Process Book

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DMGT 720 - Winter 2021 - Professor Christine Fish

Team

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Introduction

We are an education platform catered to
high school student creatives - made by creatives.

Kern is here to bridge the skill gap between students finishing their high school careers and entering their college careers.

We're a **virtual pre-college program** for high schoolers, giving them ideas of what colleges and design-based majors will lead to their dream careers-- and then **training them with the latest design skills they need to know** before starting college.

“Creativity now is as important as education literacy, and we should treat it with the same status.”

Sir Ken Robinson

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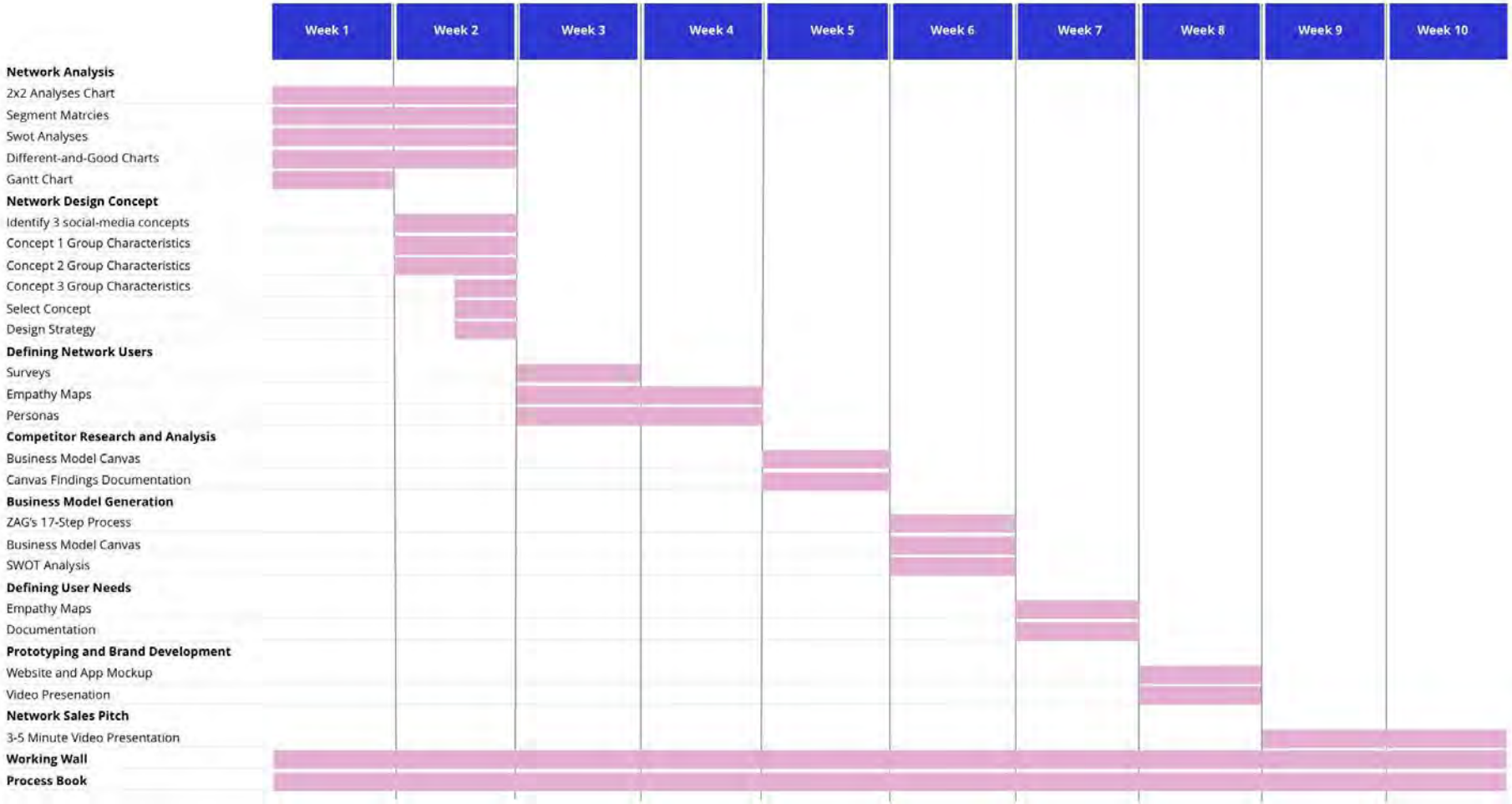
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Network Sales Pitch
3-5 Minute Video Presentation
Working Wall
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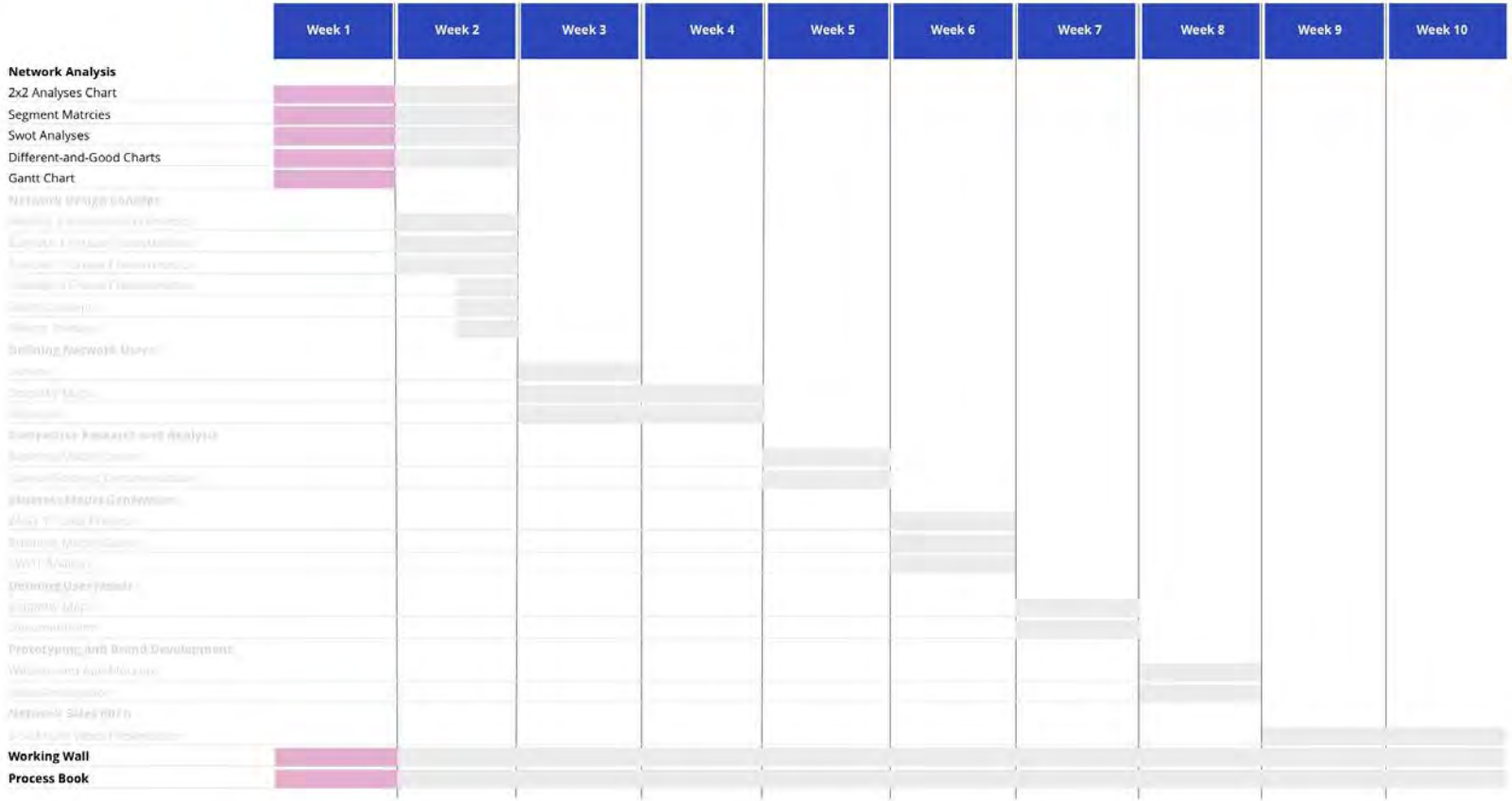
Part One
Network Analysis

