eduCulture

Medium-Fi Prototype #1

Team Coterm
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Overview

1 **INTRODUCTION**
Team, problem & solution, mission & value

2 **TASKS**
Tasks, changes from lo-fi prototype

3 **MEDIUM-FI PROTOTYPE**
Design system, major changes, and task flows

4 **PROTOTYPING**
Prototyping tools, limitations/tradeoffs, and next steps

Overview

Overview

Team

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MSCS '21

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Problem & Solution

PROBLEM

- Non-ESL middle teachers are ill-equipped to support the learning needs of ESL students.

SOLUTION

- AI-powered teacher platform that provides insight on student progress and gives suggestions on teacher lessons based on **academic** content, **cultural** understanding, and **language** abilities of their students.

Mission & Value

MISSION

- To empower non-ESL middle school teachers with academic and cultural resources, so that they can support ESL students to their fullest potential.

VALUE

- Understand ESL student needs **beyond academics** with **culture** and **language**.

Overview

INTRODUCTION 1

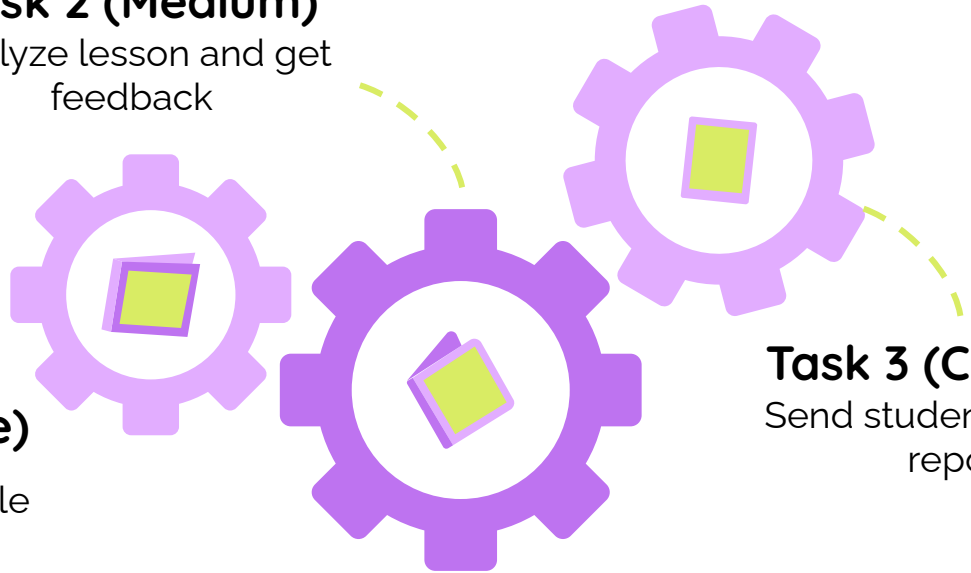
3 MEDIUM-FI PROTOTYPE

TASKS 2

4 PROTOTYPING

Tasks

Task 2 (Medium)
Analyze lesson and get feedback

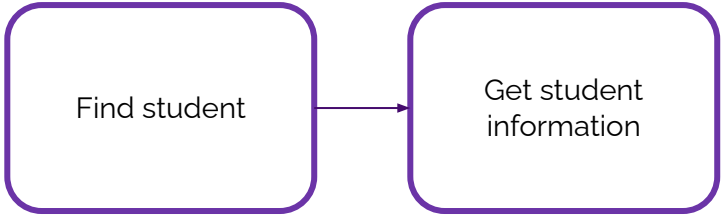


Task 1 (Simple)
View student profile

Task 3 (Complex)
Send student progress report

Task 1 (Simple)

- **Task:** View student profile.
- **Profile:** home language, cultural norms, contact information, teachers, and class schedule schedule

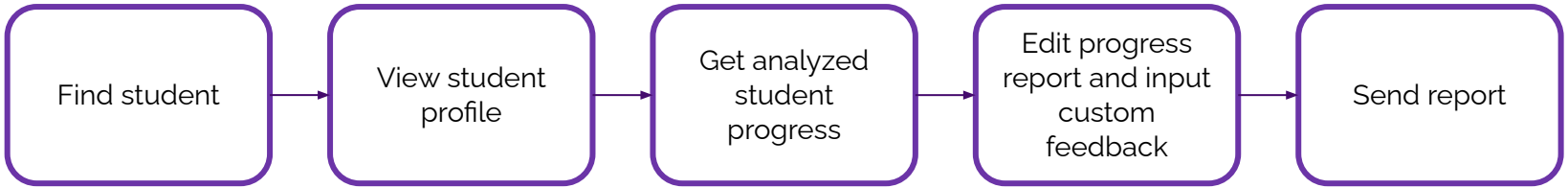


Task 2 (Medium)

