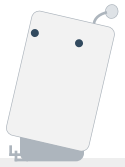
# IMPROVING
# COMMUNICATION
## inside the VoiceThread App.



Group 8
Stephen Fox | Josh Gdovin | Tamkya George

# The Problem

Our friend Amber was taking a college level art history class. Due to the Covid-19 pandemic, that class was only offered to Amber online. This would not have been her choice in classroom format, but given the circumstances she didn't have much of a choice. During her first online class, she discovered the professor was going to use an online application called VoiceThread. VoiceThread is a cloud-based application that allows students to interact with one another by creating, commenting and sharing information. Since this was Amber's first online class, this application sounded very interesting to her, and she hoped this would somehow replace the face-to-face interaction she would have encountered by taking the class in person. She watched her first lecture the professor had posted, and the class was instructed to respond to some of the questions that were asked during the lecture. This seemed like an easy enough task for Amber to take on.

First, she tried to respond to the questions in video format. Each time she tried to record a response, she would get an error about the audio not being able to be recorded from her computer. Not wanting to give up, she decided to try and post her response in a text format. After not understanding exactly what to do, she turned to her trusted friend Google. She ran a search on how to respond to a video in the VoiceThread application. She found several YouTube videos and some links that looked like they would give her the information she needed. After watching the first two videos and visiting the top search results websites, she quickly realized that the VoiceThread version in the video was older than the version she was currently using and the instructions they were demonstrating did not apply to her version of VoiceThread. As a last-ditch effort, she reacheed out to someone in her class to see if they might be able to help her create a response. The student responded that they were also struggling to figure out how to use the application and would not be much help to her. Frustrated and feeling defeated, Amber powered down her computer, slowly pushed herself away from the desk, let out a giant sigh and walked out of the room. She told herself that she would try again in few hours.

**This is a problem; this is our problem we are trying to solve**.

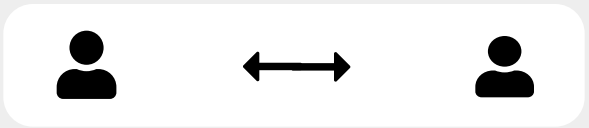

Introduce Yourself (Slide 1 of 5)

# Problem Statement

To make the VoiceThread application a powerful communication tool within a classroom by improving the ability to easily communicate with other students in posts, replies and other core functionality.

# Empathy

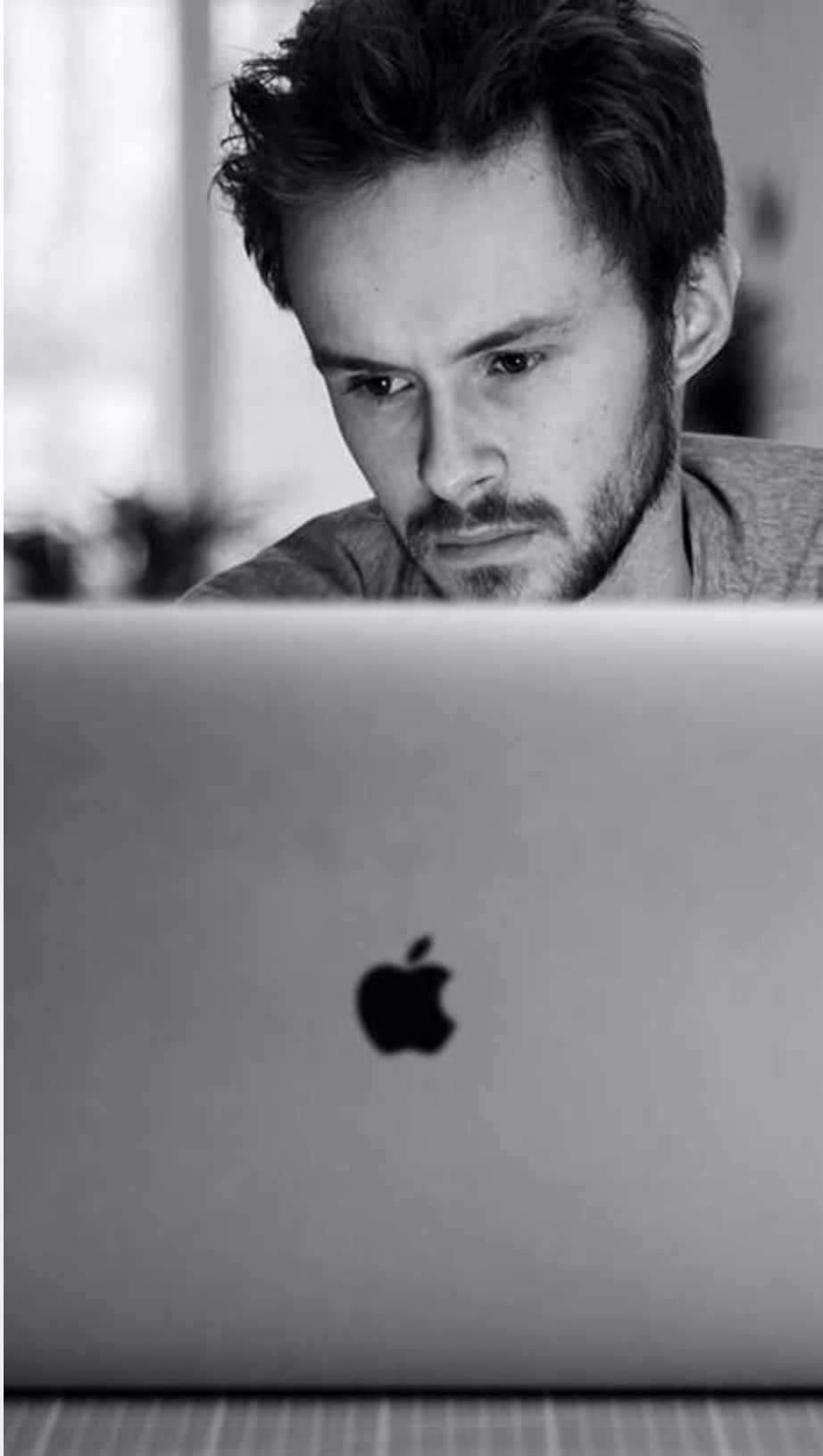
For our empathy interviews, we conducted several interviews over a number of evenings. We chose to interview three students for this project. Specifically, we focused on students who have some experience using the VoiceThread application. Because of the Covid-19 pandemic, all interviews were conducted over the Zoom application. Interviews were conducted in two different formats. The first format included each student being interviewed by themselves and being asked a series of questions. The second format combined each student into one Zoom call.



## Solo Interviews

For the solo interviews, we asked the students a series of questions and recorded their responses. Some of the questions that were asked were:

- Tell me about your experience with VoiceThread.
- How do you use VoiceThread in the classroom?
- What are some of the tasks you used VoiceThread to complete?
- What do you like about VoiceThread?
- What do you not like about VoiceThread?



## Group Interviews

For the group interview, we asked the same questions with additional follow-up questions geared towards the group discussion. Some of the group-specific questions included:

- How goes VoiceThread assist in communication in a remote learning setting?
- How do you interact with fellow students using VoiceThread?
- What does VoiceThread do better than a discussion board?
- How does it under perform when compared to a discussion board?

While the solo interviews were great, once the students were in a group setting, the answers seemed to be much more organic and the students fed off of each other's response. The follow-up questions were usually answered before we had a chance to ask them. This could have been due to being asked some of the same questions before in the solo interview, but it also could be that the answers in the group setting were much more in-depth, and the conversation flowed into other topics that would have been asked in follow-up questions.

# Interview Results 

The results we got from these interviews were interesting and some answers really surprised us. As a group, the students seemed to all agree that they would prefer a discussion board over using VoiceThread. They all gave unique answers to back up that statement, but they also gave answers they all agreed on.

