

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

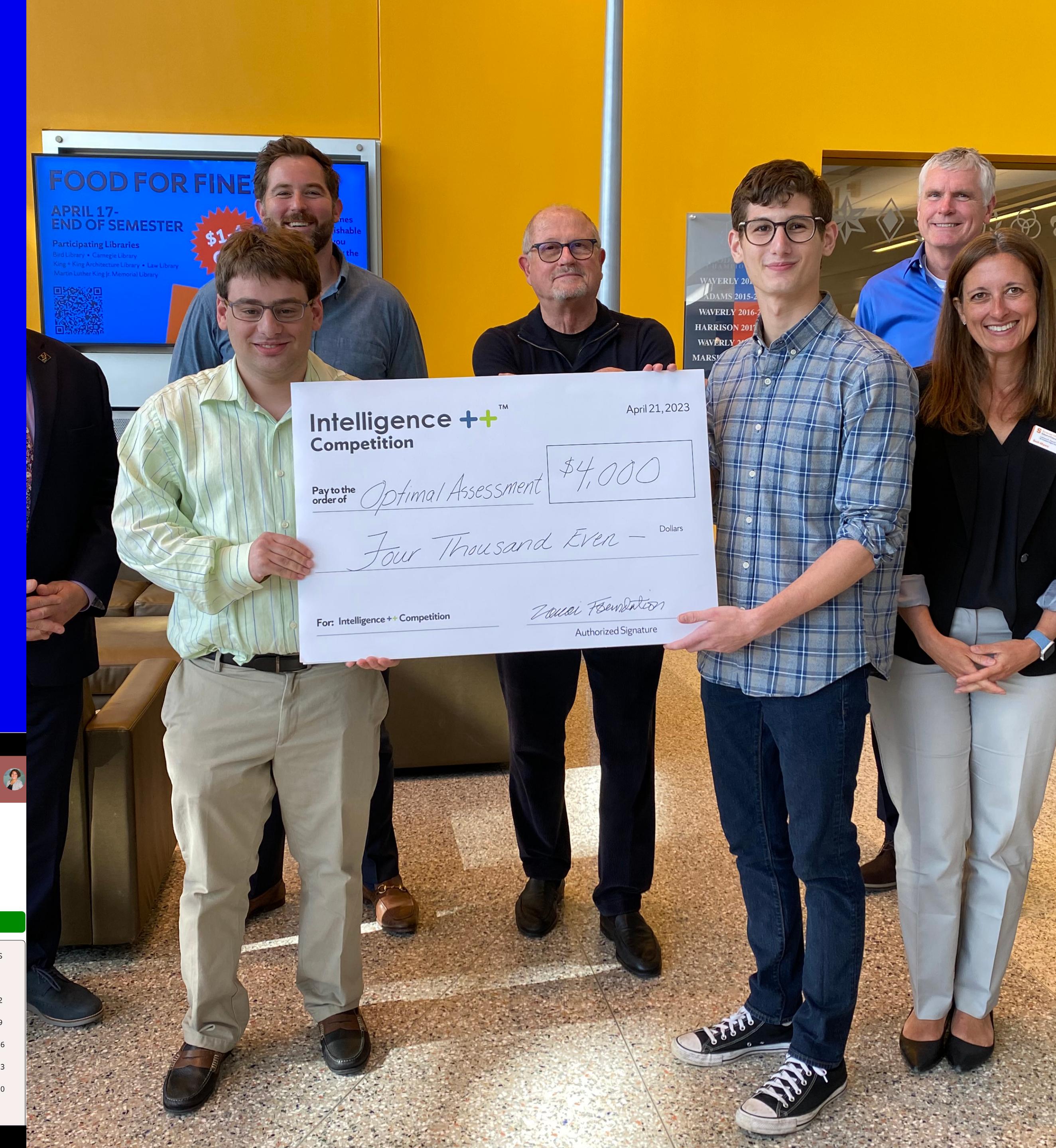
Roles

- 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 digital interface for a course titled "Intro to Early United States History". At the top, there's a navigation bar with a user icon and the title "Optimal Assessment". Below the title, a "Back" button is visible. The main content area is titled "Assessments and lessons". It features three cards: "Historical reenactment" (September 18 – October 9), "Past influences on the present" (October 2 – October 16), and "Research paper" (November 6 – December 6). Each card has a brief description and a "More" button. To the right of the cards is a calendar for September and October 2023, with the 18th highlighted in red. A green "Create assessment +" button is located at the top right of the card section.