- **Task:** Analyze teacher's lesson materials and get suggestions on difficult vocabulary terms and cultural connections.
- **Updates:** Merged medium tasks for analysis of lesson material

Task 3 (Complex)

- **Task:** Send progress report to a student and additional contacts (parents and teachers).
- **Updates:** Switched to cumulative progress report over feedback report per assignment



Overview

1 INTRODUCTION

2 TASKS

3 MEDIUM-FI PROTOTYPE

4 PROTOTYPING

Design Considerations

- **Users:** Non-ESL middle school teachers
- Technical proficiency
- Ease-of-use and ease-of-access
- Clarity and focus on content

Design System

Color

000000

FFFFFF

E9E6F2

F8D755

54428E

Typography

Noto Sans JP

Noto Sans JP

Noto Sans JP

Buttons

Send

Send

Send

Send

Send

Send

Icons

Major Design Changes

Access to progress reports in student profile

Student Section

Merged vocabulary and cultural connection suggestions

Analyze Section

Simplified upload process of lesson materials

Upload

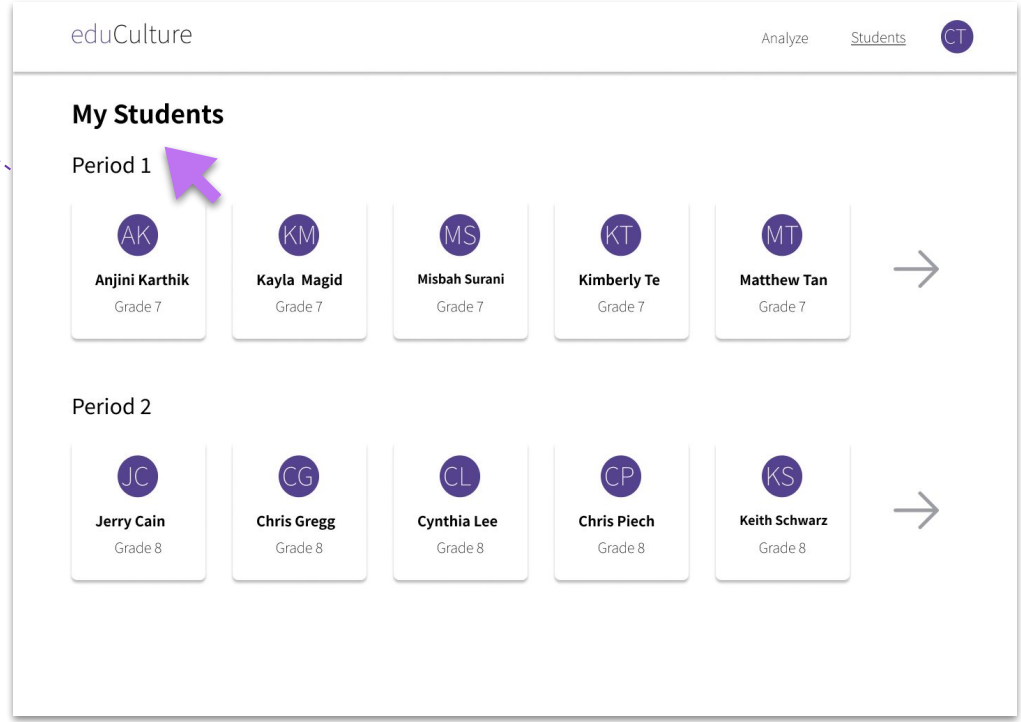
Task 1 (Simple)

