ThunderBrain

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INTRODUCTION

Brainstorming is a powerful technique for generating new ideas. To improve brainstorming further, a new web application has been created to enhance the brainstorming process in multiple ways. By anonymizing ideas, and incorporating a video chat, we allow people to brainstorm ideas from greater distances, and with less bias.

NEED FINDING

Interview with Prof. Kautz

Q: What things do you find annoying?
A: Some people dominate the conversation during meetings/ brainstorming sessions

Q: What ideas do you have?
A: A bot to moderate the meeting/brainstorming in some way.

Interview with Prof. Gonek

Q: How do you feel about a meeting moderation bot?
A: A bot that tells people when to speak would become annoying.

Q: How do you perform brainstorming?
A: I'm careful to select people so they get along and aren't biased by their friendships or dislike for others.

Survey

- Surveyed 55 Rochester undergraduates
- 49% of respondents reported thinking less of an idea that came from someone they didn't like, a situation that 62.8% of respondents reported encountering.
- 64.7% of respondents reported feeling that anonymizing ideas would help them evaluate those ideas objectively.

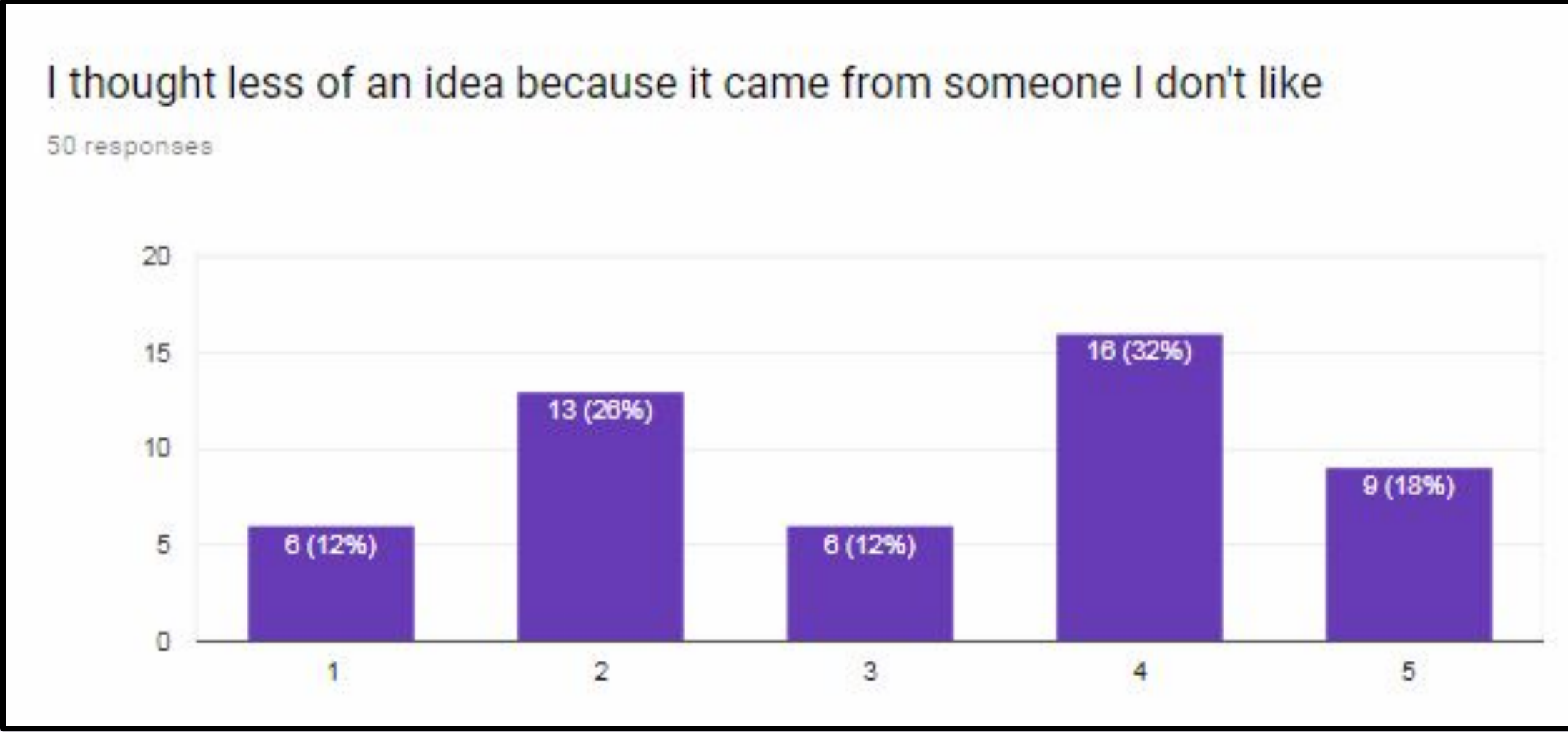