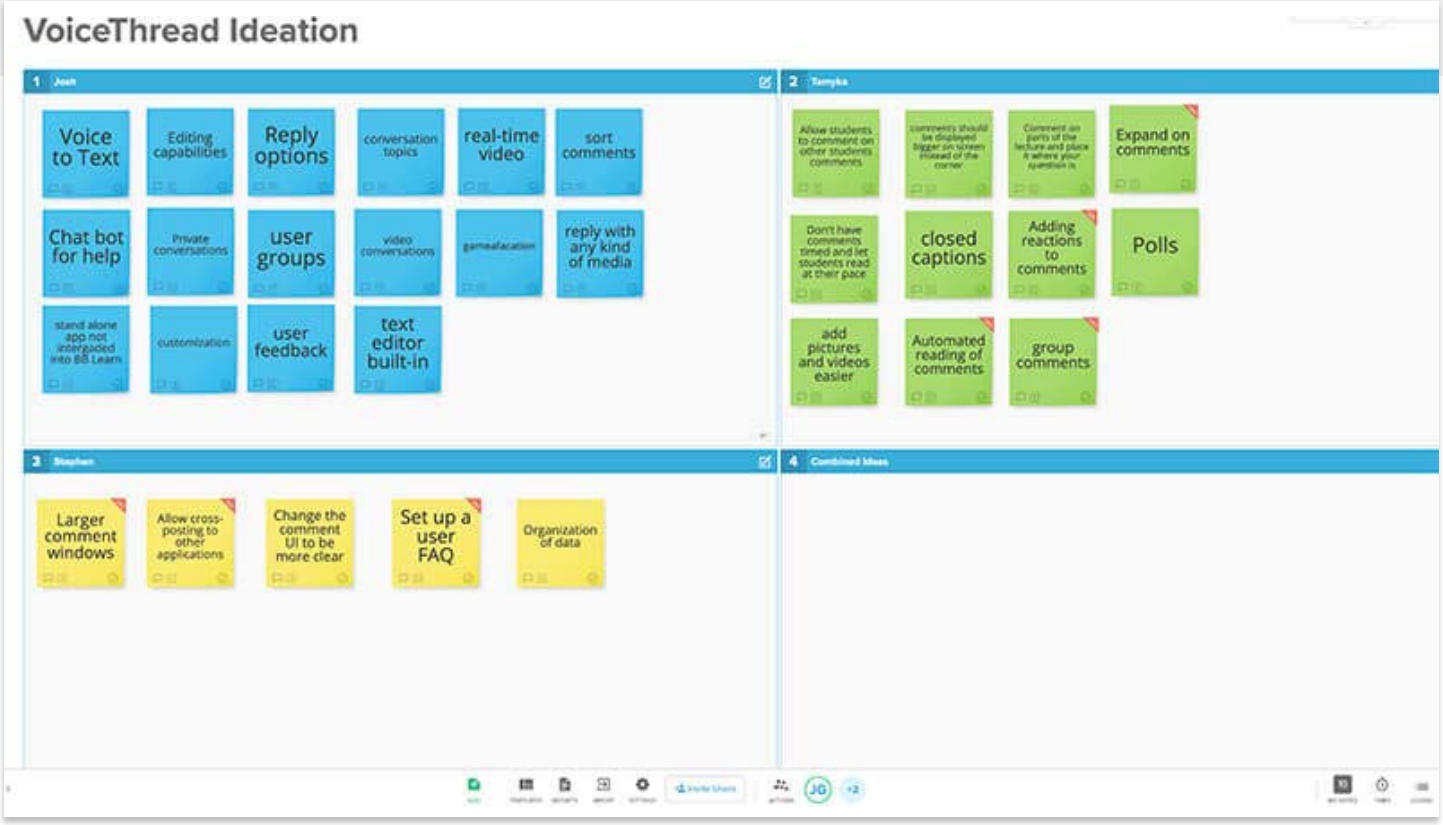
One of the answers they all agreed on was that VoiceThread made it difficult to know how to use the different response options. There is a video option, but there is no real instruction on how to use that option. When the student clicks on the video option, it just throws them into a recording session, and they always feel unprepared to give a predetermined video response. The lack of instruction provided by the VoiceThread application would cause anxiety in the students and would be a deterrent in wanting to use the VoiceThread application. This was one of the main reasons they would rather use a discussion board over VoiceThread.

As a group, we determined that VoiceThread could be a great communication tool in a remote classroom. Today's software developers aim to minimize the learning curve to use their application. This trend in software development has taught the end user that computer applications should be easy to use, with little to no instruction needed. Sadly, this is not the case for the VoiceThread application. Due to lack of instruction on how to use VoiceThread's core features, the students were not interested in trying to learn this new application on their own.

# Design Brainstorm

For the brainstorming portion of the project, we used a web-based application called Stormboard. We set up a board for our VoiceThread project. We divided the board into four quadrants and each of the members of the group was assigned a quadrant of the board. The main goal of the brainstorming sessions was to think of as many ideas as possible that might or might not relate to our project goal.

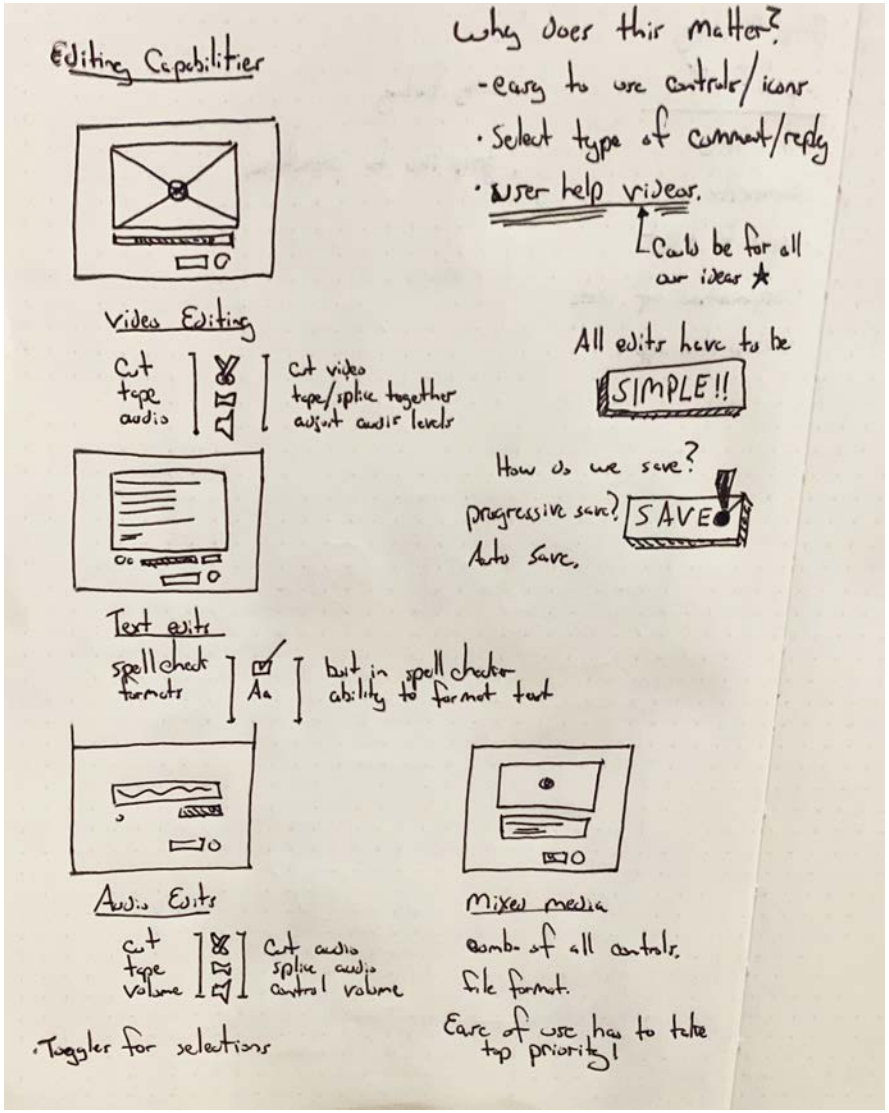
Our process was very collaborative even though we were not able to work on this as a group in real time every time. We would review what the results were from our interviews, and from that review come up with an idea. In this process, there are no bad ideas, only ideas that could be the foundation of another idea. This snowball effect was an effective way to generate a large number of ideas.




