home page and found the email in the <i>Step by Step Guide</i>.</p>	<p>Success P11 chose to go to <i>Contact</i> and send his application to the first email on that page.</p>	<p>Success P12 clicked <i>Submit Your Research</i> in popular resources on the home page and found the email in the <i>Step by Step Guide</i></p>
	<p>P7 clicked the go back button in her browser several times, but the prototype did not support it. P7 could not find the link back to the home page.</p>	<p>P8 was confused with the two email addresses on the website. She thought the difference could be made more evident.</p>	<p>P9 did not expect the header to be a link back to the home page. Although according to P9's experience, download links are usually at the bottom, he thought placing links on top also makes sense because not everyone needs to read the instructions.</p>	<p>P10 thought the title in the orange box was clickable, but it was not. When P10 was on the <i>Types of Review</i> page, he scrolled over the exempt section several times, but he did not see the link to exemption categories.</p>	<p>P11 mentioned that he would use Ctrl+F to look for keywords to save time. The difference between the two emails could be more evident on the <i>Contact</i> page.</p>	<p>P12 said all the abbreviations, such as IRB and HSRO, on the website, are confusing. P12 said it was hard to make the connection to parental informed consent with <i>Research With Children</i>.</p>

TABLE 6 USABILITY TEST 2 NOTE

6.2. Issues found in usability test 2

In usability test 2, all 6 participants were between 20 to 40 years old, including undergraduate and graduate students and high school teachers. Three participants successfully completed all seven tasks. The other 3 completed six out of seven tasks, which was an improvement from usability test 1. However, the participants seemed to spend even more extended time on each task. That was because Maze started recording when participants began reading the task descriptions, so if the participant had further questions for the moderator, the time recorded would be much longer. In addition, participants were thinking aloud during the usability test. The time recorded was not an ideal reference of how fast they completed a task.

#	Task description	Number of participants who failed
1	Do you need to submit your project for review? You want to study a topic about how digital products affect kindergarten children. You want to observe and interview 10 children. You are not sure if your project needs to be reviewed by HSRO, so you go to Human Subjects Research Office website to find out.	2
2	What if, after reading the definition of research and human subjects, you still have some doubts. What would you do next?	0
3	Now, you know you need to submit your research for review. What will you do next?	0

#	Task description	Number of participants who failed
4	<p>You are working on the application form, and you see this question on the application form:</p> <p>“If you believe your project qualifies for Exemption, which exemption number(s) apply?”</p> <p>*The RIT Institutional Review Board (IRB) categorizes Human Subjects Research into three Risk Types (Exempt, No Greater than Minimal Risk, and Greater than Minimal Risk). The IRB makes the final determination of risk type. For classifications, please see the RIT HSRO website Types of Review.”</p> <p>Please find the exemption numbers on the website.</p>	0
5	You realized that you need to collect parental informed consent; how would you start?	1
6	You have all your application forms, consent forms, and supporting materials ready. You would like to check if any document is missing. What could you do?	0
7	Great! You have everything ready. Where would you send your application to?	0

TABLE 7 USABILITY TEST 2, NUMBER OF PARTICIPANTS WHO FAILED

- **Differentiate two different contact emails**

The current contact page contained two different email addresses. These two different email addresses had different purposes. When a person sees the first email on top and does not see the other one at the bottom, the person will likely assume this is the only one and directs all questions to the first address. Another issue is that the two email address descriptions are presented in two long sentences that are hard to read. Three of the participants went to *Contact* to find where to submit their applications, but this information was not clearly stated on the page.

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[PARENTS](#)
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Latest Announcement


August 10, 2021



COVID-19 Updates

Given the most recent guidance by the U.S. Centers for Disease Control, State of New York, and Monroe County concerning COVID-19 transmission, RIT has issued these revised standards related to human subjects research:


August 10, 2021




New Consent Form Requirements

New Consent Form Requirements for Non-Exempt Research, Updated to Include New 2018 Federal Regulation Requirements. Under the revised 2018 Common Rule, the requirements for informed consent for non-exempt research projects will change, with


Popular Resources




Submission Checklist




Who needs IRBs?




Application Forms




Submit Your Research




Informed Consent Resources



Types of Review




Human Subjects Protection Training



FAQ

Contact



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FIGURE 12 CONTACT WAS A POPULAR DESTINATION TO FIND THE SUBMISSION EMAIL.

- **Internal inconsistency in titles**

Internal inconsistency. “Who needs IRBs?”, “Definition of research and human subject” and “Do you need IRB review” all lead to the same page, “Do you need IRB review?” The differences could cause confusion. Additionally, none of the testers used the link in popular resources on the home page in task 1. This means they either didn’t see it or could not connect its title with its content.

- **Back to the home page link**

Three participants (two desktops, one mobile) did not perceive the header on top as a link back to the home page of the HSRO Website. One participant commented, “It does not look like a link.” The header of HSRO does not have an underline or any hover effect (Figure 13), so it is understandable why the participants did not consider it a link. Using the header as a link is actually a common practice across different websites, e.g., Harvard CUHS (Figure 14).

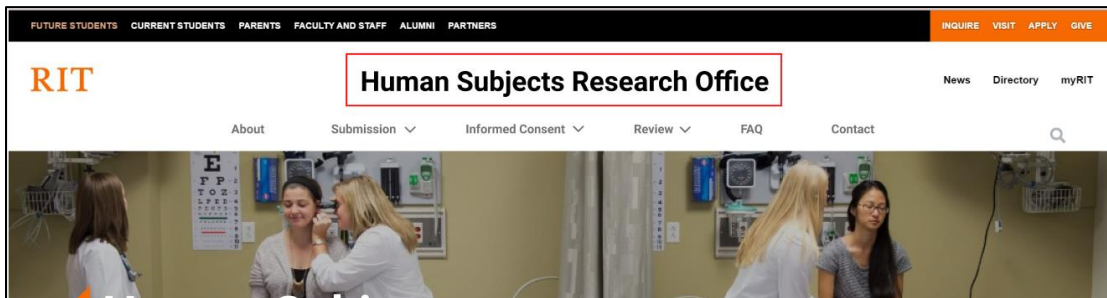


FIGURE 13 THE HEADER DID NOT LOOK LIKE A LINK FOR SOME USERS.

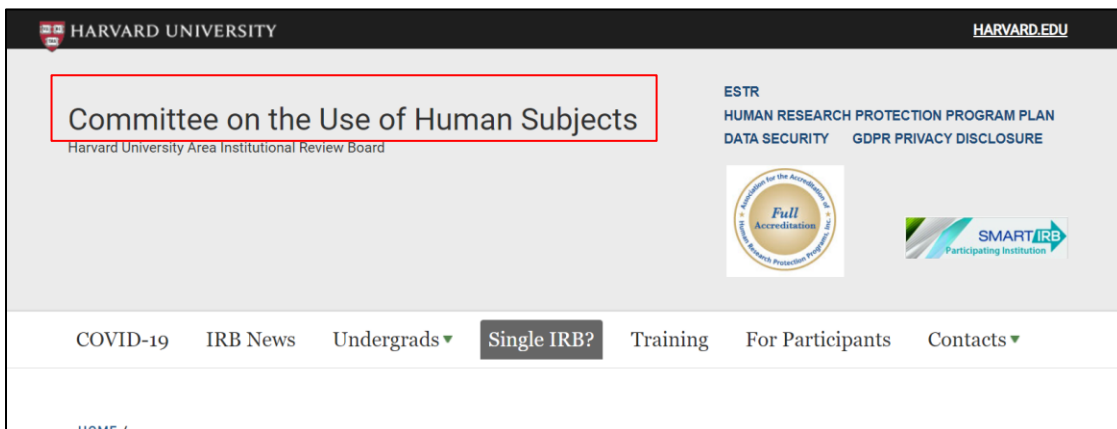


FIGURE 14 THE HEADER ON THE HARVARD CUHS WEBSITE IS A LINK

- **The overview page did not provide enough introduction to the whole section**

Three participants chose to read the higher-level information in the overview part of the

submission section and informed consent section before digging deeper. However, there were no links to navigate users to other topics on this website about submission or informed consent. For example, on the “Informed Consent Overview” page, users could not see the introduction about exempt research, non-exempt research, research with children, so users would still be confused when they see those terminologies in the menu.

6.3. Design Changes

6.3.1. Contact page

Two email addresses, one for the office and one for the director, were moved to the top of the page so that people could easily see them. The two grey boxes were links to the respective contact details at the bottom. Instead of using one sentence to describe multiple purposes for each email, the sentence was broken down into several bullet points, making it easier to read.