Gantt Chart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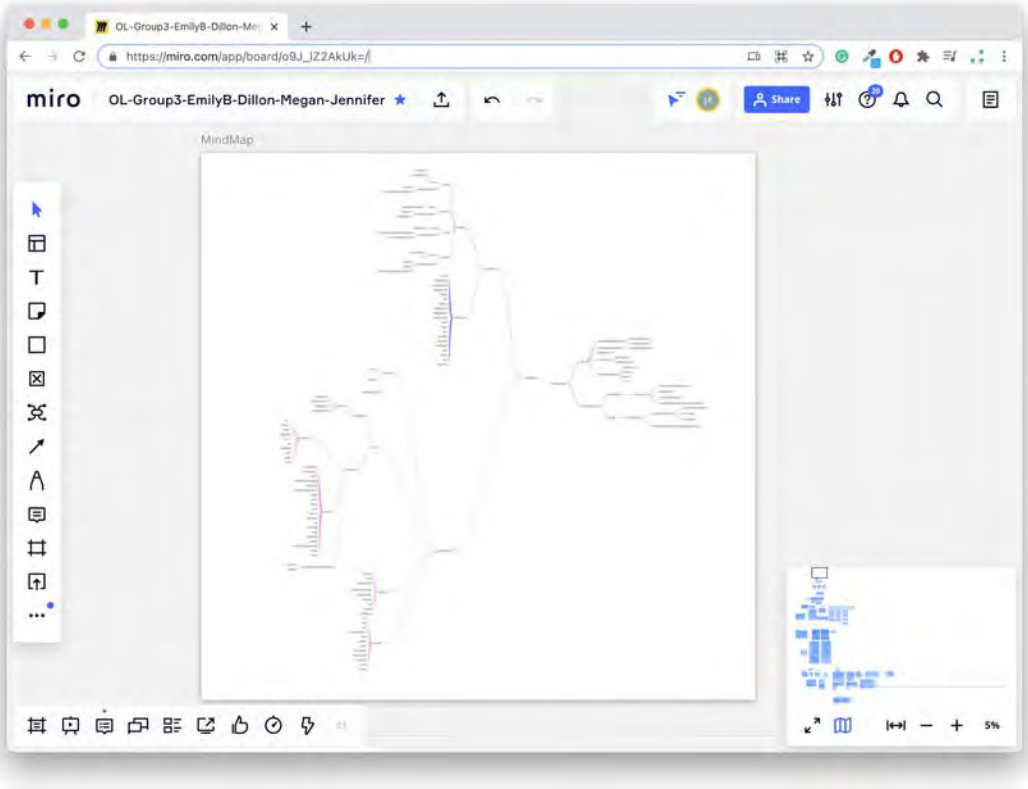
Brainstorm

