

Protocol

During our usability tests, we followed the following protocol:

Interview/Warm-Up: Introduced the goal of the usability test and how it will work, including the role of each of our team members.

Transition: Explained the purpose of our project design and the participant's role in testing it (to pretend that they were a high school student in a sex ed course).

Test: Guided the participant through two general tasks:

- Customizing the experience of doing homework by personalizing the AI agent that leads the student through video assignments.
- Seeking information anonymously by navigating through the resource center and utilizing the anonymous questions feature.

Wrap-up: Explained the purpose of each feature of the design that the participant interacted with. Then asked the participant for feedback regarding clarity/usability of the design, cohesiveness of the features, and general areas to improve.

Usability Test Descriptions & Findings

Usability Test 1

We conducted our usability test with a 19-year-old UW student in her place of residence. We chose this participant because she is close to the target age of people who would be using our final product. The familiar environment allowed her to be more comfortable during the usability test, and it simulated the environment of our targeted population because most students would be using this design outside of the classroom. Aishu acted as facilitator, computer, and notetaker. For the test itself, we first had the participant complete one checkpoint of an assignment, changing her agent representation in the process. At first, she was not quite sure where to go to personalize her agent, and she eventually pressed the settings button. She had no issues navigating both aspects of the personalization pop-up. However, she never utilized the play button because she did not understand its function. After settling on an agent, she pressed save and assumed that doing so would also close the pop-up rather than her having to press the x button as well. She then completed the checkpoint question with no issues. Next, we had her ask her course instructor a question, check the answer to the question, and ask a follow-up question on the same thread, all of which went smoothly. For the last part, we prompted her find more information about the body in the resource center. She successfully found the resources button to navigate to the page, and she was able to access a resource and

the description of the resource. After this test, we made some key changes to our prototype. We changed the functionality of the “save” button in the agent personalization page so it would close the pop-up as well. We also decided that the pop-up should be open when the participant first starts using the design so they know that this feature exists in settings.

Usability Test 2

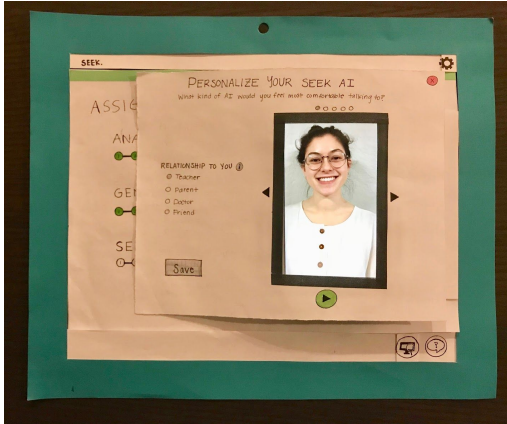
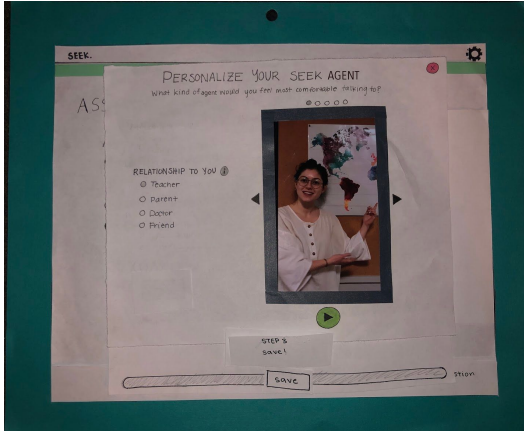
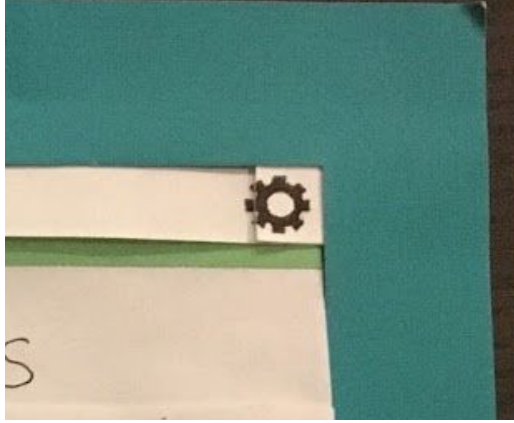
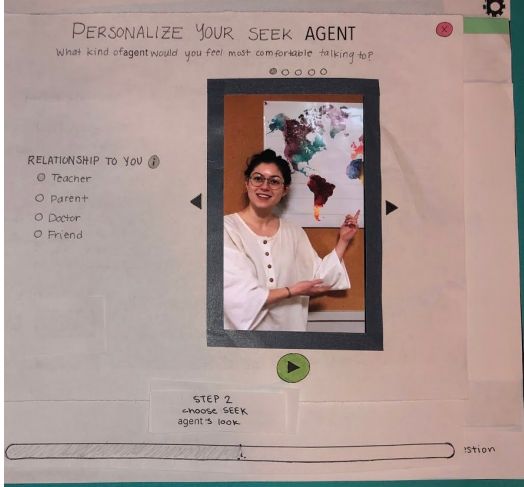
Test two was conducted in a breakout space in CSE2. Aishu facilitated the test, Haley was the computer, and Max took notes. Our participant was a 20-year-old University of Washington student. We chose this space because it was conveniently located and quiet. After introducing him to our project we asked him to complete several tasks with the SEEK interface. We first asked the participant to customize his agent so that it felt more comfortable to him. Our participant had some confusion here. He thought that each agent had only one relationship role and that as he scrolled through each option, the relationship status would change automatically to display that. It took him some time interacting with the interface to understand that he could choose both the agent and the relationship separately. We then asked him to complete the sexuality homework assignment through the first checkpoint. He was able to find the assignment and complete the question successfully. We then asked him to find resources about the human body. He was somewhat confused by the resource centers icon, but once he figured out how to navigate to the resource center he was able to find the information. We then asked him to ask a question to his teacher. He navigated to the anonymous questions tab and was able to submit a question, and then navigate to the answer tab to see the response from his teacher. After this test, we realized that prompting participants to go to a “resource center” or “anonymous question” feature made it too obvious which buttons to click, and we wanted to test if the icons on the buttons made it clear what they represented. So, for our last test we decided to use a broader prompt, asking the participant to “learn more about the body” to see where he/she would feel compelled to navigate to.