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

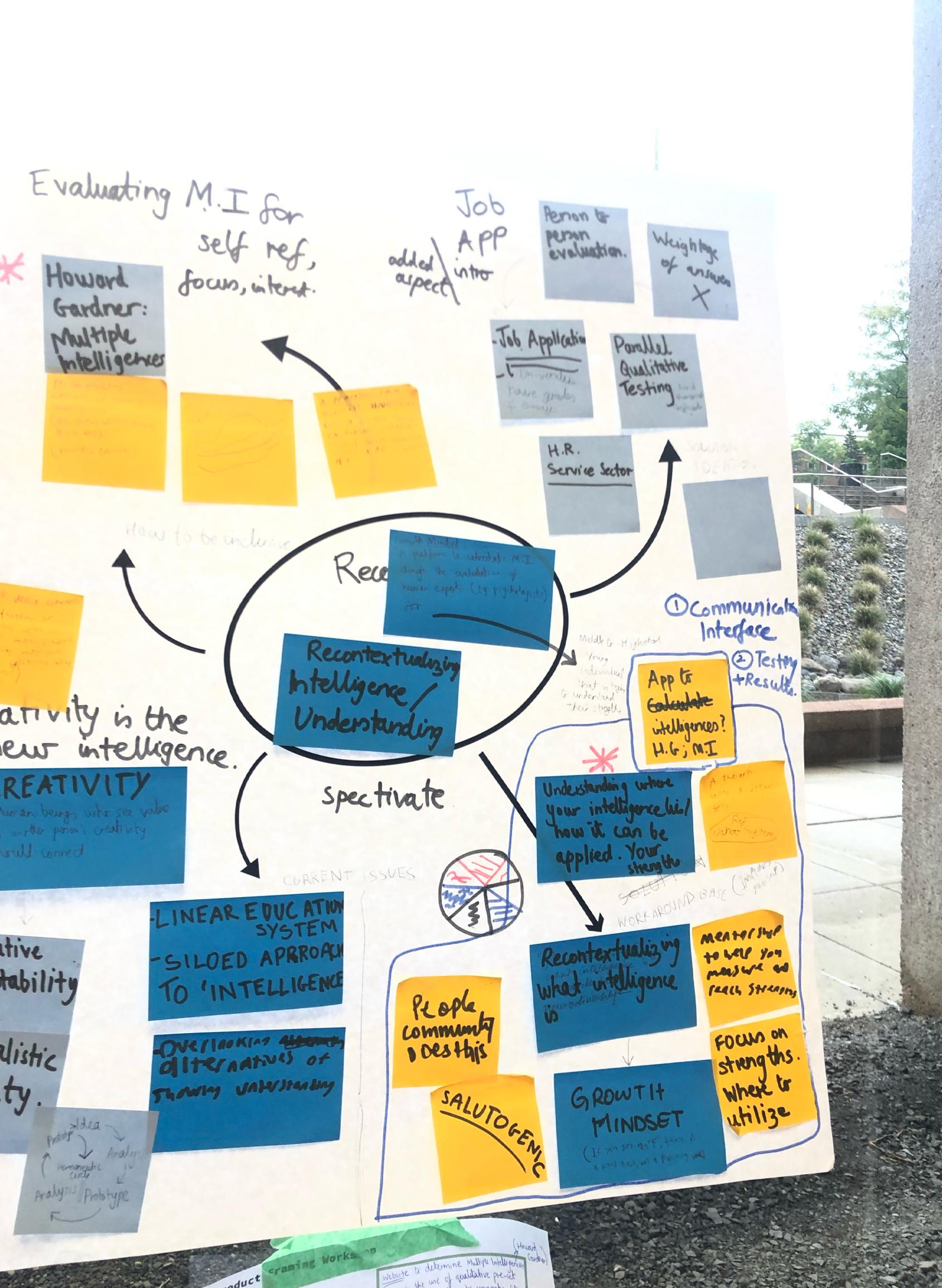
- Exploring the solutions
- Testing the solutions
- Iterating the solutions