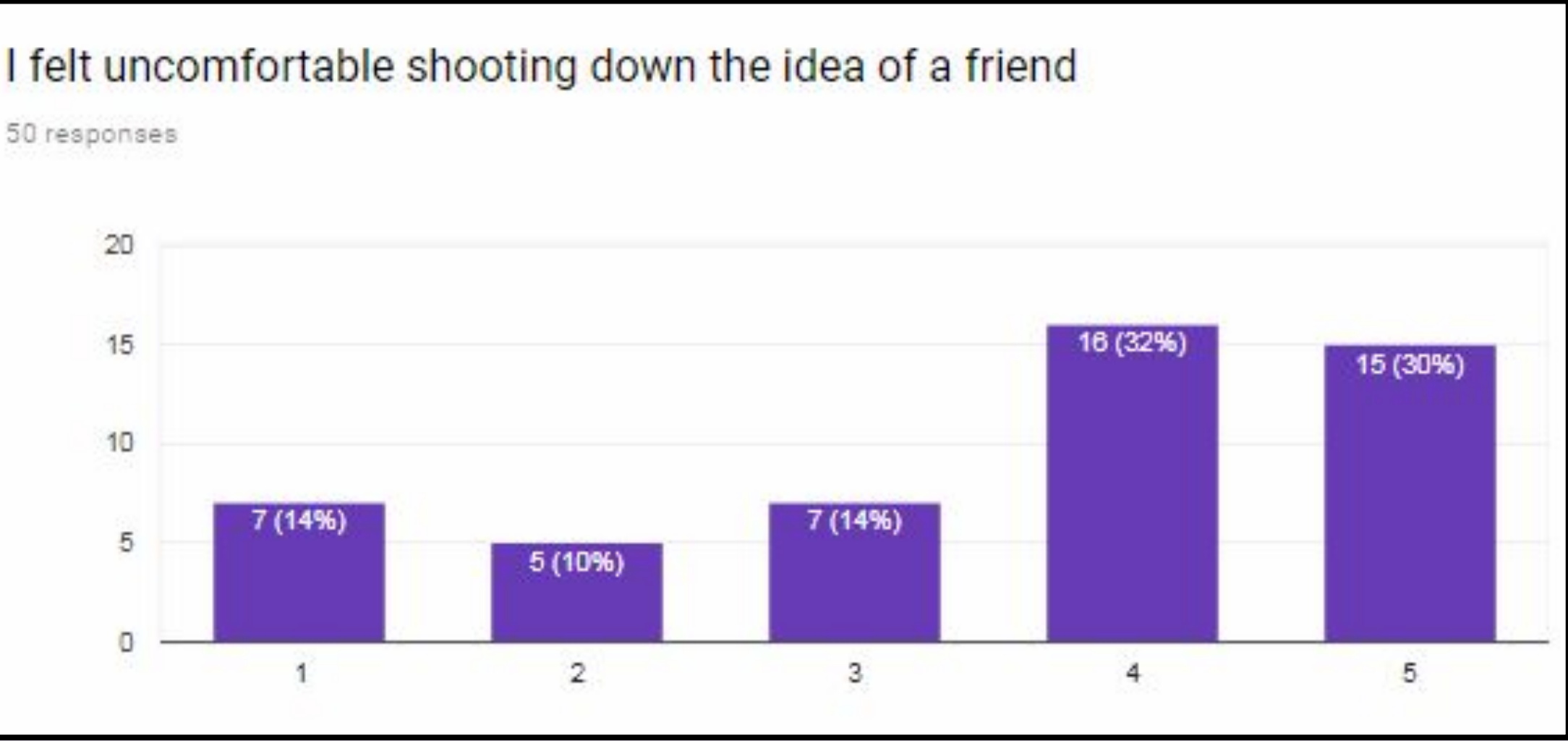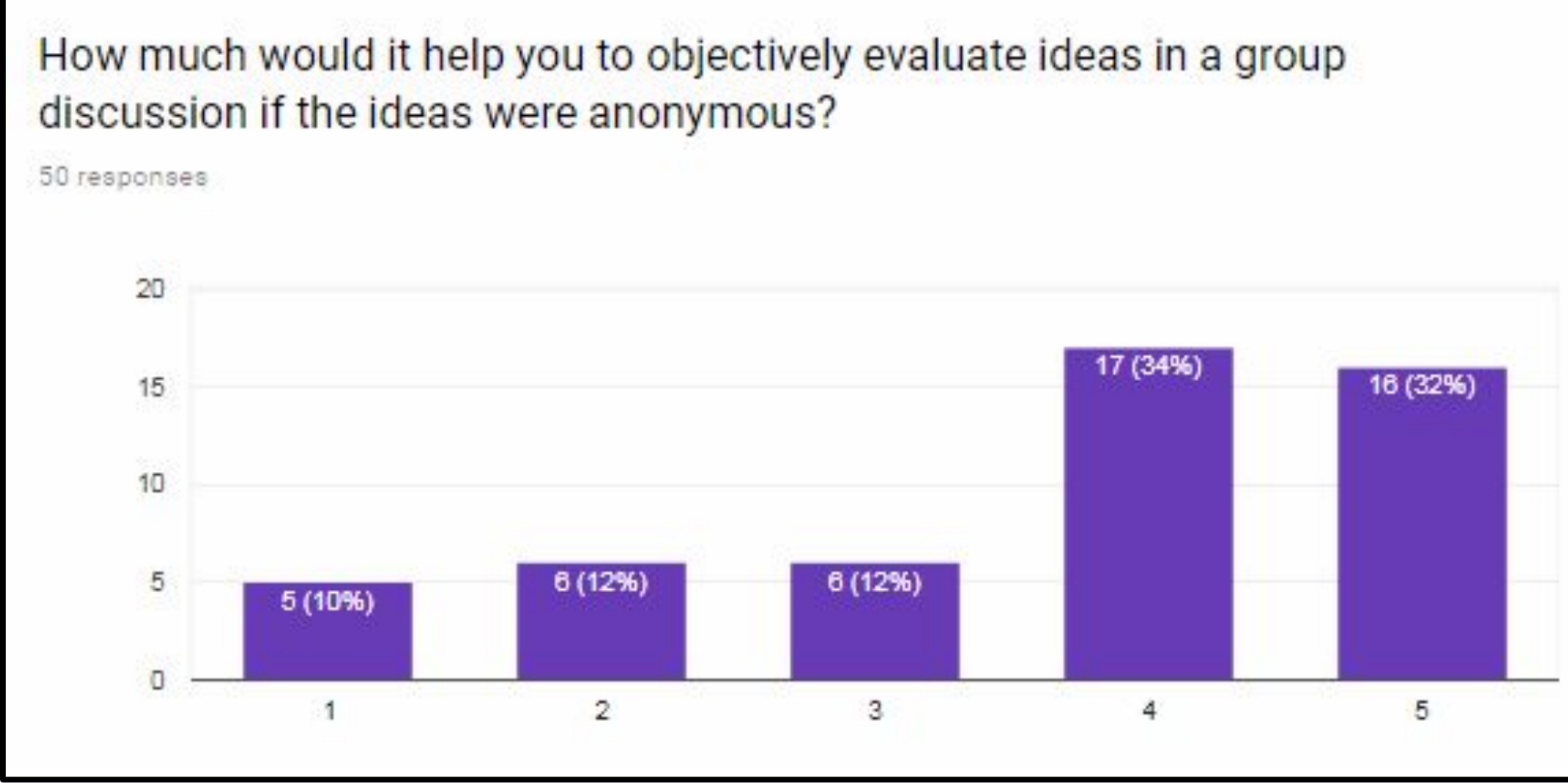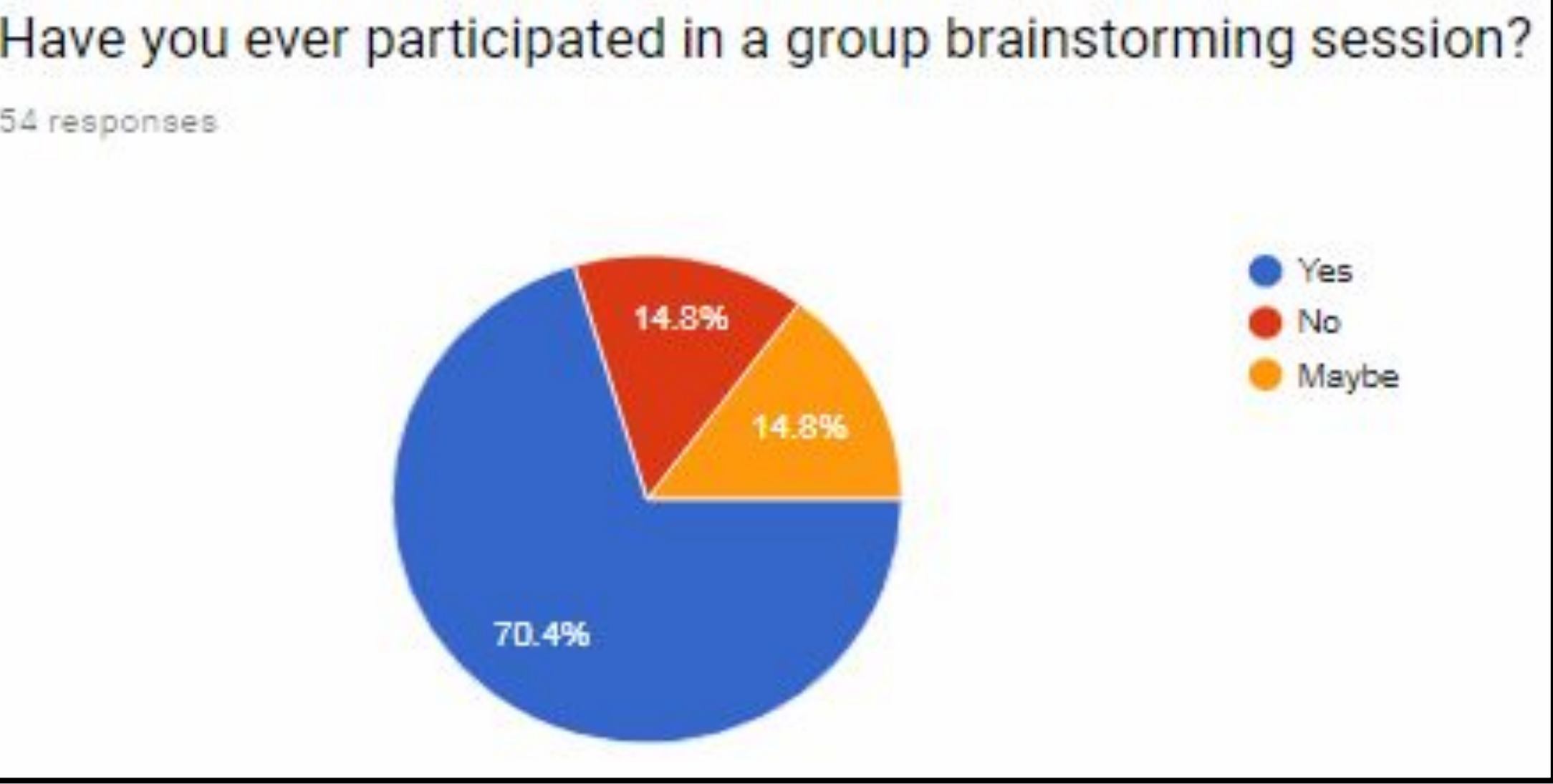Q: Have you ever participated in a group brainstorming session?
Q: During brainstorming sessions, how much do you agree with the following?
❏ I supported my ideas over others.
❏ I considered all ideas objectively and equally.
