

Needfinding for Hybrid Collaboration

January 14, 2022



Meet the *Team*



Kelly Chen
M.S. LDT '22



Zander Lack
CS '24



Sam Silverstein
Symbolic Systems '22
M.S. CS '23



Ben Thier
M.S. LDT '22

Domains in Hybrid Collaboration



(Schools Week)

**Learning
Environments**

**Professional
Environments**



(Offset)

**Technology-Supported
Mediation of *Teamwork***

Participant Selection

Environments

Tech Experiences

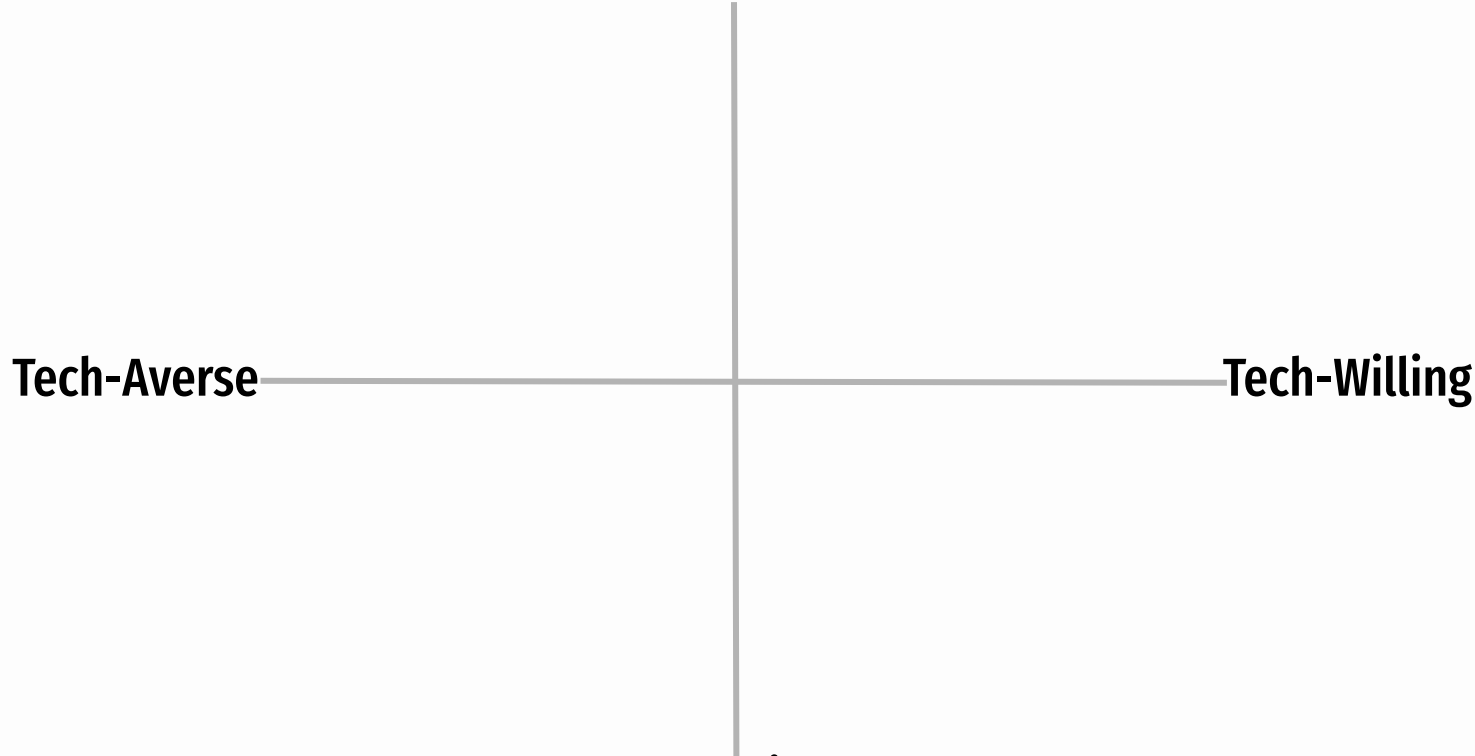
Subject Domains

Academic

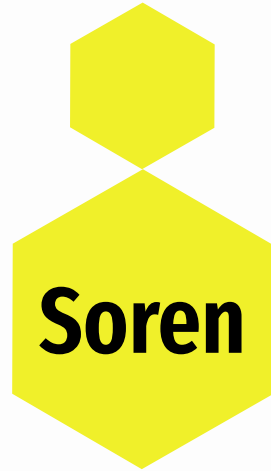
Tech-Averse

Tech-Willing

Professional



Interview Participants



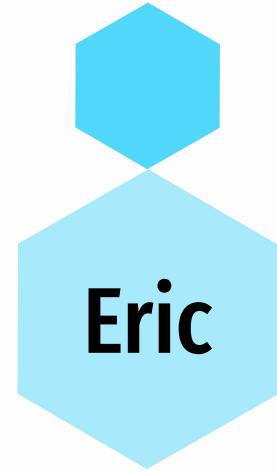
Co-Instructor
@ Stanford LDT
Master's Program



Ear training
teacher
@ Stanford



PhD candidate
in Consumer
Behavior
@ WashU



Data Scientist
@ energy
company

Participant Selection

Environments

Tech Experiences

