Sexual Health at Princeton

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Project Description

According to a 2016 survey conducted by University Health Services at Harvard University, sixty percent of students engaged in sexual activities within the past twelve months, but many of them did so without protection ("60 Percent of Students Sexually Active, Survey Finds Lower Rates of Protection"). Based on this data, it seems that there is an inherent disconnect; a significant number of students seem to be engaging in sexual activity, yet are not properly equipped to engage in such activities in a healthy way. In order to protect themselves from sexually transmitted infections and unwanted pregnancies, students must have easy access to sexual health resources on campus. However, since "sex" and "sexuality" are controversial topics in society, many students may not feel comfortable actively seeking advice and information. A system that could apply design principles to this problem on Princeton's campus would be targeted to students, with University Health Services, SHARE, the Women's Center, the LGBTQ Center, and the Residential Colleges being stakeholders, as all of these institutions tackle issues surrounding the sexual health and overall well-being of students. Relevant tasks that students seeking sexual health resources would perform include obtaining accurate information about sex and sexual health, making a sexual health consultation appointment, obtaining contraception, and getting an STI test. Because many of these tasks are somewhat nerve wracking to perform, a system that addressed these problems would ideally be easy-to-use so that frustration with the user interface combined with uneasiness about the topic of sex will not cause the user to stop using the system. Additionally, since many of these tasks involve patient health information, the system needs to be able to store data in a confidential way, and allow the user to interact with it in a discreet way.

Requirements

The final design will be constrained by what we consider to be high priority user values: privacy and discretion, ease of use, and easy access. Possible considerations for the final design include a discreet name for the product that would not appear out of the ordinary in a browser history or app launcher, in case the user does not want others to find out that they are consulting sexual health resources due to social stigma; and a choice of platform that is available to most people in our target population regardless of what devices they might own or their ability to go somewhere on campus in person.

User Research

We conducted two different kinds of user research. First, we sent out a survey to all Princeton undergraduate students through residential college listservs to gather information about the nature of their interactions with resources regarding sexual health and wellness. We gathered

259 student survey responses in total. Next, we interviewed 15 Residential College Advisers (RCAs), who are peer advisers specifically trained to advise on a variety of student issues, including sexual health and wellness. By interviewing RCAs, we gained valuable narratives regarding the first year student's experience with sexual health resources on campus.

Students from all four class years responded to the survey at about equal rates (Figure 1). Additionally, 62.2% of the students surveyed were females, 35.5% were males, 0.8% were non-binary, 0.4% were transgender and 1.1% gave other responses.

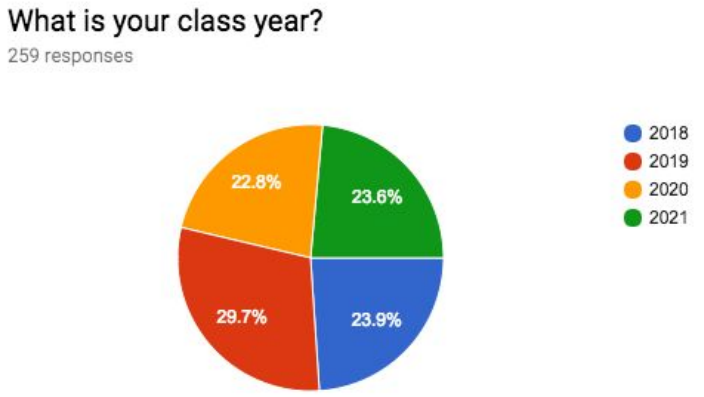

Figure 1: Class year distribution of survey participants.

About half of the students surveyed (50.6%) had consulted an online or in person resource regarding a sexual health and wellness decision in the past year (Figure 2). Online resources and friends were utilized by students the most; thus, we strived hard to integrate these aspects into our designs.

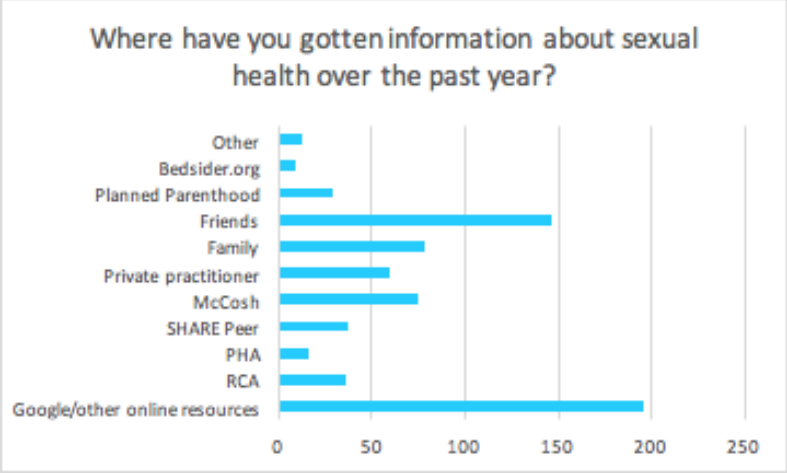

Figure 2: Number of students that have used each of the resources in the past year.