The outcome

The future

The lessons

The context

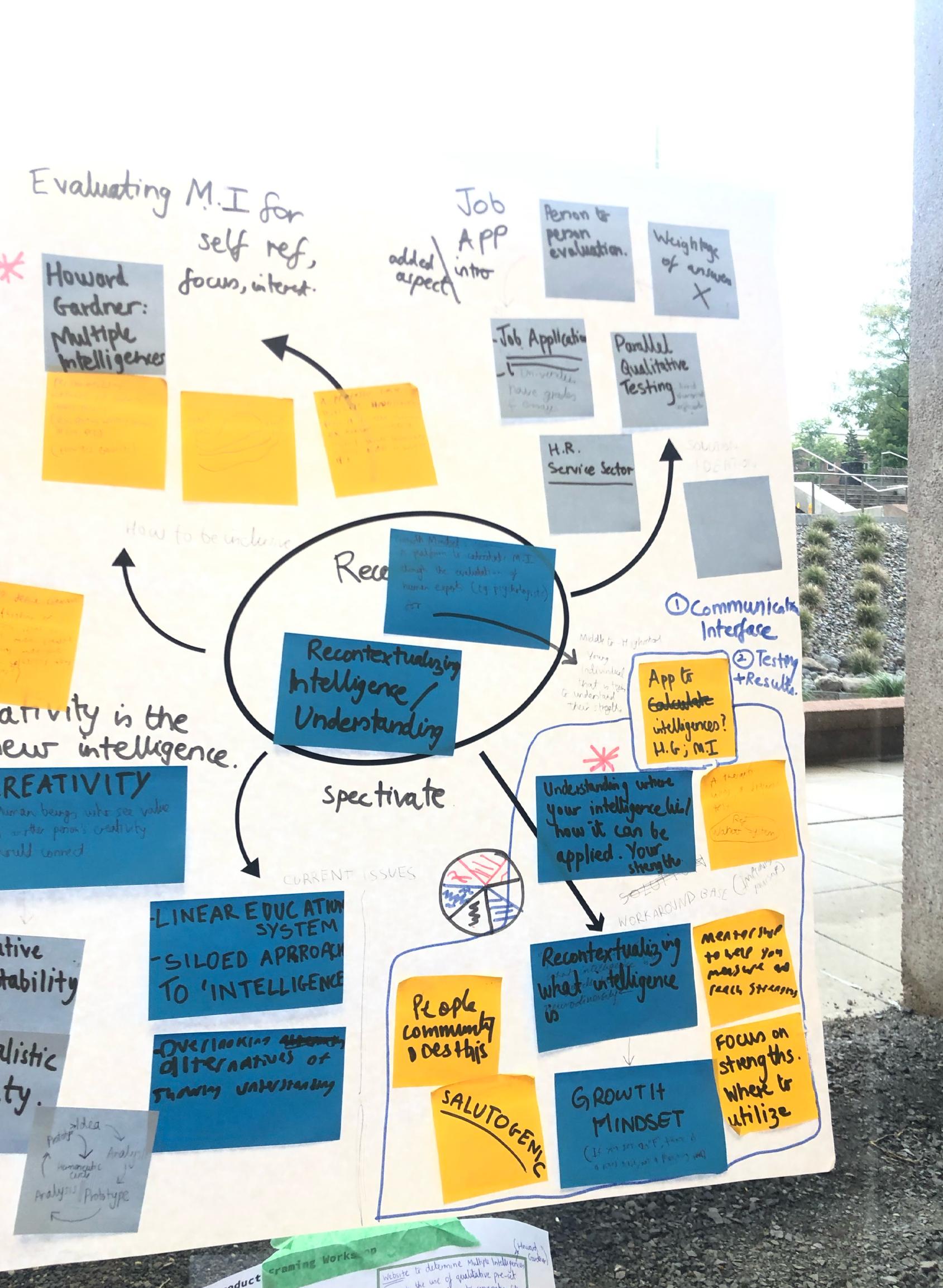


This project began at a design-led hackathon themed around designing a digital tool to help the neurodiverse community.

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.

