

ALEX LEVY

# PORTFOLIO PRESENTATION

How I design (and think)

# Optimal Assessment

## Skills

- Business
  - Entrepreneurship
  - Pitching
- User research
  - User testing
  - Survey conduction
  - Secondary research
- UX design
  - Information architecture
  - Persona & journey map
- Visual design
  - Design system creation
  - Branding
  - Prototyping
- Content design
  - UX writing
  - Example user input

## Roles

- Me (product lead)
  - Co-founder
  - UX designer
  - Visual designer
  - User researcher
  - Content designer
- Partner (business lead)
  - Co-founder
  - Market researcher

## Tools

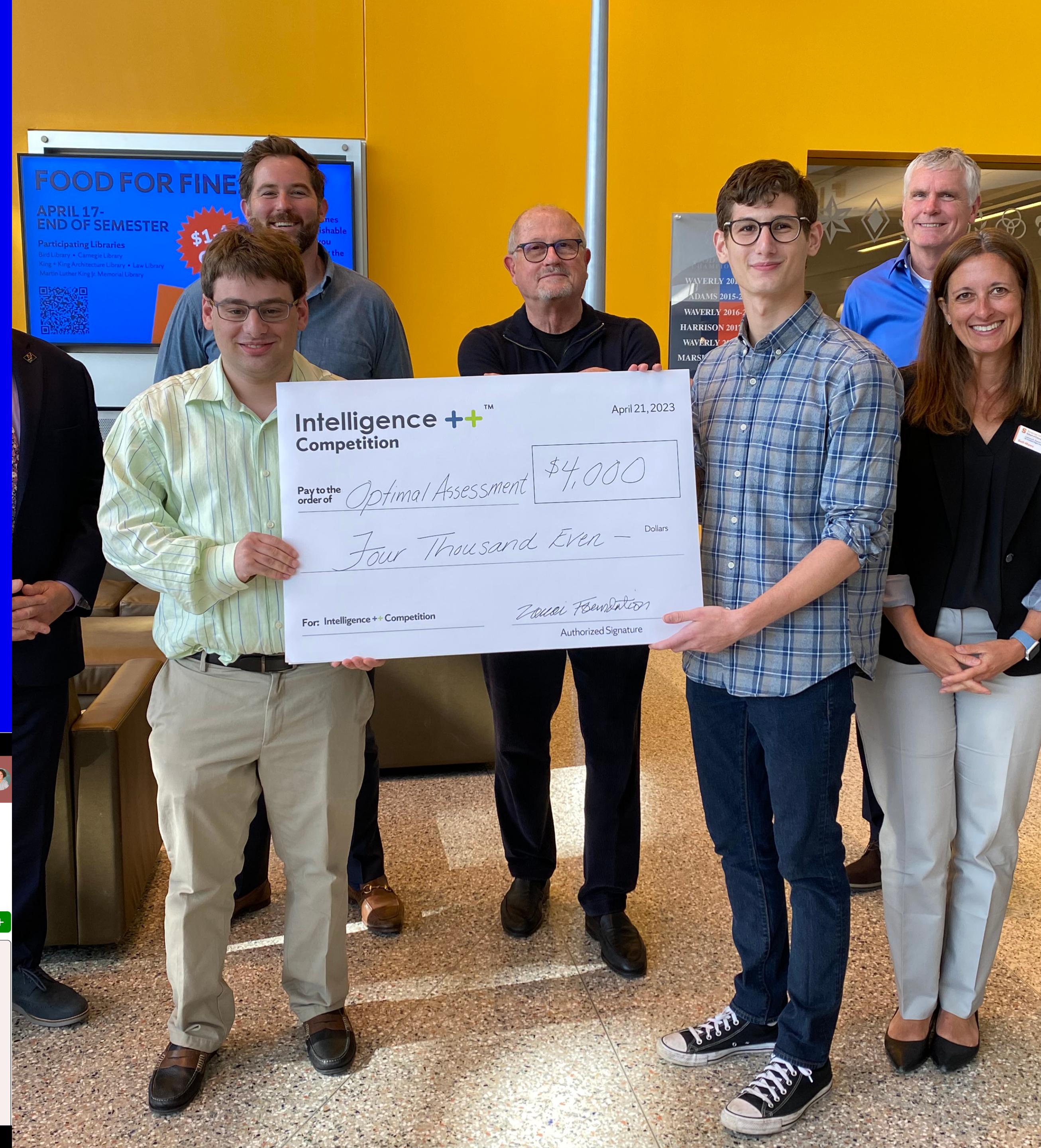
- Figma
- FigJam
- Google Forms

The screenshot shows a mobile application interface for 'Optimal Assessment'. At the top, there's a navigation bar with a profile icon and the text 'Optimal Assessment'. Below it is a back button labeled 'Back'. The main title is 'Intro to Early United States History'. Underneath the title, there's a section titled 'Assessments and lessons' with two tabs: 'Assessments' (selected) and 'Lessons'.  
**Assessments:**

- Historical reenactment**: September 18 – October 9. Description: Students will work in groups to create a short script reenacting an event covered in class and work with drama students to act out the script.
- Past influences on the present**: October 2 – October 16. Description: Students will research a piece of early American history, focusing on its lasting effects. They will present their findings in a format of their choosing.
- Research paper**: November 6 – December 6.

**Lessons:**

- A calendar for September 2023 showing days from Sunday to Saturday. The 18th is highlighted in red.
- A calendar for October 2023 showing days from Sunday to Saturday.



# My process

As you know, the design process is almost never very neat or linear. But unfortunately, a table of contents is.