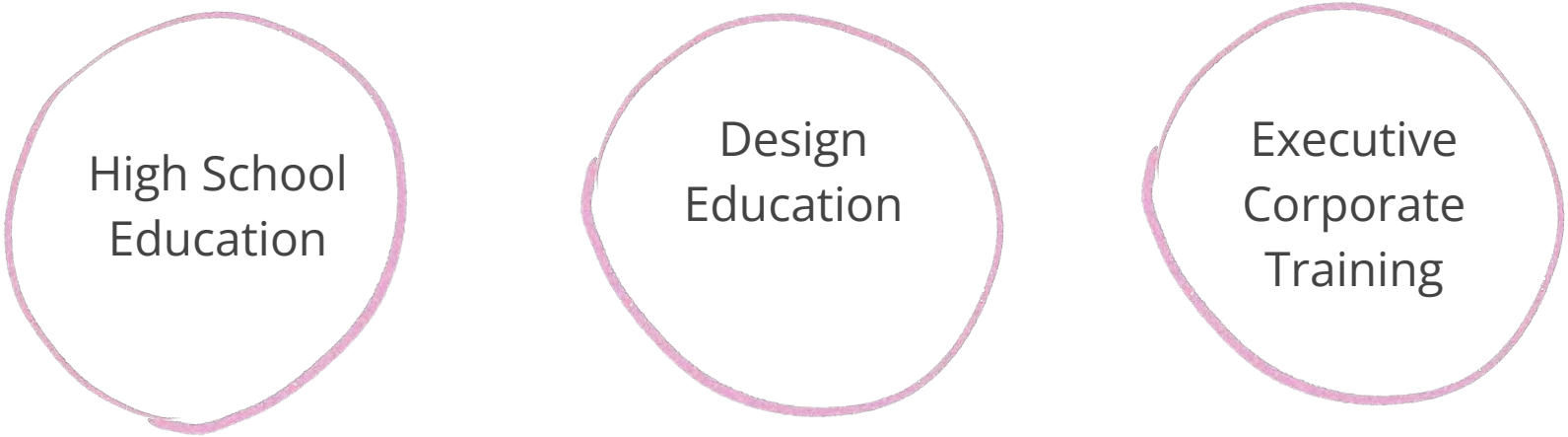


We began our project by brainstorming various industries and networks to identify potential areas for our project focus. We narrowed in on three concepts.

We used Miro to collaborate and brainstorm ideas.