# Design Brainstorm Samples

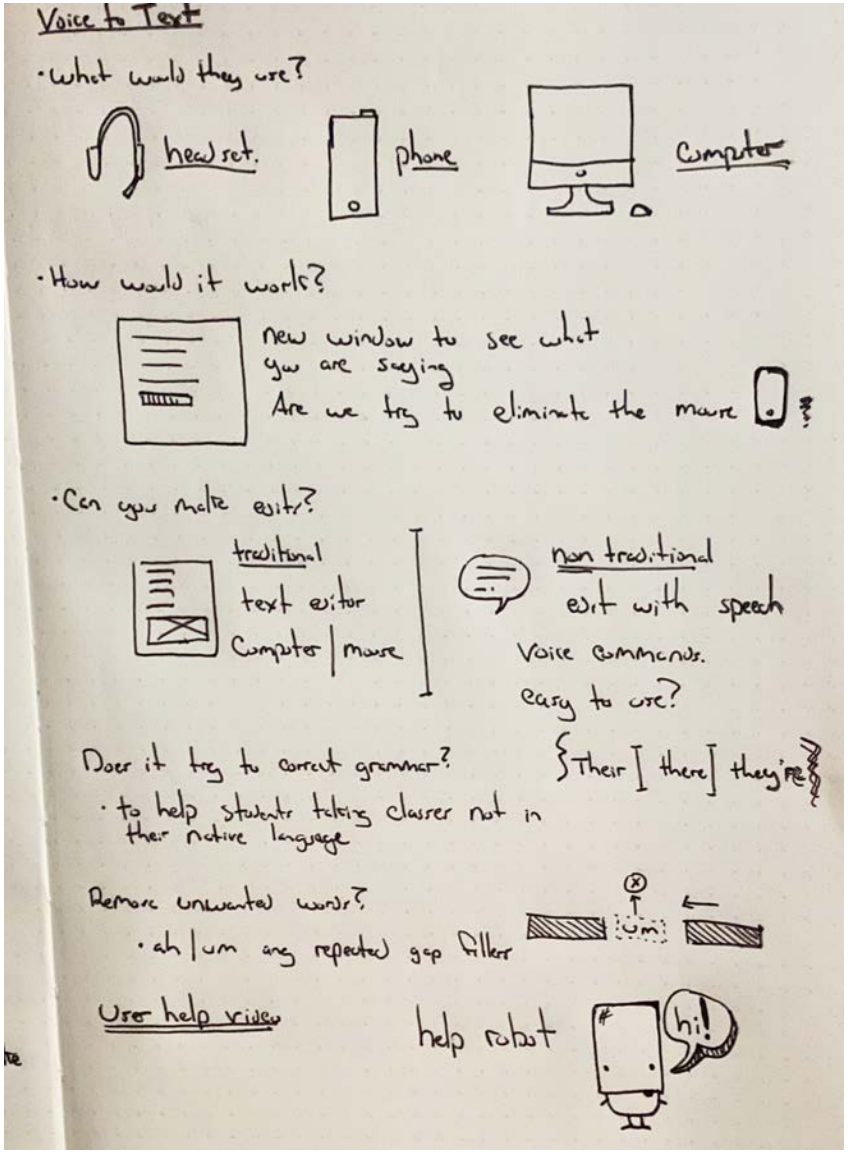
# Editing Capabilities

We experimented with the idea of allowing the user to make edits to their comments. We had to take into consideration the different way the users make comments: Video, Text, Audio and Mixed Media. The most important aspect of this idea is simplicity. We want to reduce the user's frustration, not add to it.



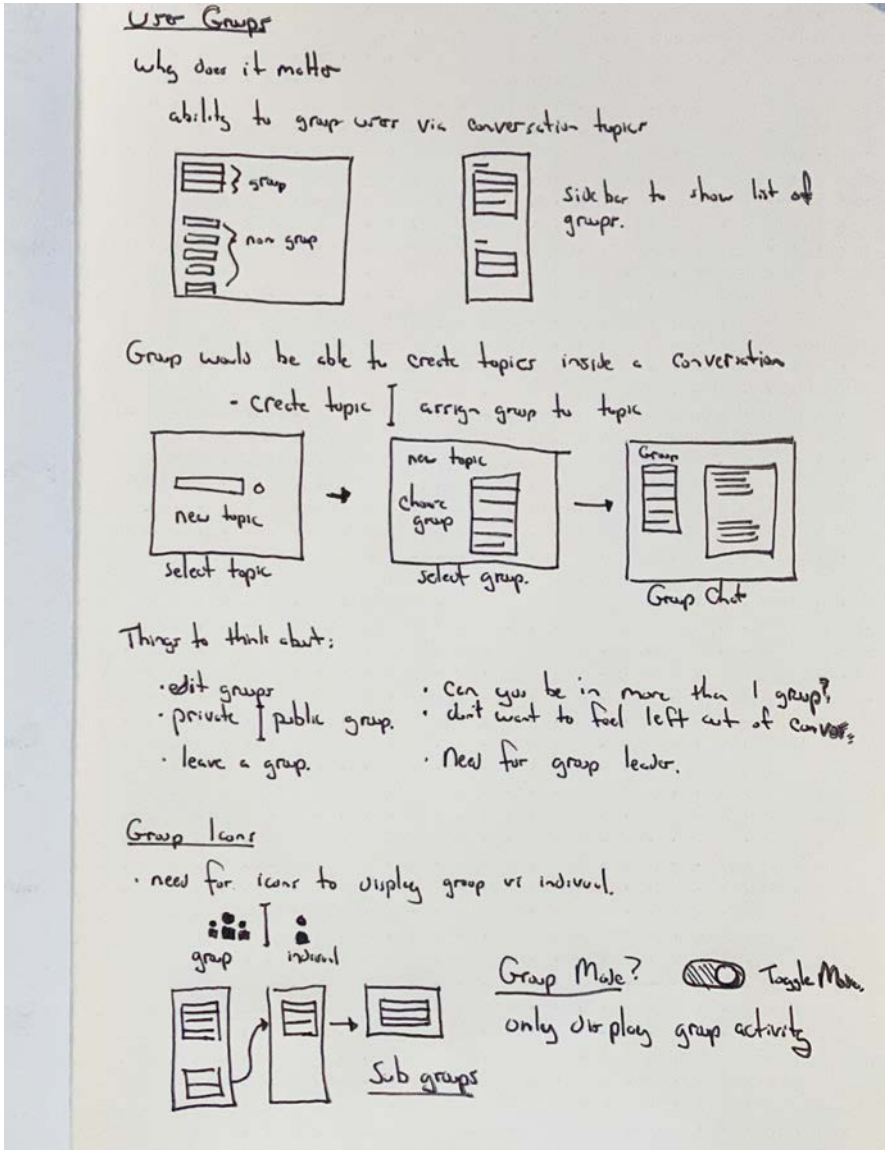

# Voice to Text

Because of the nature of this application, we thought it would make sense to give the user the ability to communicate using their own voice that is then converted into text so that they would use it in a reply in a situation that calls for text rather than audio.