## The context

## The problem

- Discovering the problem
- Understanding the problem
- Redefining the problem

## The solutions

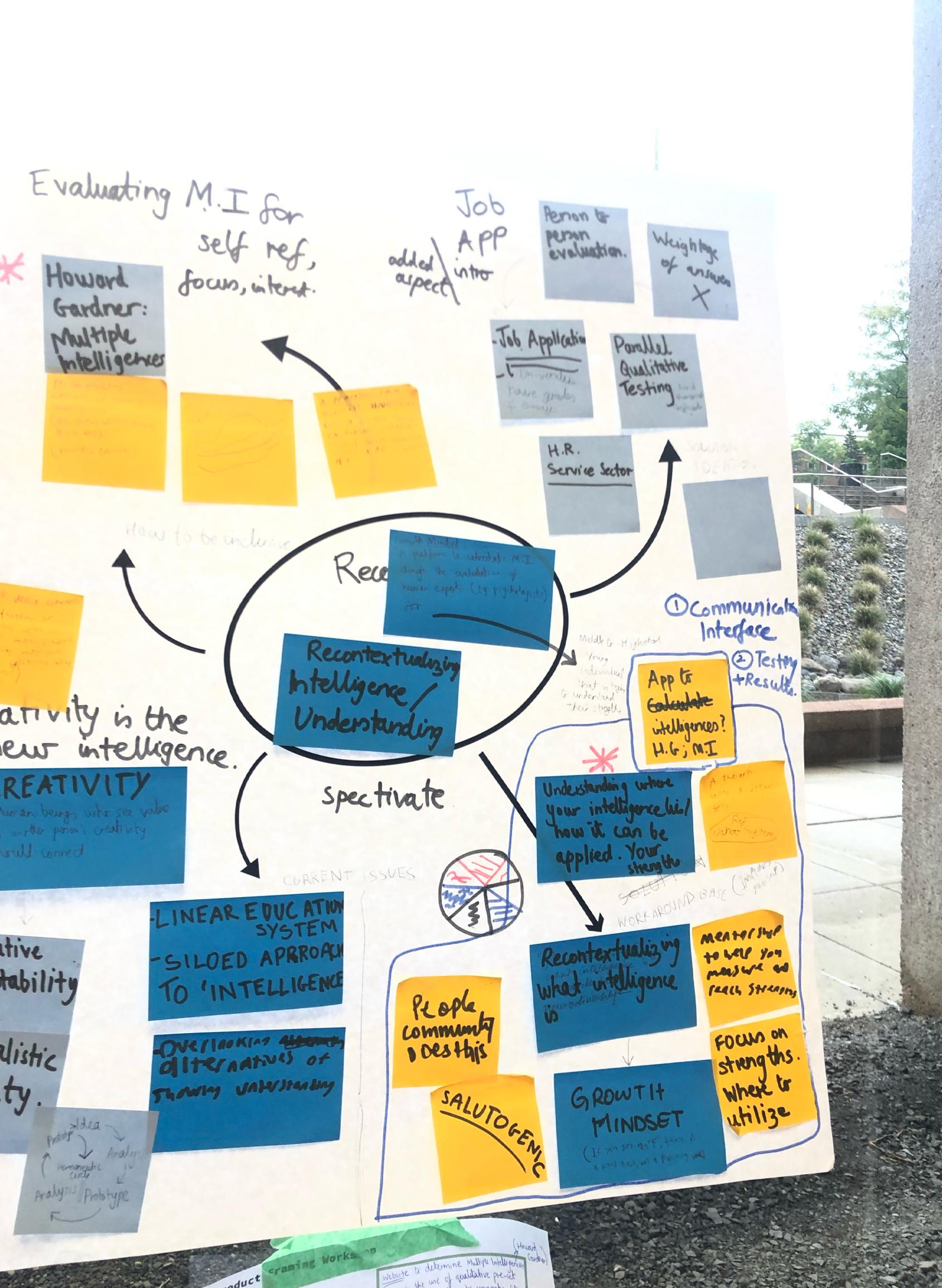
- Exploring the solutions
- Testing the solutions
- Iterating the solutions

## The outcome

## The future

## The lessons

# The context

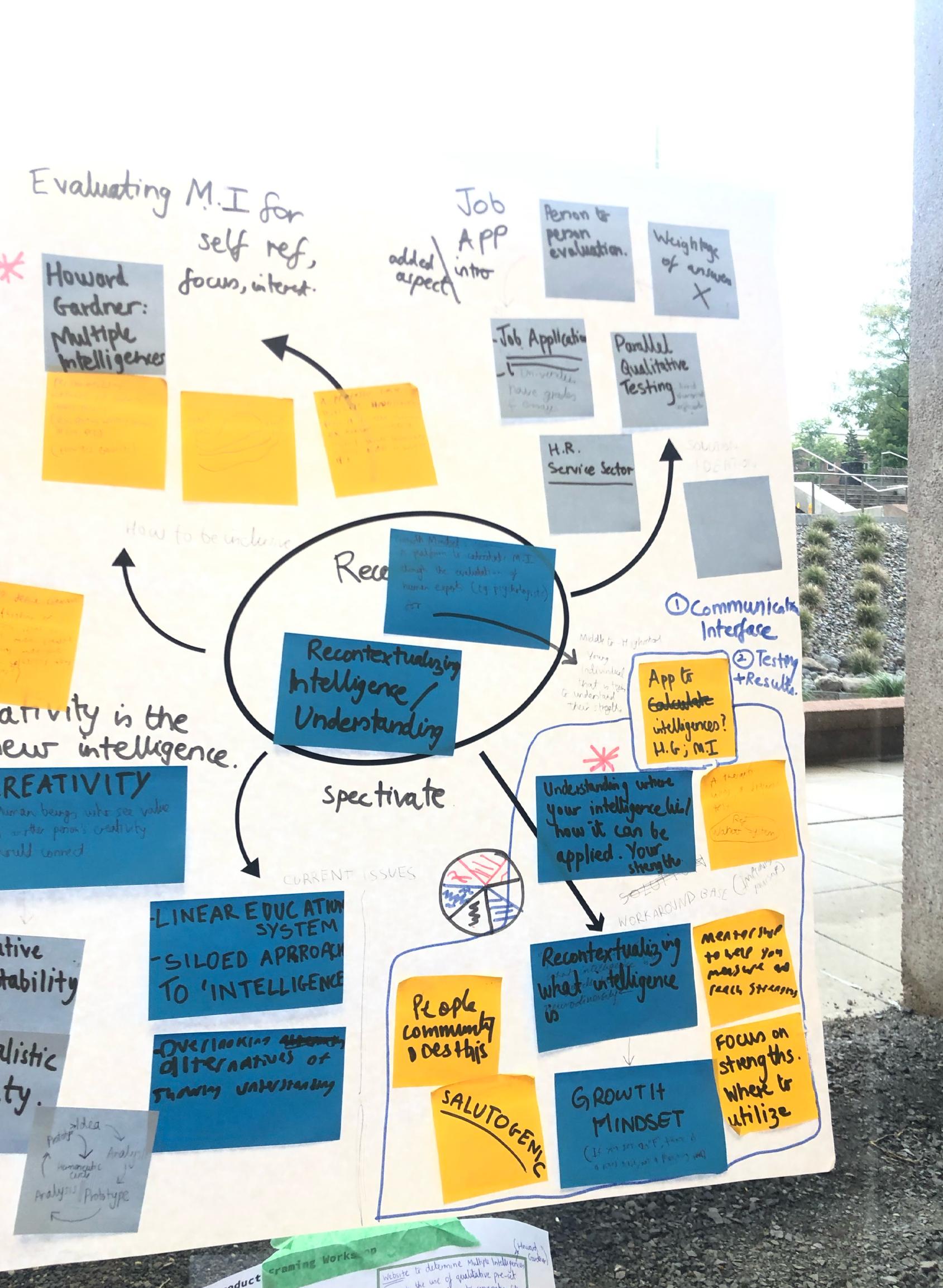


This project began at a design-led hackathon themed around designing a digital tool to help the neurodiverse community.

