Team

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Problem and Solution

- Non-ESL secondary school teachers are ill-equipped to support the learning needs of ESL students.
- AI-powered teacher platform that provides insight on student progress and suggestions for incorporating culture and language into class content.
Mission and Value

**Mission**
To empower non-ESL secondary school teachers with academic and cultural resources to support ESL students

**Value**
Understand ESL students’ needs beyond academics with culture and language
Overview

1. Design changes from HE
   - What we changed
   - What we didn't change

2. Testing

3. Looking ahead
Overview

1. Design changes from HE
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Home Page
Today’s Plan

Class Materials

- Lecture_10_26.ppt
  October 24th, 2020

- Volcano_Reading.pdf
  October 25th, 2020

- Volcano_ExtraVocab.pdf
  October 25th, 2020

- Peru_Tectonics.jpg
  October 25th, 2020

Period 1

Progress

Period 2

Progress
H2 Match between System and Real World
Line chart isn’t the best choice

H6 Recognition Rather than Recall
No labeling of axes or key trends

H7 Flexibility, Efficiency of Use
Can’t reorganize or search for files
Bar chart with labeled axes and key + consistent with progress graphs on other pages
In-panel file manager with options to order by upload date and flag key files
Task 1 and Task 3: View student profile + send progress report
Roster

AK
Anjini Karthik
Grade 7

KM
Kayla Magid
Grade 7

MS
Misbah Surani
Grade 7

KT
Kimberly Te
Grade 7

MT
Matthew Tan
Grade 7

TS
Test Student
Grade 7

TS
Test Student
Grade 7

TS
Test Student
Grade 7

TS
Test Student
Grade 7

TS
Test Student
Grade 7

TS
Test Student
Grade 7
H1 Visibility of System Status
System defaults to Period 1; need to view students in all classes
Drop-down to sort roster by period
Feedback Report Sent!
H10: Help and Documentation
Report “disappears into the void”
Feedback Report Sent!

Report History

**Feedback Report: November 7, 2020**
Sent to Teacher 1 and Parent via email

**Feedback Report: October 15, 2020**
Sent to Teacher 2 via email; sent to Parent via SMS

**Feedback Report: September 16, 2020**
Sent to Teacher 1 via email
Edited on September 20, 2020
Portal to view past reports with timestamp and options to edit or resend reports

Tab to view past reports in student’s profile
Task 2: Analyze lesson and get feedback
Volcano Basics

A volcano is a spot in Earth’s crust where molten rock, volcanic ash and certain types of gases escape from an underground chamber. Magma is the name for that molten rock when it’s below ground. Scientists call it lava once that liquid rock erupts from the ground — and may start flowing across Earth’s surface. (It’s still “lava” even after it’s cooled and solidified.)

Roughly 1,500 potentially active volcanoes exist across our planet, according to scientists at the U.S. Geological Survey, or USGS. About 500 volcanoes have erupted since humans have been keeping records. Of all volcanoes that have erupted in the past 10,000 years, roughly 10 percent reside in the United States. Most of them exist in Alaska (particularly in the Aleutian Island chain), in Hawaii and in the Cascade Range of the Pacific Northwest.

The edge of one volcanic plate may begin sliding beneath a neighboring one. This process is known as subduction. The downward-moving plate carries rock back toward the mantle, where temperatures and pressures are very high. This disappearing, water-filled rock melts easily. Because the liquid rock is lighter than the surrounding material, it will try to float back up toward Earth’s surface. When it finds a weak spot, it breaks through. This creates a new volcano.

Analysis

Cultural context:
Volcanic ranges are very present in Latin America, particularly along the west coast, where we can find the Andean Volcanic Belt.

In Ecuador, home to 9 major volcanoes, indigenous people commonly depict the volcano named Cotopaxi in traditional paintings on sheepskin canvases.

