

# Online Discussions Can Achieve Multiple Learning Objectives and Maintain High Student Engagement

Vineet Pandey  
vipandey@ucsd.edu  
Yasmine Kotturi  
Scott Klemmer  
Chinmay Kulkarni  
Michael S. Bernstein

UC San Diego  
The Design Lab

Stanford University

## Video discussion time is under-utilized

- Discussions degenerate to casual chat; help build empathy but lack the opportunity to think deeply
- Students moderate discussions on their own; move away from course material

## Discussion software maintains focus towards course material

- Organizes and moderates discussions
- Provides consistent experience at scale
- Provides cues to students at different points in discussion

## Our approach walks students through think-pair-share steps to meet learning goals.

**Student motivations vary!** *"I am attending this discussion to get feedback on my idea. I cannot spend time on this challenge exercise."*

## Metrics

Student performance: Course grades  
Exchange of ideas: Diversity in students' submissions  
Enjoyability: Continued use of new format

## Future work

Balance students' personal goals with the group's learning objectives.

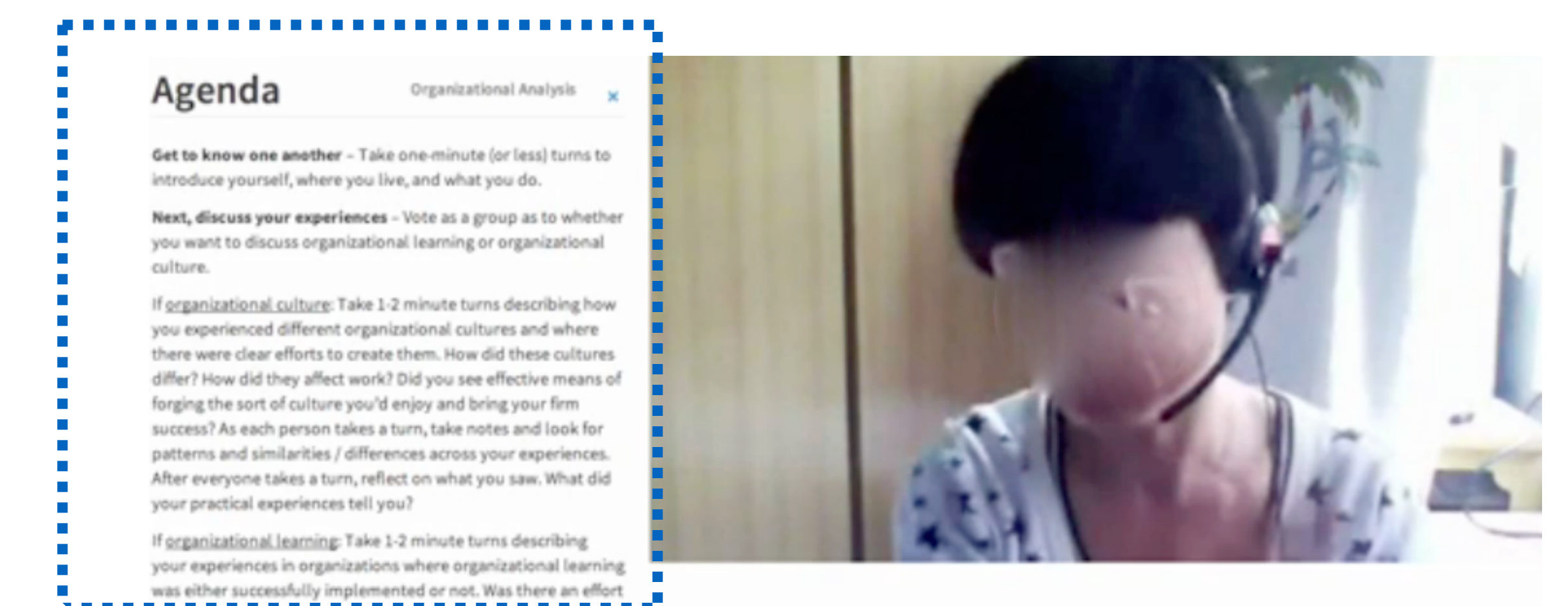
## Peer learning has multiple learning objectives

- Transfer of concepts to later problems
- Creating divergent thinking
- Building empathy
- Better collaboration skills

## Active learning assists with collaborative work

Works well with:

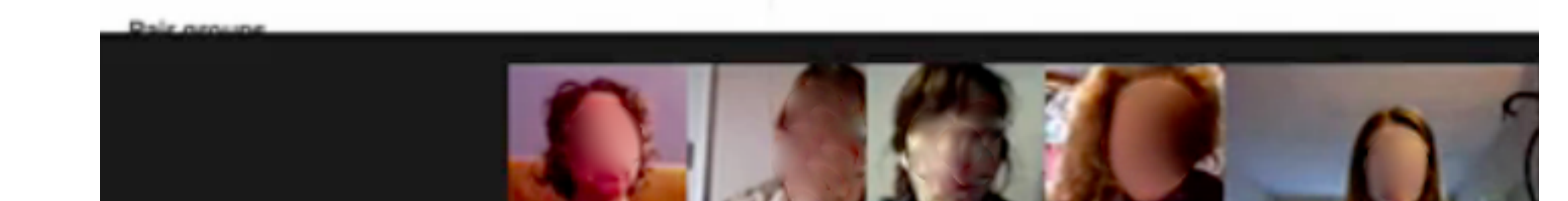
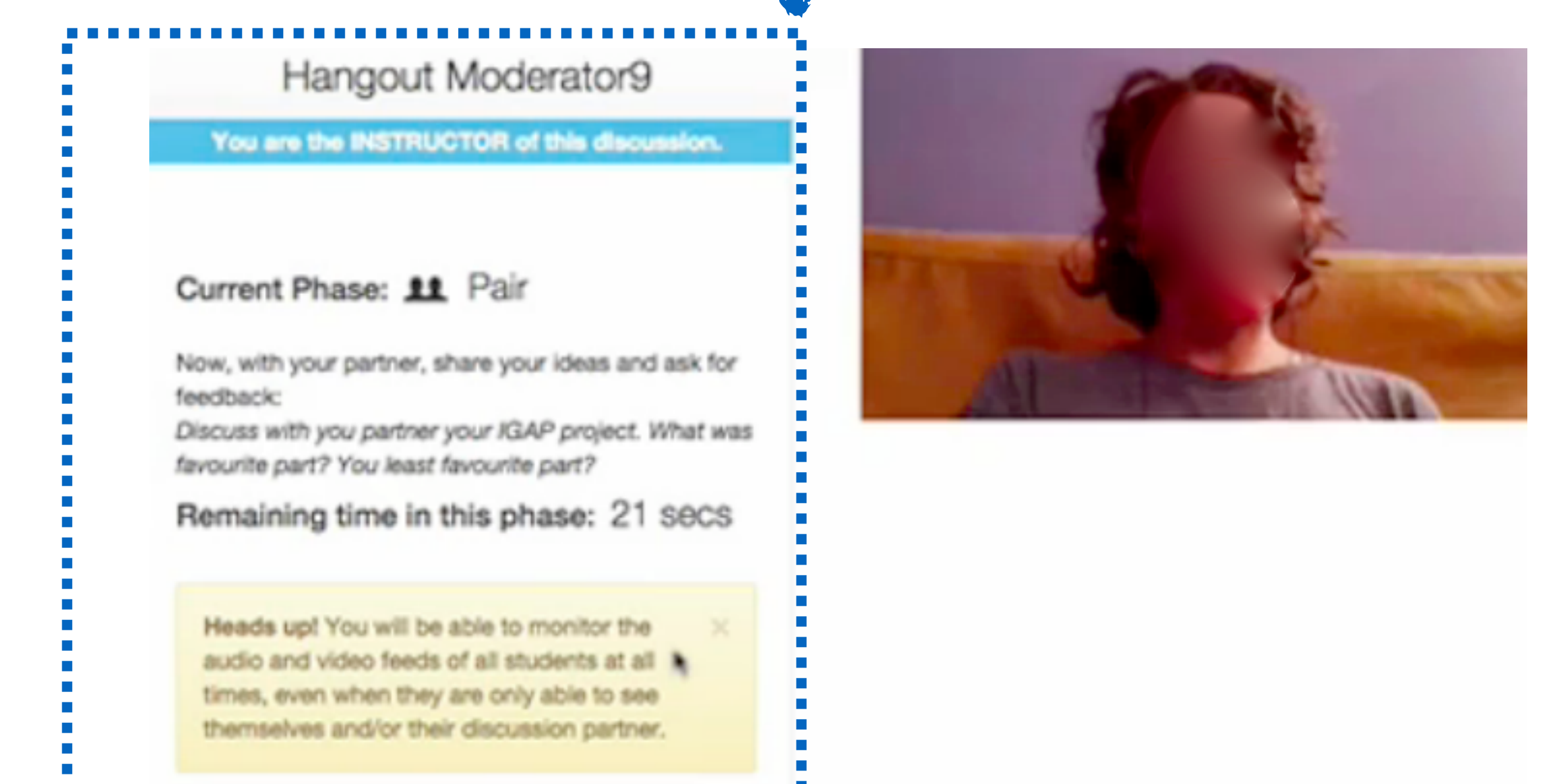
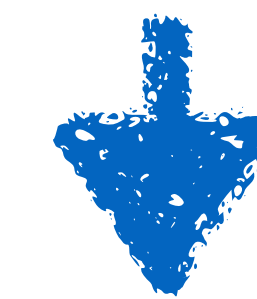
- Collaborative goal
- Individual responsibility
- Feedback to improve self-esteem



Talkabout uses agenda for students to discuss course material



1. **Think:** Students form their ideas alone
2. **Pair :** Students discuss ideas with a peer and invite feedback
3. **Share:** Students discuss ideas with all discussants!



Talkabout+ walks students through think-pair-share steps to discuss challenges