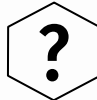
Subject Domains

Academic

Tech Averse

Tech-Savvy

Professional



Participant Selection

Environments

Tech Experiences

Subject Domains

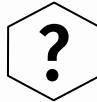
Extremes

Academic

Tech Averse

Tech-Savvy

Professional



Guiding Questions

01

How do you monitor collaborative work?



02

How did your collaboration change after moving online?



03

Can you walk me through a time when you ran into a problem in working virtually?



04

What was your initial reaction to teaching on Zoom?

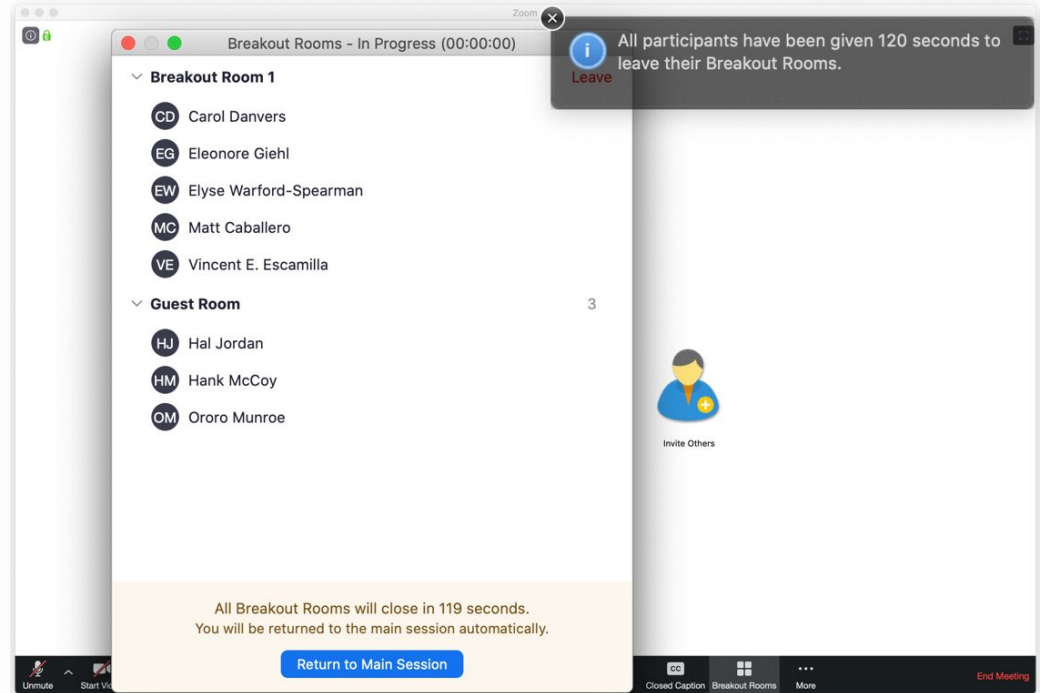


Interview Results

“I see a list of breakout rooms - which one do I jump into? There’s **no direction**. You don’t want to feel like you’re picking on people or **arbitrarily** jumping in.”

“Monitoring how people are talking to each other feels more **invasive**.”