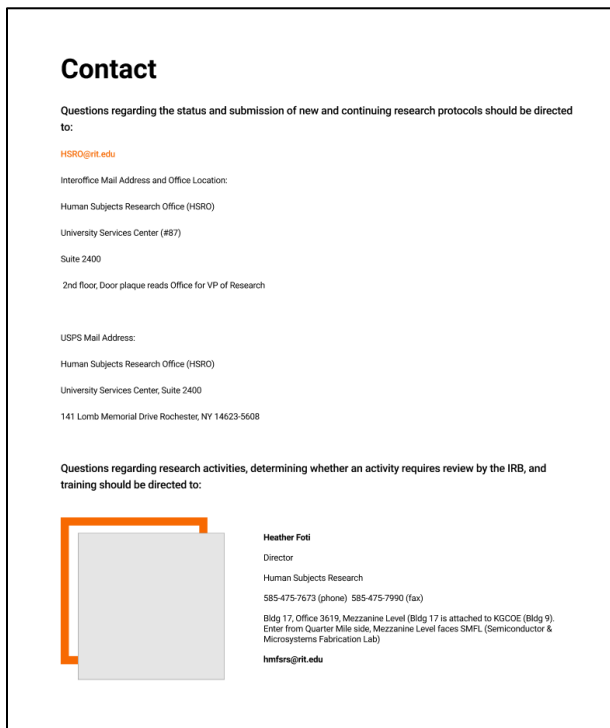


FIGURE 15 OLD DESKTOP CONTACT PAGE



FIGURE 16 NEW DESKTOP CONTACT PAGE

Contact


Questions regarding the status and submission of new and continuing research protocols should be directed to:

HSRO@rit.edu

Interoffice Mail Address and Office Location:
 Human Subjects Research Office (HSRO)
 University Services Center (#87)
 Suite 2400
 2nd floor, Door plaque reads Office for VP of Research

USPS Mail Address:
 Human Subjects Research Office (HSRO)
 University Services Center, Suite 2400
 141 Lomb Memorial Drive Rochester, NY
 14623-5608

Questions regarding research activities, determining whether an activity requires review by the IRB, and training should be directed to:



Heather Foti
 Director
 Human Subjects Research
 585-475-7673 (phone) 585-475-7990 (fax)
 Bldg 17, Office 3619, Mezzanine Level (Bldg 17 is attached to KGCOE (Bldg 9). Enter from Quarter Mile side, Mezzanine Level faces SMFL (Semiconductor & Microsystems Fabrication Lab))
hmfsrs@rit.edu

FIGURE 17 OLD MOBILE CONTACT PAGE

Contact

Contact [HSRO](mailto:HSRO@rit.edu) for:

- Submit new and continuing research protocols
- Status of your research protocols submission

HSRO@rit.edu

Contact the [director](mailto:hmfsrs@rit.edu) for:

- Determine whether an activity requires review by the IRB
- Training
- Research activities

hmfsrs@rit.edu


Human Subjects Research Office (HSRO)

HSRO@rit.edu

Interoffice Mail Address and Office Location:
 Human Subjects Research Office (HSRO)
 University Services Center (#87)
 Suite 2400
 2nd floor, Door plaque reads Office for VP of Research

USPS Mail Address:
 Human Subjects Research Office (HSRO)
 University Services Center, Suite 2400
 141 Lomb Memorial Drive Rochester, NY
 14623-5608

Director



Heather Foti
 Director
 585-475-7673 (phone) 585-475-7990 (fax)
 Bldg 17, Office 3619, Mezzanine Level (Bldg attached to KGCOE (Bldg 9). Enter from Quarter Mile side, Mezzanine Level faces SMFL (Semiconductor & Microsystems Fabrication Lab))
hmfsrs@rit.edu

FIGURE 18 NEW MOBILE CONTACT PAGE

6.3.2. Overview page

When asked about informed consent, three participants chose to go to the overview page and expected to learn some general knowledge and get a better idea of where to start. However, when they scrolled to the end and wanted to see more on certain topics, they had to go back to the menu and start over.

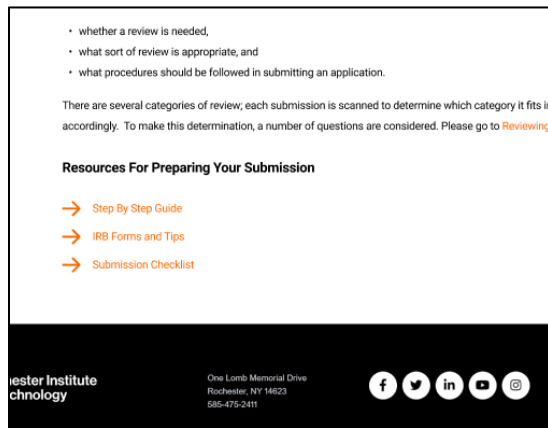


FIGURE 19 HYPERLINKS UNDER SUBMISSION OVERVIEW

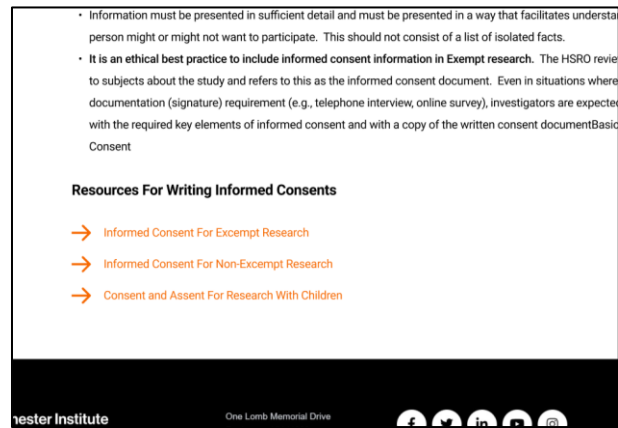


FIGURE 20 HYPERLINKS UNDER INFORMED CONSENT OVERVIEW

6.3.3. Change titles

Task 1, determining if a project needs to be reviewed, and task 5, finding parental informed consent, were two of the hardest tasks for participants. One possible reason could be the title of the page did not represent the content well. When people saw them, they had no clue what was inside, or the content did not match what they thought it was. Participant 12 said she was looking for the keyword *informed consent* or *parent*, so she did not make the connection between *research with children* and *parental informed consent*.

- All links to Do you need IRB review were made the same.
- *Research with Children* was changed to *Consent and Assent for Research with Children*.
- *Exempt Research* and *Non-Exempt Research* were changed to *Informed Consent for Exempt Research* and *Informed Consent for Non-Exempt Research*.

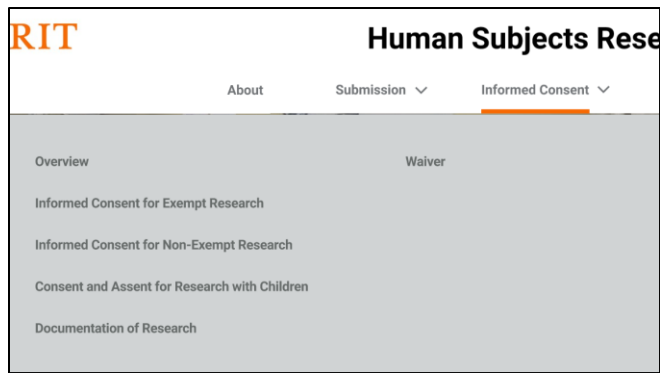


FIGURE 21 MORE DESCRIPTIVE TITLE

7. Usability Test 3 (on the prototype)

Usability test 3 was very similar to usability 2. The only thing that changed was the prototype. Six participants were invited to this test. They were between 20 to 40 years old, including undergraduate and graduate students and RIT faculty. Participants' think-aloud processes were recorded on zoom or google meet, and participants interacted with the prototype through Maze. Three participants tested the desktop version, and the other 3 tested the mobile version. This test aims to validate the changes made after usability test 2 and to find more issues.

7.1. Usability Test 3 Result

	P13	P14	P15	P16	P17	P18
	Desktop			Smartphone		
1	<p>250 seconds Success P13's habit was to click all items in the menu when encountering a new website. Then, he clicked <i>Step-by-Step Guide</i> and followed the link in <i>Step 1</i> and found the answer.</p>	<p>73 seconds Success P14 used <i>Do you need IRB review</i> in the popular resources section and found the answer.</p>	<p>102 seconds Success P15 usually would visit the <i>About</i> page when encountering a new website. Then she clicked <i>Submission</i>, and <i>Do you need IRB review?</i></p>	<p>221 seconds Success P16 did not understand the question and did not know the hamburger menu on the left was clickable, but after a while, she found <i>Do I need IRB review?</i> in the menu.</p>	<p>94 seconds Success P17's habit is to quickly scan the website when encountering a new website. She clicked <i>Do you need IRB review?</i> in <i>popular resources</i></p>	<p>54 seconds Success P18 clicked <i>Submit Your Research</i> in <i>popular resources</i> and found the answer in <i>Step 1</i>.</p>
2	<p>177 seconds Success P13 would prefer to read more content before reaching out for help. He checked out <i>Checklist</i>, <i>IRB Forms</i>, and <i>FAQ</i>. He said he would use google to find more information. Contacting the office would be the last resort.</p>	<p>39 seconds Success P14 clicked to <i>Contact</i> and found the director's email.</p>	<p>39 seconds Success P15 clicked <i>Contact</i> and found the director's email.</p>	<p>72 seconds Success P16 would email the office only if she could not find the answer herself. When I asked her to find the contact information, she scrolled to the bottom but could not find it. Then she clicked <i>Contact</i> in the hamburger menu.</p>	<p>73 seconds Success P17 would first go to <i>FAQ</i> for more help. If she could not find the answer in <i>FAQ</i>, she would contact someone in the office, so she found the contact information on the home page.</p>	<p>147 seconds Success P18 would try to find more information on this website. He clicked <i>Submission Checklist</i>. If he still could not find the information, he would contact the office.</p>
3	388 seconds	43 seconds	71 seconds	78 seconds	56 seconds	84 seconds