Miro Board

Concepts


High School Education
Design Education
Executive Corporate Training

High School Education Technology

Research Summary

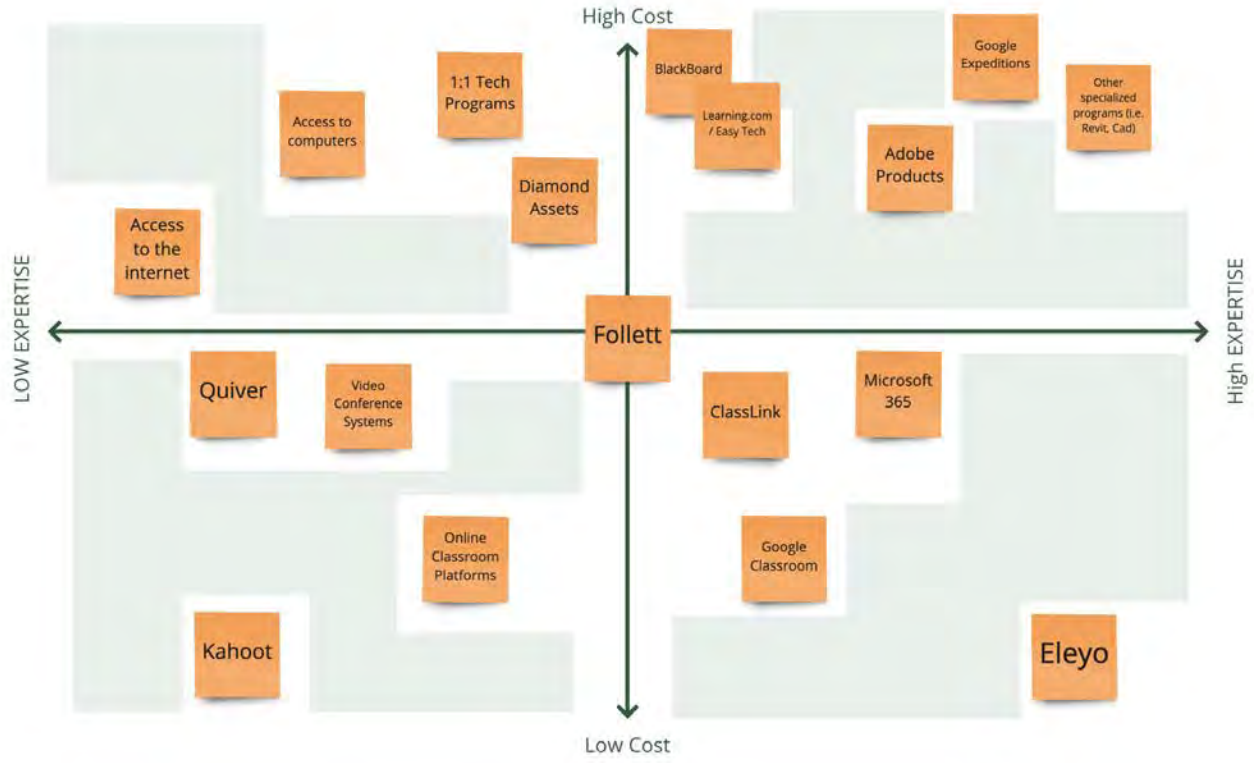
We researched various components of high school education technology to analyze their benefits, limitations, pricing, and the common technologies used.

Miro Board

High School Education Technology
2x2 Axis

We then identified key competitors in the high school ed tech market and compared their costs against the level of expertise that they offer.

Areas of opportunity are depicted in green.