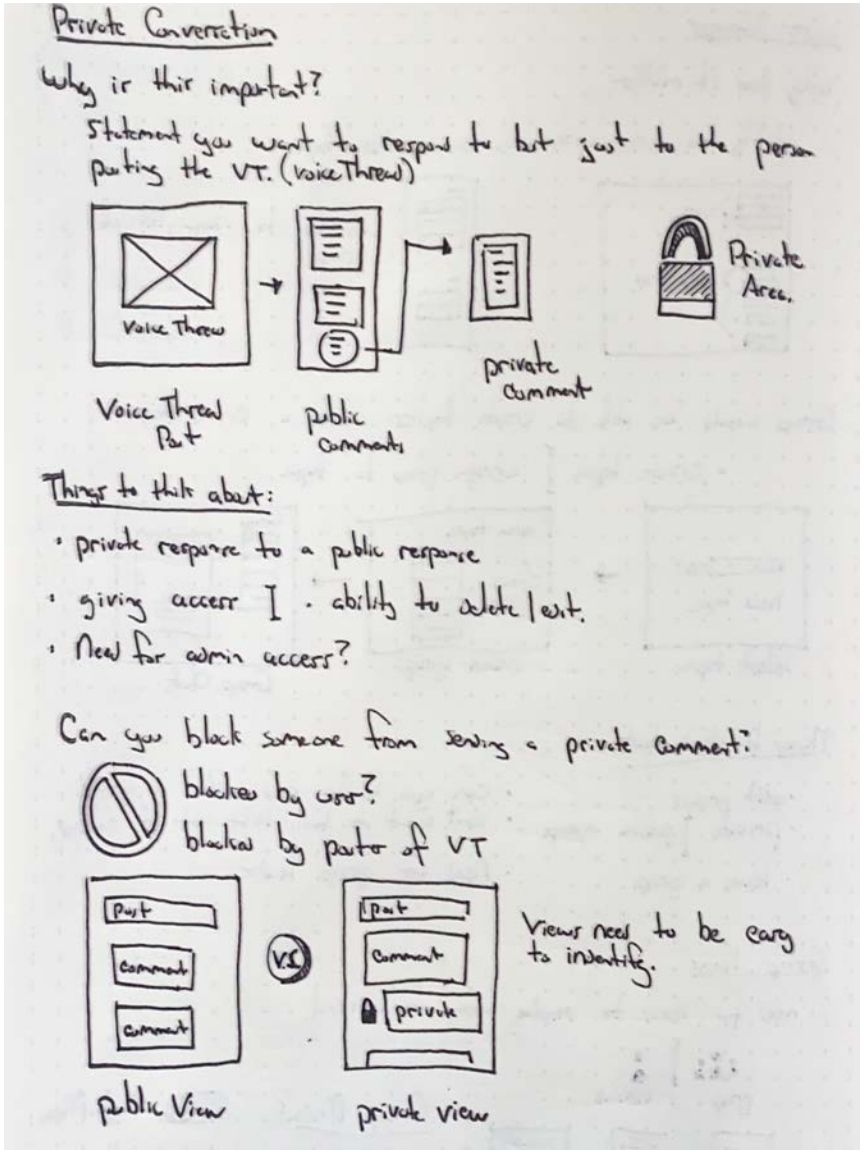
# User Groups

We wanted to explore the possibility of having users paired up in the conversation. Much like if you had a group of people, there might be different threads of conversations going on at the same time about the same topic. This is a way to organize the conversations and the participants.



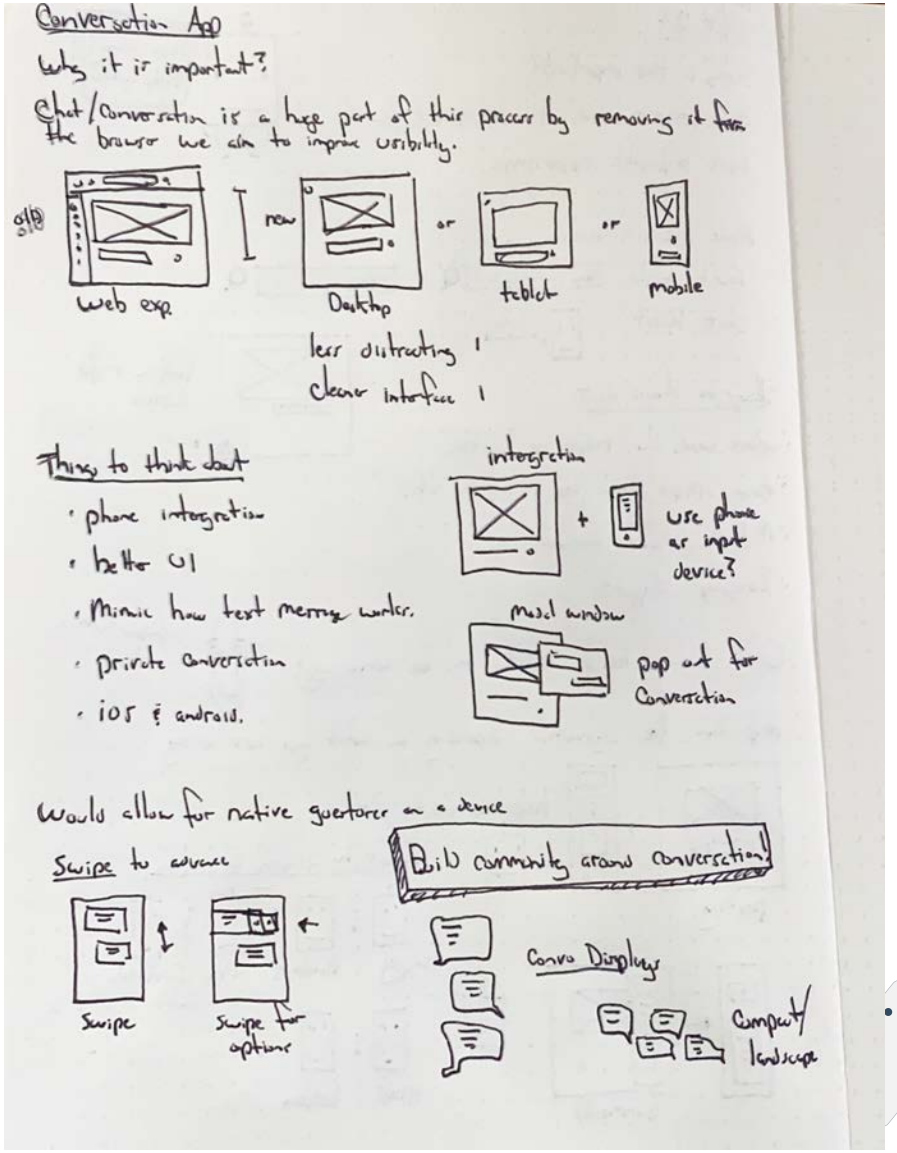

# Private Conversations

We wanted to give the user the ability to respond to any comment not just in a public forum, but also a private area. This would allow users to ask a follow-up question on topics they might not be comfortable asking in front of the entire group. This also brings into scope the possibilities of needin administrative access to monitor the private conversations.