	P13	P14	P15	P16	P17	P18
	<p>Success P13 explored the <i>Informed Consent</i> page and <i>Review</i> Page before he actually clicked <i>Step by Step Guide</i> and found the instructions</p>	<p>Success P14 clicked <i>Submission</i> and <i>Step by Step Guide</i></p>	<p>Success P15 clicked <i>Submission</i>, then <i>Overview</i>, then <i>Step by Step Guide</i>. She also said that she would download or bookmark the checklist for later use.</p>	<p>Success P16 said she would appreciate a step by step instruction, and then she found the <i>Step by Step Guide</i></p>	<p>Success P17 clicked the <i>Submission Checklist</i> in the <i>Popular Resources</i></p>	<p>Success P18 clicked <i>Application Forms</i> in the <i>Popular Resources</i></p>
4	<p>220 seconds Success P13 did not read the instructions to the end, so he couldn't find the information at first. I asked him to read it again, then he found exemption numbers.</p>	<p>134 seconds Success P14 clicked <i>Submission</i> and could not find relevant content and then clicked <i>Informed Consent</i>. She found <i>Exempt Research Category</i> in the <i>Informed Consent for Exempt Research</i>.</p>	<p>64 seconds Success P15 clicked <i>Review</i> and then <i>Types of Review</i> and found exemption categories.</p>	<p>48 seconds Success P16 clicked <i>Review</i> and then <i>Types of Review</i> and found exemption categories.</p>	<p>72 seconds Success P17 clicked <i>Types of Review</i> in <i>Popular Resources</i> and found exemption categories.</p>	<p>29 seconds Success P18 clicked <i>Review</i> and then <i>Types of Review</i> and found exemption categories.</p>
5	<p>35 seconds Success P13 remembered seeing this in previous tasks, so he found the information immediately.</p>	<p>27 seconds Success P14 clicked <i>Informed Consent</i> and then <i>Consent and Assent for Research With Children</i>.</p>	<p>18 seconds Success P15 clicked <i>Informed Consent</i> and then <i>Consent and Assent for Research With Children</i>.</p>	<p>89 seconds Success P16 clicked <i>Informed Consent</i> and then <i>Consent and Assent with Children</i>, but she did not see</p>	<p>106 seconds Success P17 clicked <i>Informed Consent Resources</i> in <i>Popular Resources</i>. She read the page and</p>	<p>91 seconds Success P18 clicked the <i>Overview</i> in the <i>Informed Consent</i> section to see what informed consent is. Then he went to</p>

	P13	P14	P15	P16	P17	P18
				parental informed consent at first.	clicked <i>Consent and Assent for Research With Children</i> .	<i>Informed Consent for Exempt Research</i> . He read the content and was not satisfied, and then he clicked <i>Consent and Assent for Research with Children</i> .
6	95 seconds Success P13 would go through <i>Step by Step Guide</i> again before using the checklist.	43 seconds Success P14 clicked <i>Submission</i> and then <i>Submission Checklist</i>	24 seconds Success P15 clicked <i>Submission</i> and then <i>Step by Step Submission Checklist</i> in <i>Step 3</i> .	52 seconds Success P16 clicked <i>Review</i> because she thought the review meant reviewing her application package. Then she clicked the <i>Submission Checklist</i> in the menu.	50 seconds Success P17 clicked <i>Submission Checklist</i> in <i>Popular Resources</i> .	24 seconds Success P18 clicked <i>Submission Checklist</i> in <i>Popular Resources</i>
7	23 seconds Success P13 went to <i>Step by Step Guide</i> and found the email in <i>Step 3</i> .	39 seconds Success P14 assumed that the email would be at the bottom at the checklist, and she found it.	28 seconds Success P15 clicked <i>Submission</i> and then <i>Step by Step Guide</i> and found the email in <i>Step 3</i>	65 seconds Success P16 would go to the <i>Contact or Submission</i> to submit her application. She eventually found	58 seconds Success P17 clicked <i>Submit Your Research</i> in <i>Popular Resources</i> and found the email in <i>Step 3</i> .	388 seconds Success P18 clicked <i>Submit Your Research</i> in <i>Popular Resources</i> , but he did not see the email in <i>Step by Step Guide</i> at first.

	P13	P14	P15	P16	P17	P18
				<p>the information in <i>Contact</i></p>		<p>He then went to the <i>Overview</i>, <i>Informed Consent</i>, <i>Training</i> trying to find it. He eventually found the email in <i>Step by Step Guide</i>.</p>
		<p>“You said exemption categories are under review, but my brain didn’t trigger the word, <i>review</i>.”</p>		<p><i>Review</i> means to review the submission package for P16.</p> <p>When P16 saw <i>Consent and Assent for Research With Children</i>, she did not think of parental informed consent at first glance.</p>	<p>She mentioned that using accordions to organize longer content would be nice.</p>	<p>P18 did not know how to go back to the home page.</p>

7.2. Issues Found in Usability Test 3

Six participants all successfully completed seven tasks without any fail, which is an improvement from the original website and the first prototype. Usability test 2 and 3 both used Maze to record participants' clicks and completion time. The usability test 3 result showed improvement in completion time, but the completion time included the time when participants were reading task descriptions, asking the moderator questions, and thinking aloud, so it was not an accurate measure of how fast a participant can complete a task.

#	Task description	Avg. Completion time: Test 2	Avg. Completion time: Test 3
1	Do you need to submit your project for review? You want to study a topic about how digital products affect kindergarten children. You want to observe and interview 10 children. You are not sure if your project needs to be reviewed by HSRO, so you go to Human Subjects Research Office website to find out.	302.6 seconds	132.3 seconds
2	What if, after reading the definition of research and human subjects, you still have some doubts. What would you do next?	155.9 seconds	91.2 seconds
3	Now, you know you need to submit your research for review. What will you do next?	62.1 seconds	120 seconds

#	Task description	Avg. Completion time: Test 2	Avg. Completion time: Test 3
4	<p>You are working on the application form, and you see this question on the application form: “If you believe your project qualifies for Exemption, which exemption number(s) apply?</p> <p>*The RIT Institutional Review Board (IRB) categorizes Human Subjects Research into three Risk Types (Exempt, No Greater than Minimal Risk, and Greater than Minimal Risk). The IRB makes the final determination of risk type. For classifications, please see the RIT HSRO website Types of Review.”</p> <p>Please find the exemption numbers on the website.</p>	152.1 seconds	94.5 seconds
5	You realized that you need to collect parental informed consent; how would you start?	188.3 seconds	61.0 seconds
6	You have all your application forms, consent forms, and supporting materials ready. You would like to check if any document is missing. What could you do?	86.5 seconds	48.0 seconds
7	Great! You have everything ready. Where would you send your application to?	140.1 seconds	100.2 seconds

FIGURE 22 AVERAGE COMPLETION TIME, USABILITY TEST 2 VS USABILITY TEST 3

- *Review* was perceived differently by different users
 Menu items are usually short and concise to save space and to reduce the user’s cognitive load. However, when the phrase is too short, it could be confusing. For example, the review on the main menu meant IRB’s assessment on applications, but participant 16 pointed out that she thought the review in the menu was to review her application package before submission. Participant 14 also said she was not sure what was in the

review tab because she could think of more than two possible meanings of review in this circumstance.

8. Future Work

The director of HSRO, Director Foti, mentioned that she had some ideas of enriching the website with more multimedia content. However, she did not have enough technical support to do so. For easier future maintenance, the content management system needs to be more user-friendly, or RIT should provide more workshops, training courses for faculties who need to manage a website. Since people have become very reliant on websites and web applications to acquire information, they become very impatient with errors and slow response times (Duan & Chen, 2007). In the usability test on the current HSRO website, participants frequently encountered errors and verbally expressed their frustration which meant the website already lacked maintenance. No matter how good a web design is, it will not last long without regular maintenance.

Creating new content and features was out of this project's scope, but some features are worth considering for future developers. For example, Director Foti mentioned a platform for researchers to find potential participants. According to director Foti, many researchers had problems recruiting participants. Penn State University has a platform called StudyFinder (Figure 23), which is specifically for clinical research. Different studies need different types of participants. Some have age limitations; some are looking for people with specific conditions. Therefore, they set up a filter to help volunteers to find suitable studies to participate in.

Several universities, such as Harvard University, the University at Buffalo, and the University of Rochester, use electronic research submission software, e.g., Click IRB, to manage applications. Electronic research submission software provides a convenient way for prime investigators and reviewers to keep track of the progress of each submission. Applicants could also find forms and templates in the system.

Any changes made after usability test 3 were not validated by another usability test yet. One more usability test is needed to make sure there are no further issues.

PennState STUDYfinder

HOME SEARCH FOR A STUDY FOR RESEARCHERS CONTACT US

Find a Study Opportunity

Healthy Volunteers

Please Select

Gender

Children (age < 18 years)

Adults (age ≥ 18 years)

Make A Difference. Get Involved.