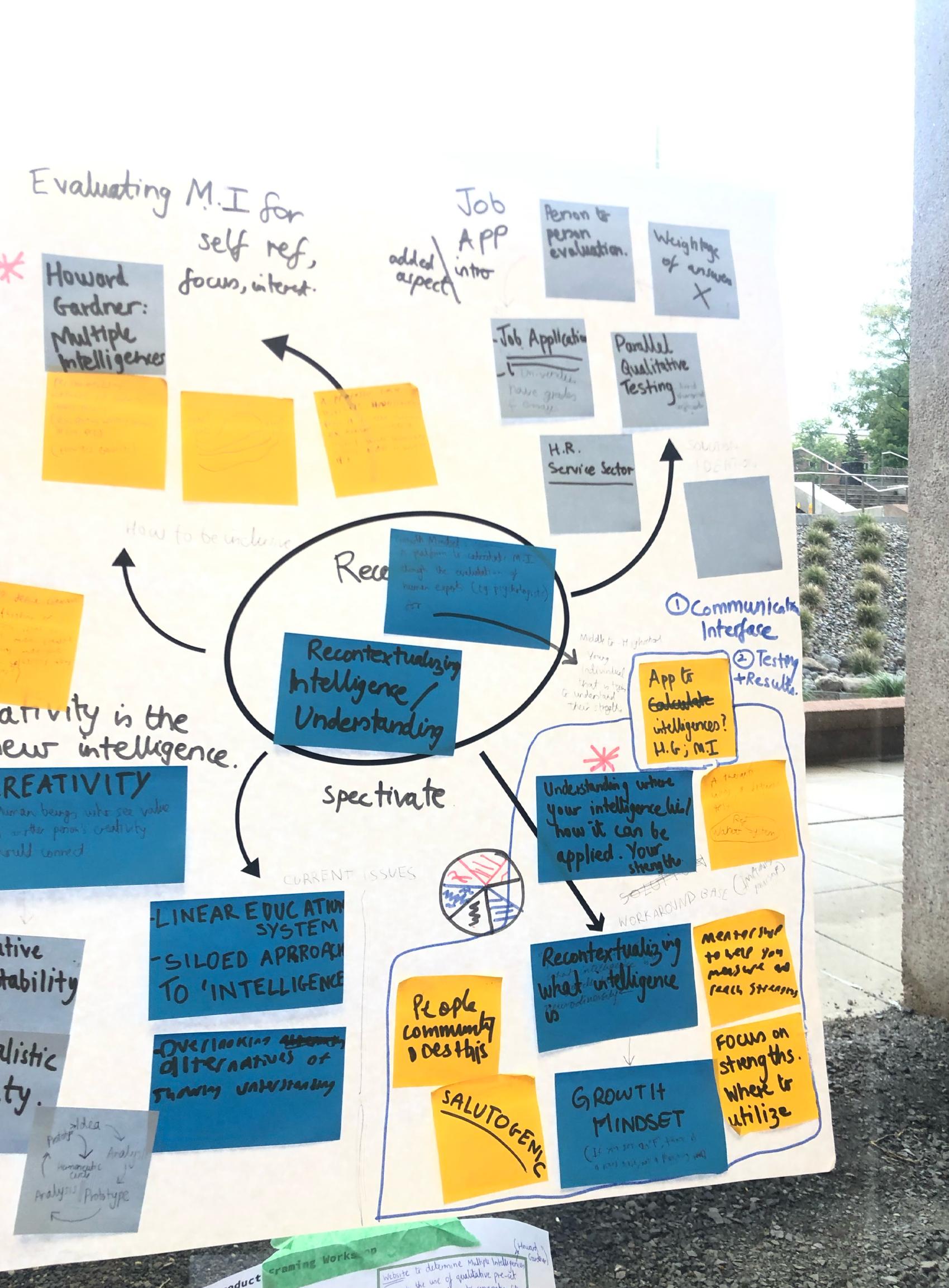
User interviews

- 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

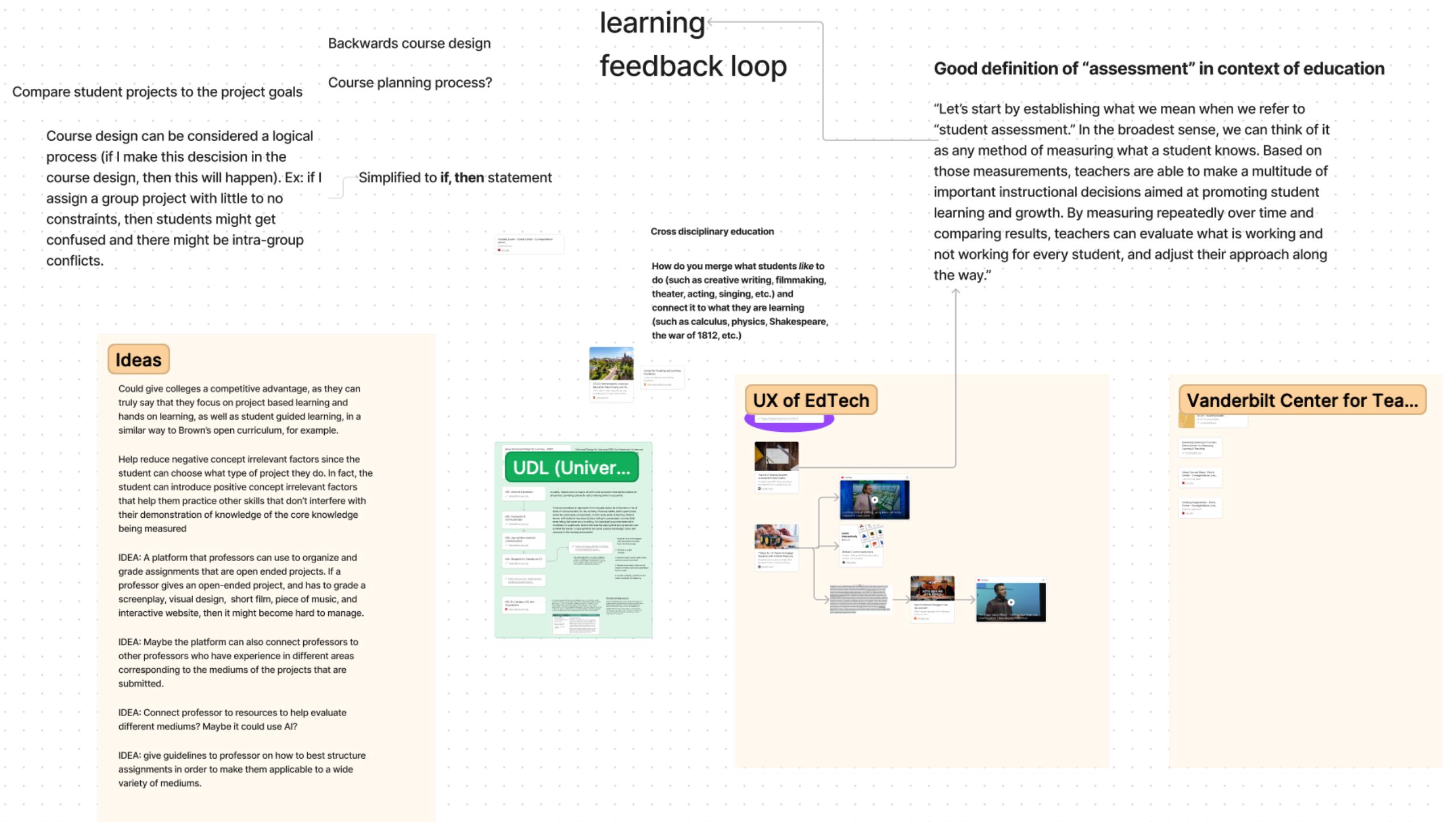
*Did our solution **truly** give students the freedom to demonstrate their understanding of course concepts in the way that they prefer...*

...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.