View student profile

Task 1

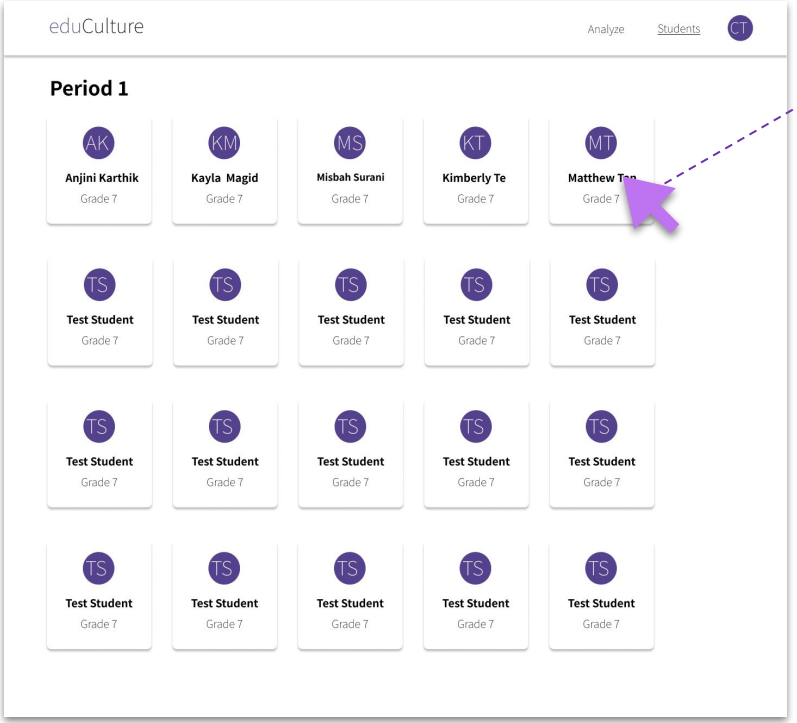
View student profile

Select class



Task 1

View student profile

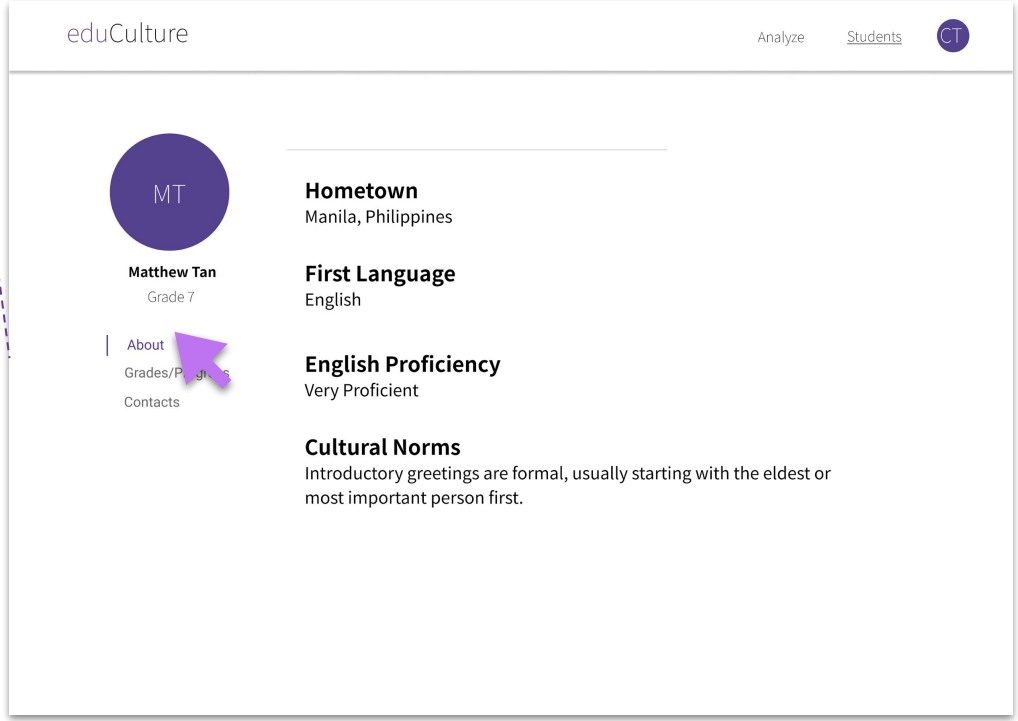


Select student

Task 1

View student profile