Usability Test 3

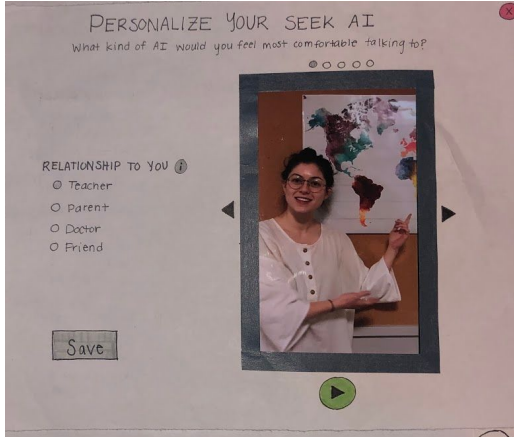
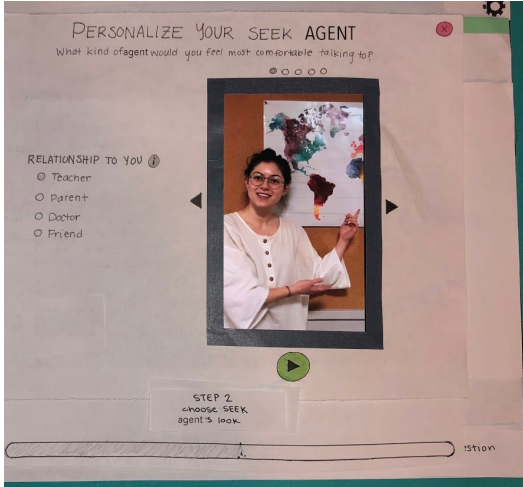
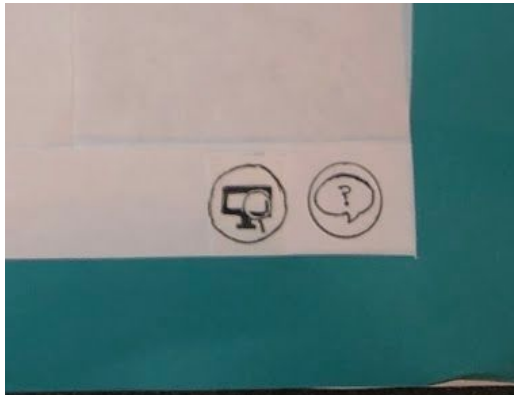
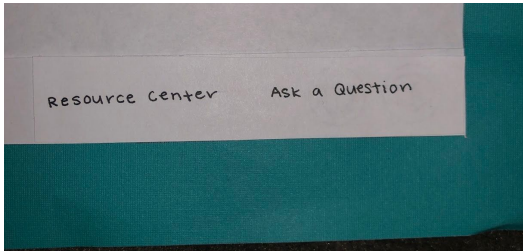
Test three was also conducted in a breakout space in CSE2. Aishu facilitated the test, Haley was the computer, and Max took notes. Our participant was a 20-year-old University of Washington student. We chose this space because it was conveniently located and quiet. We first asked our participant to customize his agent. He was able to explore the options and choose one that he liked, utilizing both the agent and the relationship features with ease. Then we asked him to complete the sexuality homework assignment through the first checkpoint. He was able to navigate to the homework, watch the video, and complete the first checkpoint easily. For the second task we asked him to learn more about the body. He first navigated to the anonymous questions tab, realized that he wanted to seek information elsewhere, and then navigated to and explored the resource center. He was able to find the body section but experienced some confusion differentiating between the links that redirect to each resource and the “more info” buttons opening to display descriptions of the resources. We asked him to ask his teacher a question about sexuality. He was able to navigate back to the question tab, enter a question, and then see the response. He also realized he could ask a follow-up question on the question thread.