Participating in research is one of the most powerful things you can do to be part of tomorrow's health care breakthroughs. Penn State is always looking for people who are willing to participate in studies, so that our researchers can better understand how to diagnose, treat, and prevent diseases and conditions.

Use this Studyfinder website to quickly and easily identify studies across Penn State that need volunteers. Every study is different - some are looking for people with a specific condition, while others need healthy volunteers ([read more about that here](#)). That's why we've created search filters to help you find the study that's right for you. You can also filter by age, and search by keyword to find studies focused on specific conditions and diseases. Typing in a location, such as State College or Hershey, will also help you filter studies of interest.

You can also [get answers to your questions about clinical research here](#).

FIGURE 23 PENN STATE UNIVERSITY STUDYFINDER

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10. Appendix

Introduction

Human Subject Research Office (HSRO) at RIT reviews all research activities involving human subjects. The purpose is to protect the rights, safety, and welfare of every participant taking part in the research. When human subject researchers submit their application to HSRO for review, they must fill out an application form, complete training, provide informed consent forms, etc. The entire process could be complex and intimidating for first-timers or even experienced researchers.

Human Subject Research Office Website is usually the starting point for people who plan to submit their research for review. The most recent application forms, new policy changes, or any other essential information can all be found on the website. Therefore, the website is loaded with detailed documentation for different kinds of research. Keeping all those documentation organized and easy to find on the website is a challenge.


The Human Subject Research Website is currently managed by the director, Heather Foti. She is also the only one in charge of updating and maintaining the content on the website. The overall design of this website was made over ten years ago when the technology was not as advanced as nowadays, so it is easy to see that the website was not developed for multimedia materials and mobile devices.

However, a mobile-friendly responsive web design and rich visual aids are essential for today's users. Therefore, a makeover of the HSRO website is needed to provide a better experience for users.

Site Goals

- To educate people about the importance of protecting human rights during research
- To educate people about how to protect human rights during research
- To provide instructions on how to submit research for review

Audience definition (Personas)



“
I just want to figure out how to submit my application.
”

Bio
Varun is a 2nd-year graduate student in Human-Computer Interaction. He has some knowledge about IRB from his previous courses but has never submitted an application before. His capstone project involves human subjects, and he wants to get this done fast.

Varun Kapoor

26 • 2nd Year Graduate Student

Motivations

CONVENIENCE	* * *
INFORMATION	* * * * *
EFFICIENCY	* * * * *
EASE OF USE	* * *


Goals

- to submit his application as soon as possible
- to get his research approved as soon as possible

Pain Points

- lack of experience in the submission process
- he has very limited time because he wants to graduate sooner.

Sp Adobe Spark



“
I better make sure what has changed since my last submission.
”

Bio
Professor Brown has conducted many human subjects research in RIT and other institutions before. He is quite familiar with the requirements and reviewing process. Even though he is experienced, he has a habit of checking the website to stay updated.

Ronald Brown

58 • Professor

Motivations

CONVENIENCE	* * *
INFORMATION	* * * * *
EFFICIENCY	* * *
EASE OF USE	* * * *

Goals

- to check new policies and download new forms
- to help students find the information and give them the link

Pain Points

- poor eyesight
- trouble remembering where the information was on the website

Sp Adobe Spark



“

I don't want to ruin my professor's research.

”

Bio

Ngoc-Bich is a 4th-year undergraduate student and research assistant. She is helping her professor recruiting participants and maintain communications. This is her first time participating in human research, so she would like to know the regulations.

Ngoc-Bich Nguyen

22 • *Research Assistant*

Motivations

CONVENIENCE	* * * *
INFORMATION	* * * * *
EFFICIENCY	* * *
EASE OF USE	* * * *

Goals

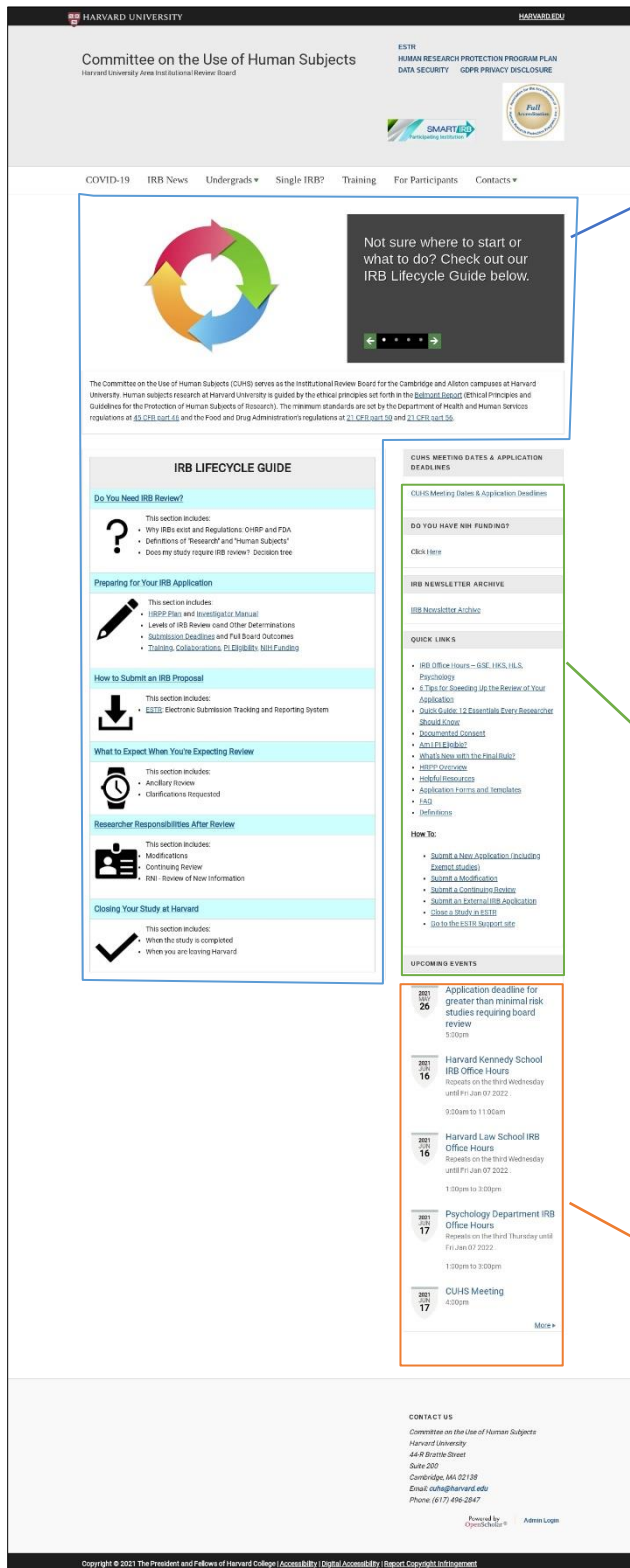
- to learn about human subject research
- to find resources about recruiting participants

Pain Points

- lack of research experience
- need more visual aids because she reads English very slowly

Competitive Analysis

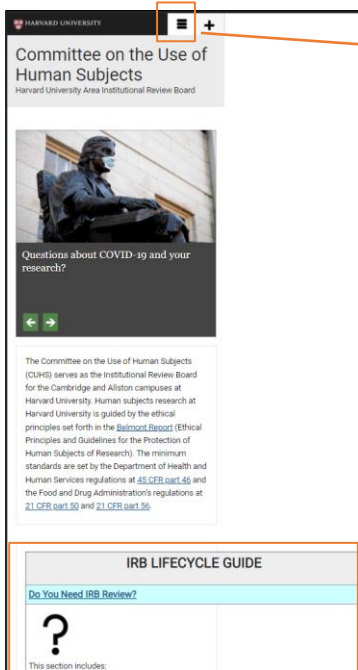
1. Harvard - Committee on the Use of Human Subjects (<https://cuhs.harvard.edu/>)



At the center of the Harvard Committee on the Use of Human Subjects website, there is a news slider, and the first slide is about the IRB lifecycle guide, which is placed right below the slider. This is a great approach because users can easily see the application process. The content in each step is broken down into several bullet points so users could get an idea of what is in the link before clicking on it.

If categorization is appropriately used, it will help users find information quickly. However, the top three categories on the right only contain one link, and quick links section is clustered with many unordered links.

Although the upcoming events section is located at a less noticeable position, the date and the event are clear and easy to navigate.



Harvard's website uses a hamburger menu for mobile versions, but part of the website was not responding to screen size changes.

Revised Rule Exempt Categories

Below are the most commonly applied Exempt categories with guidance on their use.