Soren on monitoring virtual collaboration



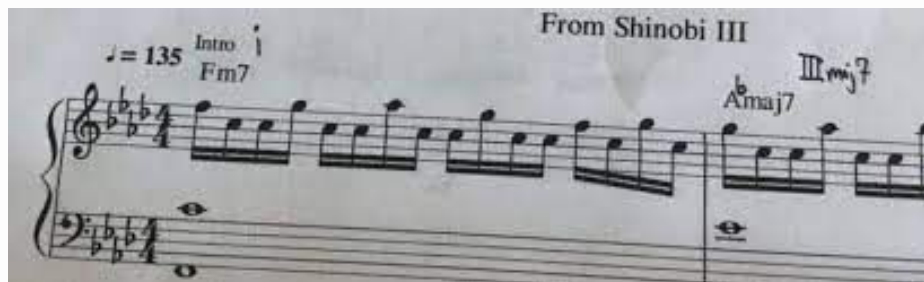
(Zoom)

Interview Results

“Zoom is **tiring**... it can leave people with a real sense of **disconnected** association.”

“Students on the **slower end** of transcribing have more time to digest the material and **feel proud** of what they’ve done”

*Erika on virtual class community
and teaching*



(ComposerCode)

Interview Results

“But after the pandemic, we were able to recruit participants from... **all over the world.**”

“We were able to recruit **much more participants** and **run a lot of study sessions.**”

Tracy on the unforeseen benefits to research on Zoom



(VectorStock)

Empathy Map: Tracy

“But after the pandemic, we were able to recruit participants from... **all over the world.**”

“Most problems are because of **tech issues** in the virtual lab.”

“In this virtual world... people schedule meetings back to back... because **Zoom is too convenient.**”

Say

The virtual lab gave her **more flexibility** in scheduling.

Facial expressions are important in interactions.

Hybrid mode works very well for her **research but not classes.**

“We were able to recruit **much more participants** and **run a lot of study sessions.**”

“On Zoom, you don’t know when is the right time for you to start talking... Everyone is muted. **There is always silence.**”

“Everyone should be open and say ‘**I really need a 10-min break.**’”

Think

Turning the **camera on** leads to **better engagement.**

Breakout rooms are helpful.

Silence in conversations signals that it’s her turn to talk.

Runs experiments with participants in a **virtual lab** over Zoom

Teaches participants **basic functions** and conducts a **Zoom prescreening** to ensure participants understand them.

Collaborates with other RAs across different breakout rooms to run multiple studies **simultaneously.**

Do

Surprised by increased connections she has with coworkers.

Embarrassed when another person and her unexpectedly start talking at the same time on zoom.

Frustrated when people run into technical issues.

Works on **different studies multiple times** a week instead of **only on one specific study on Sundays.**

Organizes **social events** via Zoom for the lab. (movie nights, self-care nights etc.)

Prepares a meeting agenda in a **separate Google Doc.**

Feel

Surprised that team bonding got better post-pandemic.

Exhausted after being on zoom for 3 hrs.

Weird to use the ‘raise hand’ function in just a small meeting.

Say



“On Zoom, you don’t know when is the right time for you to start talking... Everyone is muted. **There is always silence.**”

“You get **no feedback** it’s very difficult to **read faces**”

“...**eye contact** matters.. I need to **actively see** what’s on a piece of paper”

“Does that create an **unrealistic sense of.. goals..** we’re moving towards a flexible and rapid ear.”

“Zoom is **tiring...** it can leave people with real sense of **disconnected** association”

“**Instantaneous** communication... allows conversation to feel more **informal**”

“Having people with a **diversity of skill sets** is important”

“But after the pandemic, we were able to recruit participants from... **all over the world.**”

“students on the **slower end** of transcribing have more time to digest the material and **feel proud** of what they’ve done”

“In this virtual world... people schedule meetings **back to back...** because **Zoom is too convenient.**”

“If people in breakout rooms **were able to signal** when they want the facilitator to enter the room, I would feel **more invited.**”

“The primary thing is to have **trust** with your teammates”

“Monitoring how people are talking to each other feels more **invasive.**”

“Walking around a room and **being curious** about a conversation that’s happening, stopping in, feels a **little more natural.**”

“Everyone should be open and say ‘**I really need a 10-min break.**’”

Do



Have a way to **check base with teammates** over a communication tool

Runs experiments with participants in a **virtual lab** over Zoom

Works on **different studies multiple times** a week instead of **only on one specific study on Sundays.**

Changed class from 3 times a week to just **once a week** on Zoom

Actively adjusts her teaching material based on **visual cues**

Plans next steps while groups are collaborating

Teaches participants **basic functions** and conducts a **Zoom prescreening** to ensure participants understand them.

