

# Designing for ESL



Andrea Collins, Becky Weinstein,  
Cathy Zhang, Kimberly Tran  
**Multimodal Interfaces to Broaden Access**



# POINTS OF VIEW

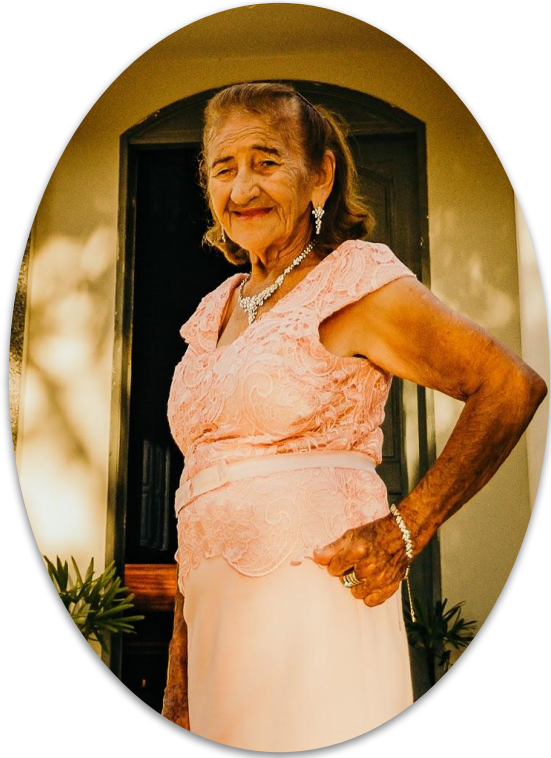
We met **Thuy**, who even after 10 years of speaking English is still uncomfortable with small talk.

We met **Yuri**, who finds that she is dependent on visual cues for verbal communication.

We met **Alejandro**, who feels burnt out from the burden of translating for his mother.



# INTERVIEW INSIGHTS



# ELSA

**English/Spanish elementary school teacher from Panama, 70s**

"Sometimes it's hard to translate from Spanish to English. Jokes in Spanish just don't make sense in English!"



# KAZUKI

**Recent college graduate from Osaka,  
Japan, 20s**

“When I first moved here I was so nervous, plus I am afraid to speak to Americans”



# REVISED POINTS OF VIEW

#1

**We met** Thuy, a mother who immigrated from Vietnam 10 years ago

**We were amazed** that after a decade of speaking English, Thuy is still uncomfortable with small talk

**It would be game-changing** to help her feel more comfortable in a variety of English-speaking situations

## #2

**We met** Yuri, an international student from Japan who is still not completely comfortable with using English beyond the classroom

**We were amazed** how dependent she is on visual cues for verbal communication

**It would be game-changing** to help her to rely less on visual and physical cues

# #3

**We met** Alejandro, who immigrated with his family as a child from Ecuador and often had to serve as his mother's translator and communicator

**We were amazed** to learn that he is exhausted from having to constantly support his mother as a translator and communicator

**It would be game-changing** to provide Alejandro with a resource to enable him to alleviate his mother's dependence



**HOW MIGHT WE...?**



**POV: Thuy**

# HOW MIGHT WE...

make engaging in small talk more accessible and fluid for adult ESL speakers in their daily lives?



**POV: Thuy**

# HOW MIGHT WE...

expose adult ESL speakers to various English-speaking contexts in which they may feel uncomfortable?



**POV: Yuri**

# HOW MIGHT WE...

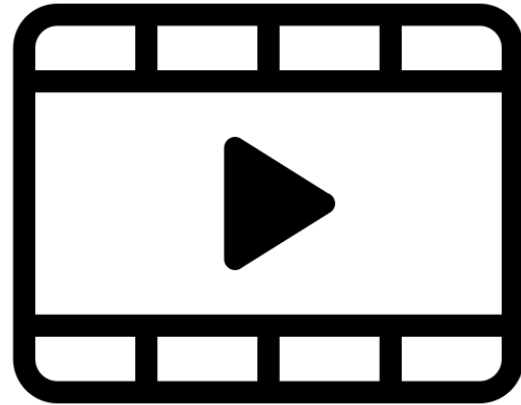
decrease the difficulty of understanding fast and/or hard-to-understand speech for adult ESL speakers?



