

Helm  
design collective

# Needfinding

# Introduction

Team Members: Hannes Boehning, Eli Wopat, Lee Alpert, Mia Paulsen

Potentiation Problem Domain:

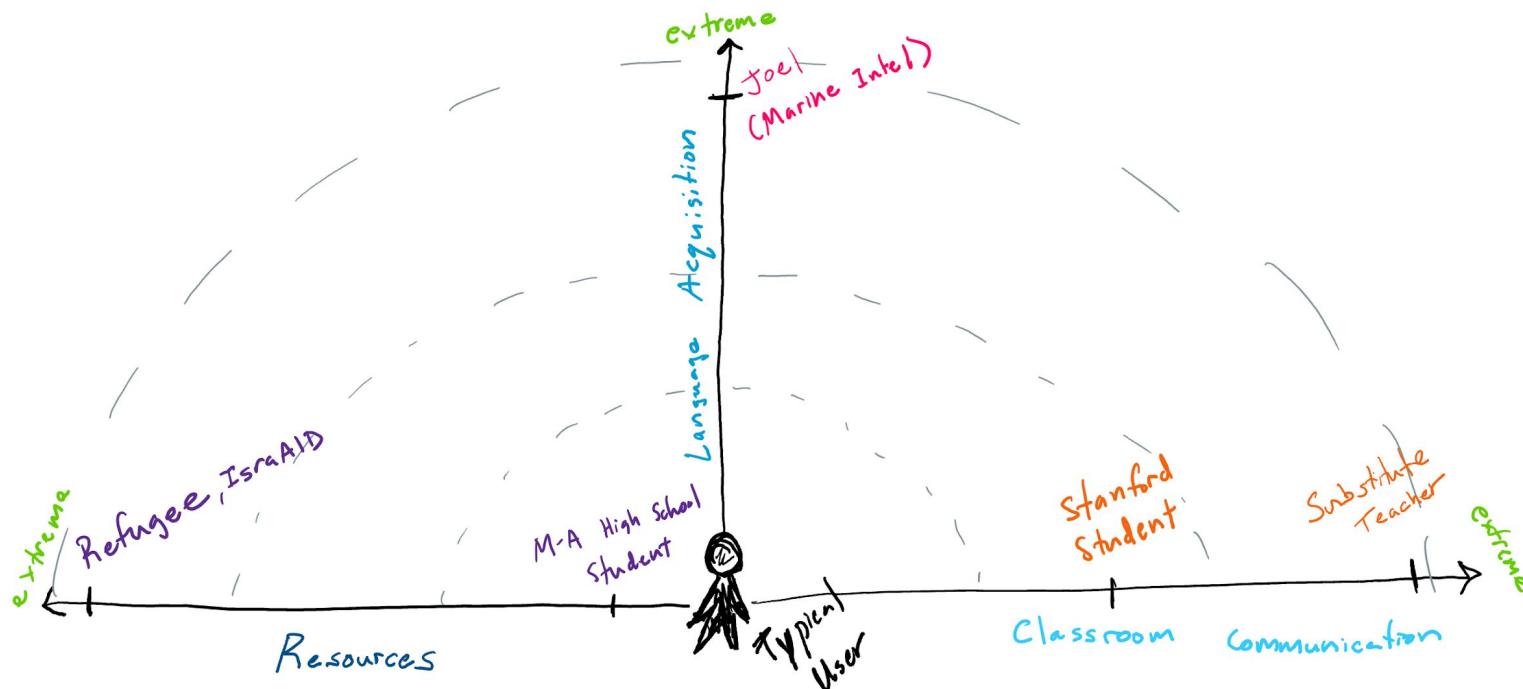
- Communication
- Resources
- Language Acquisition

# Brainstorming

- Who are we trying to interview?
- What questions are we going to ask?
- What are some extreme users in our domain?
- How are we going to find interviewees?