Definition	Protected Populations			Advice	Harvard Requirements
	Pregnant Women	Prisoners	Children		
Research involving benign behavioral interventions in conjunction with the collection of information from an adult subject through verbal or written responses (including data entry) or audiovisual recording if the subject prospectively agrees to the intervention and information collection and at least one of the following criteria is met: (A) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (B) Any disclosure of	Yes	Only Incidentally	No	Examples of such benign behavioral interventions include having the subjects play an online	Exempt Content Script

RIT Home • Human Subjects Research Office • Types of Review

Exemption Categories

Exemption 1	Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
Exemption 2	Research that only includes interactions involving <ul style="list-style-type: none"> educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures*, or observation of public behavior (including visual or auditory recording)** if at least one of the following criteria is met: <ol style="list-style-type: none"> The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7). <p><i>*Not applied for use with children.</i></p> <p><i>**Can only be applied for use with children when the investigators do not participate in the activities being observed</i></p> <p>Research involving benign behavioral interventions* in conjunction with the collection of</p>

Instead of showing everything in every category in the same table, Harvard's website uses accordions which make the page look cleaner and prevent overloading users.

2. Penn State University - The Human Research Protection Program (HRPP) (<https://www.research.psu.edu/irb>)

The screenshot shows the Penn State HRPP website. At the top, there is a navigation bar with links for ABOUT, INSTITUTES, FIND RESEARCH, CYBERINFRASTRUCTURE, PARTNERSHIPS & INDUSTRY, FOR PENN STATE, and COVID-19 INFORMATION. Below this is a 'FIND IT' section with a vertical menu of links including ABOUT THE IRB, COVID-19: HUMAN SUBJECTS, CATS IRB, FIND YOUR IRB ANALYST, IRB BASIC STEPS, IRB MEETINGS, IRB TRAINING AND RESOURCES, POLICIES AND GUIDELINES, SINGLE IRB & AUTHORIZATION AGREEMENTS, IRB AT THE COLLEGE OF MEDICINE, VOLUNTEER FOR RESEARCH, and HRPP ADVISORY COMMITTEE. The main content area features a 'News and Announcements' section with a purple border, containing articles about COVID-19 research and revised standards for research visits. Below this are sections for 'Getting Started', 'IRB Analysts', and 'Future Participants'. At the bottom, there is a 'Feedback' section with a 'SHARE YOUR VOICE' graphic. The footer contains contact information for various offices and a privacy policy.

12 unorganized items in the menu could take users more time to process.

The new announcements are placed on the main page inside a purple box.

This section looks just like other parts of the page, same color, size, and style. However, the information here could be very helpful for first-time users. Links are also provided in the paragraphs.

Penn State Senior Vice President for Research

Search This Site | People | Departments | Penn State

ABOUT • INSTITUTES FIND RESEARCH CYBERINFRASTRUCTURE PARTNERSHIPS & INDUSTRY FOR PENN STATE COVID-19 INFORMATION

FIND IT

- ABOUT THE IRB
- COVID-19: HUMAN SUBJECTS
- CATS IRB
- FIND YOUR IRB ANALYST
- IRB BASIC STEPS
- IRB MEETINGS
- IRB TRAINING AND RESOURCES
- POLICIES AND GUIDELINES
- SINGLE IRB & AUTHORIZATION AGREEMENTS
- IRB AT THE COLLEGE OF MEDICINE
- VOLUNTEER FOR RESEARCH
- HRPP ADVISORY COMMITTEE

IRB OFFICE CONTACT

The 330 Building, Suite 205, University Park, PA 16802
Phone: 814-865-1775 • Fax: 814-863-8699

University Park/Campus Locations: irb-orp@psu.edu

College of Medicine/Penn State Health: hspo@pennstatehealth.psu.edu

The IRB committees and staff are responsible for reviewing and approving, requiring modifications, or withholding approval of research involving human subjects.

OFFICE DIRECTORY

REPORT A RESEARCH CONCERN

OSVPR Home / Office for Research Protections / Institutional Review Board / Step 1: Do you need to submit?

IRB Basic Steps

STEP 1 IS IT Human Subjects Research? | STEP 2 BEFORE You Submit | STEP 3 HOW To Submit | STEP 4 AFTER You Submit | STEP 5 AFTER APPROVAL

Step 1: Do you need to submit?

Effective March 15, 2020: Revised standards for Human Subjects-Related Research Visits during COVID-19

In the context of rapidly evolving circumstances regarding COVID-19, and the University's focus on social distancing and the health and well-being of the community, the Office of the Senior Vice President for Research, in consultation with Vice Dean for Research and Graduate Studies in the College of Medicine, has issued these revised standards related to human subjects-related research visits. In summary, research visits should be performed remotely (e.g., by phone or Zoom) whenever possible. Studies involving face-to-face interaction with participants with no direct drug or device therapeutic benefit are to be postponed until further notice. See the Penn State COVID-19 webpage for University updates.

The IRB program is operating remotely but at full capacity. [Learn more on COVID-19 and human subjects research here.](#)

All Penn State employees and students conducting activities that meet the definition of both "research" and "human subject" must submit for Institutional Review Board (IRB) approval before beginning any research activity. **IRB approval cannot be retroactive.**

If you are not doing Human Subjects Research but would like or need an official IRB determination, you can submit for a Non-Human/Non-Research Determination. See the Investigator Manual for details.

Is it Research?

Research is a "systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge" (45 CFR 46.102(d)).

Examples of Research

- Federally funded research projects
- Graduate theses and dissertations
- Surveys, interviews, or observations (social sciences)
- Studies that utilize test subjects for new devices, drugs, or materials (biomedical)

NOT Research

- Activities or class projects intended ONLY to receive a grade in a course. However, if the results are intended to be used beyond the classroom, IRB review and approval/determination is required.
- Program improvement evaluations
- Projects for which the results are not intended to contribute to generalizable knowledge

Is it a Human Subject?

A human subject is "a living individual about whom an investigator (whether professional or student) conducting research:

(i) obtains information or biospecimens through intervention or interaction with the individual, and uses, studies, or analyzes the information or biospecimens; or (ii) obtains, uses, studies, analyzes, or generates identifiable private information or identifiable biospecimens" (45 CFR 46.102(e)).

This means that people are human subjects. Existing data or specimens with identifiable, private information are also human subjects. This includes data that was not collected by the researcher herself or specifically for the study in question, but that can be traced back or identified with the individuals from whom it was collected.

If your activity falls under FDA regulations, note that the FDA definition of human Subjects research includes the use of test articles (i.e., drugs or devices) on humans or human specimens, **whether identifiable or not** (CFR Title 21).

What If I'm Not Sure?

Not sure if you need to submit? Contact us! You can also refer to Penn State Policy RP03: The Use Of Human Participants In Research for further information.

What's Next?

If you do need to submit, move on to Step 2 for more details on training and getting started in CATS IRB.

Office of the Senior Vice President for Research
304 Old Main
University Park, Pennsylvania 16802
OSVPR Phone: 814-865-9580
Email: osvpr@psu.edu
IRB Office Phone: 814-865-1775
Directory of Research Offices
Report a Research Concern
Report an Information Security Concern
Resources for Reporting Wrongdoing

Office of Sponsored Programs
Office of Sponsored Programs
Strategic Interdisciplinary Research Office
Office of Research Information Systems
Office of Postdoctoral Affairs
Office of Technology Management
Office of Entrepreneurship and Commercialization
Office of Industrial Partnerships

Office for Research Protections:
Conflict of Interest (COI)
Research Misconduct
Institutional Review Board (IRB)
Quality Management
Education
Radioisotopes (IAC)
Regulated Biohazardous Materials (BIO)
Vertebrate Animal Care and Use (IACUC)
Scientific Diving
Unmanned Air Systems
Embryonic Stem Cell Research Oversight
Dual Use Research of Concern
Controlled Substances

Interdisciplinary Research Institutes:
Huck Institutes of the Life Sciences
Institute for Computational and Data Sciences
Institute of Energy and the Environment
Materials Research Institute
Social Science Research Institute
Cancer Institute
Clinical and Translational Science Institute

Related Organizations:
Animal Resource Program
Applied Research Laboratory
Ben Franklin Technology Partners
Consortium for Building Energy Innovation
Corporate Engagement Center
Innovation Park
Penn State at The Navy Yard
Pennsylvania Technical Assistance Program

Useful links
Office Contacts
Office of the President (OPRT)
Hershey-UP Shuttle Service
Limited Submissions
Post Opportunities
SciVal
Funding Institutional (Formerly SciVal Funding)
SciVal & Funding Institutional Quick Guides
OSVPR Portal
Login

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Clear step 1, 2, 3 signs on top, which are easy to follow for users. Each block is also a link to detailed instructions.

Important messages are placed in a purple box, which is consistent with the main page.

PennState
Office of the Vice President for Research

ABOUT INSTITUTES FIND RESEARCH CYBERINFRASTRUCTURE PARTNERSHIPS & INDUSTRY FOR PENN STATE

COVID-19 INFORMATION

FIND IT

OSPIR Home | Office for Research Protections | Institutional Review Board
Step 1: Do you need to submit?

IRB Basic Steps

STEP 1: IS IT Human Subjects Research? | STEP 2: BEFORE You Submit | STEP 3: HOW To Submit | STEP 4: AFTER You Submit | STEP 5: After APPROVAL

Step 1: Do you need to submit?

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What's Next?