I worked with two graduate students on this education-oriented design prompt:

Design a digital tool/interface that could offer the opportunity to highlight different approaches to testing and promote different ways of demonstrating understanding.

# The context



## Brainstorming

- We brainstormed and researched different problems that neurodiverse people may have with testing.

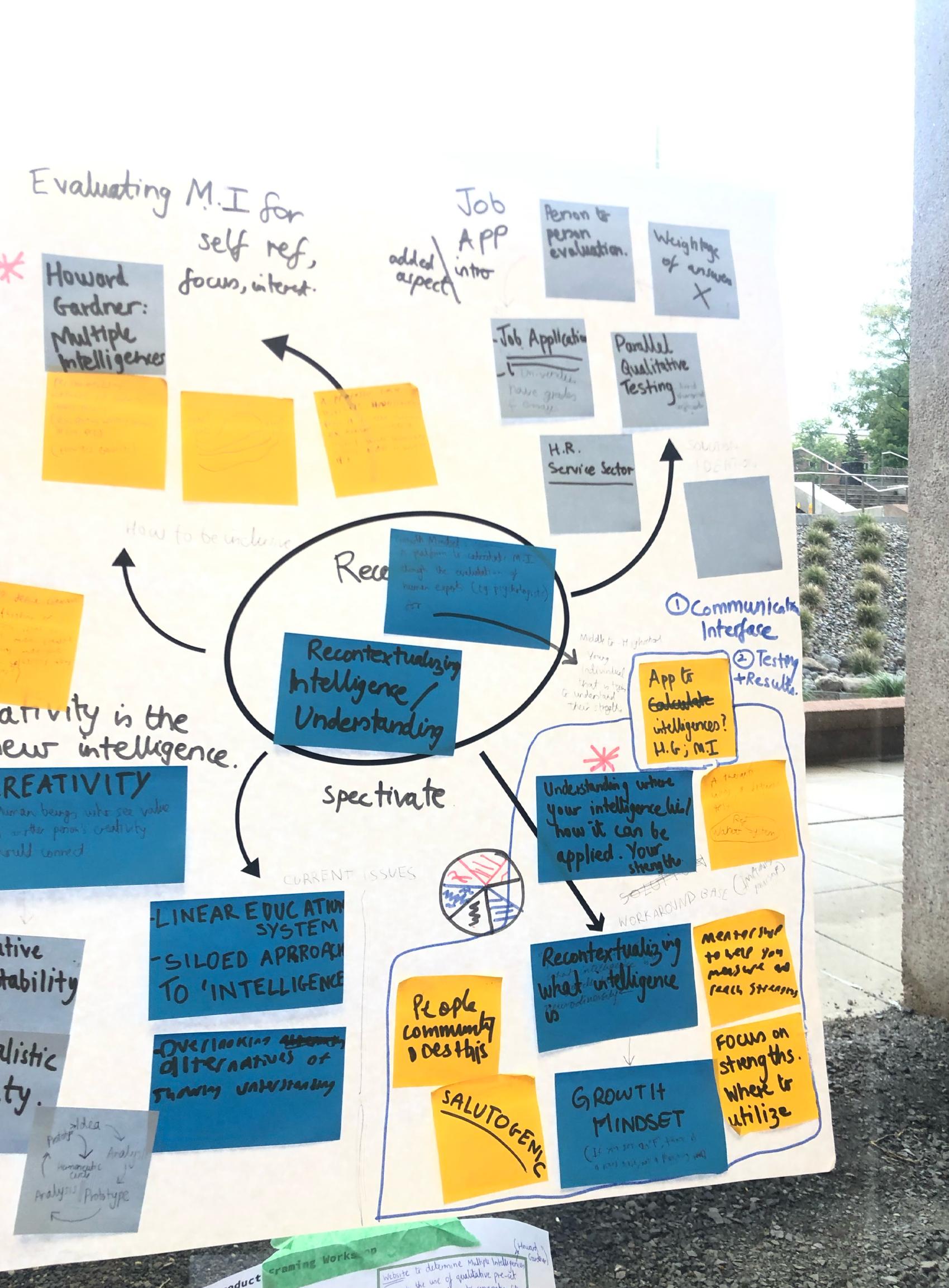
## User interviews

- Next, we interviewed students in Syracuse University's InclusiveU program who have cognitive disabilities.
- One of the students, who is a music major, said that he would like it if he could use his musical abilities to demonstrate his understanding of his courses.

## Designing

- Finally, we designed a working prototype of an application where students would take a survey about what types of assessments (such as multiple choice, short answer, project based, etc.) that they prefer.

# The context



The results are in!  
We lost.

Even though we didn't win the hackathon competition, I knew that this was not the end of this project.

# The problem

## Taking it further

- I signed up for a class with the same goals and focus as the hackathon.
- This class was largely self-guided and had a business pitch competition at the end.