❏ I felt uncomfortable shooting down the idea of a friend.
❏ I disliked one of the members of the group I was brainstorming with.
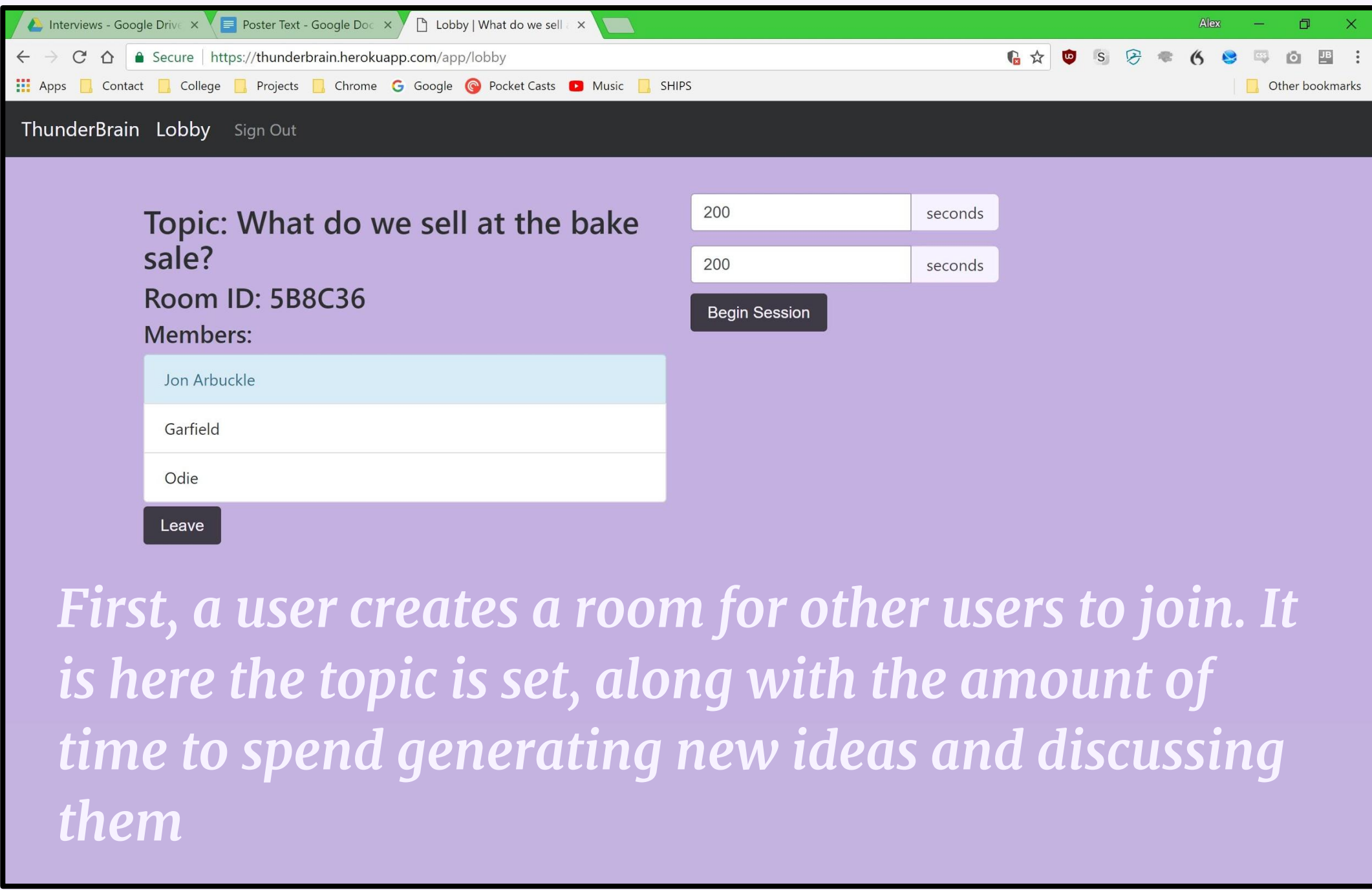❏ I thought less of an idea because it came from someone I don't like.
Q: How much would it help you to objectively evaluate ideas in a group discussion if the ideas were anonymous?