# Extreme-O-Meter



# Interviewee #1, Keegan



- Substitute teacher for Sequoia Union High School District
- Substitute teachers see classrooms of many different subjects and ages
- Knew of him through a summer job
- Interviewed at the GSB

# Interview Results

“There should be **less** technology in the classroom”



One of the biggest problems:  
**wireless headphones**



“When you give a student a chromebook to do their readings or access an online textbook, they can just as easily open a tab to YouTube. We should instead give them a kindle that has all of their books on it but no access to the internet”

# Interview Analysis

<u>SAY</u> <ul style="list-style-type: none"><li>● “Specific technology”</li><li>● “Distractions”</li><li>● “Misunderstandings”</li></ul>	<u>DO</u> <ul style="list-style-type: none"><li>● Would frequently sigh, pause, or laugh while explaining his frustrations</li></ul>
<u>THINK</u> <ul style="list-style-type: none"><li>● He could be disappointed in the school system, and struggle with seeing such widespread problems in the education system</li></ul>	<u>FEEL</u> <ul style="list-style-type: none"><li>● He might feel powerless as a substitute teacher, like he can't affect positive change because he is only in each class for a small amount of time</li></ul>

## Conclusions & Questions

Make tech specific for education from the start, rather than trying to make it work with education after the fact.

# Interviewee #2, Sarith



- Senior Director of Operations  
IsraAID USA
- IsraAID is an NGO focused on  
global disaster risk reduction and  
response.

# Interview Results

Two main involvements with education:

## 1. Disaster Risk Reduction



## 2. Awareness



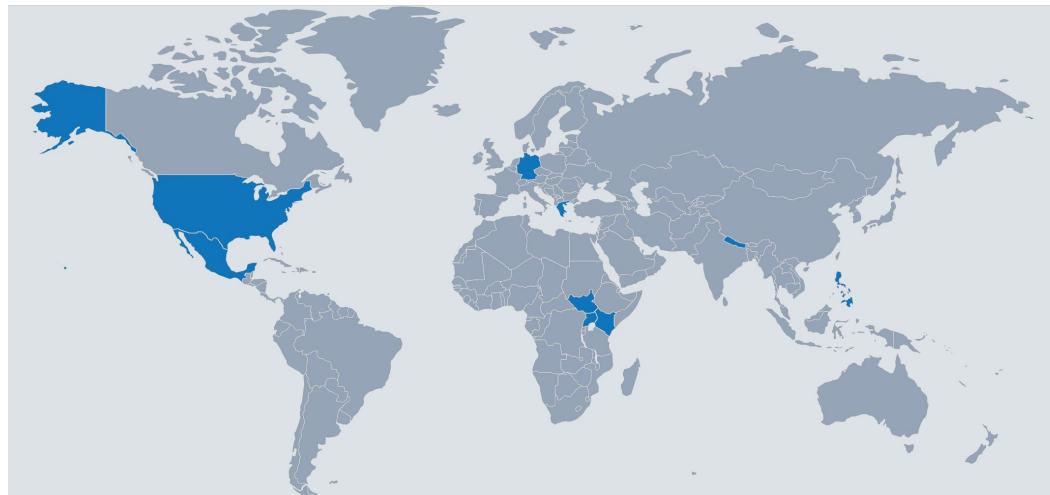
“We've worked hard to create really great board games about fostering empathy. There are no right or wrong answers, the results are inspiring.”

# Interview Analysis

<p><u>SAY</u></p> <ul style="list-style-type: none"><li>● “We’ve reached about 3,000 students but it isn’t enough.”</li><li>● “We are trying to implement a curriculum in multiple locations.”</li></ul>	<p><u>DO</u></p> <ul style="list-style-type: none"><li>● Would constantly check the time and keep an eye on her phone to check incoming messages</li></ul> 
<p><u>THINK</u></p> <ul style="list-style-type: none"><li>● She could be thinking about how much work remains to be done.</li></ul>	<p><u>FEEL</u></p> <ul style="list-style-type: none"><li>● She could feel that she doesn’t have enough resources to reach her goals.</li></ul>

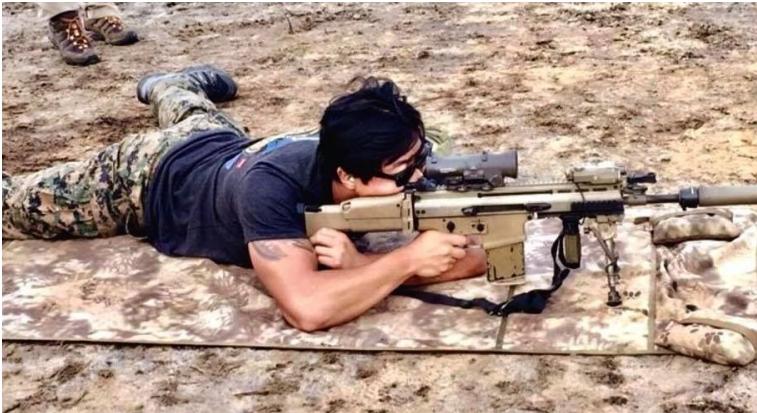
# Conclusions & Questions

When a great educational tool is created, how can it reach more people with limited resources in a way which is culturally sensitive?