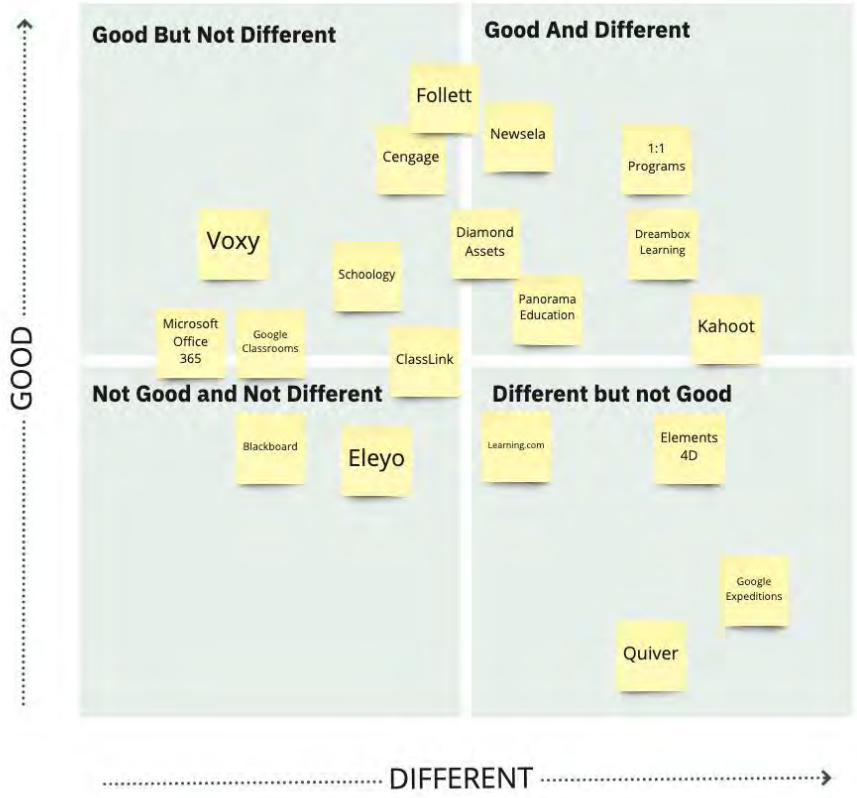


High School Education Technology
SWOT

High School Education Technology
Different and Good Charting

Using the same competitors from our 2X2 analysis, we plotted these businesses into categories of different and good.