Usability Test Findings

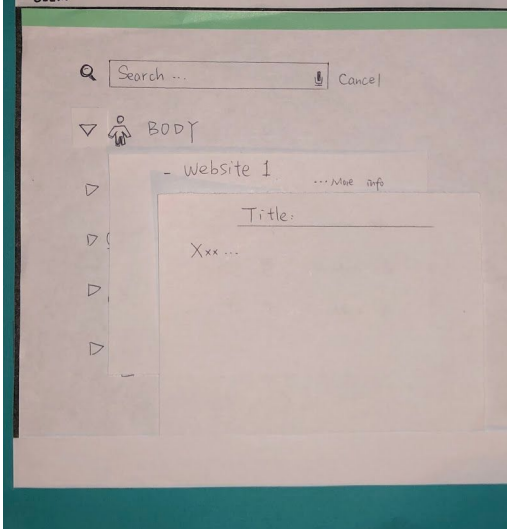
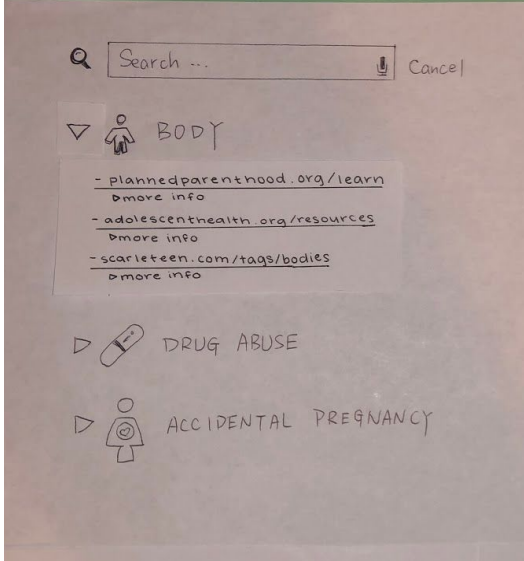
Usability Test 1

Severity	Incident	Revision
4	 <p>Save button seemed like it should close pop-up in addition to saving, but it only saves</p>	 <p>X button is used to close window without saving, Save button is displayed only after personalization steps are complete, pop-up closes when Save is pressed</p>
4	 <p>Button was clearly identifiable as leading to a Settings section, but participant was unclear what Settings contained until it was navigated to</p>	 <p>Settings page is open when design is used for the first time, making it clear that the agent personalization feature exists</p>