# Discovering the problem

## Asking myself a question

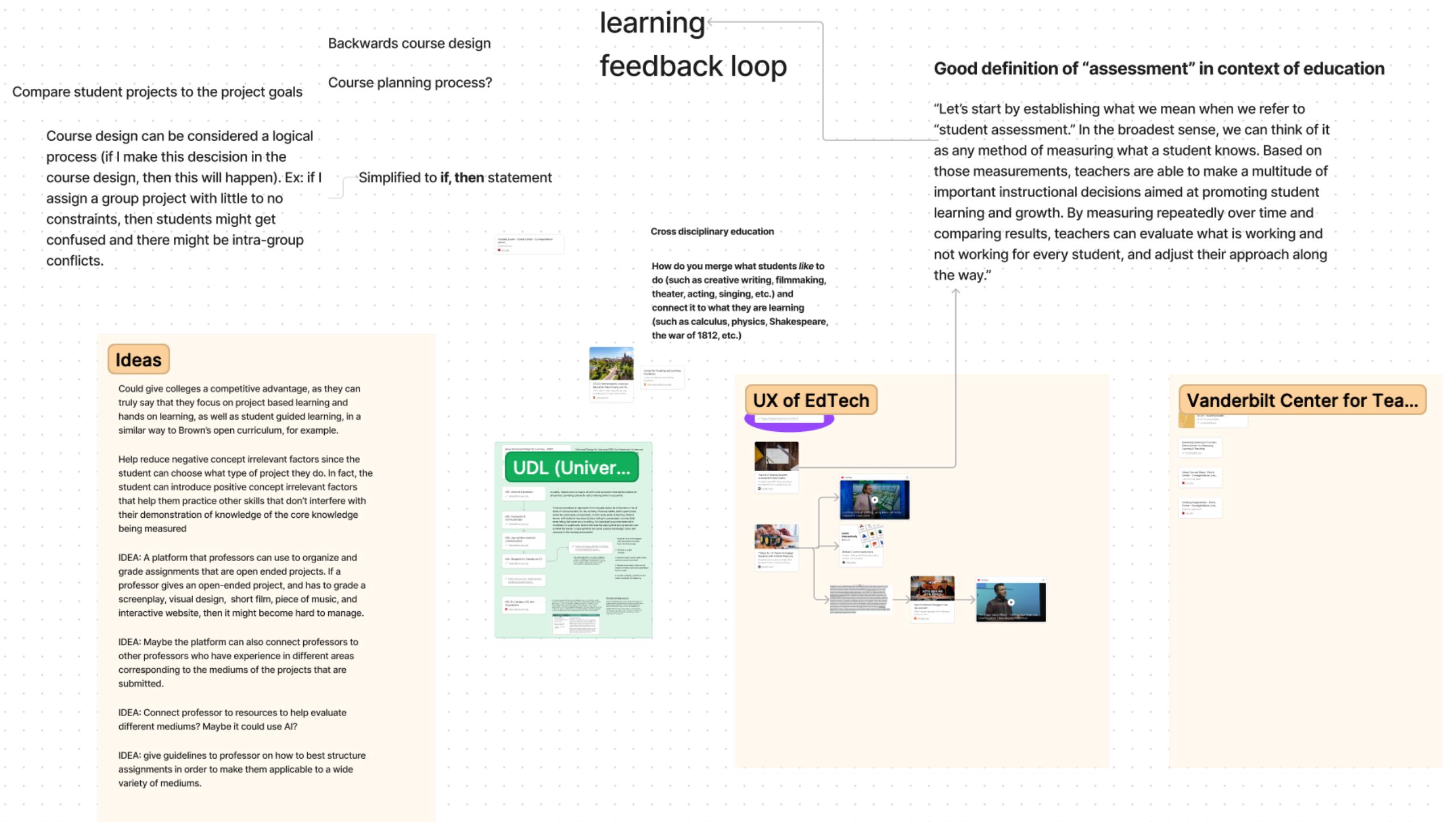
*Did our solution **truly** give students the freedom to demonstrate their understanding of course concepts in the way that they prefer...*

*...or was it just a band-aid covering up a larger problem?*



# Discovering the problem

Design rubric to be applicable to any medium of project - connects to what Prof. Osborn said about having a clear rubric so the student isn't graded on the artistic qualities of their project



## Learning about learning

I did secondary research to develop a better understanding of teaching and learning

### Universal Design for Learning

- An educational framework that flips the course design process on its head
- First you create learning goals, then you design engaging assessments, and you finish by designing lessons.

### Interesting studies

- I found some educational studies that showed innovative assessment styles, such as a physics assignment where students create a short video

# Discovering the problem

## Why can't assessments be tailored to student strengths?

**Well, what if students are not the only stakeholders?**

- Students' needs have to be balanced with university, program, and accreditation requirements, just to name a few.

**And who is in charge of achieving that balance?**

- The professor, who has to meet the needs of the students while ensuring that learning is taking place through measurable metrics.

**So, how can I find the answer to my original question?**

- By talking to professors!

# Understanding the problem

**How do you teach philosophy to a film major?**

How a philosophy professor  
designed a media ethics course

## **Know your audience**

- Assignments and lessons that work for some students might not work for others

## **Grading is hard**

- Student guided, creative/artistic projects need to be graded based on course content rather than artistic or technical skill

## **If students don't care, they don't learn**

- Students need to feel like they are in control of their own learning, If they don't, then they won't learn as well, if at all.

# Understanding the problem

## Student perspectives

How neurodiverse students navigate an educational system that is often one-size-fits-all

### Memorable courses and projects

- One student enjoyed a project that allowed her to use art to express concepts about climate change.

### Barriers to learning

- Some students said that they have trouble reading lengthy textbooks
- Other students said that find it difficult to stay focused during exams.
- One student said that they like being able to watch recorded lectures so they can pause and slow down the video

# Redefining the problem

## A new direction

Originally, I thought the problem was simply that professors don't know what types of assessments are best suited for their class. But now that problem was shifting.

### **Redefining what an assessment is**

- My focus shifted to helping professors deviate from the “one size fits all” model that many courses follow.

### **A helping hand**

- At this point, a student joined the project, focusing on answering the business questions.

### **With a new focus comes new questions**

- Even though the business pitch competition was approaching, I still had some gaps in my understanding of how professors approach course design.