The biggest issues that prevented the students from making or following through on a decision regarding their sexual health in the past year were inconvenience and stigma/taboo (Figure 3).

Figure 3: number of students that are concerned about each one of the issues

In our student survey, we asked which sexual health questions student had a hard time finding an answer to on Princeton's campus. 35.1% of the surveyed students submitted narratives; some of the most frequent and common themes were:

- STD and STI prevention and transmission
- STD and STI testing locations and frequency
- Comparing birth control options
- How and where to have personal conversations about sexuality and moral conflicts
- How to get birth control without a student's parents finding out
- LGBT sexual health
- Confidentiality of McCosh resources
- Talking to partners about sexual health

These are all topics that we would want our future design to address. Some of these topics are Princeton-specific, such as using McCosh resources or being on the university's insurance plan, whereas others pertain to sexual health in general. Our final design will need to address both kinds of topics.

In order to spark our brainstorming process, the last question in our survey asked students about resources they think would improve sexual health on campus. We received 97 responses (37.5% of the students surveyed). Some of the most relevant or common answers were:

- Better sexual education during freshman orientation
- Streamlining the McCosh appointment scheduling system
- Organizing information sessions at McCosh
- Open and destigmatized conversation about STDs, STIs, masturbation and other topics
- An anonymous online and live chat with health professionals

- Having more free birth control methods
- A Princeton specific Q&A confidential online resource
- An online guide to sexual health at Princeton, including testing facility locations, available resources and birth control options.
- A day dedicated to STD testing, similar to FluFest, in order to reduce stigma.

As we awaited survey responses to come in, we interviewed the Residential College Advisors. We asked them about their training, their interactions with their advisees about sexual health questions, the resources they redirect their students to, and their suggestions for improving sexual health on campus. All the RCAs interviewed talked about a 1.5-hour training they have at the beginning of the year, which focuses on campus resources related to sexual health rather than on sexual education. As a result of this, a few RCAs mentioned that they did not feel prepared to talk about sexual health issues. A majority of the RCAs did feel prepared to talk about sexual health issues; however, this was mainly because of their background, and the education they received on these topics before coming to Princeton. All of the RCAs were aware of the resources available on campus, and generally redirect their advisees to McCosh or SHARE for their sexual health concerns. RCAs are required to talk about sexual health at their first meeting with their advisees, but the topic rarely comes up during the rest of the year. The majority of the RCAs interviewed had not been asked any questions yet about sexual health from their advisees yet this year. They do provide free condoms to their advisees, and in general feel prepared to answer questions about contraceptive methods. They felt that women ask questions much more frequently than men do. Finally, their suggestions included adding more sexual health training to RCA training, catering to the needs of the students that don't feel comfortable asking questions, and promoting events like the Safer Sexpo which they feel are very helpful.

Design Methodology

Before our group brainstorming session, we all read the survey responses and the interviews in order to have a full picture of the students' concerns and recommendations. All five team members met up and discussed our results and common trends in the data before starting the brainstorming session. We realized that the recurring topics were the need for confidential resources, the convenience of online resources, and a need to destigmatize sexual health conversations on campus. We then began the brainstorming session, in which different team members suggested designs, and we talked about the specifics of each particular design before moving on to the next idea. In the end, each group member had suggested at least one idea. We proceeded to narrow down the number of designs by grouping similar ones, and we ended up with several. design ideas. We set up a voting system where each member of the group got to vote on their three favorite designs. We then proceeded to count the votes for each of the designs, and selected the designs with the highest number of votes. This selection was straightforward, since three designs were the apparent winners: the Q&A site with professional and peer advisers, the location-based sexual health resource app, and the toilet stall kiosk (see

later sections for full descriptions). Figure 4 shows the voting system we used, and the results of our vote.