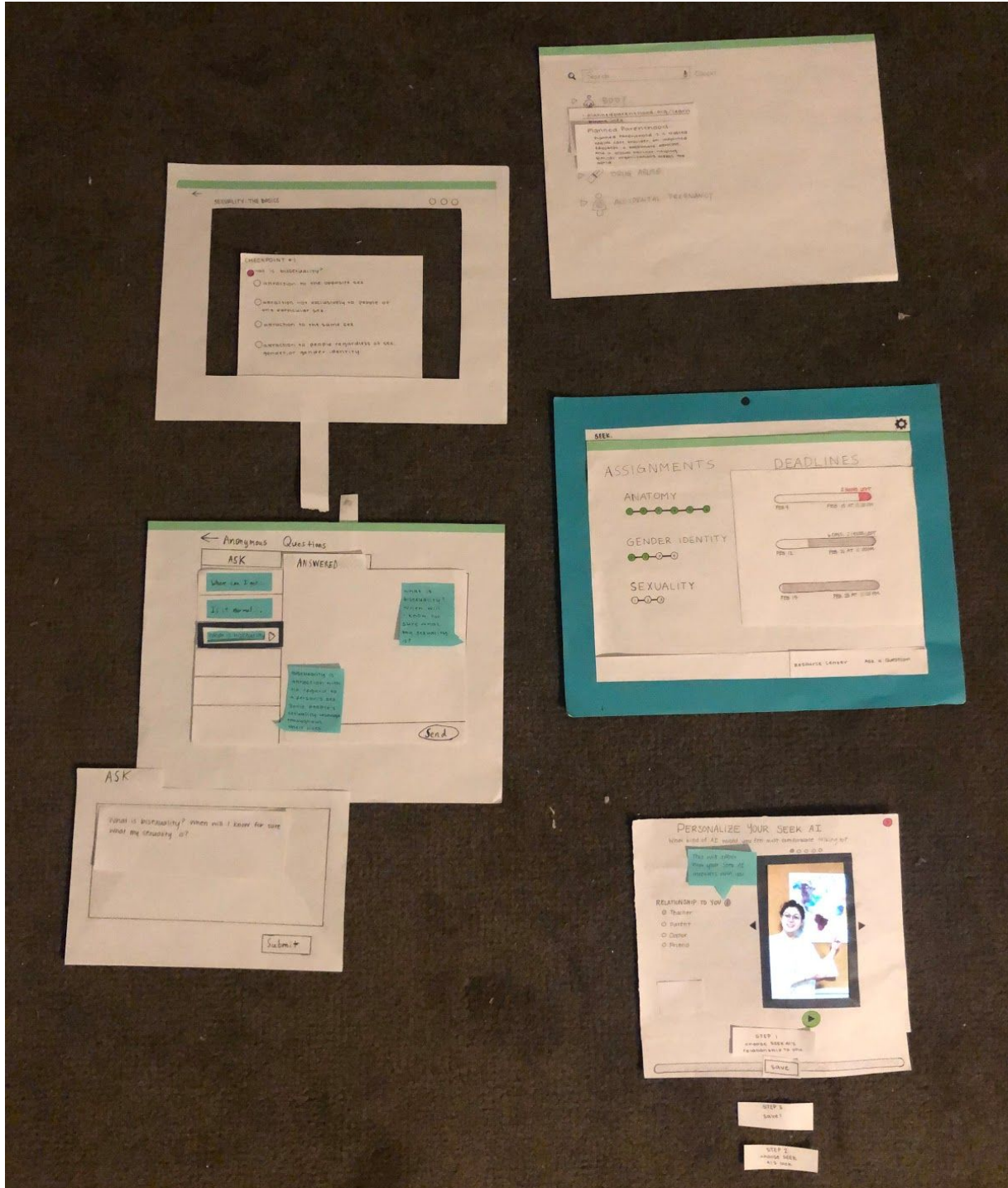
Usability Test 2

Severity	Incident	Revision
4	 <p>Participant was confused about the difference between changing agent look and changing relationship to user</p>	 <p>Make the AI agent selection process more clear by adding a progress bar and steps for the user to follow</p>
2	 <p>Participant was confused about what feature the left button navigated to because icon does not clearly indicate a resource center</p>	 <p>The "Resource" icon and "Ask a question" icon have been replaced with clickable text to distinguish between the two</p>

Usability Test 3

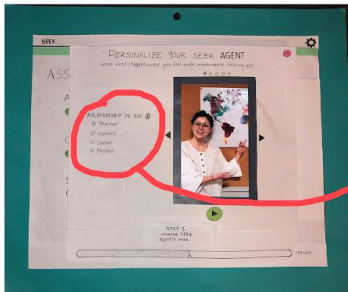
Severity	Incident	Revision
3	 <p>Participant was confused about how to access resource description vs. go to resource itself from resource center page</p>	 <p>Underline links to resources to indicate they are hyperlinks. More Info button includes caret icon to indicate that description will pop up under link when pressed.</p>