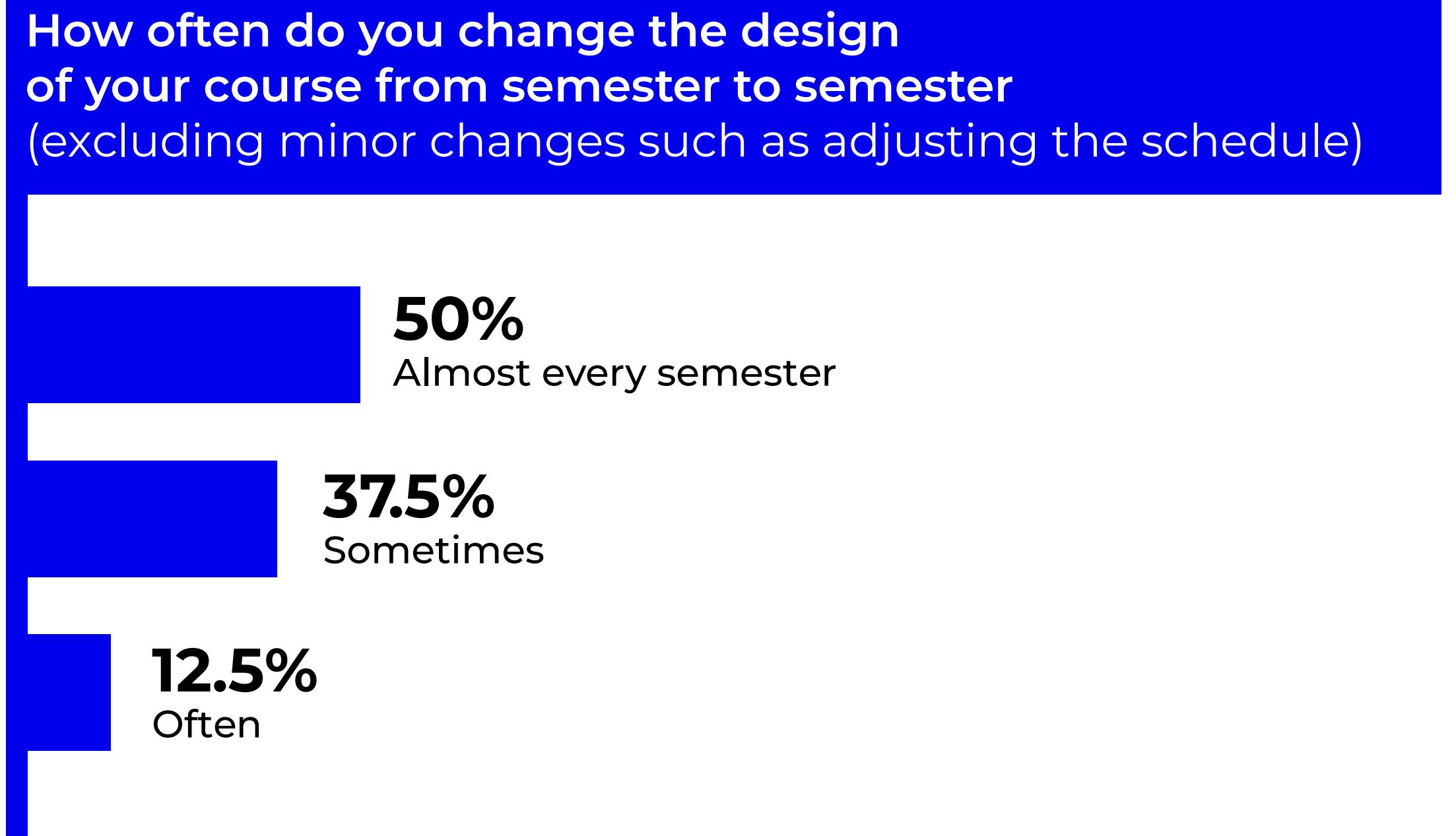
# Redefining the problem

## Course design survey

I conducted a survey of eight professors to get an overview of how professors from a diverse set of disciplines approach course design.

### Professors redesign courses often

**How often do you change the design  
of your course from semester to semester**  
(excluding minor changes such as adjusting the schedule)



50%

Almost every semester

37.5%

Sometimes

12.5%

Often

# Redefining the problem

## Course design survey

While professors have varying approaches and challenges with course design, there were some common themes, such as organization, timelines, and seeing the big picture.

### Many different approaches to course design

#### How do professors design their courses

“ Sticky notes on my dining room table to sort and group various lessons/projects

“ I read blogs, journals, and articles daily and listen to podcasts

“ A Text Edit document to arrange all my notes and topics

“ A list of topics in [Microsoft] Word that I start with

### Varied challenges with some interesting overlap

#### What challenges do professors face with course design

“ Finding an overall flow for the course — most content is not linear in application or operation, but we have to put it into a linear timeline

“ Working with outside clients on course projects, realistic timelines, working in student teams for project delivery

“ Maintaining continuity of material, adding rich assessments without overloading myself with grading tasks.

“ Knowing what topics, exercises, etc. will work since each semester is different

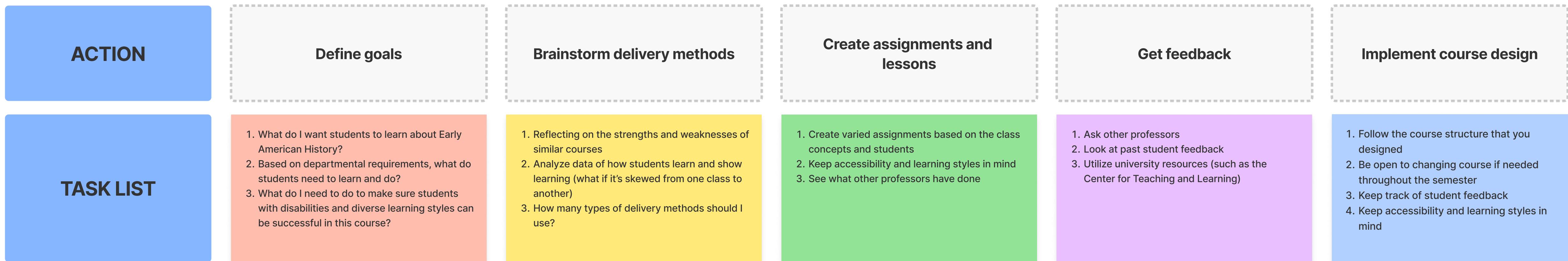
# Redefining the problem

## Persona and journey map

### Professor Thomas

Professor Thomas is an American history professor who has been teaching for almost eight years. He notices that more and more students seem to be struggling in his class, not paying attention, and not thinking critically about class material.

He is currently designing a course on early American history. Based on past experience teaching similar courses, students don't retain much information after the class ends and don't seem very involved in their learning.



# Redefining the problem

## A new problem

Students learn in different ways, but many course structures are one-size-fits-all.

Professors want to give students a learning experience that works for everyone, but they don't know the learning styles of the class they are designing the course for.