	Laura	Jonathan	Ines	Madeleine	Natalie
Q&A with health professionals and peer advisers with resource integration	X	X	X	X	X
Location-based sexual resource app		X		X	X
Free-form Q&A forum with students	X		X		
Toilet stall kiosk	X		X	X	X
Outside McCosh kiosk					
Redesign pamphlets (paper)		X			
Uber for contraceptives					

Figure 4: Voting method used for design brainstorming and choice process. The chosen designs are highlighted in yellow.

The three designs we chose (highlighted in Figure 4) were a Q&A system answered by health professionals and peer advisers, a map of the sexual health resources available on campus at a given time, and resource kiosks in toilet stalls. We proceeded to further discuss these designs and added specifications to each. We drew a few design alternatives of each chosen designs on paper before drawing them out on the digital Sketch software.

During this process, we followed Randy Pausch's tips for working in a group (Randy Pausch's Tips). We specifically let everyone talk and we identified the designs by one of their main characteristics ("Redesigned paper pamphlets" not "Ines's design") to avoid egos. We also made sure to phrase alternatives as questions to avoid confrontation and criticizing previous ideas. We didn't end the meeting until we had created the sketches for all three designs and had discussed their functionality extensively, to make sure that we all agreed on the specifics of each design.

Design Space

`What requirements may be difficult to realize?`

Privacy is an important requirement that warrants particular attention when implementing systems like our proposed system which may have sensitive personal information pass through. It will require design decisions about how to either not store information or store it

securely, communicate to the user that their privacy is not being violated, and ensure transparency and user trust.

What are some tradeoffs that you should or did explore?

One major tradeoff was between quick availability of information and comprehensive, personalized information. For example, a proposed design where we provide an anonymous question and answer system run by experts would have high comprehensiveness and personalization, because users can ask whatever questions they can imagine and that apply to their specific situation. However, such a system would have a delay between asking a question and receiving the answer, which makes it unsuitable for emergency situations. In contrast, a design where we curate a list of questions and answers that we find most important or helpful would provide immediate access to answers, but would be of no help to users with questions that are not on the list. Navigating these two extremes is important to our design consideration.

Which tasks will be easiest to support? Which are the hardest to support?

The easiest tasks to support include organizing information that already exists in some form in university resources, e.g. the McCosh website, and making it more accessible and useful. This is relatively easy because the main problem with those pieces of information is that they are scattered and hard to find. More difficult would be tasks that require generating new content, curating user submitted questions, or other things that we users might want or need that do not exist yet at all. This would be more difficult because we would have to create new content and ensure its accuracy, take responsibility for updating it, and fulfill other maintenance requirements.

You more than likely modified, added to, or removed elements of your requirements and usability criteria as a result of conducting the design process. Discuss these in this section, what were the changes you made and why did you make them?

During the design process we decided to narrow down our focus to think about our accessibility requirement in terms of not only information being easy to find, but how easily users can incorporate our designs into things that they already do in their lives. We wanted to focus our attention on platforms that most people use, or for physical designs, installing them in places that people already go.

Design Summary

In total, our team generated seven ideas that were seriously considered throughout the design process. Based on the extensive user feedback we received through our survey and interviews,

our designs fell into three major categories: web-based question-and-answer platforms, mobile-based platforms relying on location services, and hardware installments around campus.

We brainstormed two web-based question-and-answer platforms: one was supported and maintained purely by students and the other by peer advisors and McCosh professionals. We imagined the student-backed web app to be run in a similar fashion to the popular general Princeton Q&A site, Real Talk Princeton, where students can ask any question about Princeton, and other students will answer. The peer advisor and health professional-backed web app would differ from the student-backed web app in that the answers to the questions would be verified, since only knowledgeable peers and professionals would be able to answer the questions. Additionally, if the web app was more professionally-backed, we could seamlessly integrate on- and off-campus resources within the site to provide additional support for students. Thus, we chose to pursue the professionally-backed web app as one of our three designs.

Our two mobile-based platforms were centered around the concept of finding and obtaining sexual health products (e.g. condoms, dental dams, Plan B, etc.). Our first design was an interactive map which denotes where the closest sexual health products and resources are on campus (e.g. RCA rooms that are fully stocked, college offices, McCosh, LGBTQ+ center, etc.). Our second design was essentially an "Uber for sexual health products"; if a student needed a sexual health product, they could request one, and another student would bring it in a given amount of time to a specified location. For privacy and cost reasons, we decided to pursue our first location-based design as one of our three designs, as it would prevent the student from having to interact with another student while receiving the sexual health product, and would prevent the student from having to pay delivery fees.