Final Paper Prototype

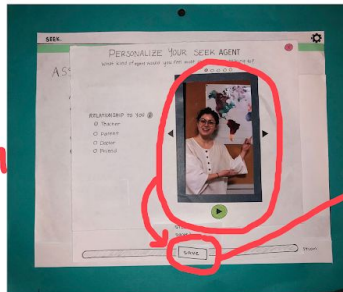


Task 1: Engaging with tailored content

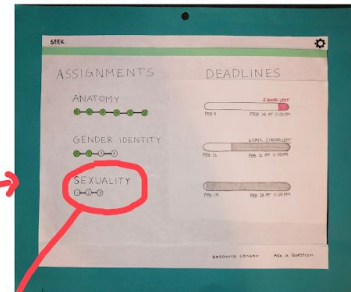
The following images and descriptions demonstrate how the course can be tailored to individual students through a personalizable AI agent. This enables students to complete homework and learn material relevant to them without judgement from an actual person, and they can customize the look and personality of their agent in a way that makes them most comfortable interacting with it.



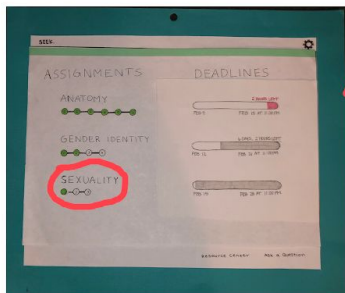
The student will set their Seek Agent preferences on their first login. First they will choose the Seek Agent's relationship to them.



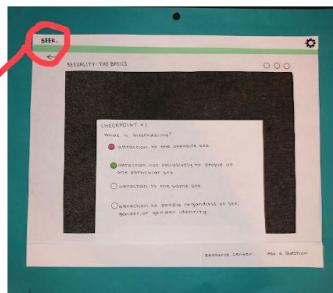
The student will then choose the Seek Agent representation that they want to see, then click 'Save'.



From the main page, student can view assignments and deadlines. From here, they can click on an assignment to work on completing it.



When the user returns to the main page, their checkpoint information will be recorded.



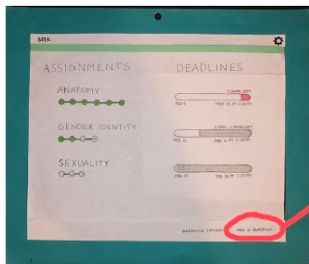
Checkpoints throughout the content ask the student to answer questions about the content that they have learned. When a student answers the question correctly, they will finish a checkpoint.



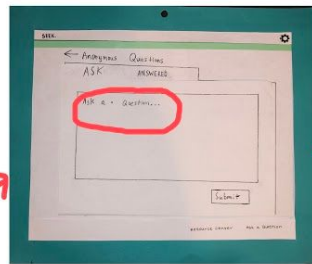
From an assignment page, the student will interact with their SEEK agent to learn the assigned content. They can ask questions intermittently and the agent will pull factual data to answer.

Task 2: Procuring answers to questions anonymously

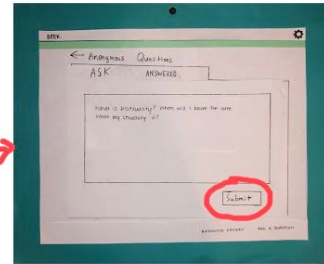
The following images and descriptions demonstrate how students can discreetly get their questions answered by either submitting anonymous questions to their teacher through a form or by searching through through the resource center, which links them to reliable outside resources about several topics.



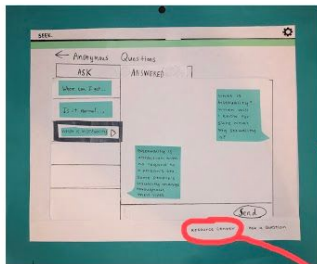
The student can ask a question by pressing the "Ask a Question" button on any screen.