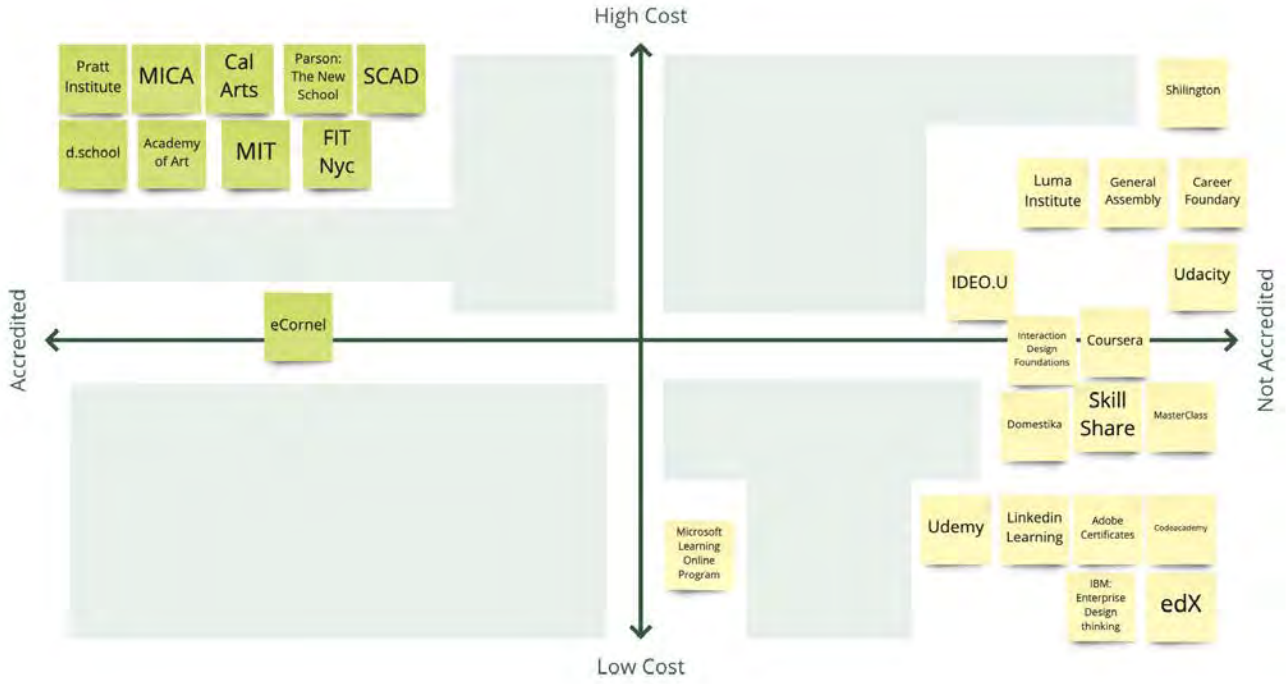
Miro Board



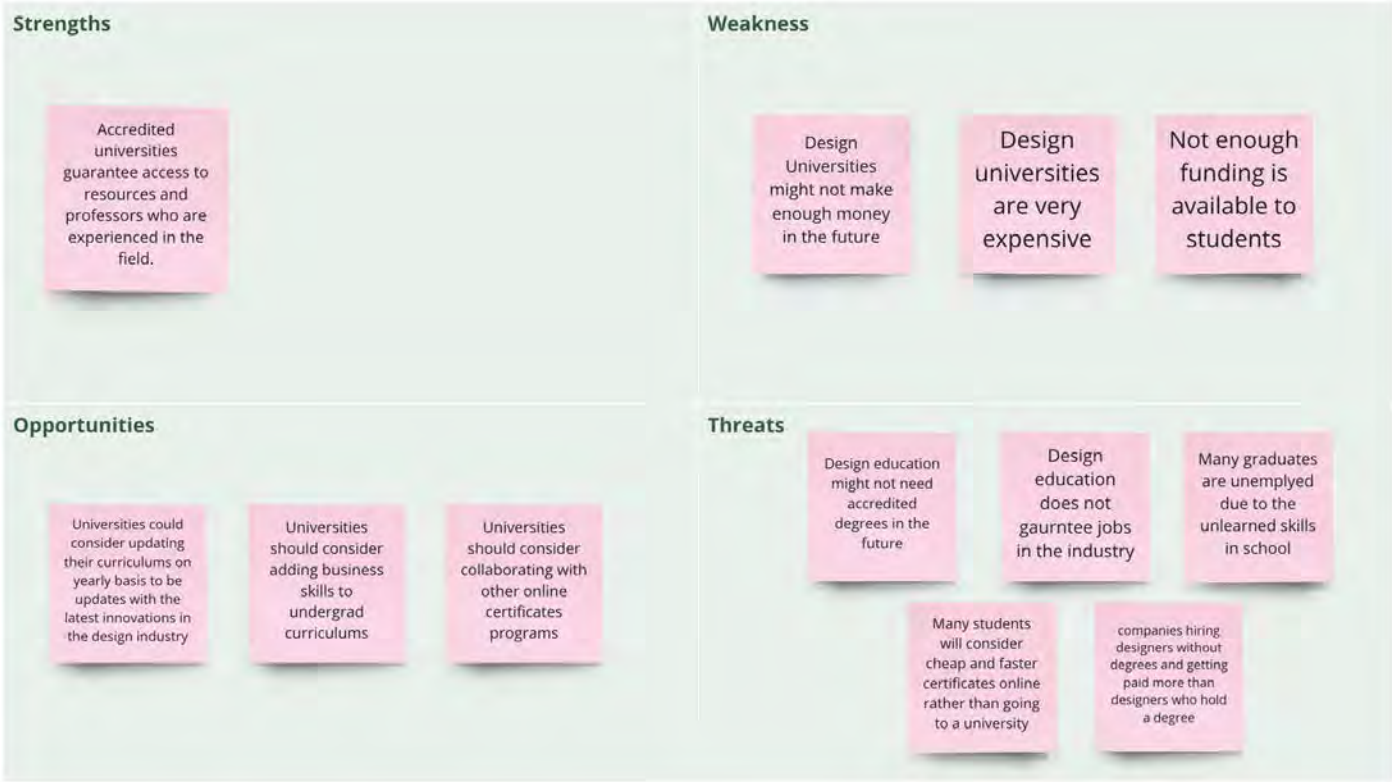
Design Education
2x2 Axis

We continued our research by identifying various platforms, colleges, and other modalities that offer design education.

Two categories emerged: those that are accredited and those that are not.