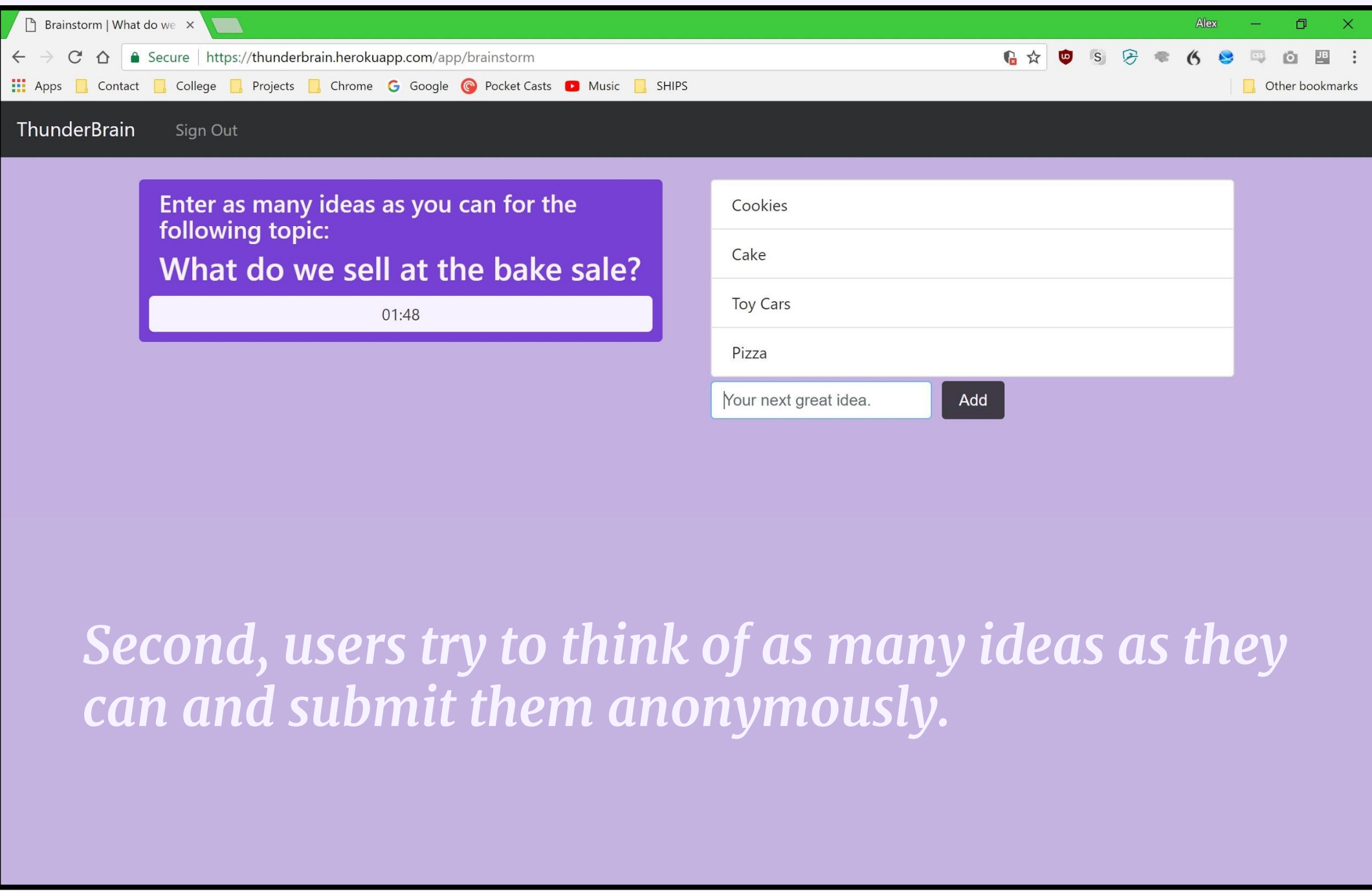Q: Have you ever used video chat applications for brainstorming in a group?
Q: Do you have any other thoughts about how personal bias may affect the result of a brainstorming session?
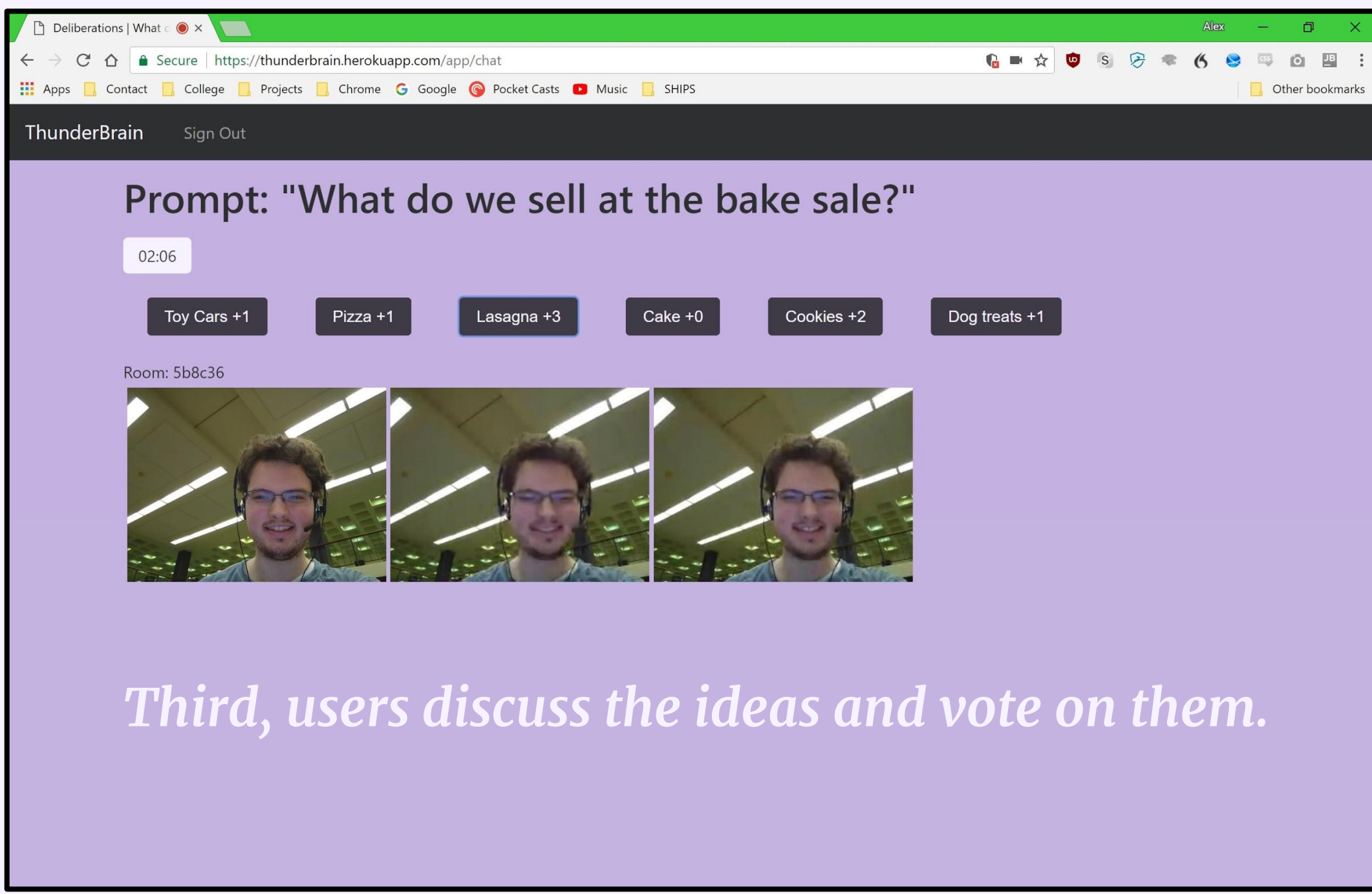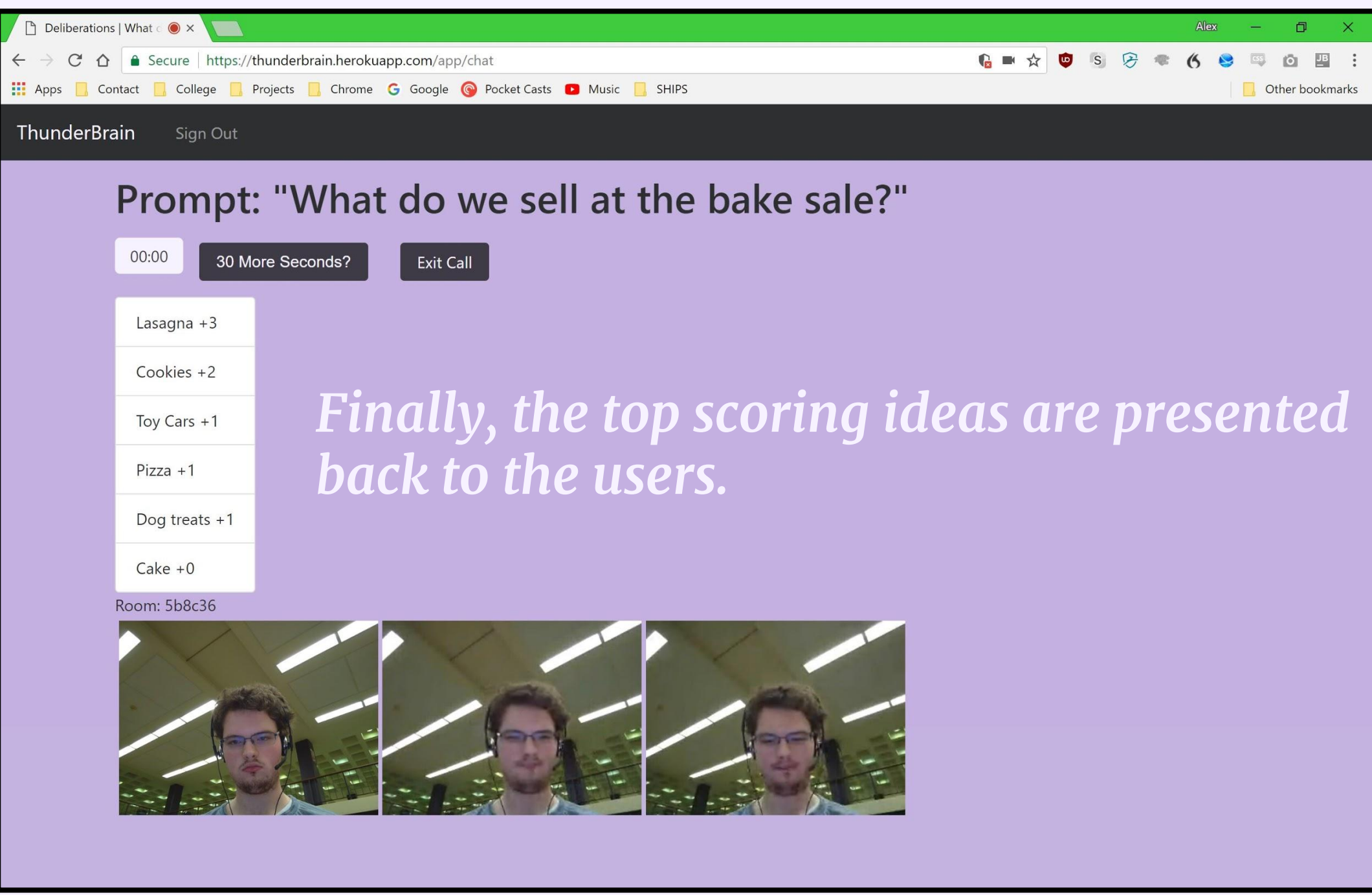