The two hardware designs we brainstormed were centered around promoting visibility surrounding sexual health on Princeton's campus, and providing physical spaces for students where they could access sexual health information and receive answers immediately. Our first design consisted of kiosks outside McCosh Health Center where students could essentially interact with a digital pamphlet instead of waiting to schedule an appointment and/or receiving paper pamphlets at the appointment. Although these kiosks would promote visibility in the public-eye, they still pose a privacy risk to the students. Our second design consisted of tablets being installed on the back of bathroom stalls around campus. This design would promote visibility of sexual health on Princeton's campus, while maintaining student privacy. Thus, we decided to pursue this toilet stall design as one of our three designs.

Design 1: Princeton Private (*Figure 5*)

PrincetonPrivate will serve as the one-stop-shop for both personalized and general sexual health advice and resources. It will essentially be a "Piazza for sexual health questions", where users can get advice from both health professionals *and* peers online. Additionally, links to helpful resources about sexual health in general (e.g. Planned Parenthood, Bedsider.org, etc.)

and sexual health at Princeton (e.g. McCosh Health Center, SHARE, LGBTQ+ center, etc.) will be integrated within the website.

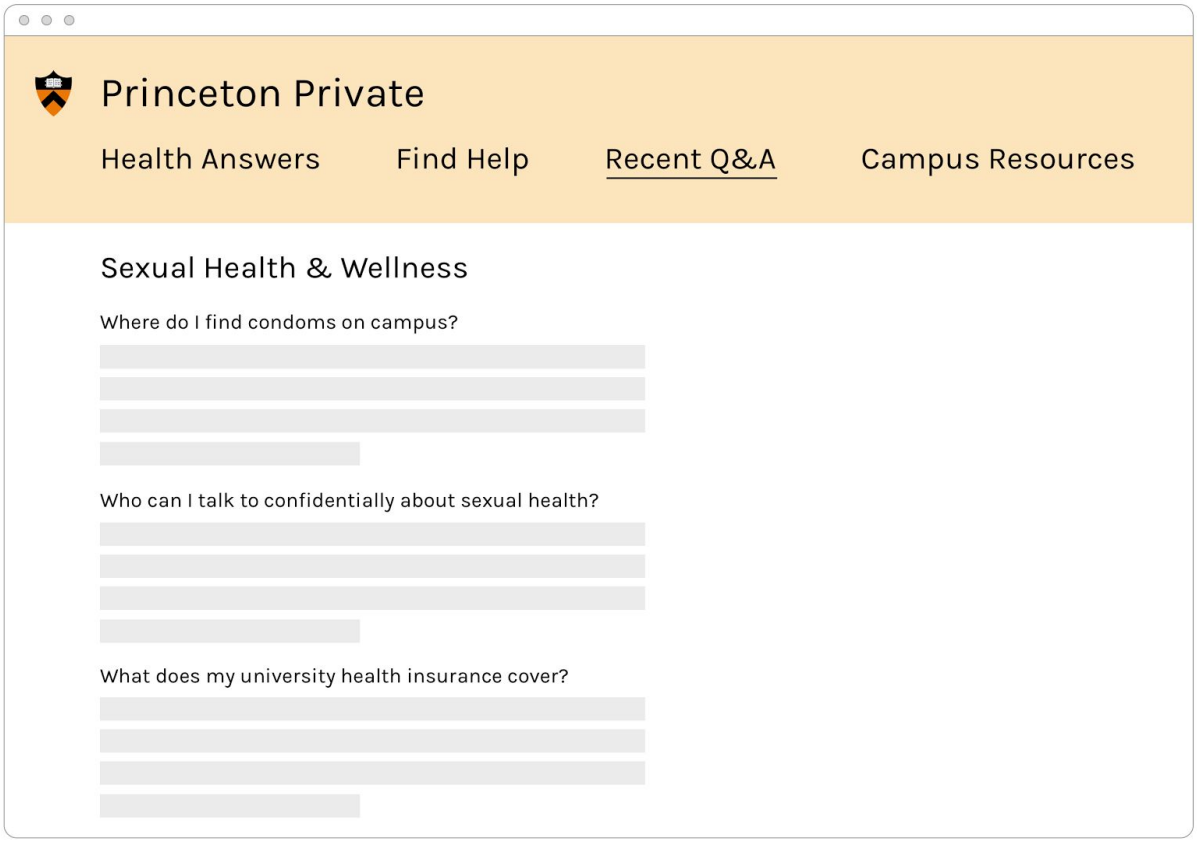

Figure 5: Princeton Private design

A potential use case for this is a student who is interested in getting an intrauterine device (IUD) at Princeton, but is unsure if their insurance covers it, and furthermore, is unsure if their parents will find out if they pay for the IUD with their insurance plan. They log-in to PrincetonPrivate, and ask the question: “I am thinking of getting a Mirena IUD, and have AmeriHealth insurance. Can I get the IUD inserted at McCosh without my parents finding out?”. A health professional submits an answer explaining the process of getting an IUD at McCosh, and suggests questions to ask the insurance provider before engaging in the procedure. A student submits a “peer answer” explaining that they, too, have AmeriHealth insurance and got a Mirena IUD at McCosh; the student further explains the steps they had to take to ensure complete confidentiality.

The biggest advantage of this system is that it is a one-stop-shop for all resources and advice. Students will be able to find professional resources about any sexual decision they are looking to make during their time at Princeton and beyond. Additionally, the mixture of professional and peer advice allows students to gain insights regarding the specifics of a sexual health decision, and also gain access to personal narratives of Princeton students who have gone through a