Assigns peer feedback opportunities to **lessen teaching load**

Collaborates with other RAs across different breakout rooms to run multiple studies **simultaneously.**

Works closely with students who are **struggling**

Walks around her classroom to see how each student is handling the material.

Stays in the main Zoom room during breakout sessions

Organizes **social events** via Zoom for the lab. (movie nights, self-care nights etc.)

Prepares a meeting agenda in a **separate Google Doc.**

Assesses **energy** and **productivity** of in-person teams

Distribute roles in teams to **match skill sets**

Prepares a meeting agenda in a **separate Google Doc.**

Think



Teaching is about **trade-offs**

He **needs** better online **monitoring tools**

Giving students **more time** with material is good.

Zoom **accommodated** more experience levels

Facial expressions are important in interactions.

Turning the **camera on** leads to **better engagement**.

Teams **do not utilize norms** well

Students should **receive feedback** every time they do thoughtful work

The virtual lab gave her **more flexibility** in scheduling.

Breakout rooms are helpful.

Zoom offers more **reflection**

Zoom leaves people feeling **disconnected**

Teams with **diverse backgrounds** are more **creative**

Real-time communication leads to optimal information exchange in teams.

Trust improves team effectiveness

Team dynamics change depending on the setting and goal.

Teammates are useful for providing different **perspectives** and approaches

Zoom class necessitates **individual learning**.

Feel



Apprehensive
when first
working with a
new team

Trusting of
reliable and
consistent
teammates

Single-minded
in work settings,
more gregarious
in academic
settings

Surprised about
the **benefits** Zoom
offered for slower
students

Unsure of how
to **balance**
Zoom tradeoffs.

Less comfortable
teaching without
in-person
feedback

More **resigned**
during online
monitoring

More **capable**
with faster
communication
tools

Less pressing
need to
monitor teams
he **trusts**

Disdain for lack
of connection
from Zoom (like
it adds a wall)

Attached to
traditional
methods of
teaching

Embarrassed
when another
person and her
unexpectedly
start talking at
the same time on
zoom.

More **equipped**
to monitor
in-person
collaboration

Uninvited to
join online
collaborative
sessions

Sense of
arbitrariness in
online
monitoring

Surprised that
team bonding
got better
post-pandemic.

Exhausted after
being on zoom
for 3 hrs.

Weird to use
the 'raise hand'
function in just
a small
meeting.



Surprises

Trust

Similarity
across
environments



Contradictions

Willingness
to engage
virtually for
different
purposes

Negative &
positive
emotion



Tensions

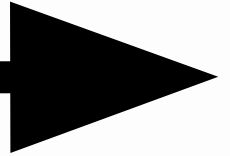
Feedback
mechanisms

Transfer of
skills to
virtual
world

Needs Driving Insights

What role does technology play in **mediating collaborative interactions** that take place in person?

How might we extract the **positives** of **virtual** collaboration and transfer them to better facilitate **in person** collaboration?



Acknowledgements

Slide layout from **Slidesgo** and **Freepik**
Image credits provided under images

Empathy Map: Tracy

“But after the pandemic, we were able to recruit participants from... **all over the world.**”

“Most problems are because of **tech issues** in the virtual lab.”

“In this virtual world... people schedule meetings back to back... because **Zoom is too convenient.**”

Say

The virtual lab gave her **more flexibility** in scheduling.

Facial expressions are important in interactions.

Hybrid mode works very well for her **research but not classes.**

“We were able to recruit **much more participants** and **run a lot of study sessions.**”

“On Zoom, you don’t know when is the right time for you to start talking... Everyone is muted. **There is always silence.**”

“Everyone should be open and say **‘I really need a 10-min break.’**”

Think

Turning the **camera on** leads to **better engagement.**

Breakout rooms are helpful.

Silence in conversations signals that it’s her turn to talk.