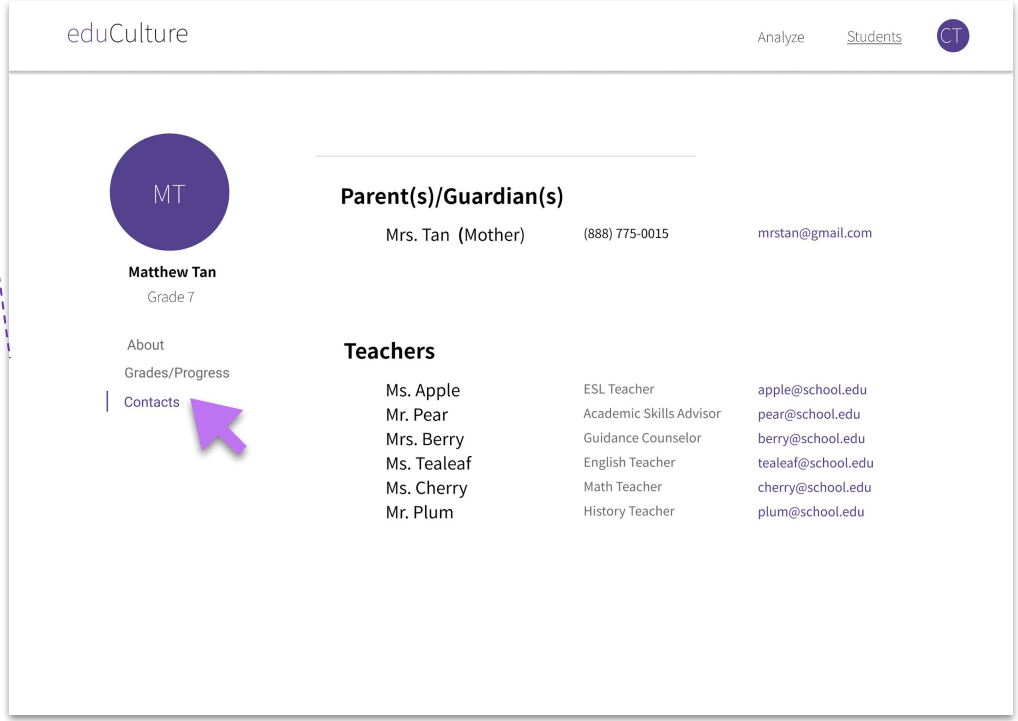
About Section



Task 1

View student profile

Contacts



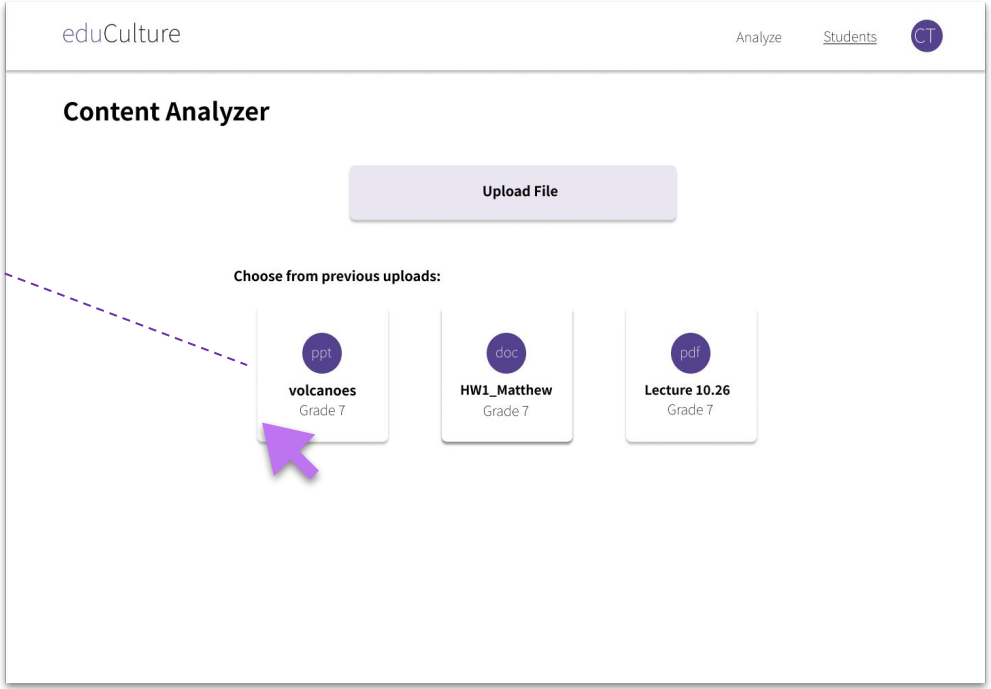
Task 2 (Medium)

Analyze teacher's lesson materials and get suggestions on difficult vocabulary terms and cultural connections