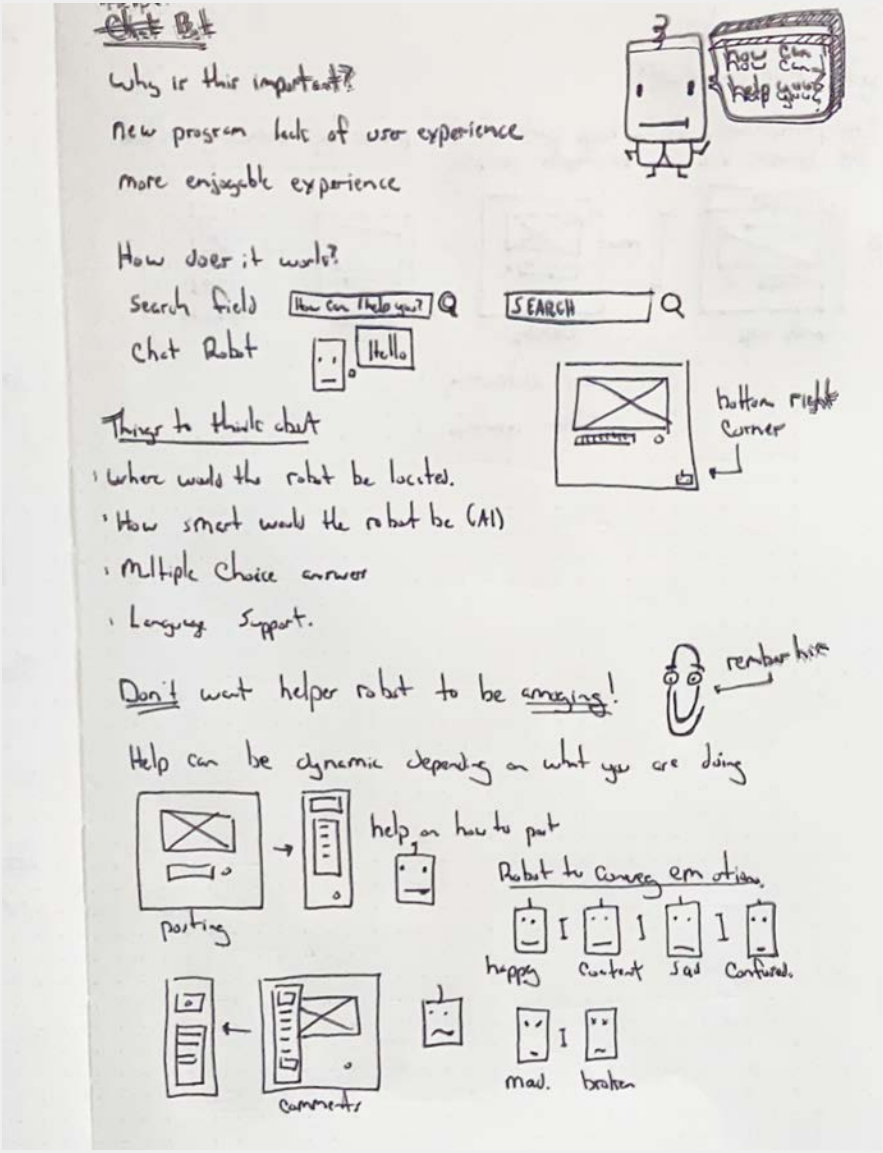
# Conversation App

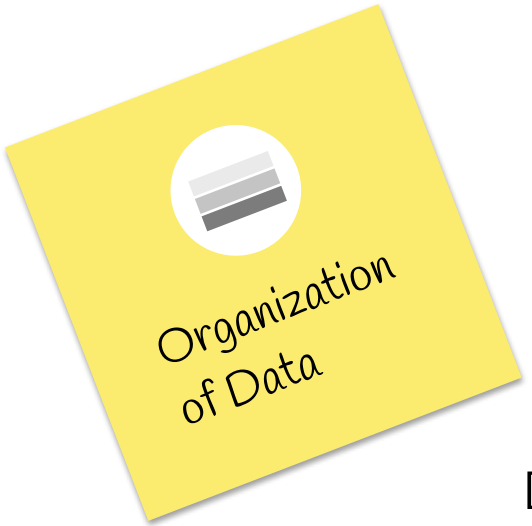
We wanted to explore what the user experience for conversation might be if we made the VoiceThread a stand-alone app. This also opened up the possibility of integrating other devices, such as a mobile phone. This would also allow us to experiment with conversation structure and explore using gestures within the app for conversations.




# Helper Bot ★

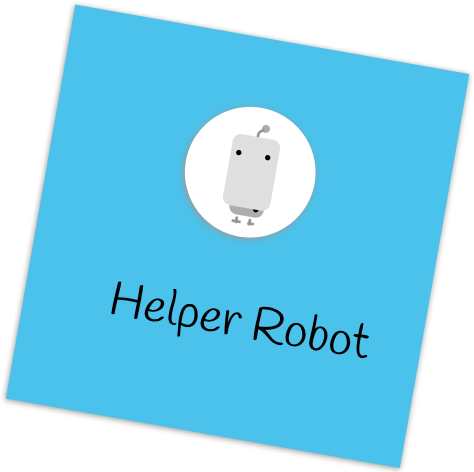
Communicating in the application can be frustrating. We wanted to explore the possibility of creating a helper robot to help the user navigate the options when communicating in the app, such as commenting, replying and overall usage of this part of the app.






## Design Brainstorm Results

The results of our Stormboarding sessions were a collective group of ideas that were specific in some directions and wildly out of the scope in other directions. After we brainstormed all of our ideas, we then reduced down the number of ideas as a group, talking about each one and which ones might make more sense to take to the next phase of the project.


User Testing

# User Backgrounds

For the testing of this design idea, we used three current college students. Two of the students have had some experience using the VoiceThread application in some of their online classes, and one of the students had no prior experience with the application. With respect to the students with previous VoiceThread experience, we asked them what they thought about the user experience. A common answer among both students was the steep learning curve on how to use the application. After a long search session on the internet, the solution for one of the students was to leverage another student who had taken the course in the previous term and ask them for assistance in using the application.

We conducted the test phase in the location that we believe students would most likely be using the VoiceThread application, which would be at a home desk or office. The testing was conducted during the evening so that we did not interfere with the students' school schedules.

We presented this project to the students in two different ways. In the first version of the project, we gave the students the designs and asked them to review the designs without any explanation or help. The two students who have previously used VoiceThread were able to understand the precise problem for which we were trying to solve and understood the steps we were showing to reach the resolution. The other student was not as confident in her ability to understand what was being represented in the designs or to even identify the problem statement.  Without this context, the student was unable to contribute much to the conversation.

# Testing Questions

The questions posed by the students during this phase were somewhat generic and not targeted at the core of the problem statement. Some of the questions posed included:

- Can you leave a comment on the video?
- How did the Helper Robot get triggered to ask me if I needed help?
- Does the Helper Robot have a guy or girl voice?

In the second presentation, we walked each student through our thought process, showing the designs along the way. The questions we got during this phase were more specific to the designs and directionally more targeted to our problem statement. Some of the questions we received included:

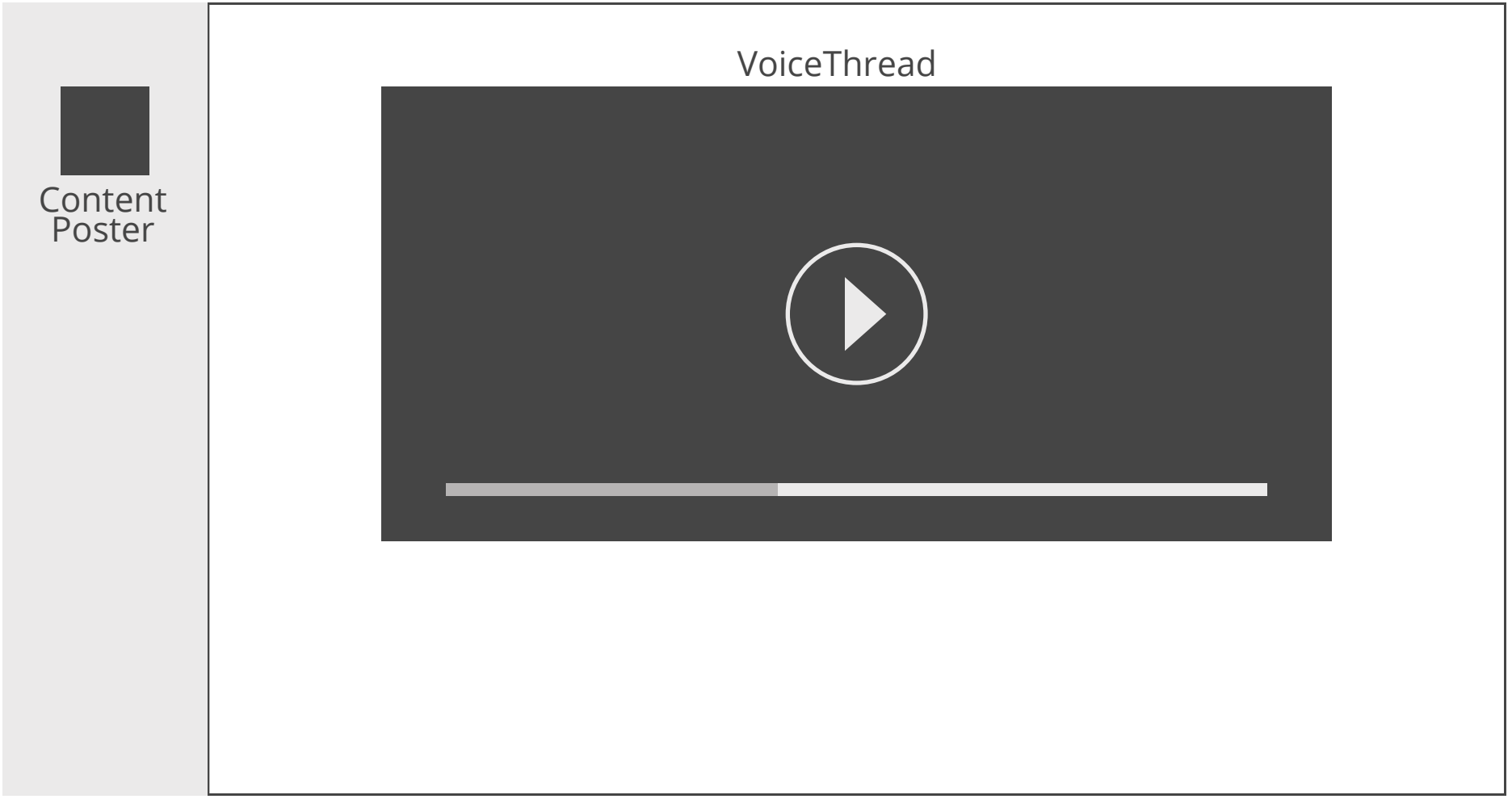
- What if I want to change the type of response I want to give after already choosing one to get help with?
- What if I don't know what keywords to search for?
- What would the search results look like?