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Office of the Senior Vice President for Research
200 Old Main
University Park, Pennsylvania 16802
OSPIR Phone: 814-865-1996
Email: ospir@psu.edu

IRB Office Phone: 814-865-1775

Directory of Research Offices

Report a Research Concern
Report an Information Security Concern
Resources for Reporting Wrongdoing
Office of the Senior Vice President

Office of Sponsored Programs
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Office of Research Information Systems
Office of Postdoctoral Affairs
Office of Technology Management
Office of Entrepreneurship and Commercialization
Office of Industry Partnerships

Office for Research Protections:
Office of Research and Research Misconduct
Institutional Review Board (IRB)
Quality Management
Education
Human Resources (HR)
Regulatory Affairs/Research Matters (RM)
Wellness, Sexual Care and Title IX/STC
Statistics Billing
University of Research
Epidemiology/Statistical Research Oversight
Dual Use Research of Concern
Controlled Substances

Interdisciplinary Research Institutes:
Health Institute of the University
Institute for Computational and Data Sciences
Institute of Energy and the Environment
Medical Research Institute
Scripps Research Institute
Center for Health
Office and Translational Science Institute

Related Organizations:
Animal Research Program
Applied Research Laboratory
Bio-Health Technology Program
Center for Building Strong Innovation
Corporate Engagement Center
Innovation@PSU
Penn State's The Henry Ford
Pennsylvania Technical Assistance Program

Useful links
Office Contacts
Office for Research (OSPIR)
HersheyUP Shared Services
Human Resources
Penn State University
Funding Information (Formerly Social Funding)
Office for Research Protections (OSPIR)
IRB

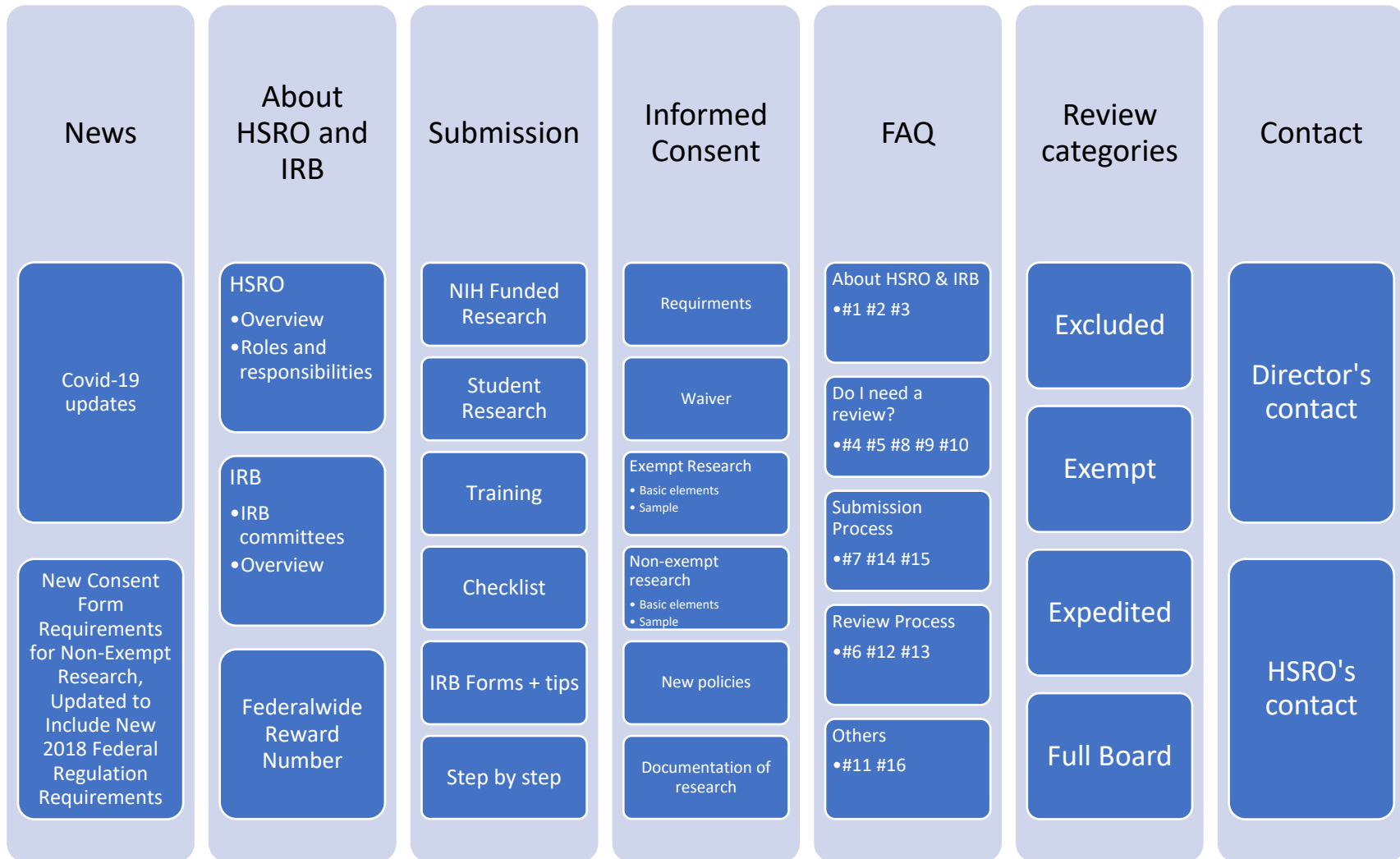
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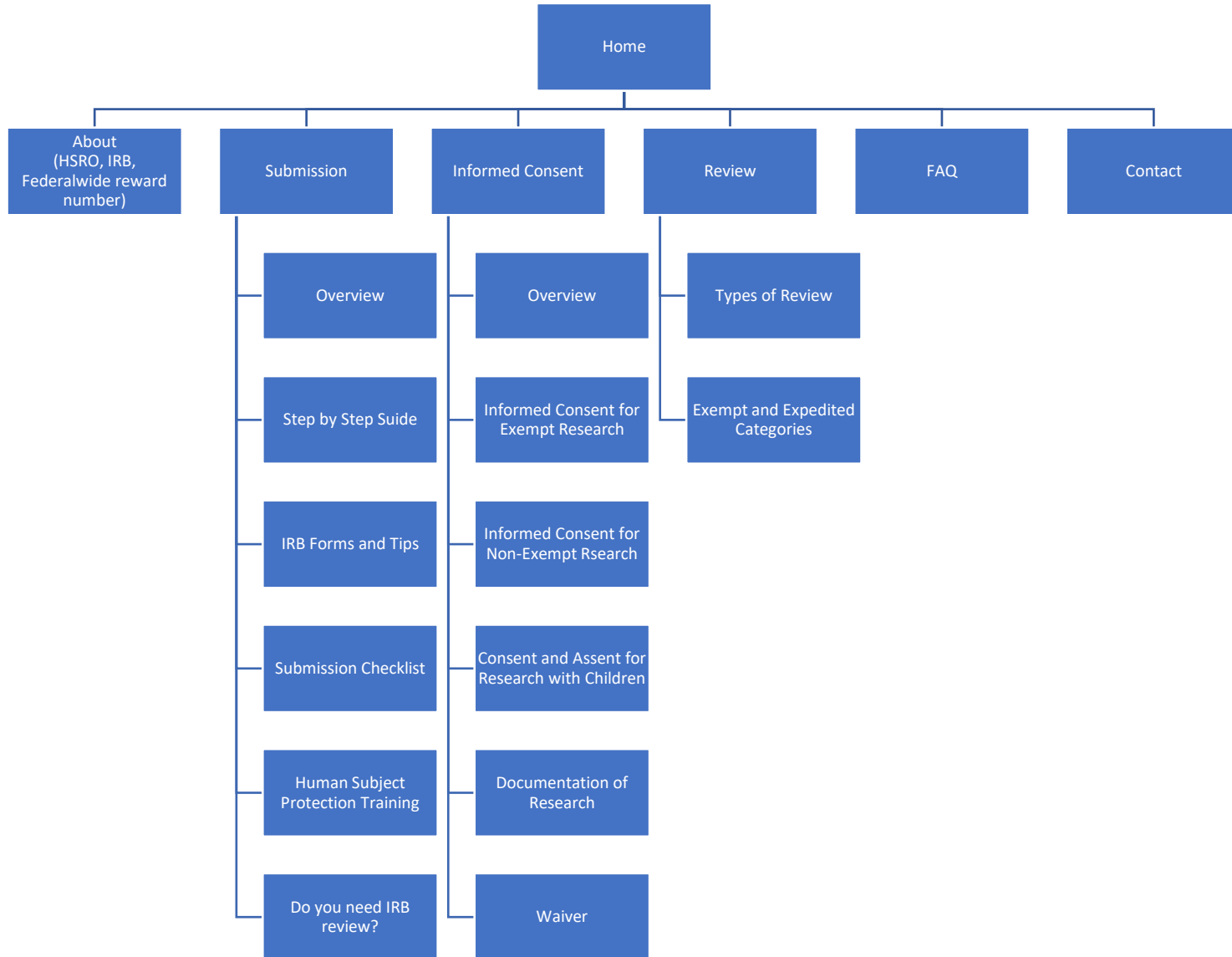
This website is not mobile-friendly, which could be a severe usability issue. When you visit the website on an iPhone X, the website would look like a smaller desktop version. The font would look very small unless you enlarge it. There is no hamburger menu or any other similar approaches to collapse the menu.