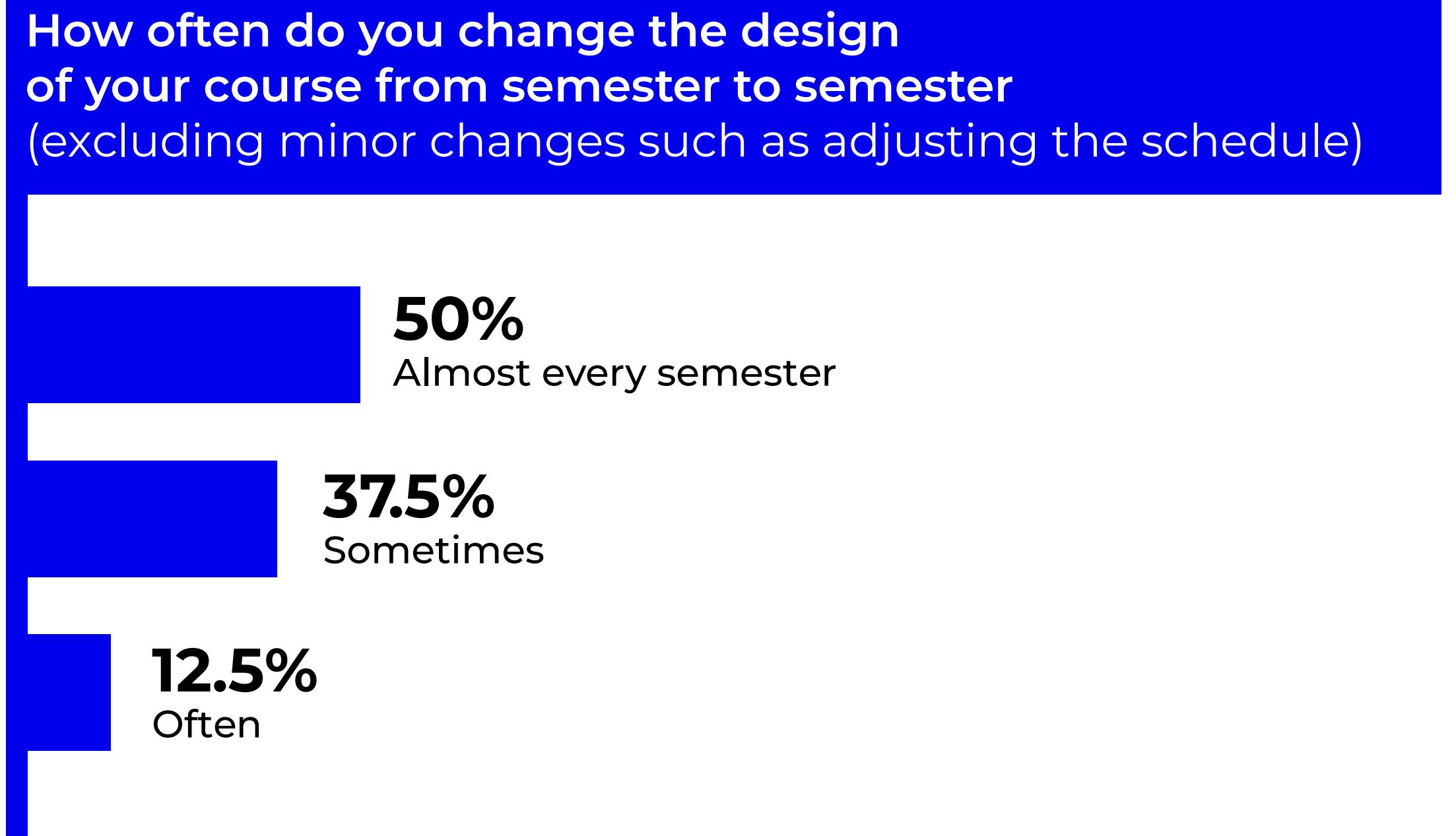
Redefining the problem

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

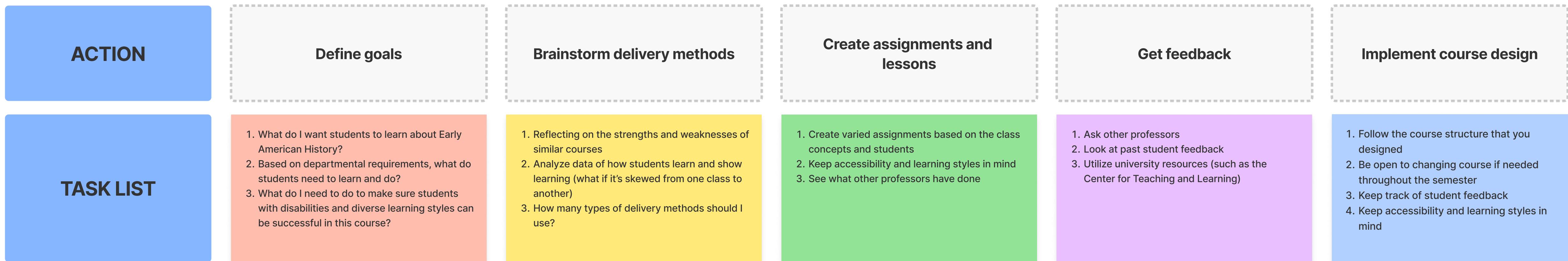
Redefining the problem