Radically adjusting course structure to fit every student is necessary, **but is currently a massive undertaking.**

# The solutions

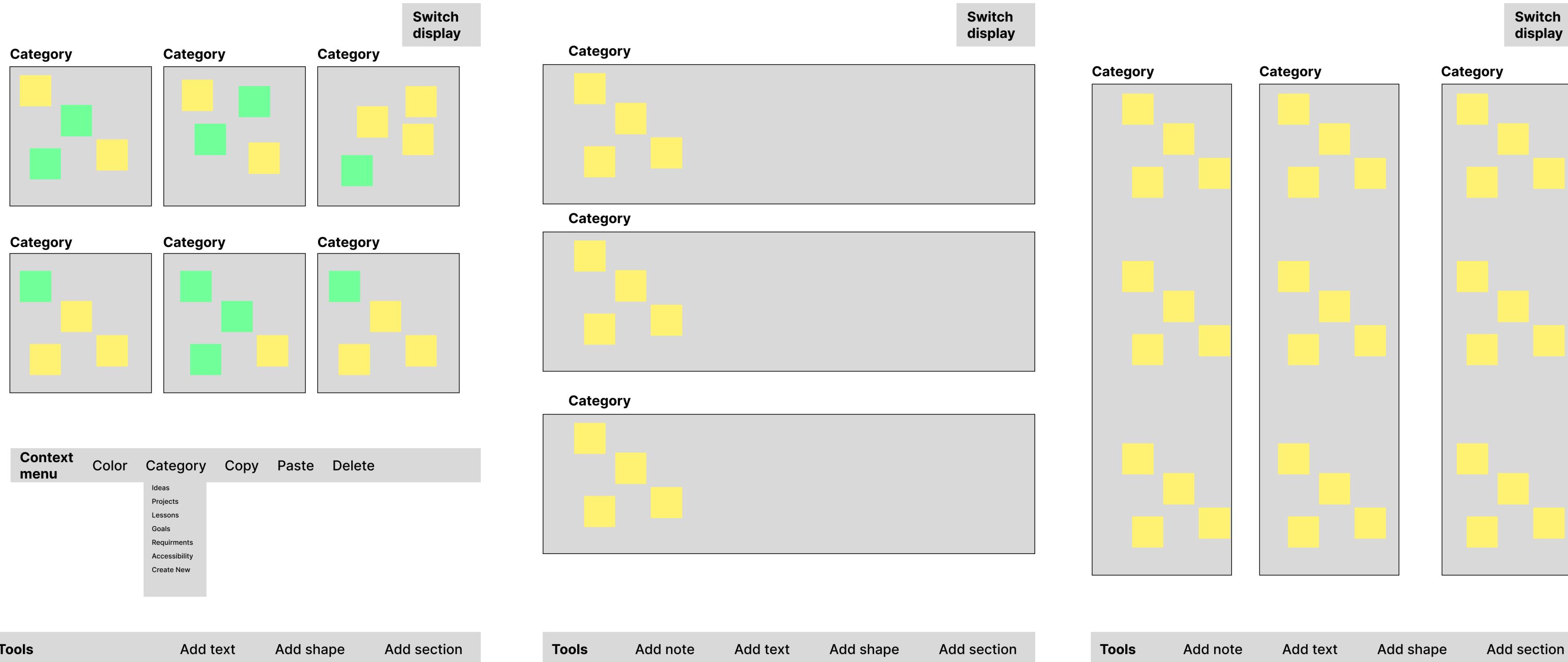
## Time to design

- Now that I had a better understanding of the problem professors face designing courses, I could start ideating and designing solutions.

# Exploring the solutions

## Visualizing my thinking

Before jumping into the core interface design, I wanted to explore solutions for how course information could be displayed and organized.



# Exploring the solutions

## Connecting goals to assignments

I also wanted to explore how professors could link course goals to individual assessments.

### Goals

Develop logical historical arguments 

Develop an understanding of early American history 

Connect historical themes to the present 

Interact with primary historical sources 

### Assignments

Day in the life of a revolutionary soldier 

Researching an important political compromise during ratification of the constitution 

Myths and truths about early American history 

# Exploring the solutions

## Wireframing

I made some wireframes to visualize what the architecture of the design might look like.

### Topics

What topics will the course cover?

[Import topics →](#)

### Elements

Description

[Add element +](#)

### Pre-requisites

Description

[Add line +](#)

### Languages

Description

[Add line +](#)

### Accessibility

Description

[Add line +](#)

### Requirements

Description

[Add line +](#)

[← Back](#) [Next →](#)

### Assessments

New Assessment [+](#)

Assessment title  
Big label

Assessment title  
Big label

Assessment title  
Big label

[Button text →](#) [Button text →](#) [Button text →](#)

### New Assessment

[Learner data ↗](#)

### Format

Drag objects from the columns into the box on the bottom to experiment with assessment formats and styles. You can add objects to the columns using the field directly below the corresponding column.

[Adjectives](#) How would you want students to describe their assessment experience?

[Mediums](#) How might students show their understanding of course topics?

[Elements](#) How will the course elements be integrated into the assessment?

[Topics](#) How will the assessment cover the required course topics?

[+ + + + +](#)

[← Back](#) [Next →](#)

### Lessons

New lesson [+](#)

Lesson title  
Big label

Lesson title  
Big label

Lesson title  
Big label

[Button text →](#) [Button text →](#) [Button text →](#)

# Testing the solutions

## User testing

Due to time constraints and scheduling issues, I was only able to conduct one user testing session. I do plan to conduct more soon, though

### Course topics

Enter course topics.

New topic +

**Topic**

L

Add subtopic +

**Topic**

L

Add subtopic +

**Topic**

L

Add subtopic +

[← Back](#)

[Next →](#)

Search X

Laurie F 4 months ago  
data science

Laurie F 4 months ago  
artificial intelligence

Laurie F 4 months ago  
cyber security

# Testing the solutions

## Not everyone likes whiteboarding

The professor said she isn't a fan of whiteboarding applications, and was a little confused about that feature of the design.

### User feedback

- The professor said she isn't a fan of whiteboarding applications, and was a little confused about that feature of the design
- While this was just one comment from one user ,it got me thinking about the fact that not all professors would find a whiteboarding canvas intuitive.

**Format**  
Drag objects from the columns into the box on the bottom to experiment with assessment formats and styles. You can add objects to the columns using the field directly below the corresponding column.

**Adjectives**  
How would you want students to describe their assessment experience?

Fair  
Expectations true  
Stress-free

**Mediums**  
How might students show their understanding of course topics?

Exams  
Project  
Oral assessment  
Presentations  
Visualizations  
Sharing of ideas

**Constraints**  
How will the course Constraints be integrated into the assessment?

**Topics**  
How will the assessment cover the required course topics?

Data science  
AI  
Cyber security  
Databasing

+ + + +

Project	Project	Oral assessment
Fair	Data science	Databasing
Expectations true		Presentations
Stress-free		Visualizations
		Sharing of ideas

# Testing the solutions

## A confusing component

Because a course can have many different elements (such as a long list of topics), I needed to design a component that would allow professors to continuously add entries to a list through user input.