**SOLUTIONS**

*How might we  
make engaging  
in small talk  
more accessible  
and fluid for  
adult ESL  
speakers in their  
daily lives?*

# Source Videos to Understand Colloquialisms



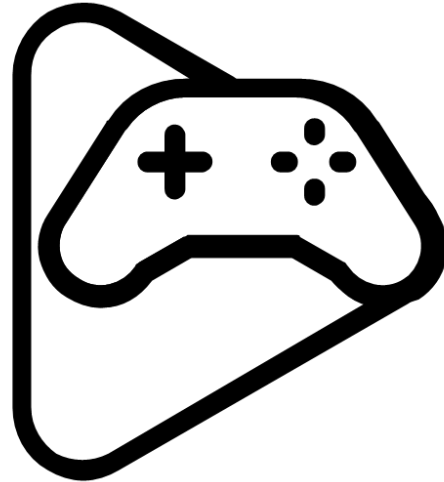
*How might we  
make engaging  
in small talk  
more accessible  
and fluid for  
adult ESL  
speakers in their  
daily lives?*

# Provide Visual Cues During Conversation



*How might we  
expose adult ESL  
speakers to  
various  
English-speaking  
contexts in which  
they may feel  
uncomfortable?*

# Learn Conversational English Through a Game





**PROTOTYPES**



# PROTOTYPE #1

*short videos to learn colloquial English*



# ASSUMPTIONS

1. People feel engaged while watching short videos
2. People can learn from watching short videos



# DORA

**Dermatologist who was born and raised  
in Israel, 50s**

“I didn’t even know I was pronouncing it  
wrong”

Which is the  
correct  
pronunciation?



**Which is the  
correct  
meaning?**

Poggers?

A. Unfortunate

B. Epic

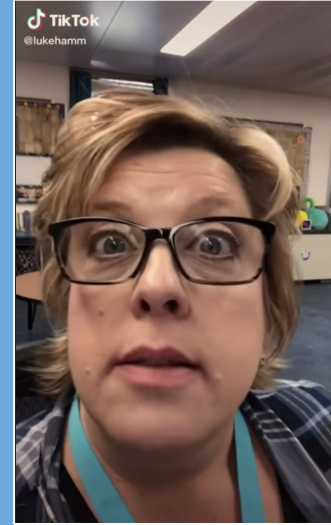
C. Eco-Friendly

D. Shy

E. Jittery



“It’s pronounced Gif”



“This is a totally epic, poggers moment”

# Outcome

Initial Score:

0/2

Final Score:

2/2

How likely are you to retain this information?



How much did you enjoy learning in this format?





# TAKEAWAY

People can successfully engage with and learn from content in a short video format.



# PROTOTYPE #2

*providing visual cues during conversations*



# ASSUMPTIONS

1. Visual cues are helpful during a conversation.
2. Visual cues are not distracting or stressful during a conversation.

# TESTING





# JENNY

**Engineer and immigrant from China of  
25 years, 50s**

"When I didn't understand, I could make a guess using the pictures."



# TAKEAWAY

Visuals during a conversation can assist with ESL speakers' comprehension.



# PROTOTYPE #3

*gamifying real world situations to learn English*



# ASSUMPTIONS

1. People will be engaged playing a game to learn English
2. Playing a game is an effective way to retain English



# WILL

**Refugee who immigrated from Vietnam,  
60s**

“We had a ‘monkey see, monkey do’ kind of philosophy to learn how to react in unfamiliar situations.”

# TESTING

Welcome to Immerse!

Good Morning!

You've got a busy day today. What do you want to start with?



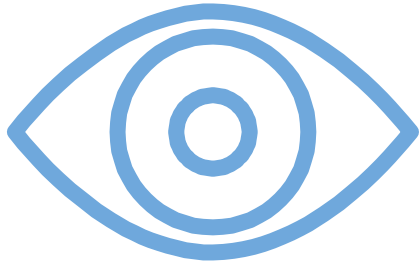
- Grab breakfast at Peg's Diner.
- Go to the doctor's office for your annual checkup.
- Attend your college classes.
- Buy groceries at the store.
- Meet George for coffee.



# TAKEAWAY

Exposure and repetition allow ESL populations to learn and retain English.

# INSIGHTS



**Visuals**



**Repetition**



**Relevance**



**Interactive**



# COMBINED SOLUTION

*we want to create interactive, visual scenarios where  
users can practice English in everyday situations*

# SUMMARY

1. Pain Points - small talk, various contexts, difficult-to-understand speech
2. Quick Prototypes - videos, quizzes, slideshow, Google Form
3. Incorporate visuals, repetition, and interaction

# NEXT STEPS

*further develop the story around our solution via our  
concept video and continue testing our insights*

# THANK YOU!



## Appendix

### HMWs from POV 1

#### How Might We...

1. ...help Thuy be exposed to different types of conversations so she can practice her skills
2. ...give Thuy a template for different small talk contexts
3. ...remove Thuy from any situation which requires small talk
4. ...help others engaging in small talk with Thuy better understand why she feels it difficult to engage with them
5. ...make small talk a more fun experience for her
6. ...empower the person at the other side of the dialogue to support her
7. ...integrate small talk into her daily life through existing conversations
8. ...connect Thuy with people she feels comfortable communicating with for practice
9. ...teach Thuy conversational English in an impactful way
10. ...assess the specific areas in conversational English that make Thuy uncomfortable
11. ...give Thuy low pressure ways to practice small talk
12. ...expand Thuy's vocabulary in a low-commitment way