## Interviewee #3, Joel



- Junior transfer student, served in US Marines before Stanford
- As a Marine, chosen to learn intensive Arabic in Monterey, CA schoolhouse
- Hanne met through a friend of a friend and approached about interview
- Interviewed at Coho

# Interview Results

“64 weeks, 7 hours of class per day, 4 hours of homework per night and typically around 40% of the class will fail on their first try”



“The biggest thing that clicked was finding that **moral connection** with what I was **learning**”

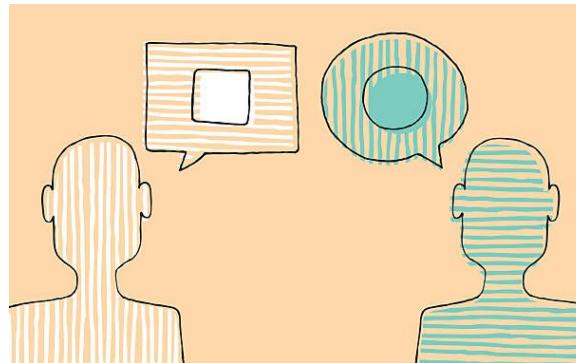


مستقبل (Future)	مضارع (Present continuous)	ماضي (past)	روح to go
هروح	بروح	روحت	أنا
هنروح	بنروح	روحنا	أهنا
هتروح	بتروح	روحت	أنت
هتروحبي	بتروحبي	روحتي	لتشي
هتروحوا	بتروحوا	روحتوا	أنتوا
هيروح	بيروح	راح	هو
هتروح	بنروح	راحت	هي
هيروحوا	بيروحوا	راحوا	هم (همه)

“I typically **listen to news** in Arabic to keep up with my language skills... it’s also fun to hear a **different perspective**”



“But, I feel bad that I’m not as good as I used to be”



# Interview Analysis

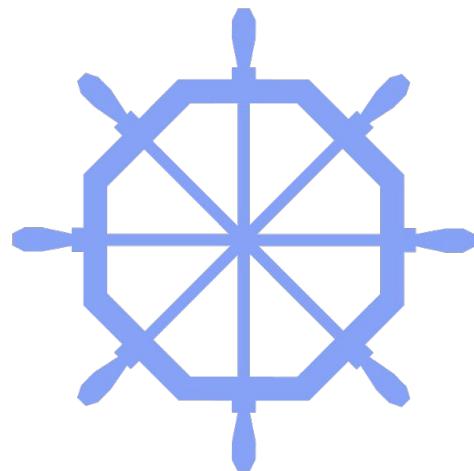
<p><u>SAY</u></p> <ul style="list-style-type: none"><li>“On a first date when you have nothing in common, it makes connecting much harder. Language is the same”</li></ul>	<p><u>DO</u></p> <ul style="list-style-type: none"><li>Face lit up talking about w/ Jordanian Uber driver</li><li>Shook his head talking about grammar tables, intensive study</li></ul>
<p><u>THINK</u></p> <ul style="list-style-type: none"><li>Interacting with local narratives helps learning idioms, nuances, etc.</li><li>Needs a way to brush up</li></ul>	<p><u>FEEL</u></p> <ul style="list-style-type: none"><li>Nostalgia, gratitude, and a sense of accomplishment, BUT ALSO frustration at difficulty of learning</li></ul>

## Conclusions & Questions

- Language is not a one dimensional study: cultural and dialectical nuances are often disregarded
- A moral or emotional relationship with language is key to commitment and consistency

# Overall Needs and Insights (Summary)

- Technology has potential
- Technology can be detrimental for interactive learning when used incorrectly
- Resources still matter



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# Additional Interviews



## Interviewee #4, Sam



- Current Stanford Undergrad
- Met in textbook section of Stanford Bookstore

# Interview Results

\*sarcastically\*

“Amazing academic advisors I’ve **never** been to”





- More privileged students have advantages finding internships
- Extra class expenses are ridiculous



Account



Dashboard



Courses



Calendar



Inbox



Commons

# Dashboard

[View All Courses](#)



“Canvas **can be** good but teachers have to actually use it.”