### User feedback

- My first iteration of this component duplicated the entire input field component each time the user added an entry/
- The professor found this confusing and had a hard time figuring out how to properly interact with the component.

The image shows two versions of a user interface component for adding course topics. The top section, labeled 'FIRST ITERATION', displays three separate input fields, each with a 'Topic' label and a 'New topic +' button below it. The bottom section, labeled 'FINAL ITERATION', shows a single input field with a 'Add topics' label and a 'Add +' button to its right. Below this input field is a list of five items, each preceded by a red 'X' icon.

First Iteration	Final Iteration
Three separate input fields for adding topics.	A single input field for adding multiple topics.
Each input field has a 'New topic +' button below it.	A 'Add +' button is located to the right of the input field.
No list of previous entries is shown.	A list of five entries ('The American Revolution', 'The Constitution', 'Federalism & Anti-Federalism', 'Congress', 'Presidents') is displayed below the input field.

**FIRST ITERATION**

**Course topics**  
Enter course topics.  
**New topic +**

**Topic**  
  
**Add subtopic +**

**Topic**  
  
**Add subtopic +**

**Topic**  
  
**Add subtopic +**

**FINAL ITERATION**

**Add topics**

**Add +**

✗ The American Revolution  
✗ The Constitution  
✗ Federalism & Anti-Federalism  
✗ Congress  
✗ Presidents

# Testing the solutions

“I can scroll down?”

The professor didn't realize she could scroll down on this screen to view another section.

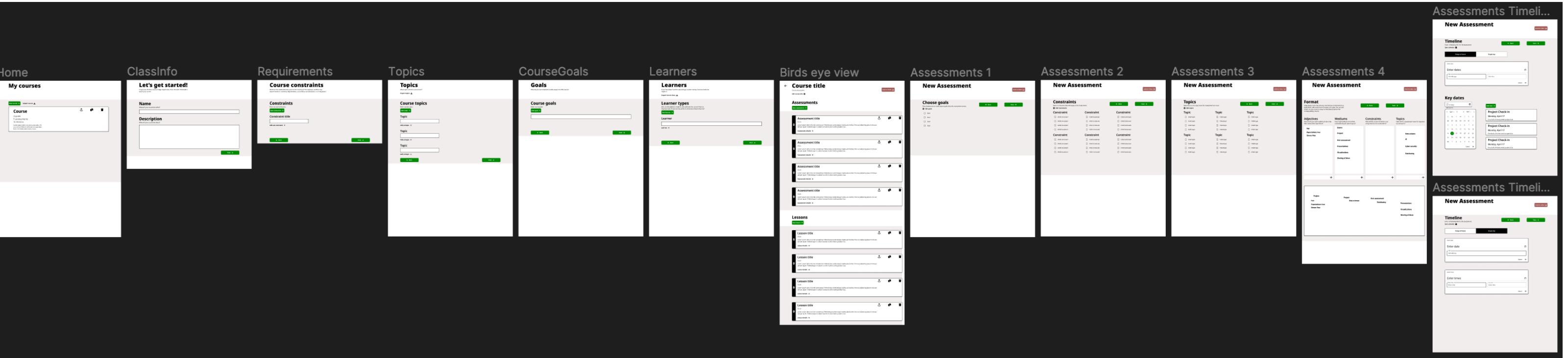
The screenshot shows a user interface for managing course content. At the top, there's a header with a back arrow, the title 'Course title', a 'Course description' link, an 'Edit course info' button, and a 'Learner data' button. Below the header, there are two main sections: 'Assessments' and 'Lessons'. Each section contains four items, each with a title, a date field (all showing 'Date'), a detailed description (all showing placeholder text 'Lorem ipsum dolor sit amet consectetur. Pellentesque pellentesque malesuada facilisis rhoncus adipiscing ipsum tristique semper quam. Pellentesque in nullam laoreet et amet morbi gravida risus.'), and a 'Details' link. The 'Assessments' section has a 'New assessment +' button at the bottom, and the 'Lessons' section has a 'New lesson +' button at the bottom.