Design Education
SWOT: Accredited

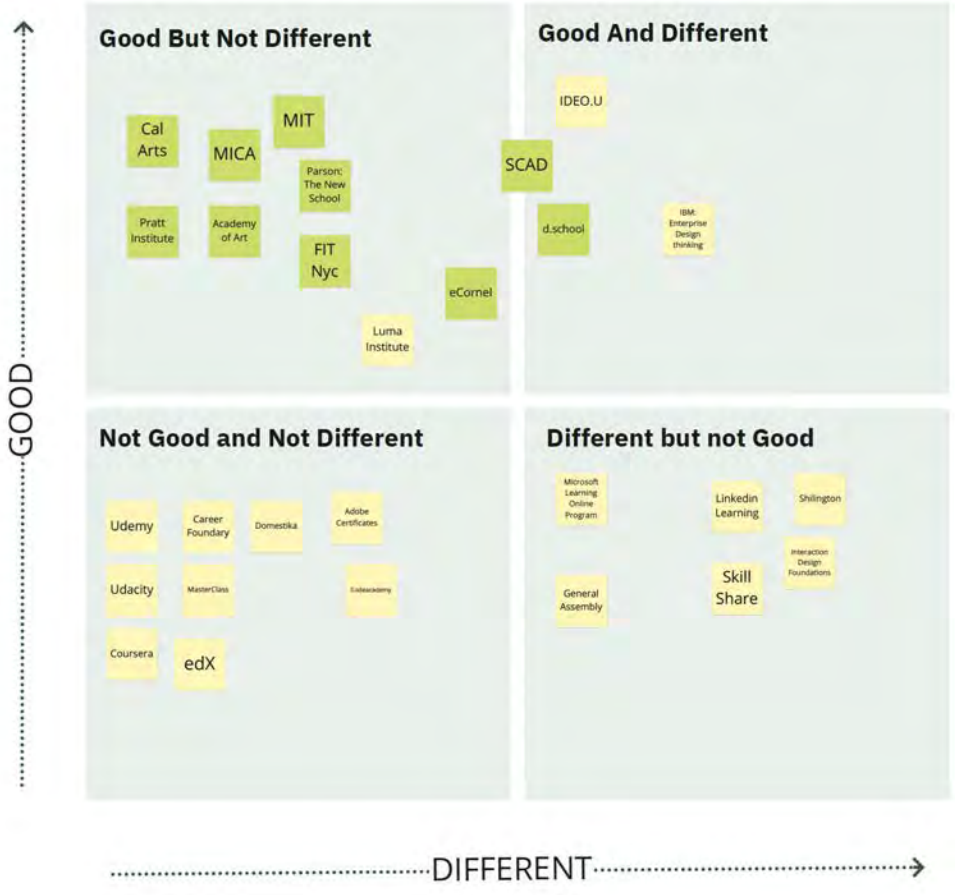


Design Education
SWOT: Not Accredited

Design Education
Different and Good Charting

Using the same competitors from our 2X2 analysis, we plotted these businesses into categories of different and good.

Miro Board



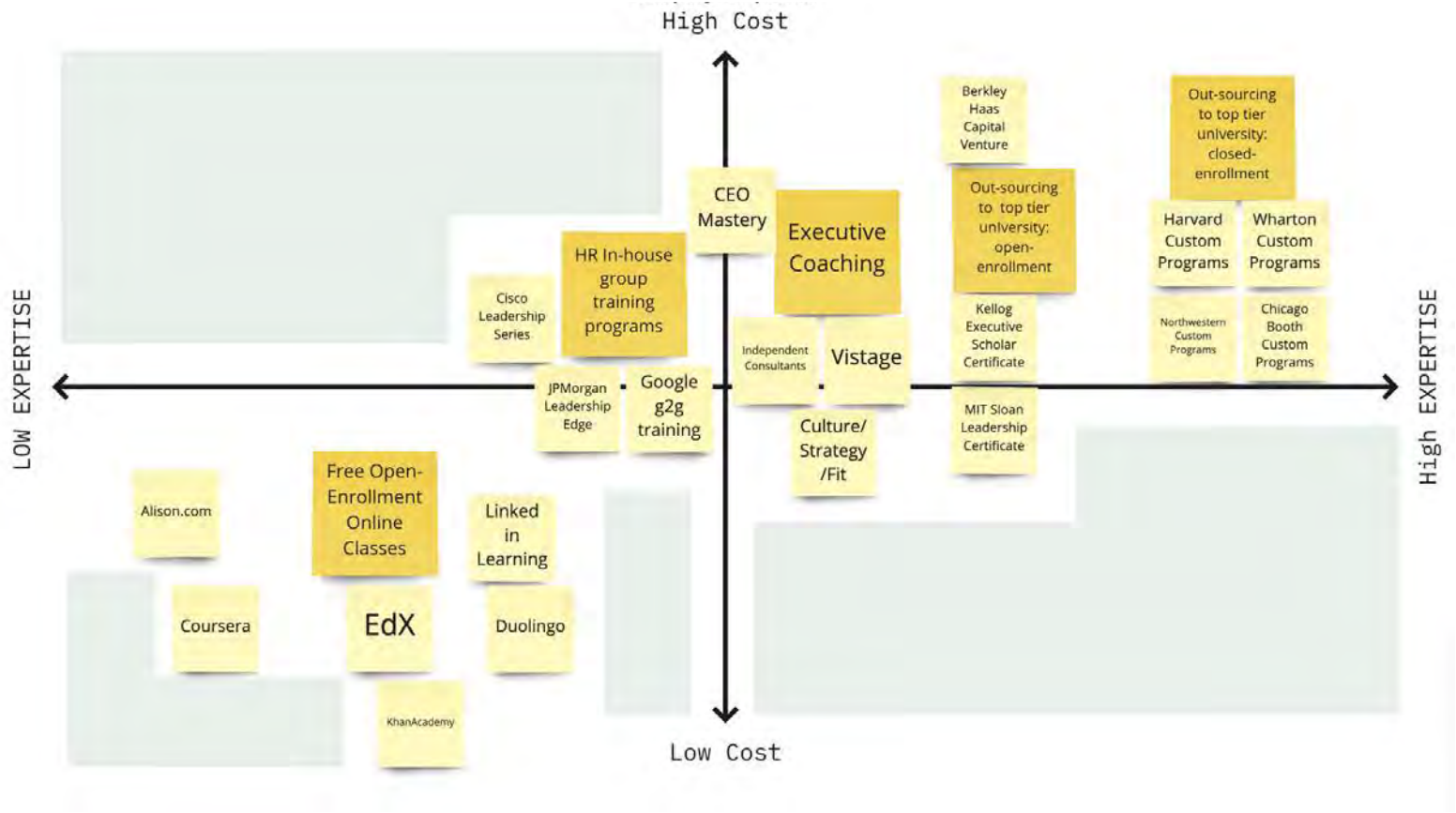
Executive Corporate Training
Research Summary

We completed our network analysis by researching executive corporate training, which includes university programs, executive coaching, HR programs, and free online classes.