similar decision-making process. Disadvantages that were pointed out during the poster session included not having an “instant” question-and-answer service for urgent matters as part of this one-stop-shop for sexual health, and the fact that this solution still requires students to go out of their way to access the resource, does not promote sexual health visibility on campus in a radical way, and thus only caters to students who are already actively seeking out information about sexual health. This design could easily encompass many of our user requirements, as we could address and cover a breadth of problems on the site, and introduce new features as new pages or sub-apps as user requirements shift over time.

Design 2: Frisky Finds (*Figure 6*)

FriskyFinds is a map-based app that helps users locate where to find condoms and other sexual health resources on campus. Currently, there are many resources available to students, but our survey results showed that lack of information and inconvenience are the primary reasons preventing many students from making a decision about their sexual health. Students are unclear about testing locations, where they can talk to professionals, and where condoms are available at any given time.

A potential use case for this is a student who is making a decision about engaging in sexual activity but is unclear where to get a condom beforehand. All RCAs have condoms outside their door but if the student is in an unfamiliar building or if the nearest box is empty, this app would help them locate the nearest resource.

Some advantages of this system is that, as an application, it is low-cost to build. It is also easy to test through using our own phones on Princeton’s campus. It is advantageous in that it’s functionality can be expanded; the app can be further developed outside of this class to include more functionality and information for students-- perhaps even incorporating PrincetonPrivate’s Q&A section. Some disadvantages are that its accuracy would be updated and maintained by Princeton students and it is thus not self-sustainable. However, the mobile nature of the application satisfies our design requirements of being private, easy to use, and easy to access. The current name, ‘FriskyFinds,’ is perhaps not as discreet as we would like, and might appear out of the ordinary in an app launcher. The choice of a mobile application platform, if developed for both iOS and Android, is available to most people in our target population regardless of what device they own.

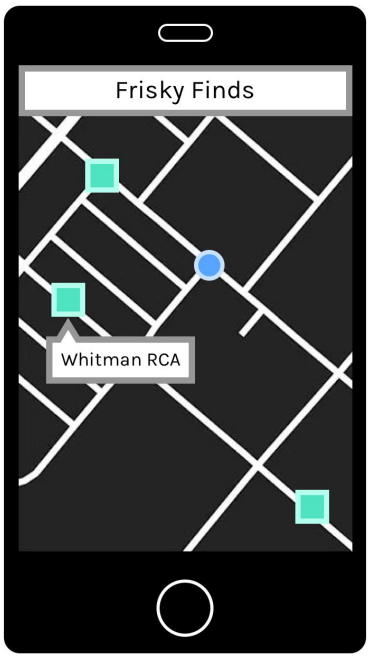

Figure 6: Frisky Finds design

A lot of potential users really liked this idea, but one piece of feedback is that it is a little less interesting unless the app is updated with current information dynamically. To address this, we would need to ensure that Princeton Peer Health Advisors, Residential College Advisers, or other peers would be interested in assuming the responsibility of updating the app with current information.

Design 3: Throne Thoughts (*Figure 7*)

ThroneThoughts will be an interactive information panel displayed on the back of bathroom stalls. According to our survey, the top reason preventing students is inconvenience. Displaying important information regarding resources on campus on the back of every bathroom stall presents every student with such information at least once every day.