Site Content

1. Content Grouping and Labeling

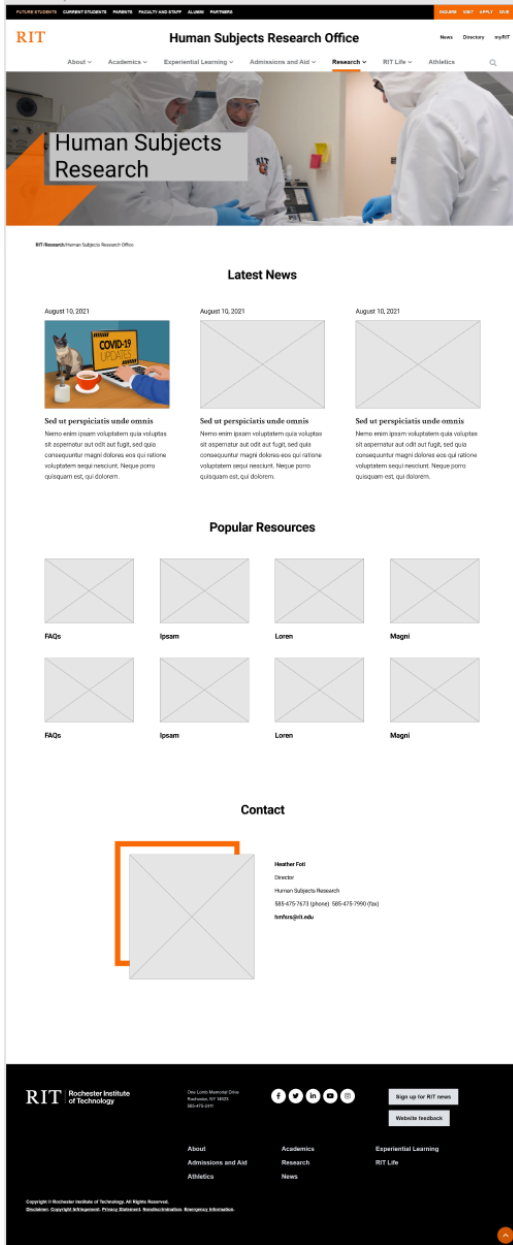


2. Site Map

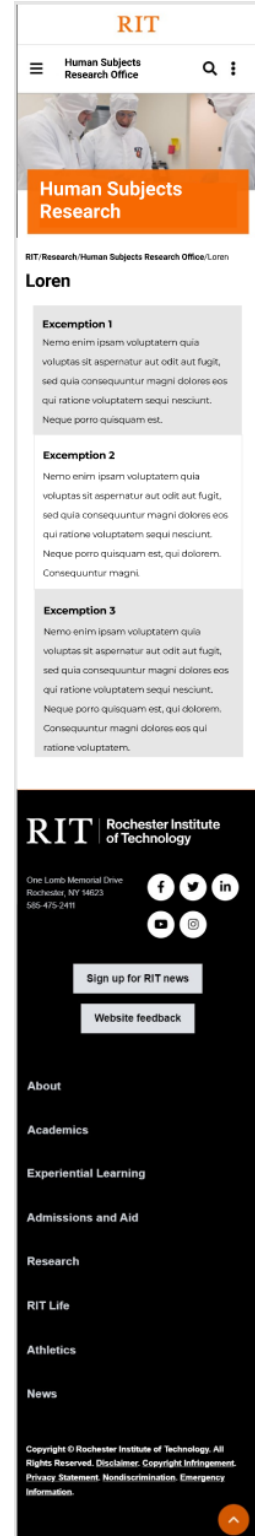
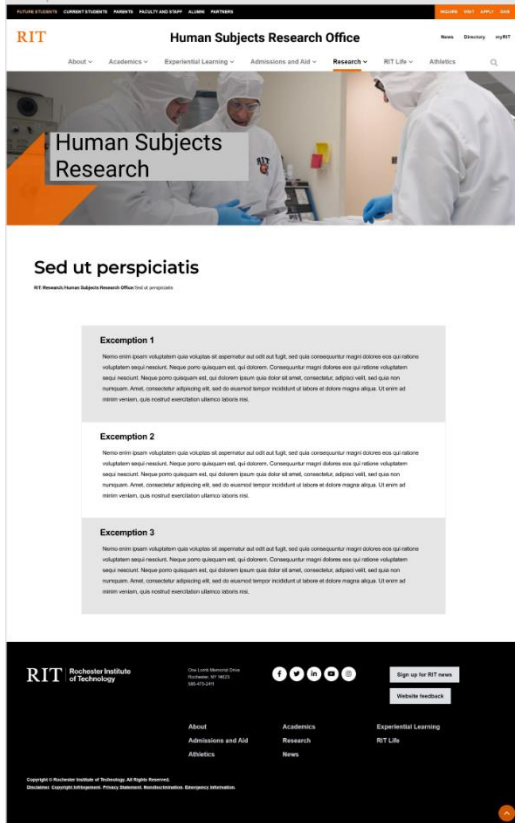


Design

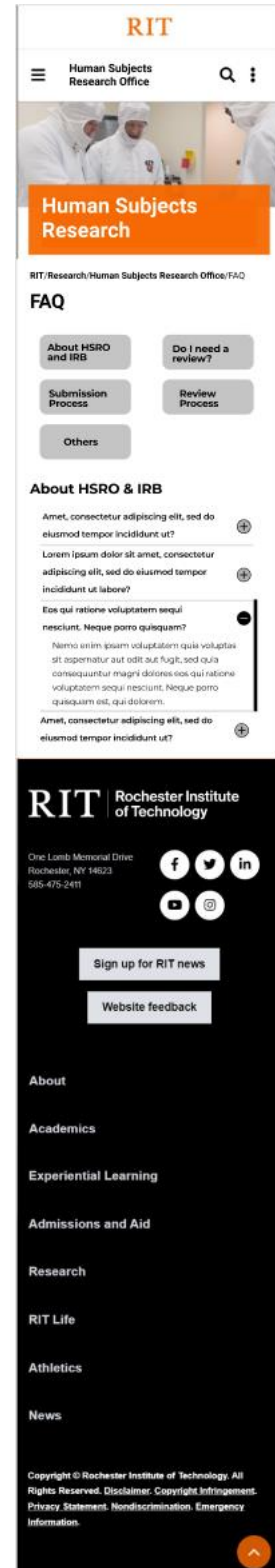
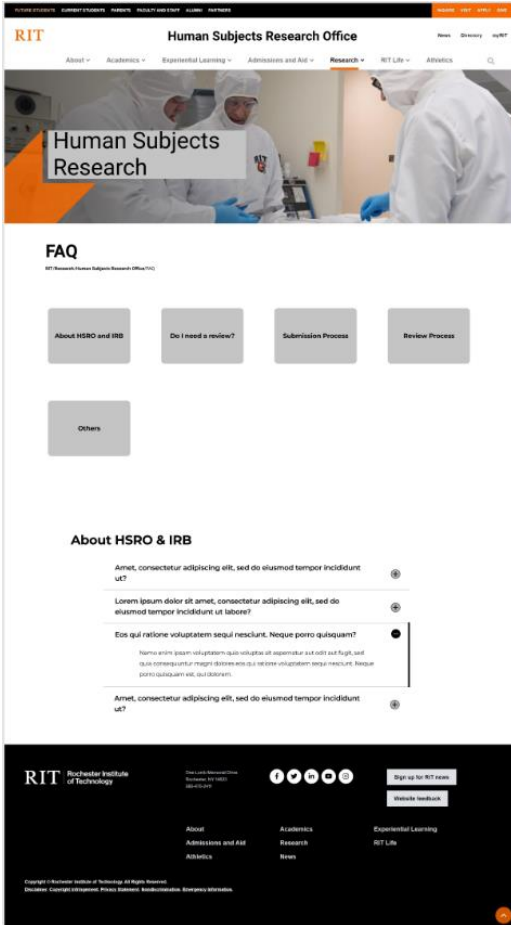
- Home page