## Appendix

### HMWs from POV 2

#### How Might We...

1. ...help Yuri understand words through masks
2. ...make Yuri more comfortable with her ability to listen to words
3. ...help Yuri practice picking up English words without visual cues
4. ...develop Yuri's confidence to engage in communications virtually despite visual limitations
5. ...assess Yuri's true comprehension of words (without visuals)
6. ...help supplement visual cues that are not present during COVID
7. ...help Yuri become more comfortable relying less on visual cues and more on actual words
8. ...provide more visual and emotional cues for Yuri in online settings
9. ...normalize providing visual cues to an ESL
10. ...make social distance less of a barrier for translation
11. ...use mobile devices to supplement in-person communication involving masks
12. ...integrate features into existing video chat solutions to decrease the difficulty of understanding fast and/or hard-to-understand speaking

## Appendix

### HMWs from POV 3

#### How Might We...

1. ...help Alejandro support his mother in a less extreme way
2. ...connect Alejandro with other resources which can also help his mother
3. ...automate or supplement Alejandro's help to make his tasks less repetitive
4. ...help Alejandro balance his commitments as a son and translator with his goals as a student
5. ...help Alejandro's mother communicate more easily without a third person translating
6. ...increase the accessibility of resources for Alejandro's mom
7. ...make the translation process more fun and rewarding
8. ...provide resources to his mother that make her feel more comfortable becoming proficient in English on her own
9. ...mediate boundaries between Alejandro and his mom
10. ...support Alejandro emotionally so he doesn't feel frustrated helping his mother
11. ...create more situations in which his mother doesn't require a translator
12. ...simplify the process for Alejandro's mom to handle government language

## Appendix

### Solutions from HMW 1

1. AI chatbot that generates various conversations where they engage in small talk to practice
2. App with fun video from pop culture/relevant interests that reflect various conversions
3. Short, fun conversational snippets for language learners
4. App that connects them with people to chat to practice
5. Pen pal app to connect them with someone to practice written conversation with
6. Set up conversation partners with people trying to learn their language
7. App that analyzes their messages and suggests other ways of phrasing things to diversify their vocabulary and conversation style
8. Goals tracker to track conversation goals
9. Give them phrase of the day to integrate into a conversation
10. Give them cues during her actual conversations
11. Have common phrases pop up as an extension during video calls
12. Give them templates at the beginning, middle, and end of day, personalized to their needs
13. Diary where they can write down things that happened, and then templates that help them convert these happenings into small talk
14. Practice small talk with people they're comfortable with (like family members)
15. Help them find low-stakes environments in their existing life to practice small talk
16. Special small language dictionary with common small talk phrases

## Appendix

### Solutions from HMW 2

1. Chatbot that adapts the conversation based on where there is confusion or to build diversity in conversation through thoughtful conversation flow
2. Sim-like game that integrates conversational scenarios that help us assess their comfort level (i.e. choose your story - we can assess which scenarios they avoid and find ways to integrate those more smoothly into the game for them to practice)
3. Diagnostic tool that gives common situations and asks user to rate their comfort, then generates personalized curriculum to address their needs
4. Something that generates various conversational videos that also ask for their feedback to gauge understanding (mini-quizzes to practice comprehension)
5. Set up meetings that imitate situations (ex. doctor's office) and help user progress through levels of difficulty
6. Have user track / categorize the day's conversations and rate them on comfort level to track their comfort over time / provide resources to address the areas of lower comfort
7. Journal app where they can record conversations and situations that made her uncomfortable
8. Interactive short videos of different contexts for conversational English
9. App that listens to their daily conversations and then assesses the parts they have difficulty with
10. Informational vocabulary tool with common terms in English but separated by situation and difficulty

## Appendix

### Solutions from HMW 3

1. Personalized voice profiles added to communications to improve accuracy of closed captions
2. Visual depictions of conversations as there are happening to give more visual context and understanding of conversation
3. sentiment analysis for sentences read online that produces an emoji to represent the emotion from the sentence/paragraph
4. AI that generates a flow chart of conversation, more specifically stories, to help track who is who and information grouping
5. Standards to provide enough clarity to normalize specific things like closed captions in educational and professional settings
6. Encouraging checkpoints to summarize last x minutes throughout the meeting
7. Visual AI that recognizes confusion and attempts to provide context to the user to clarify potential points of confusion
8. Annotations sent to attendees after meeting
9. Recap tool that helps meeting planners send agenda and recap before and after meetings
10. Highlight the meeting attendees who are being addressed at any given time
11. Integrate a deliverables tool into video chat to help attendees figure out what their job is after the meeting
12. Live keywords (and maybe person who said it so that you can check in individually with the person later)
13. An anonymous “someone in the meeting didn’t understand” button that anyone can click
14. Add more options to use emojis in video calls
15. Somehow incorporate ASL into conversations
16. Some sort of color scheme that changes color based on the sentiments expressed by the person at that time in meetings