A potential use case for this is any student who uses the bathroom, sees information about sexual health that interests them, and is then able to interact with the information panel to learn more about this information while they are in the stall. With the information the student has learned and the constant reminder of that information as he goes to the bathroom everyday, he takes steps to establish and maintain healthier and safer sex practices.

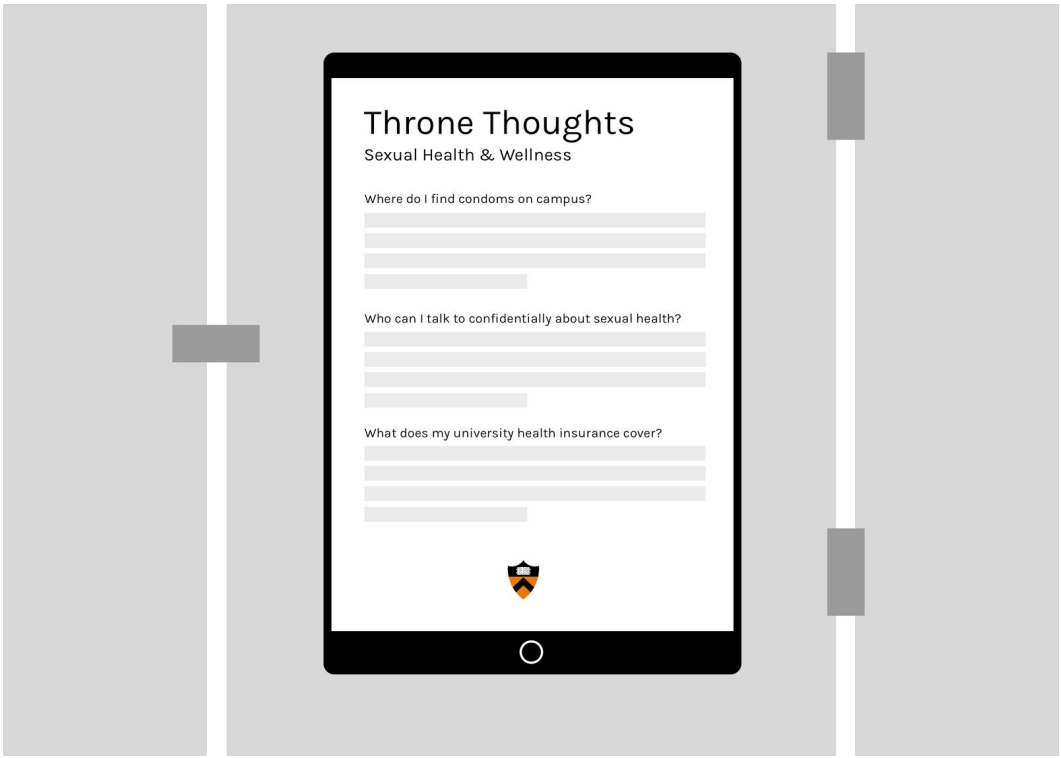

Figure 7: Throne Thoughts design

Some advantages of this system is that it is able to reach all students across campus multiple times throughout the day. However, there are many concerns with this design; as an iPad application and hardware set-up, it is high-cost to build and test, and there are lots of concerns regarding hygiene with interactive systems inside bathrooms stalls. The location of the system satisfies our design requirements of being private and easy to access, but reservations users might have about hygiene impact its ease of use. The choice of a bathroom stall for our location is available to everyone in our target audience.

A lot of potential users really liked this idea, but expressed concerns over the hygiene and cost aspects.To address this, one idea is to convert the interactive system into a more passive information display panel, so that the users are not actually touching the screen while going to the bathroom.

Feedback

During the COS 436 poster session, our group collected feedback from professors and other students about our three primary designs. After discussing the advantages and disadvantages of each design with the visitors, we asked them to vote on a design that they feel would improve the sexual health and wellbeing of Princeton students the most. Overall, people agreed that PrincetonPrivate was the most practical design, but felt that FriskyFinds and ThroneThoughts

were the most innovate, and had a greater chance of *actually* improving sexual health at Princeton in a radical way.

Citations

60 Percent Of Students Sexually Active, Survey Finds Lower Rates of Protection | News. (n.d.). Retrieved October 12, 2017, from http://www.thecrimson.com/article/2016/12/12/uhs-health-survey-data/

Randy Pausch's Tips for Working Successfully in a Group. Retrieved November 10, 2017 from http://cos-436-human-computer-interface-technology.wikispaces.com/Randy+Pausch%27s+Tips+for+Working+Successfully+in+a+Group