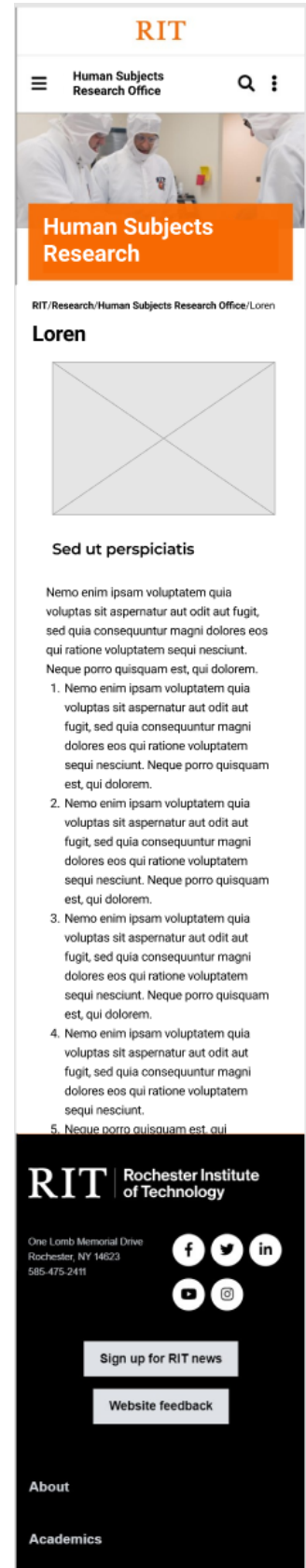
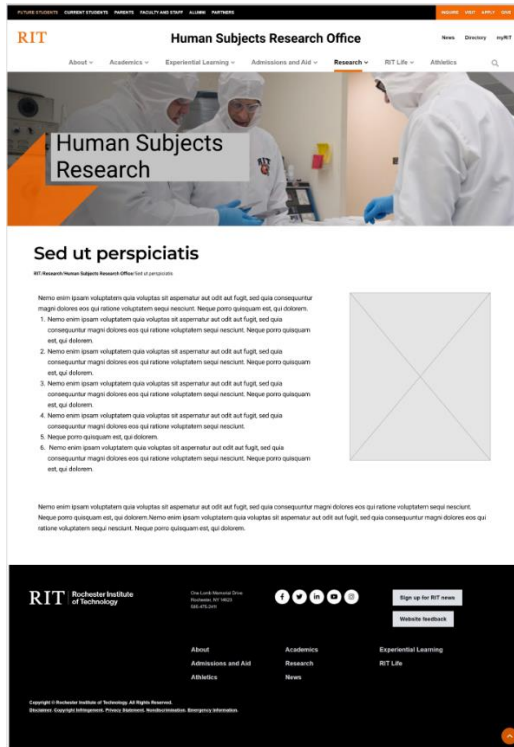
- This frame can be used for a page with a lot of similar items, such as exemptions.



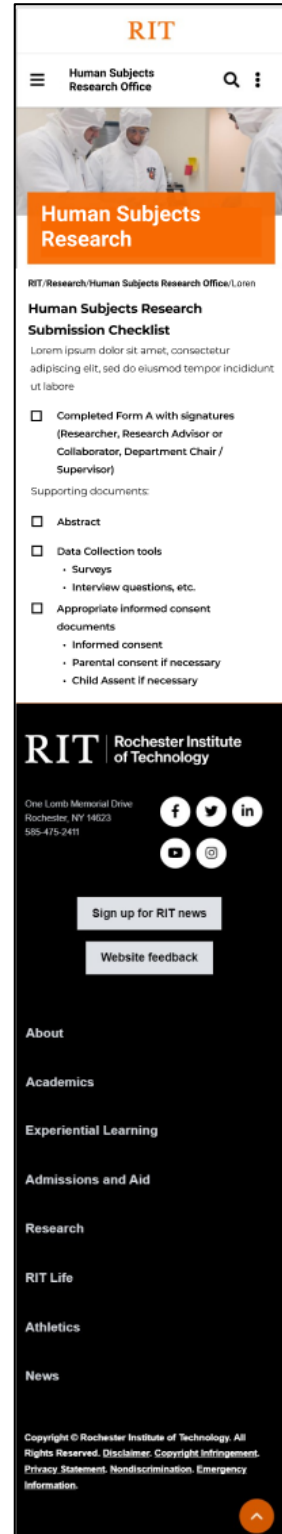
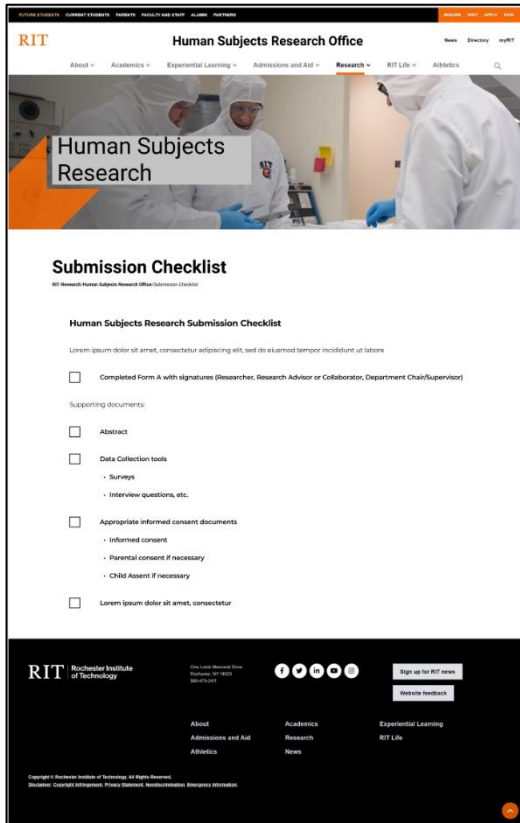
- Frequently asked questions will be sorted into five categories, and users could use the links on top to jump to the specific topic.



- This frame can be used on any page with an article and a picture.



- The entire checklist and a downlink can be displayed on the website.



- Step by step guide.

Submission

Human Subjects Protection Training

All members of RIT and external researchers collecting data at RIT are expected to adhere to the highest ethical and professional standards as they pursue research with human subjects. In light of that and the national law, adopted the **Cultivating Institutional Training Initiative (CITI Program)** for human subjects training. CITI Program www.citiprogram.org is a web-based training employed by academic institutions, government agencies, and commercial organizations worldwide.

Anyone submitting a research study for review will need to show evidence, for themselves and everyone participating in the research that they will undergo an individual class, of successful completion of the **Human Subjects Research (HSR)** course from the CITI Program. The training is valid for three years and certification obtained while at another institution may be honored. **Review will not begin until the certificates are received.**

How to create an account and register for courses?
Go to CITI website at www.citiprogram.org and click "Register" to create an account.

STEP 1

In the "Select your Organization Affiliation" box start typing "Rochester Institute of Technology" and select it when you see the name come up.
Click the check boxes and click "Continue to Create Your CITI Program (Username/Password)"

STEP 2

Supply your personal information and click "Continue to Step 2"

STEP 3

Create a username, password and select a security question.
Click "Continue to Step 4"

RIT

Human Subjects Research Office

Human Subjects Research

RIT/Research/Human Subjects Research Office/Loren

Loren

STEP 1

Eos qui ratione voluptatem sequi nesciunt.

- Neque porro quisquam est.
- Qui dolorem ipsum quia dolor sit amet, consectetur.
- Adipisci velit, sed quia non numquam eius modi tempora.

STEP 2

Eos qui ratione voluptatem sequi nesciunt.

- Neque porro quisquam est.
- Qui dolorem ipsum quia dolor sit amet, consectetur.
- Adipisci velit, sed quia non numquam eius modi tempora.

RIT | Rochester Institute of Technology

One Lomb Memorial Drive
Rochester, NY 14623
585-475-2411

f t in

Sign up for RIT news

Website feedback

About

Style Guide

The style of the HSRO website should follow the RIT theme to maintain a consistent RIT style so that users would not mistake it as other institution's website.

RIT website's style is listed in [Brand Portal | RIT](#) and the following paragraph is .

a. Typography

RIT's major typeface is Neue Haas Grotesk and Milo Serif. You can see it in the headlines, body copy, and captions with different weights. Sometimes Arial and Georgia are used to substitute Neue Haas Grotesk and Milo Serif when Neue Haas Grotesk and Milo Serif are not available.

For web use, RIT Brand Portal suggested **“font-family: "Helvetica Neue", "Helvetica", "Roboto", "Arial", sans-serif”**

b. Color

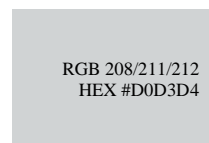
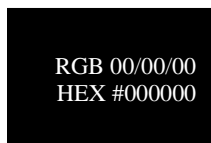
The new design will also follow RIT's color palette, and the colors on the current HSRO website that are not consistent with RIT's color palette will be replaced.

The website will primarily use the RIT orange and white as its background color.

The hyperlinks and email address in the body copy will also be orange.



The primary text color will be black. Different hues can be used to create more effects.



If more colors are needed for this project, RIT also has an accents palette, but they should be used carefully.



Requirements

1. Essential Requirements

- a. Responsive web design
- b. Restructure the navigation system
- c. Bug fixes (Broken links, collapsible menu, duplicated menu items)
- d. Clear step by step instructions for application submission

2. Desirable Requirements

- a. A page for current researchers to look for participants
- b. Multimedia materials
- c. Internal site search

3. Global/Accessibility Considerations

- a. The current font size in the body copy is too small. It needs to be 16 px at least.
- b. When the RIT orange is used on a web font size smaller than 18, the color should change to #C75300.
- c. All videos and pictures should be captioned.

Conclusion

The HSRO website is the major source of information for people conducting human research at RIT. Even though the content is up-to-date, the style is not. The HSRO website was built when mobile devices were unpopular, so it is not responsive to different screen sizes. To accommodate users of various devices, responsive web design is a staple for modern websites. RIT's main website has made several style changes during the past ten years, so the style of the HSRO website is not consistent with the main website. The new design will consider the mobile version and use styles similar to RIT's main website.