Runs experiments with participants in a **virtual lab** over Zoom

Teaches participants **basic functions** and conducts a **Zoom prescreening** to ensure participants understand them.

Collaborates with other RAs across different breakout rooms to run multiple studies **simultaneously.**

Do

Surprised by increased connections she has with coworkers.

Embarrassed when another person and her unexpectedly start talking at the same time on zoom.

Frustrated when people run into technical issues.

Works on **different studies multiple times** a week instead of **only on one specific study on Sundays.**

Organizes **social events** via Zoom for the lab. (movie nights, self-care nights etc.)

Prepares a meeting agenda in a **separate Google Doc.**

Feel

Surprised that team bonding got better post-pandemic.

Exhausted after being on zoom for 3 hrs.

Weird to use the ‘raise hand’ function in just a small meeting.

Empathy Map: Soren

"I've read a lot about what makes for **good teams**."

"If people in breakout rooms **were able to signal** when they want the facilitator to enter the room, I would feel **more invited**."

"Walking around a room and **being curious** about a conversation that's happening, stopping in, feels a **little more natural**."

"Monitoring how people are talking to each other feels more **invasive**."

Assigns peer feedback opportunities to lessen teaching load

Monitors **in-person** collaboration more **closely**

Stays in the main Zoom room during breakout sessions

Assesses **energy** and **productivity** of in-person teams

Plans next steps while groups are collaborating

Researches peer to peer learning

Say

He doesn't **incorporate his research** into his teaching practice often enough

Teaching is about **trade-offs**

He **needs** better online **monitoring tools**

Think

Teams **do not utilize norms** well

Students should **receive feedback** every time they do thoughtful work

If he's good at teaching something, he should **teach it again**

Do

Uninvited to join online collaborative sessions

More **equipped** to monitor in-person collaboration

Sense of **arbitrariness** in online monitoring

Feel

Less pressing need to monitor teams he **trusts**

More **resigned** during online monitoring

Passionate about his research and job

Empathy Map: Erika

"It was a real **panic** moment... ..eye contact matters.. I need to actively see what's on a piece of paper"

"You get **no feedback**. it's very difficult to **read faces**"

"Zoom is **tiring**... it can leave people with real sense of **disconnected** association"

"students on the **slower end** of transcribing have more time to digest the material and **feel proud** of what they've done"

"Does that create an **unrealistic sense of.. goals..** we're moving towards a flexible and rapid ear."

Actively adjusts her teaching material based on **visual cues**

Changed class from 3 times a week to just **once a week** on Zoom

Walks around her classroom to see how each student is handling the material.

"Works closely with students who are **struggling**"

Say

Think

Do

Feel

Zoom leaves people feeling **disconnected**

Zoom offers more **reflection**

Zoom **accommodated** more experience levels

Giving students **more time** with material is good.

Zoom class necessitates **individual learning**.

Giving students more time **works against** training students to have a fast ear

Less comfortable teaching without in-person feedback

Disdain for lack of connection from Zoom (like it adds a wall)

Unsure of how to **balance** Zoom tradeoffs.

Attached to traditional methods of teaching

Surprised about the **benefits** Zoom offered for slower students

Empathy Map: Eric

"Instantaneous communication... allows conversation to feel more **informal**"

"My teammates brought a lot of **out-of-the-box** solutions"

"At a company you just need to get it done, but in school everybody needs to **learn**"

Say

Real-time communication leads to optimal information exchange in teams.

Teammates are useful for providing different **perspectives** and approaches

Team dynamics change depending on the setting and goal.

"I got a lot of value where I was the one **explaining**, just the act of that helps"

"The primary thing is to have **trust** with your teammates"

"Having people with a **diversity of skill sets** is important"

Think

Teams with **diverse backgrounds** are more **creative**

Trust improves team effectiveness

In person collaboration is better than virtual collaboration

Communicate on tools like Slack over Email

Asks teammates for ideas and **encourages participation** of others

Be **reliable and consistent** to establish trust with teammates

Do

Need for an informal environment is important for effective communication

Trusting of reliable and consistent teammates

Single-minded in work settings, more gregarious in academic settings

Distribute roles in teams to **match skill sets**

Be on the lookout to **help** your teammates

Have a way to check base with teammates over a communication tool

Feel

Apprehensive when first working with a new team

More **capable** with faster communication tools

Grateful to have completed a large project