# Iterating the solutions

## Lots of iteration!

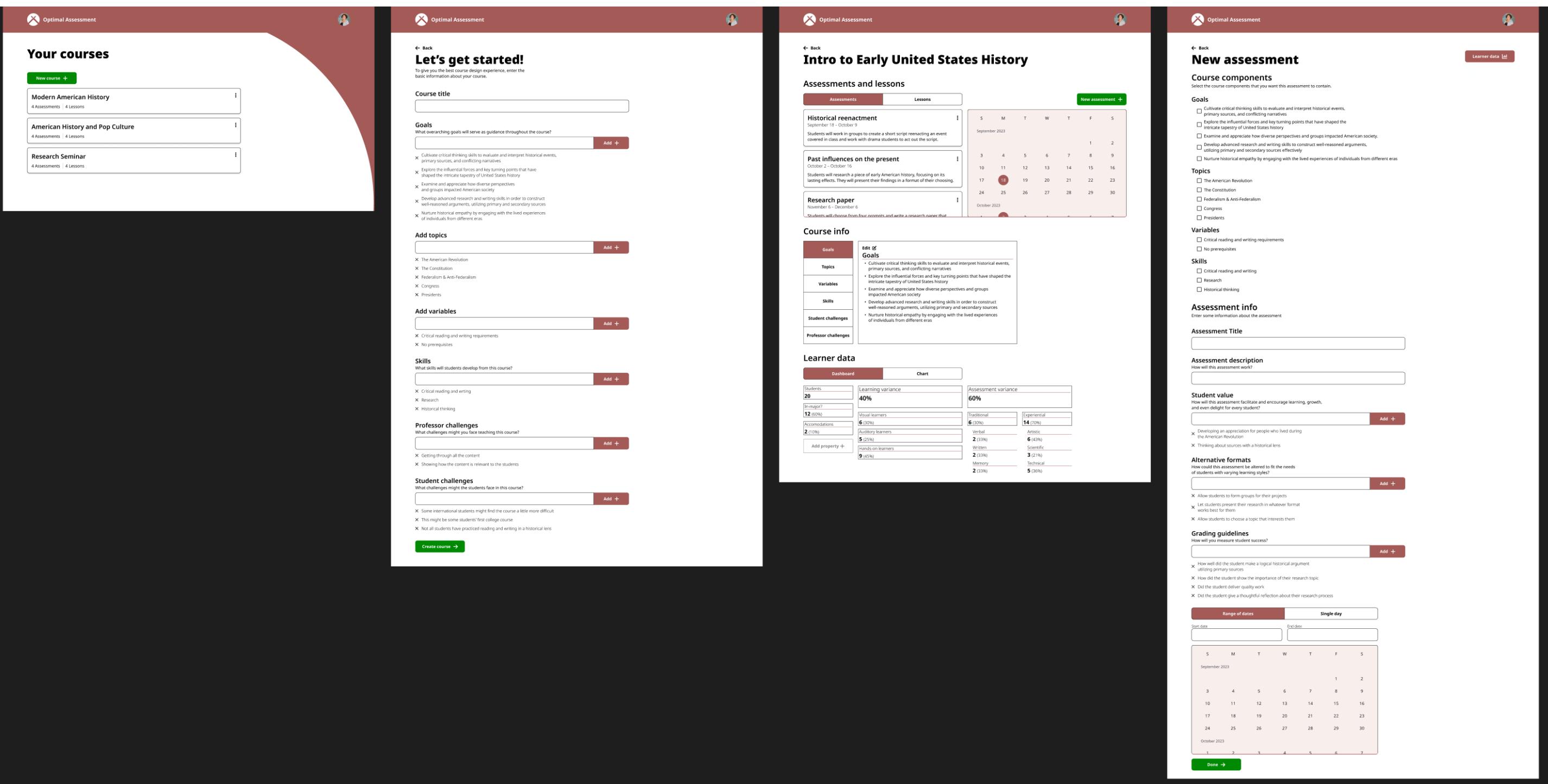
### From 13 screens to four

- The original iteration was 13 screens, with individual flows spanning across multiple screens.
- From a usability perspective, this could lead to user fatigue, so I trimmed it down to four screens while keeping most of the content.



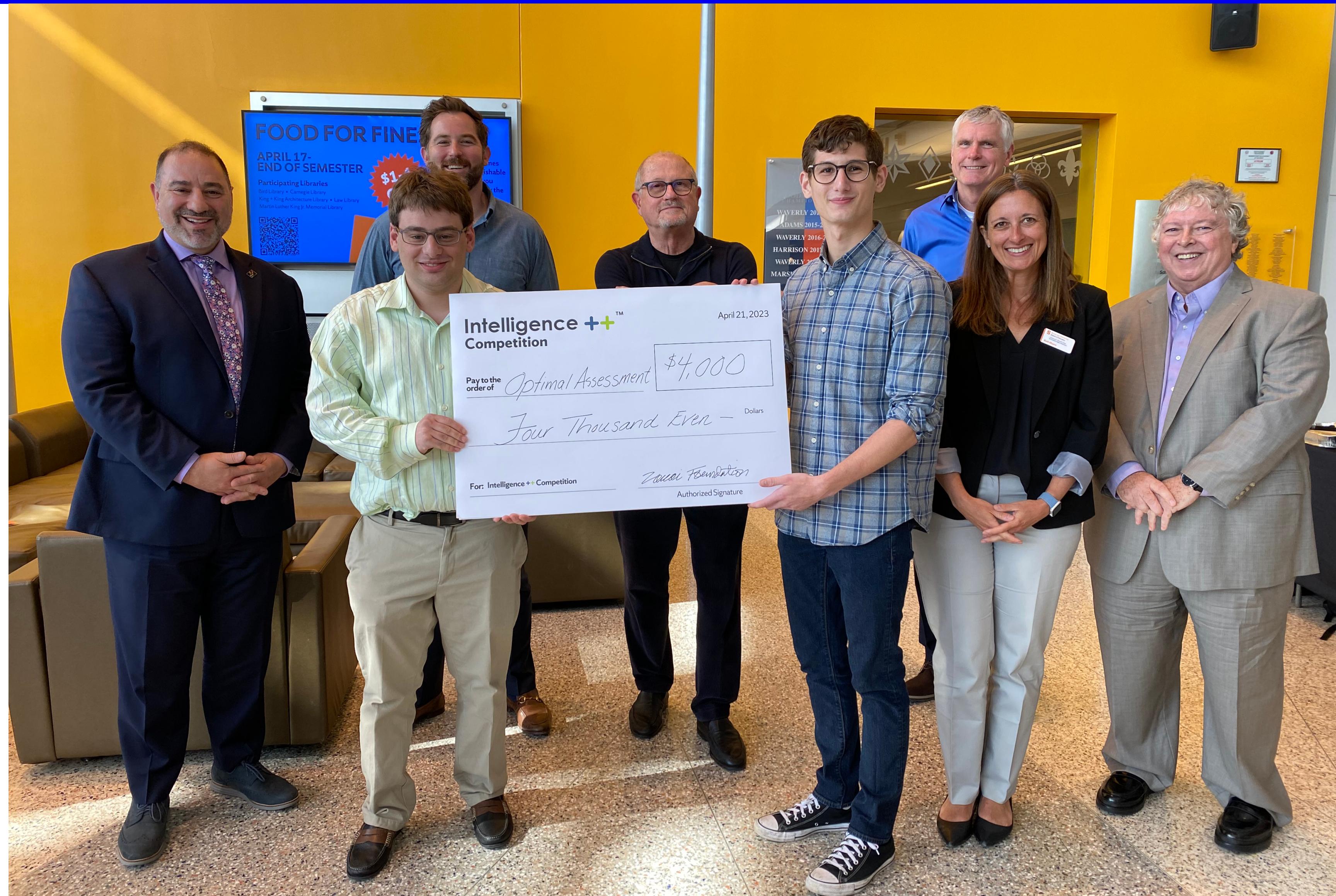
### Better use of color

- I adjusted the colors to be less dull, and made my color usage more intentional.
- When a button element adjusts something on the page, it is dark pink. When a button navigates to another page, it is green.



# The outcome

The results are in!  
We won!



# The future

**We are just getting started!**

I am currently developing out a functional prototype using a no-code development tool. After that, we might see if we can work with a developer to expand this idea further

# The lessons

## Being the only designer is tough

- As the only designer on this project, I had to stretch myself and my skills.
- This helped me grow as a designer, but also limited the project's potential.

## Talking to users and experts

- This was the first project where I got real world experience doing user research.
- The insights I gained were invaluable during the design process.

## Creating user and business value

- I learned how to improve the experience for users and communicate how that will create business opportunities

# Prototype

## Prototype

<https://youtu.be/A5TgkfmtR-I>

# THANK YOU!

Any questions?  
Ask away!