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

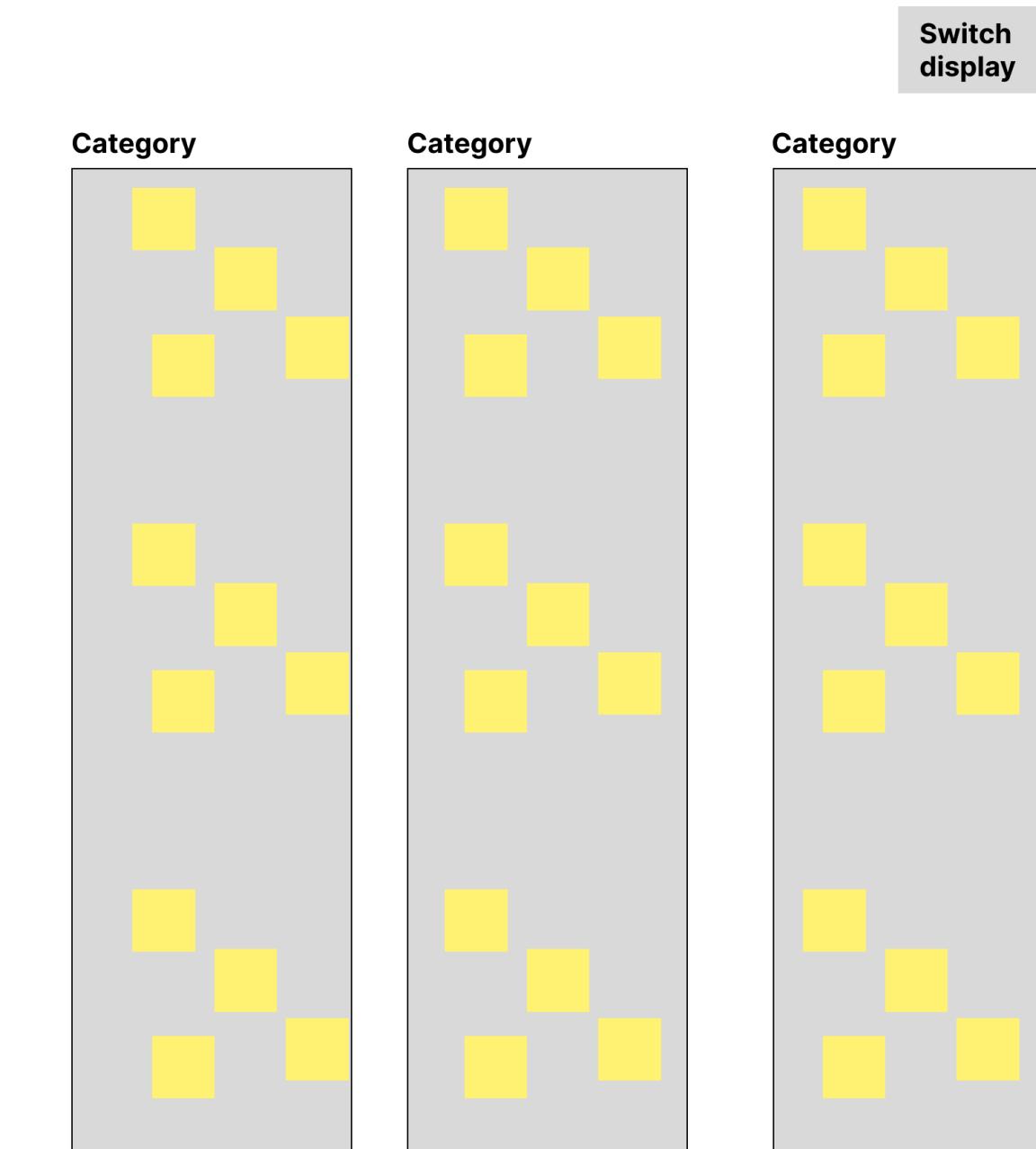
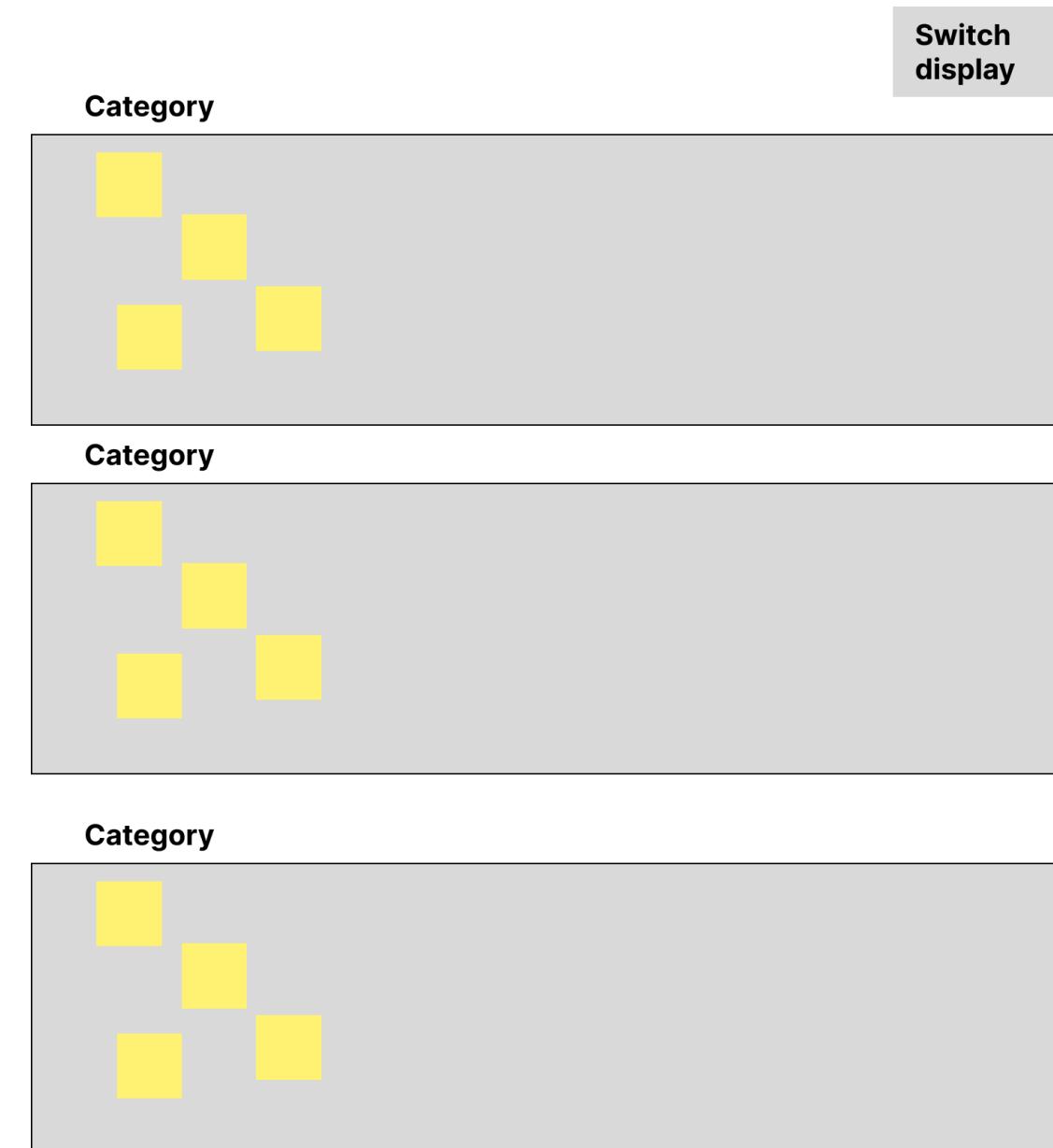
Time to design

- 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.