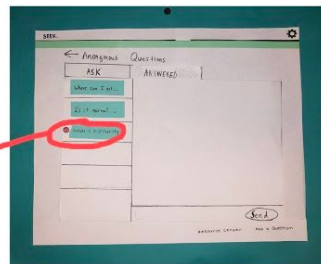
The student can fill in their question in the box that says "Ask a Question..."



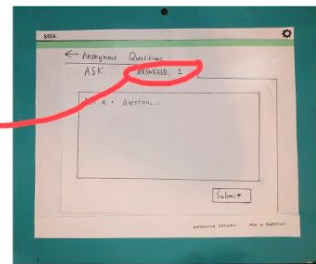
After asking a question, the student will press the "Submit" button to create a new anonymous thread with their teacher.



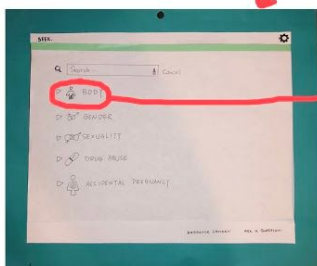
Students can respond to the thread if there are any follow up questions that need answered. The student can access the resource center by clicking the "Resource Center" link on any page.



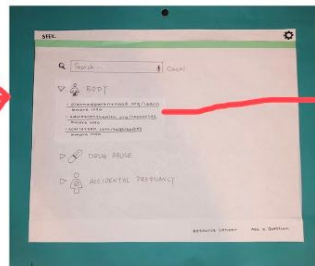
Unread messages will have a red mark next to them. Clicking any message preview on the side will open the exchange in the space to the right.



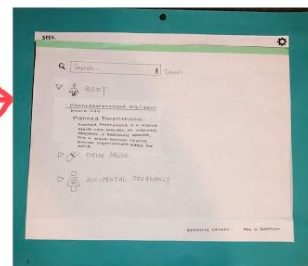
When a student's question is answered, there will be a notification of the number of unread messages on the "Answered" tab. The student can click the "Answered" tab to see previously answered questions.



The resource center shows resources sorted by topic. Students can either use the search bar or click a topic to view applicable resources.



Clicking a topic will expand to a list of resources. Clicking a resource will link to that resource.



Clicking "more info" shows the title of the resource as well as a short informational note about the resource.

Most Important Revisions

AI Agent Representation

In the pop-up that allows students to change the representation of the AI agent, participants were confused about the difference between changing the agent's relationship to the student and changing the look of the agent. This could be improved by adding a progress bar showing that they should complete these actions in sequence. For instance, 'Step One: Choose your relationship with the AI agent' and 'Step Two: Choose a look'. Once these actions are completed, the final action will be 'Step Three: Save progress and exit'. This will lead them out of the AI agent personalization pop-up and back to their previous screen, updating the AI agent as necessary. This revision is incredibly important to our design because the ability to personalize the AI agent is central to our design, focusing on increased engagement and comfort surrounding sensitive topics. This feature allows students to have some control over *how* they learn course material, and it is crucial that our design makes clear how they can do that.

Navigating to 'Resource Center' & 'Ask a Question'

When asked to complete the task about seeking information anonymously, which dealt with navigating to the 'Ask a Question' and 'Resource Center' pages, participants were unsure about which icon represented the 'Resource Center'. We have seen this problem before in previous testing and attempted to make the icon more clear, but our solution to change the icon from a textbook to a desktop with a magnifying glass did not work. So, we decided to replace the 'Resource Center' icon and 'Ask a Question' icon with clickable text to distinguish between the two. While this may not be the most important revision to our design, for students only need to learn once that the desktop-with-magnifying-glass-icon takes them to the 'Resource Center,' changing these icons to clickable text makes our design less ambiguous for the student user in the first place and enables recognition rather than recall.

Resource Center

In the 'Resource Center' page, participants were confused about how content was presented on the page, unable to distinguish clearly between links to credible websites and descriptions of what kind of content they can expect to find via those links. To iterate on this issue, we have underlined topic header links to resources in order to indicate that they are hyperlinks. We will also add a caret icon to the left side of each "More Info" button to indicate that a description of the hyperlinked resource will pop up under the link when the button or caret is pressed. Making this page clear and easy to use is important to our design because students may otherwise choose to refer to Google or an open search engine, simply because it may take less work to find an answer. A simple, clean design and easy ability to search for resources pertaining to a particular topic will retain students use on this page and guide them to seek more credible information.