Discussion topic:
- Encourage students to ask their families of the significance of volcanoes near their ancestral homes. In Spanish: ¿Cuál es el significado de los volcanes donde vivimos antes? What is the significance of volcanoes we lived before?
H4: Consistency and Standards
Checkboxes aren’t clearly visible

H7: Flexibility, Efficiency of Use
No way to navigate through panels corresponding to different highlighted terms
Volcano Basics

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The edge of one tectonic plate may begin sliding beneath a neighboring one. This process is known as subduction. The downward-moving plate carries rock back toward the mantle, where temperatures and pressures are very high. This disappearing, water-filled rock melts easily. Because the liquid rock is lighter than the surrounding material, it will try to float back up toward Earth’s surface. When it finds a weak spot, it breaks through. This creates a new volcano.

Discussion topic:
- Encourage students to ask their families the significance of volcanoes near their hometowns.

In Spanish: ¿Cuál es el significado de los volcanes donde vivimos antes? (What is the significance of volcanoes where we lived before?)

Cultural context:
Volcanic ranges are very present in Latin America, particularly along the west coast, where we can find the Andean Volcanic Belt. In Ecuador, home to 9 major volcanoes, indigenous people commonly depict the volcano named Cotopaxi in traditional paintings on sheepskin camisoles.

In Spanish:
- A volcano is a spot in Earth's crust where molten rock, volcanic ash, and certain types of gases escape from an underground chamber. Magma is the name for that molten rock when it's below ground. Scientists call it lava once that liquid rock erupts from the ground — and may start flowing across Earth's surface. (It's still "lava" even after it's cooled and solidified.)

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Arrows in panel to navigate between content for different terms

Clear checkbox functionality
Not Fixed

- **H3 User Control and Freedom**: Letting the user edit or highlight words (Task 2)
  - The AI is responsible for analyzing content

- **H7 Flexibility, Efficiency of Use**: Let the user give general feedback (Task 3)
  - General feedback can be given within the existing form
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Testing Goals

- Test if our platform is both **intuitive** and **robust**
  - Can users easily carry out all three tasks?
  - Can users carry out these tasks with a high level of intricacy?

- Identify final fixes to make; see if they align with HE
Methodology

Conducted over Zoom and in person

Medium-fi prototype built in Figma

Participants controlled the prototype
Participants

- Target participants: Secondary school educators (not ESL trained)
- Recruited through our network (connections of contacts)
Participants

Dr. Wolfe
High school science teacher (AP Bio)

Chris
High school science teacher; marine biologist

Aisha
College sophomore; former ESL tutor

Barbara
Elementary educator
Key Findings and Ideas for Redesign

- The site might be intuitive and robust, but our tasks are not self-explanatory → tutorial page?
Key Findings and Ideas for Redesign

- The site might be intuitive and robust, but our tasks are not self-explanatory → tutorial page?

- Confusion around “Class Profile” button → rename or reposition appropriately
Key Findings and Ideas for Redesign

Users thought that clicking on "Class Profile" would reveal information on student roster → Rename or reposition accordingly?
Key Findings and Ideas for Redesign

- The site might be intuitive and robust, but our tasks are **not self-explanatory** → tutorial page

- Confusion around “Class Profile” button → rename or reposition appropriately

- Confusion around “Today’s Plan” section → communicate function through design
Key Findings and Ideas for Redesign

Overlapping functionality here (shortcut) with “Lesson Materials” = confused users

→ Communicate function of panel through design?
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Questions Moving Forward

- How might we provide the user with appropriate context on using our tool without overwhelming?
- How might we ensure the nomenclature of our buttons is consistent with education standards?
- How might we further simplify our interface without losing robustness?
Thank you! Any questions?
Appendix

- Current prototype (Medium-Fi Redesign #3):
  [https://www.figma.com/file/QX0JbYdO4cgo2TeWYHNgFh/CS-377E-Project-Team-Coterm?node-id=818%3A2](https://www.figma.com/file/QX0JbYdO4cgo2TeWYHNgFh/CS-377E-Project-Team-Coterm?node-id=818%3A2)

- README:
  [https://docs.google.com/document/d/1WGHO-riCZu1IdiE9v5qpatdLlC88taQ08xcL_Sa01Bg/edit](https://docs.google.com/document/d/1WGHO-riCZu1IdiE9v5qpatdLlC88taQ08xcL_Sa01Bg/edit)