Task 2

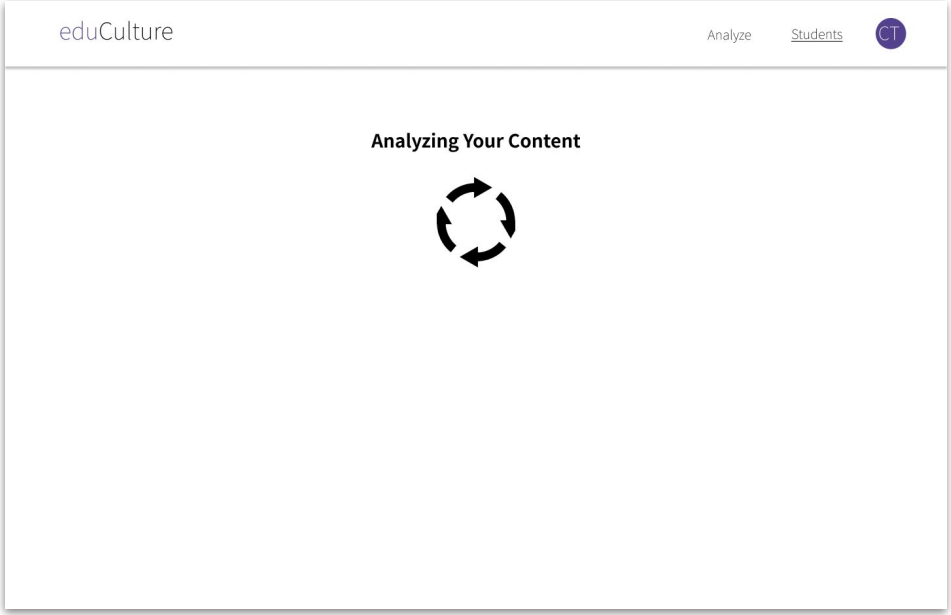
Analyze lesson and get feedback

Select file to analyze



Task 2

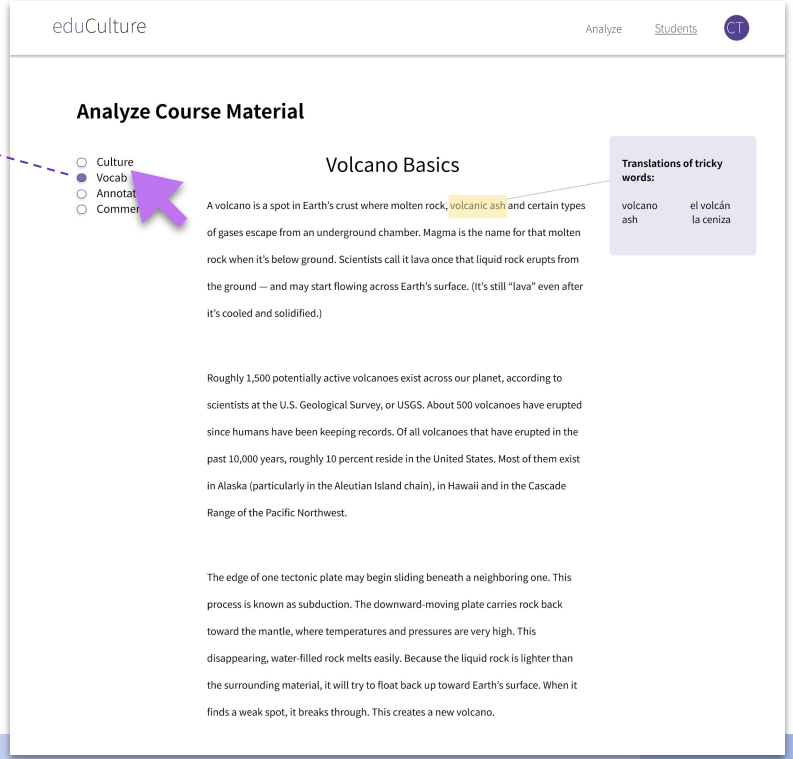
Analyze lesson and get feedback



Task 2

Analyze lesson and get feedback

View difficult vocabulary terms



Task 2

Analyze lesson and get feedback

Select cultural connections to view

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Analyze Students CT

Analyze Course Material

- Culture
- Vocab
- Annotation
- Comments

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 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.

Translations of tricky words:

volcano	el volcán
ash	la ceniza

Related to: Oregon

Related to: Peru

1. https://www.volcanodiscovery.com/peru.html
2. https://en.wikipedia.org/wiki/Nazca_Plate

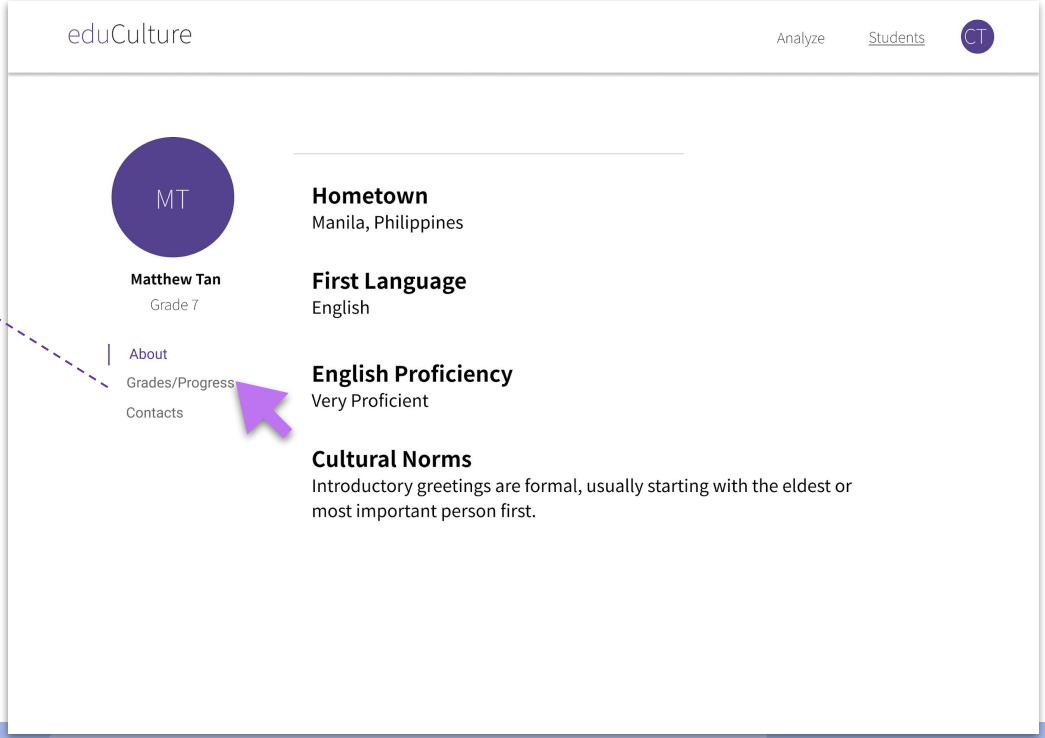
Task 3 (Complex)