The problems that the students identified seemed to overlap with each other. For example, one common issue that was brought up multiple times was the lack of resources to find meaningful help in using the VoiceThread application. This observation reassured us that we were targeting resolution of a real problem

# User Scenario

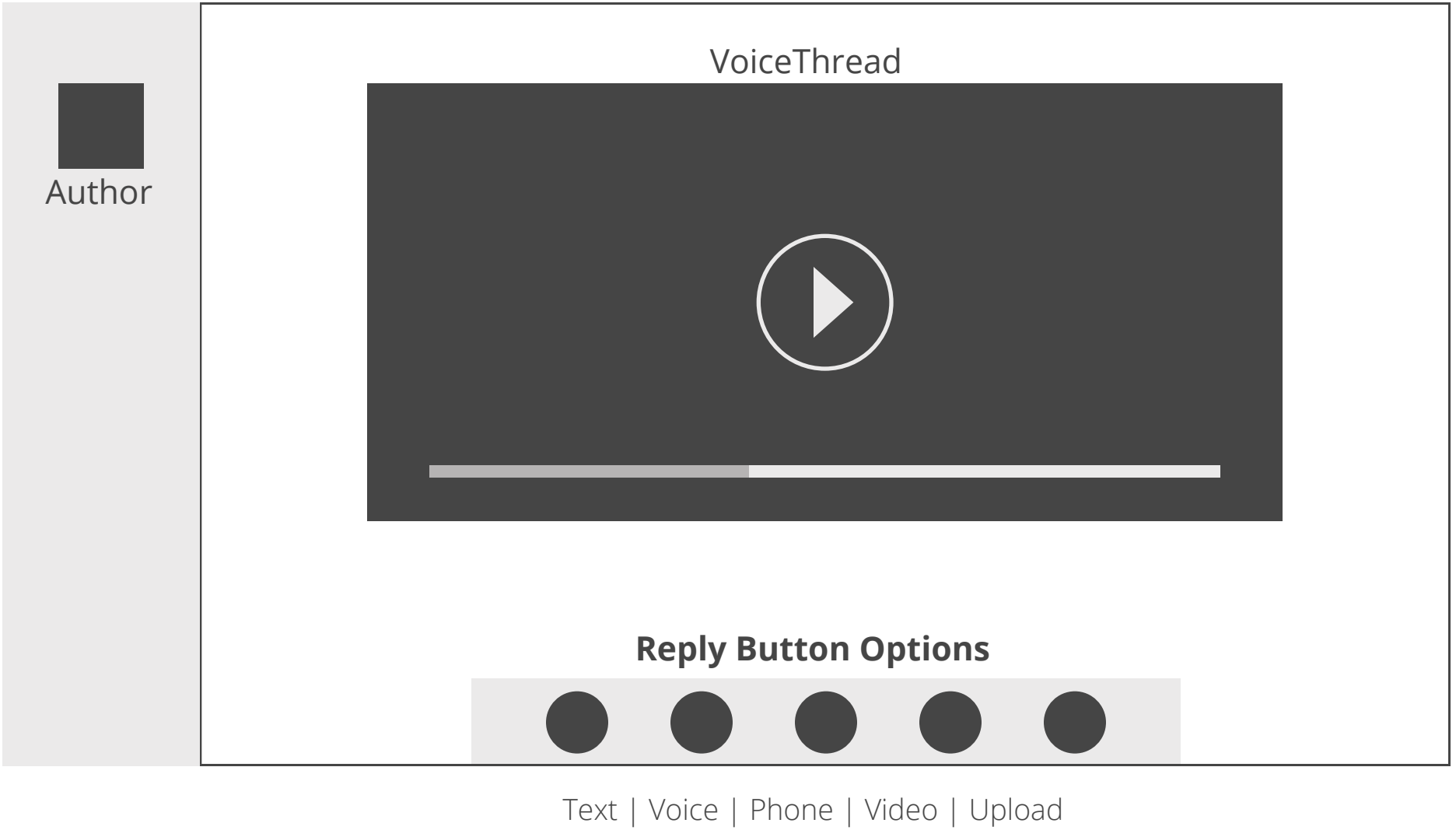
## 1 Student watches the video that is posted.

This is a feature to improve a student's understanding of how to use VoiceThread to reply to a posted thread. First, the user would watch the posted video on VoiceThread. Either during the video or after the completion of the video, the student would make the decision on how to respond to the post (video).



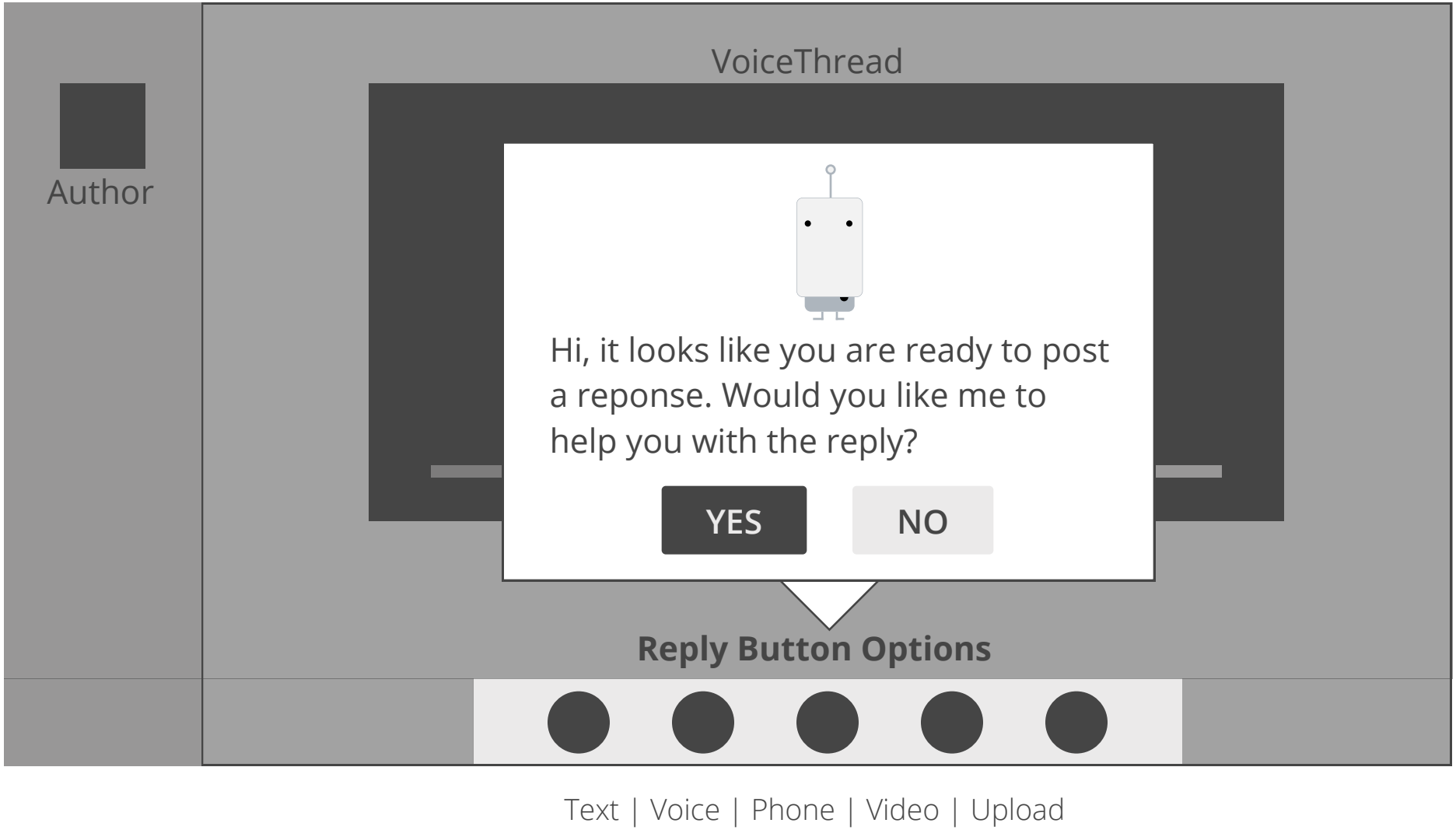
## 2 Reply options are presented to the student.