Tools Add text Add shape Add section

Tools Add note Add text Add shape Add section

Tools Add note Add text Add shape Add section

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 +](#)

Assessments
[New Assessment +](#)

Assessment title
Big label
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.
Button text →

Assessment title
Big label
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.
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Button text →

Lessons
[New lesson +](#)

Lesson title
Big label
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Lesson title
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Button text →

[← Back](#) [Next →](#)

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 →](#)

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	Presentations	
Expectations true			Visualizations	
Stress-free			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.

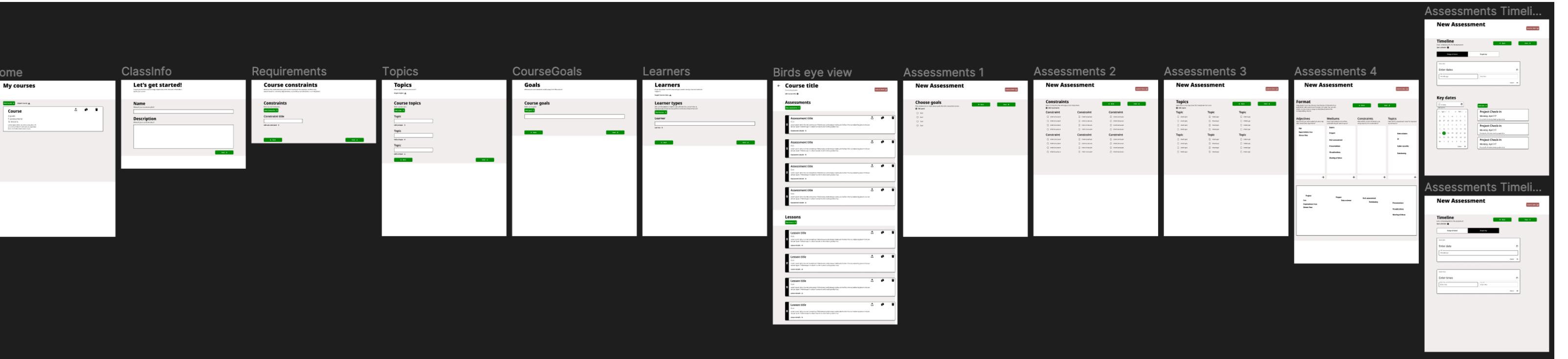
The screenshot shows a user interface for managing course content. At the top, there's a header with a back arrow, the title 'Course title', a 'Course description' link, an 'Edit course info' button, and a 'Learner data' button. Below the header, there are two main sections: 'Assessments' and 'Lessons'. 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!