THE PROCESS

First, a user creates a room for other users to join. It is here the topic is set, along with the amount of time to spend generating new ideas and discussing them

Second, users try to think of as many ideas as they can and submit them anonymously.

Third, users discuss the ideas and vote on them.

Finally, the top scoring ideas are presented back to the users.

RESULTS/CONCLUSION

- We were able to identify two general styles of brainstorming:
  - "Bottom-up": In control groups, testers would generate ideas and filter them out at the same time, due to the ability to discuss ideas as they came.
  - "Top-down": In groups using our system, large amounts of ideas were generated right off the bat which would then be eliminated one-by-one during the deliberation process.
- Users using our system generate more (albeit generally less well-thought out) ideas than groups brainstorming organically.
- Anonymization of ideas causes users to be less inhibited in the sorts of ideas they generate, and resulting ideas tend to be more "out there" and diverse relative to each other when they know other group members won't shut down their creative thinking.
- These less-filtered ideas also tend to lead to less-filtered responses.
- Relatedly, users of our system seem are more lively and animated during the brainstorming process than those brainstorming without a specialized system.
- More-so than agreeing more with the ideas of others, users are more willing to self-criticize and agree with outside criticism of their own ideas when ownership of their ideas is removed.

In conclusion, both styles of brainstorming have pros and cons, but our system easily facilitates one kind of brainstorming that can lead to larger quantities of more varied ideas. Should a group prefer the "top-down" style of brainstorming, our app provides the tools to easily facilitate that process without a human mediator.

"[Thunderbrain] helped alot [*sic*] with making some of the decisions, and it was honestly really nice to be able to view ideas in a judgement free zone." - Anonymous Test Subject