Send progress report to students and additional contacts (parents and teachers)

Task 3

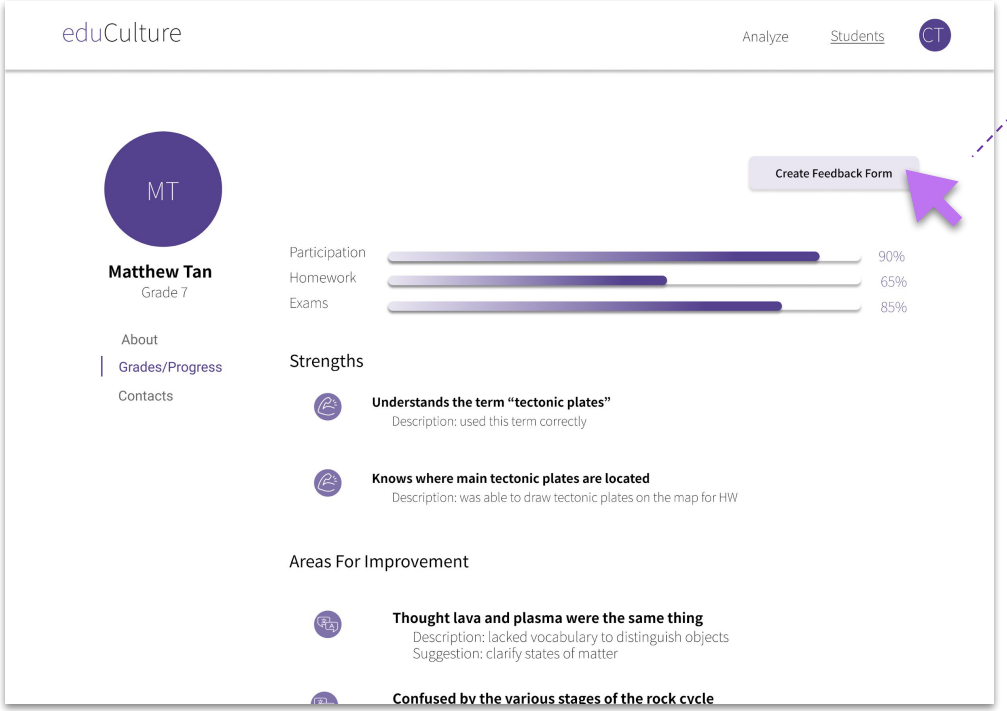
Send student progress report

Enter through student profile



Task 3

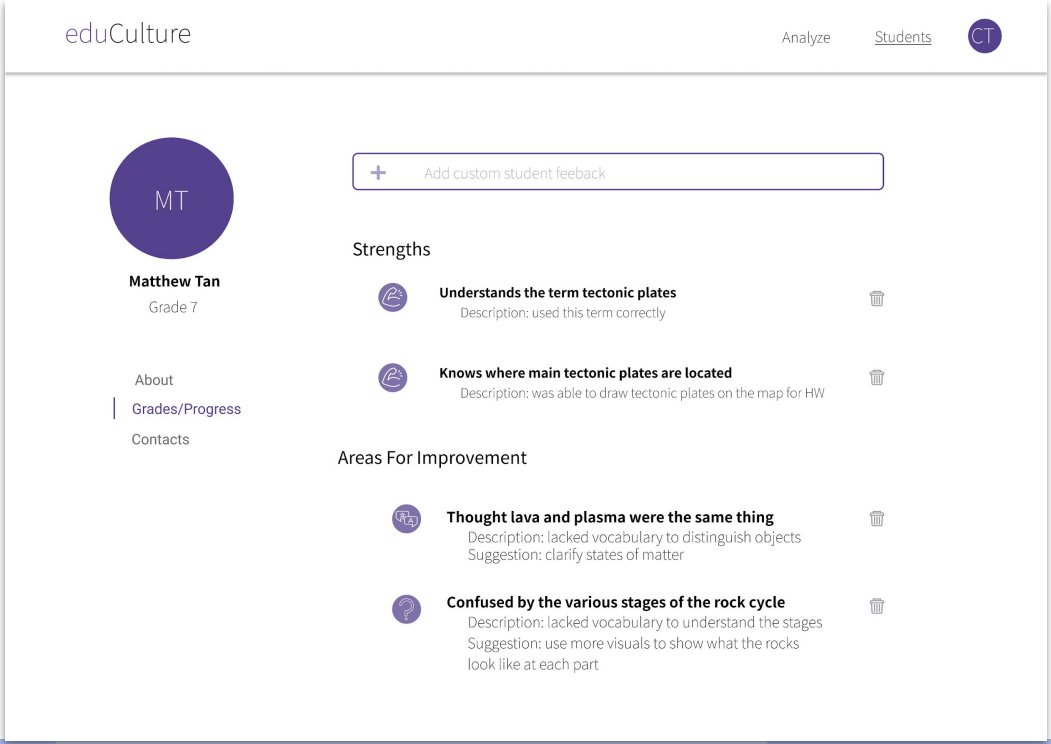
Send student progress report



Create progress report

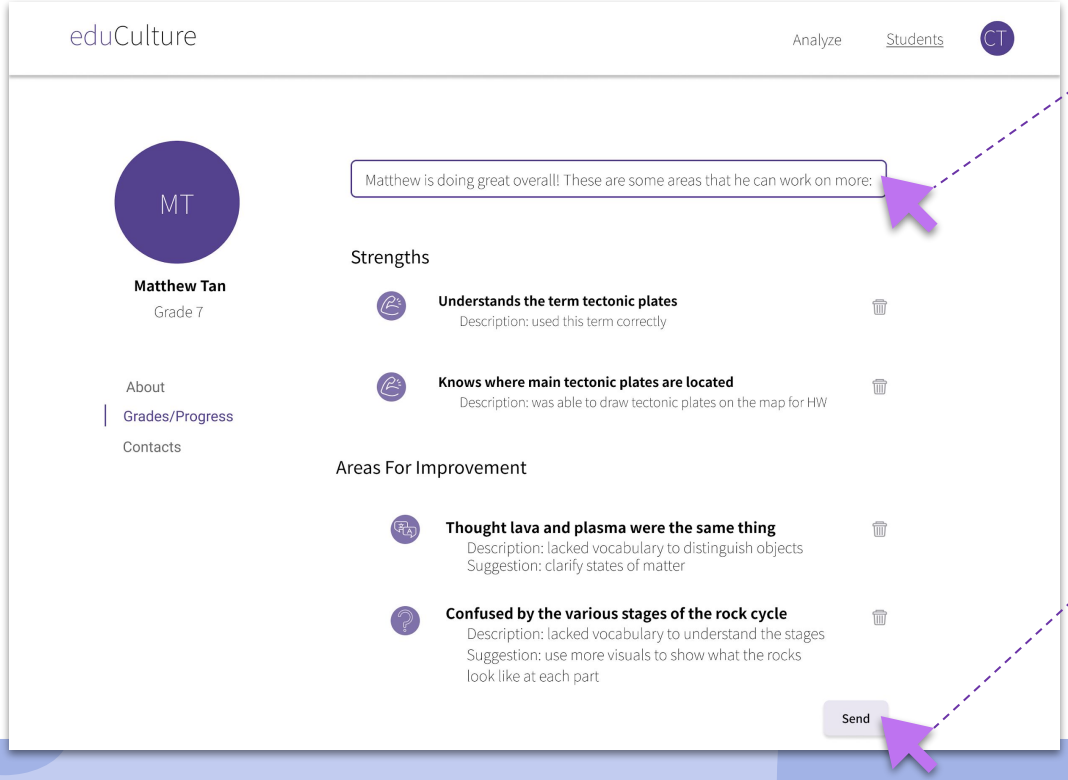
Task 3

Send student progress report



Task 3

Send student progress report

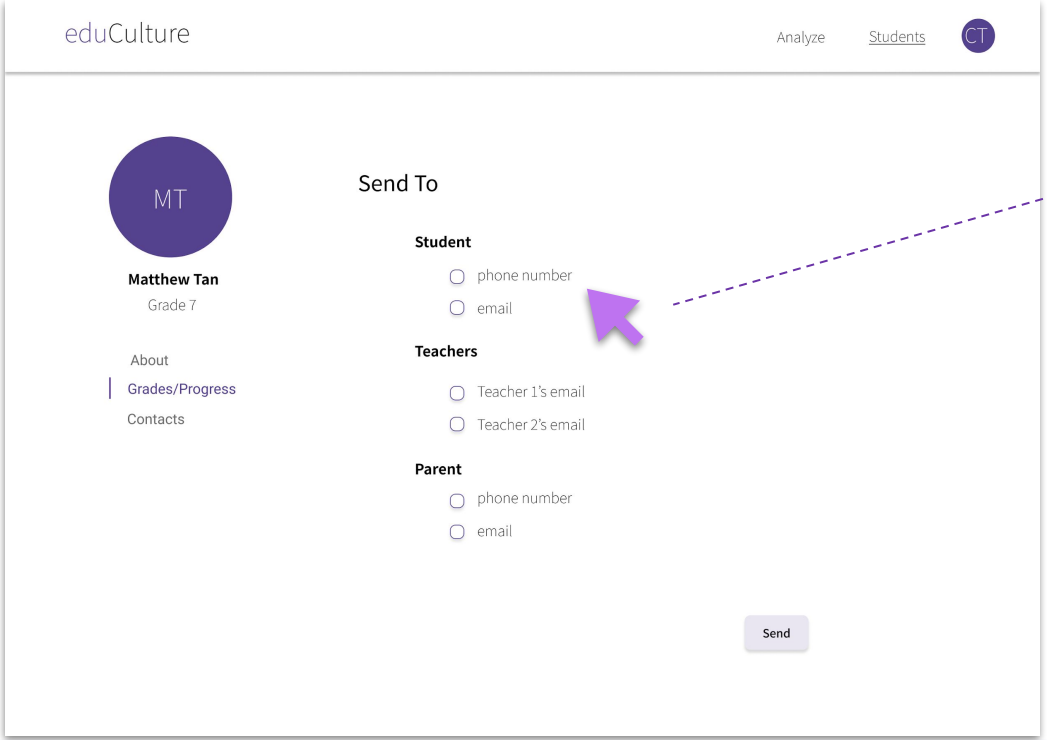


Input custom text and edit form