The user is presented with five options to respond, which include through (1) text, (2) voice, (3) phone, (4) video, or (5) content upload. This is where the Helper Robot interaction with the user would occur. The screen would have an overlay on top of the VoiceThread application, allowing the user to highlight the helper section of content.



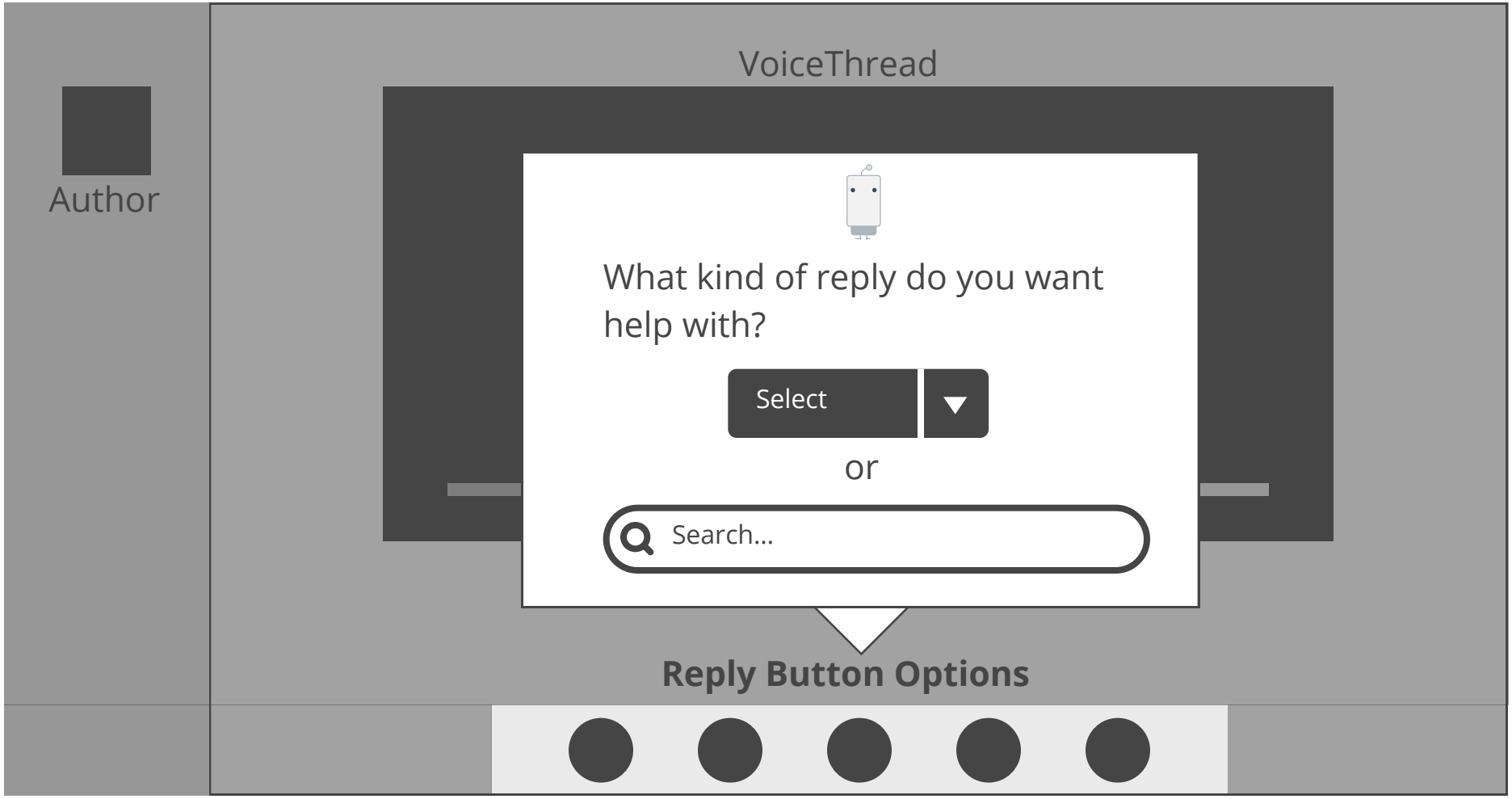
## 3 Ask the student if they would like help.

The first question the Helper Robot would ask is to determine if the student actually wanted help in replying to the post. If they do, the Helper Robot will present them with two options.



## 4 Present the student with topics to select or a search option.

The next step would be for the user to select the category in which they need help or run a search for a topic.