“There’s a lot of variety between different classes and how easily their resources can be accessed, especially the humanities and STEM.”

# Interview Analysis

<u>SAY</u> <ul style="list-style-type: none"><li>“There should be a maximum on how much I have to spend for a class.”</li></ul>	<u>DO</u> <ul style="list-style-type: none"><li>Browsing for textbooks</li></ul>
<u>THINK</u> <ul style="list-style-type: none"><li>She may think buying textbooks is an unfair financial burden</li></ul>	<u>FEEL</u> <ul style="list-style-type: none"><li>She may feel let down by Stanford</li></ul>

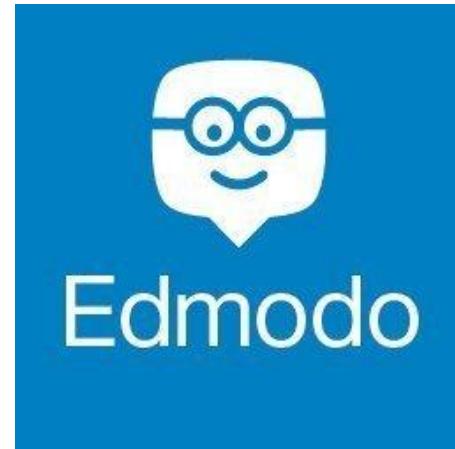
# Interviewee #5, Ainsley



- Junior at Menlo-Atherton High School
- Has been a part of the local public school district since elementary school
- Mia's sister gave us the contact of some friends who would be willing to help out

# Interview Results

“Transitioning from middle school and only using iPads to high school and having to use paper was a really hard adjustment”



Math grade improvement over a trimester due  
to Smartboard:

**82% → 92% → 95%**

Online videos have been tremendously helpful for explaining concepts in a “flipped classroom”.



# Interview Analysis

<u>SAY</u> <ul style="list-style-type: none"><li>● “Explainer videos”</li><li>● “Hard to transition”</li><li>● “Reliant on technology”</li></ul>	<u>DO</u> <ul style="list-style-type: none"><li>● Enthusiastic about using iPads in middle school and her favorite teacher’s style of using a “flipped classroom”</li></ul>
<u>THINK</u> <ul style="list-style-type: none"><li>● Reflecting on the ways in which she is grateful for tech in the classroom, but also wants to be okay without it</li></ul>	<u>FEEL</u> <ul style="list-style-type: none"><li>● Excited about the ways technology has improved her education</li><li>● uncomfortable with her reliance on devices for schoolwork</li></ul>

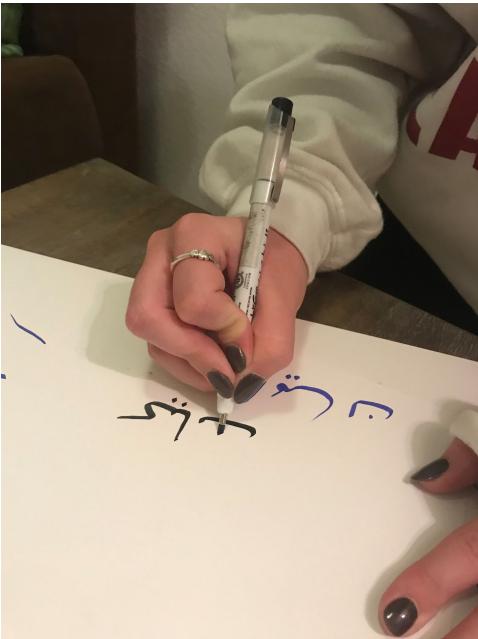
## Conclusions & Questions

There still needs to be a mix of paper and tech in the classroom.

They can be the most beneficial if they are combined, but detrimental if they slide too far either way.



## Interviewee #6, Kate



- Current Stanford undergraduate
- History Major
- Referred to by mutual friend

# Interview Results

- English: Native
- Spanish: Fluent - learned at home
- French: Proficient - school
- Arabic: Fluent - school and time abroad
- Russian: Proficient - school, intensive programs





- “Stanford ignores the cultural aspect of languages”
- “Stanford discouraged me from studying more than one language.”