Send complete report

Task 3

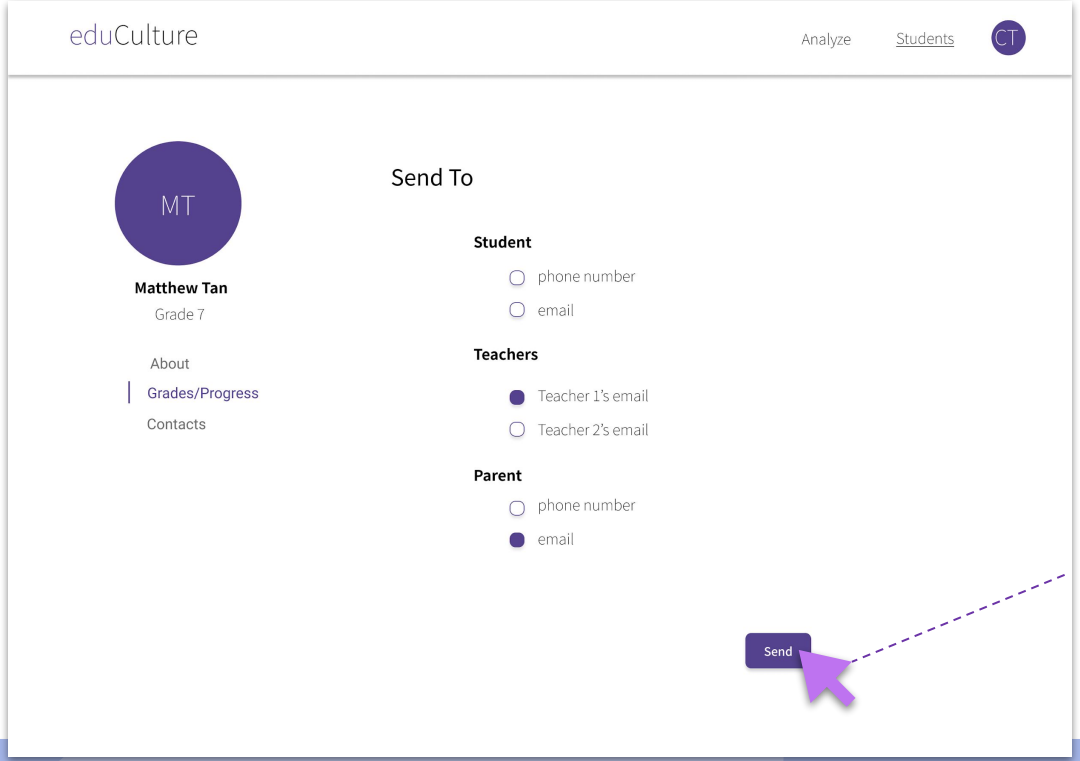
Send student progress report



Select contacts and send options

Task 3

Send student progress report



Send progress report!

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Prototyping Tools

- **Tools:** Figma
- **Tool limitations**
  - Display options
  - Repetitive interaction connections

Limitations & Tradeoffs

- **Assumptions**
  - Teacher completed sign-up process
  - All student data pre-loaded
- **Limited functions**
  - Interaction limited to task use cases
  - No “Edit” option for student profiles
  - No file storage management system
- **Wizard of Oz**
  - Analysis of lessons
  - Progress report generatin

Next Steps

- **Future tasks**
  - Enable teacher sign-up process
  - Upload student data
  - Manage file storage system

- **Improvements**
  - Color and layout
  - Homepage
  - Toolbar
  - Toggle display options
  - “Edit” options

Thank you!

Questions?