Text | Voice | Phone | Video | Upload

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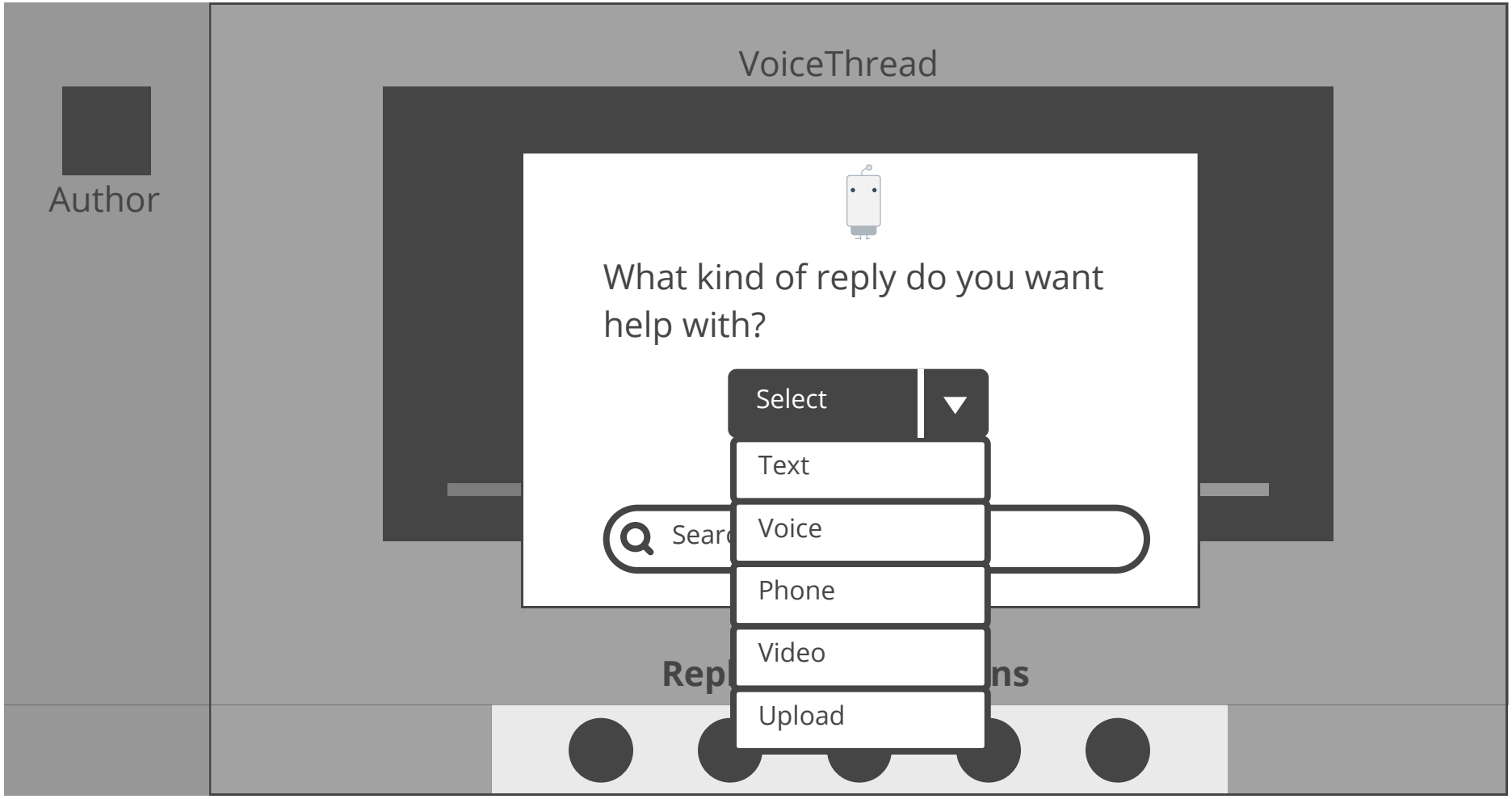
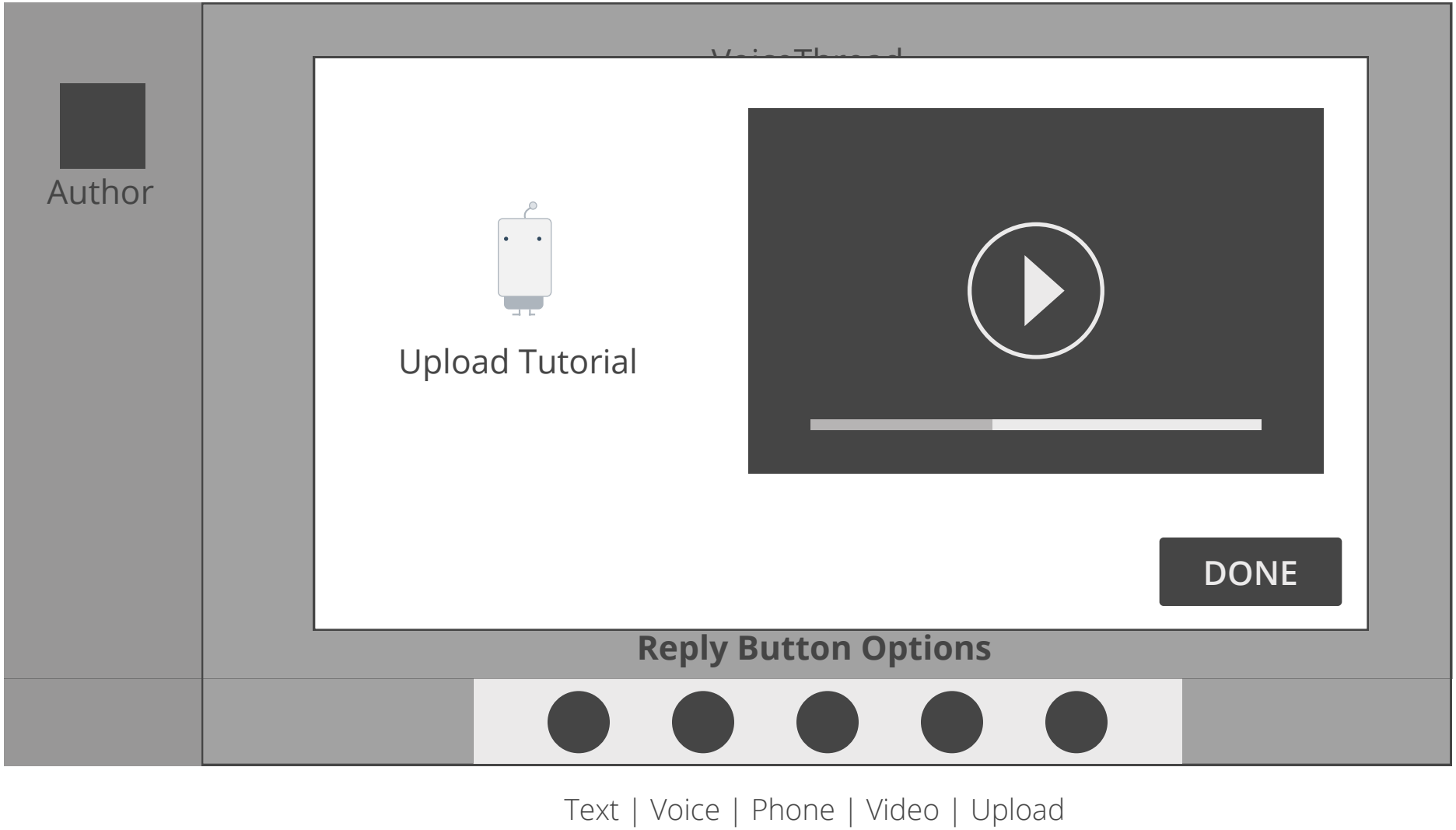



Text | Voice | Phone | Video | Upload

## 5 Display the video for the student to watch

In the last step, the student would be presented with a video of the topic they chose. The user would watch the video to understand how to respond in their desired format, close the video and then preform the task on their own.



# Test Feedback

**Strengths:**
Students noticed how simple the help feature was to use. They liked that the help automatically presented itself when it was time to reply to the post.  They told us that the step-by-step directions were easy to understand and they were able to follow along. Students mentioned that this would be a helpful addition to the entire program, not just on how to reply to VoiceThread content.

The student who had never previously used VoiceThread understood the concept that we were trying to improve. She mentioned to us how she liked the overlay feature, which allowed her to focus on the area of content that was prompting her attention.

One student tester made a similar observation to another student tester that this feature could be applied to the entire application, and not just to the reply section. They really liked the persona portrayed by the Helper Robot and suggested that the robot should have some kind of animation in the final product.

**Weakness:**
Students wanted to know how they could turn off the Helper Robot if they no longer needed help. They also wanted to know how to close out of the help section if they no longer required assistance. They mentioned that they would prefer if the Helper Robot walked them through an actual reply post instead of having to watch a video and then try and replicate the steps displayed in the video.

The students mentioned that while they liked the overlay feature, they wished it was a bit darker. They were curious as to what the search results would look like if they attempted to use that search feature.

The students raised the point that we never show the final screen of what the reply looks like and where on the screen the reply goes.

# Test Reflections

It was interesting to compare the students' reactions when we did not explain to them what the point of the project was in comparison to walking them through the designs and explaining in detail the purpose of each screen. When we did not give them instructions to guide the exercise, the students who had previous experience in using VoiceThread recognized the interface and were able to guess what the goal of the problem statement was with fairly good accuracy. The student who had never used VoiceThread before was not quite sure what the purpose of the designs were, other than some sort of robot offering to help with a task with which she was unfamiliar.

The students highlighted some really great points in this testing phase. Even the student who never used VoiceThread was able to understand the problem statement. Admittedly, as a group, we feel the feedback we received from actual VoiceThread users was more in-depth and detailed. All of the students we tested observed, as part of their feedback, how easy it was to follow the steps of how the Helper Robot was trying to help them.

As one student pointed out, giving the user the ability to close out of the help functionality is an aspect of the product that we overlooked during our test designs. The student observed that this might be a helpful feature for the entire application. While we as a group agree with that statement, we also thought we would have better results in the testing phase if we limited the Helper Robot to only improving the conversation aspect of the VoiceThread application.

We found the idea of real time help versus a video tutorial a very interesting point. This would allow the student to get real time help and follow along with the Helper Robot, and not have to remember the steps that were covered in the video.

## Test Revisions

With this feedback we would be prepared to do another round of revisions. Some of the revisions to our design would include:

- A close button to close out of the helper section altogether.
- A real time help walk-through rather than just playing a video
- A design slightly closer to how VoiceThread actually looks
- A reply screen mockup for testing the user journey

# Final Design

To see the final design demo please visit:

https://gdovindesigns.com/client/drexel/designThink/