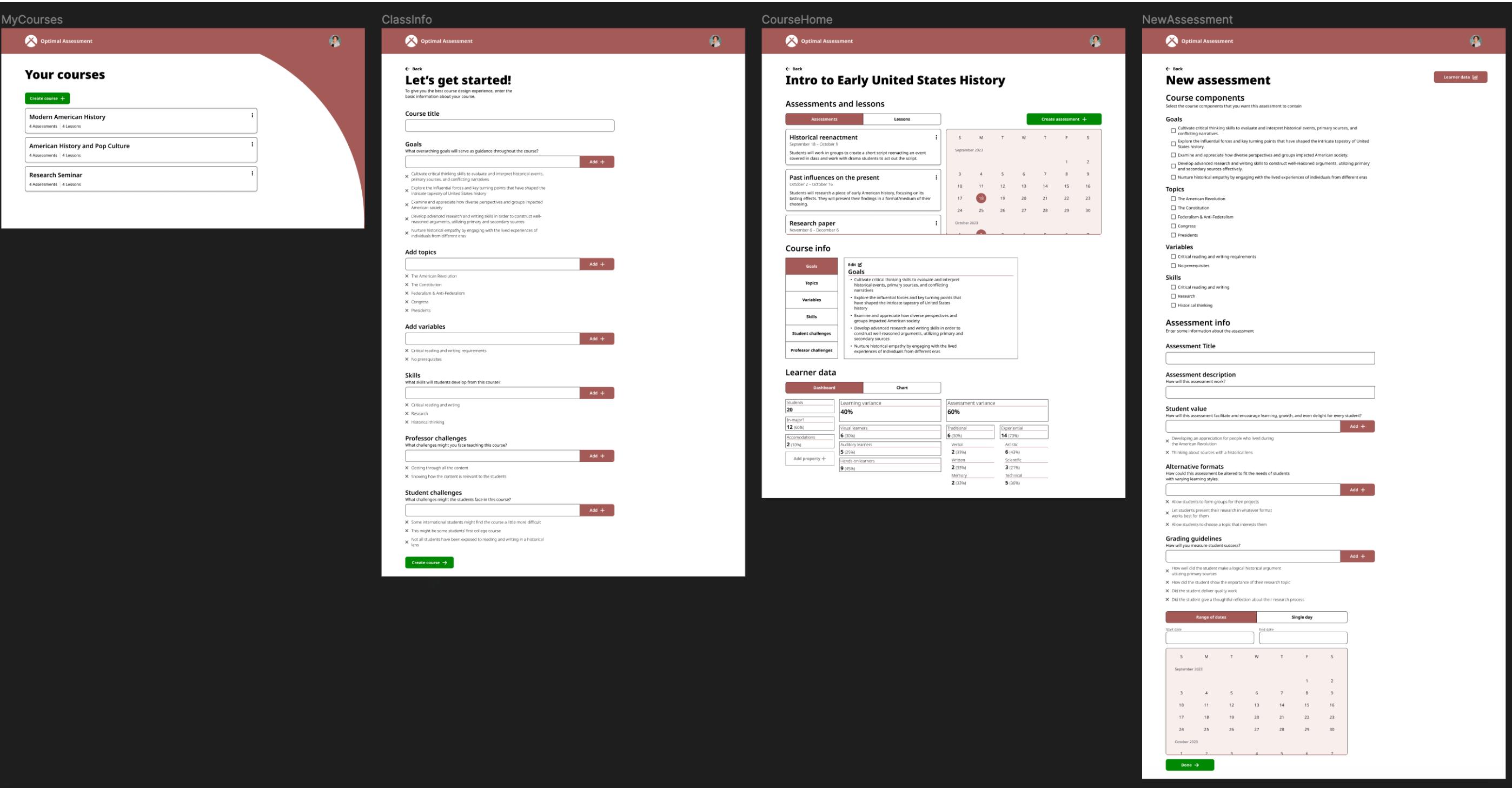
From 13 screens to four

- 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.



Improved layout

- The original design didn't make effective use of a grid, so I adjusted the grid and adhered to it more strictly.

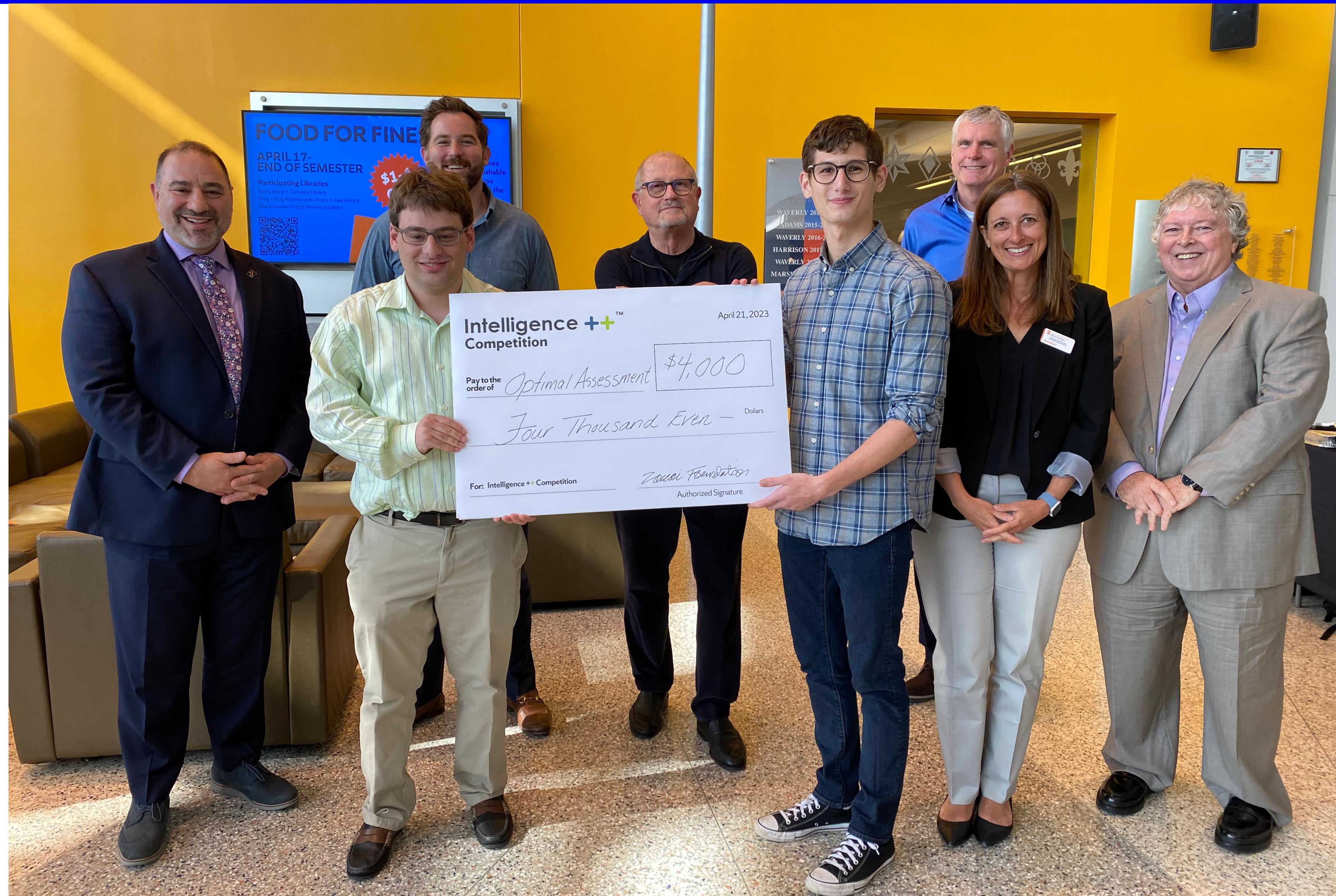
Iterating the solutions

Prototype

https://youtu.be/6YxIDJqjM_c

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

THANK YOU!

Any questions?
Ask away!