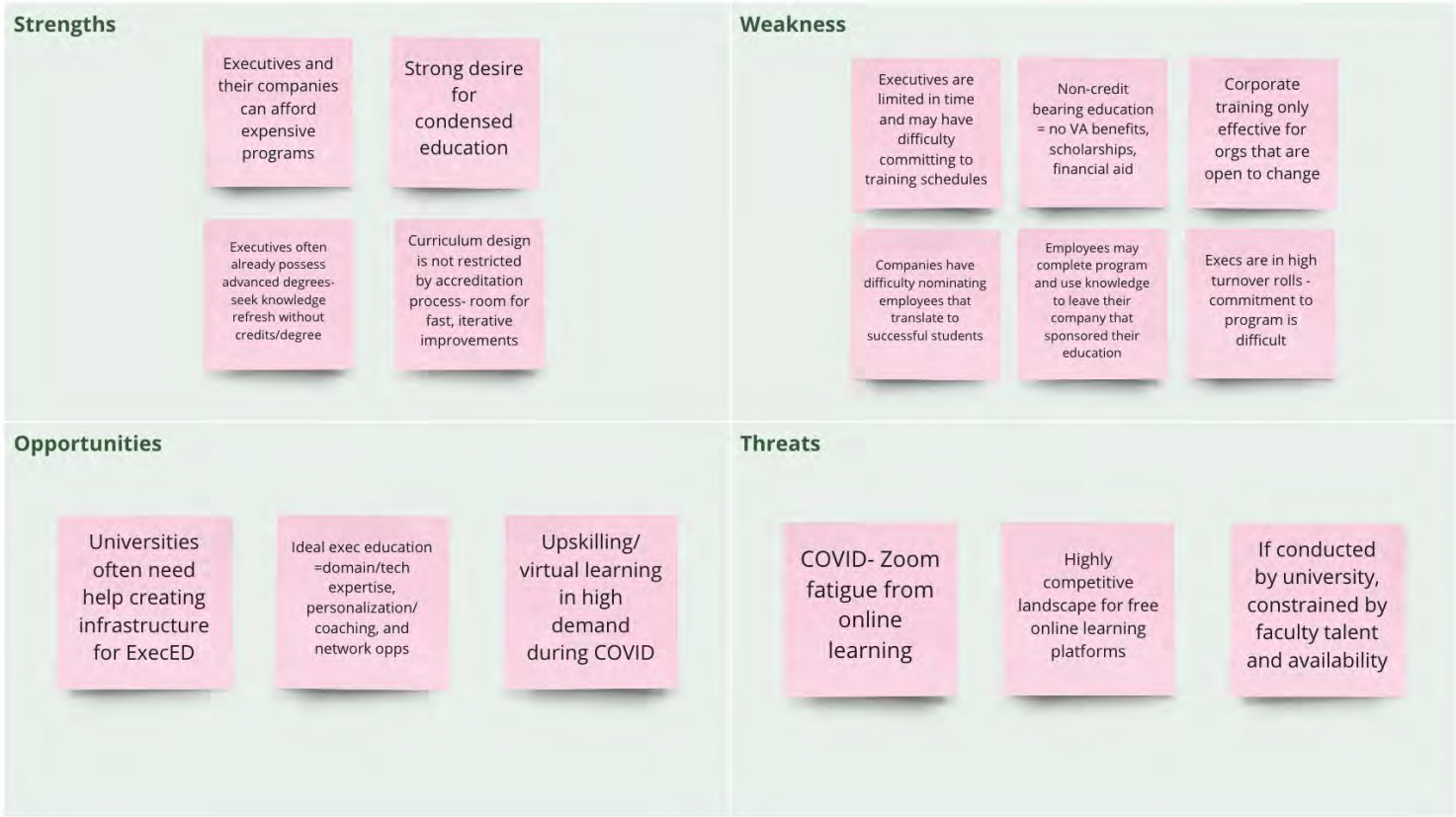
Miro Board

Executive Corporate Training
2X2 Axis

Areas of opportunity include high cost/low expertise programs, and low cost/high expertise programs.



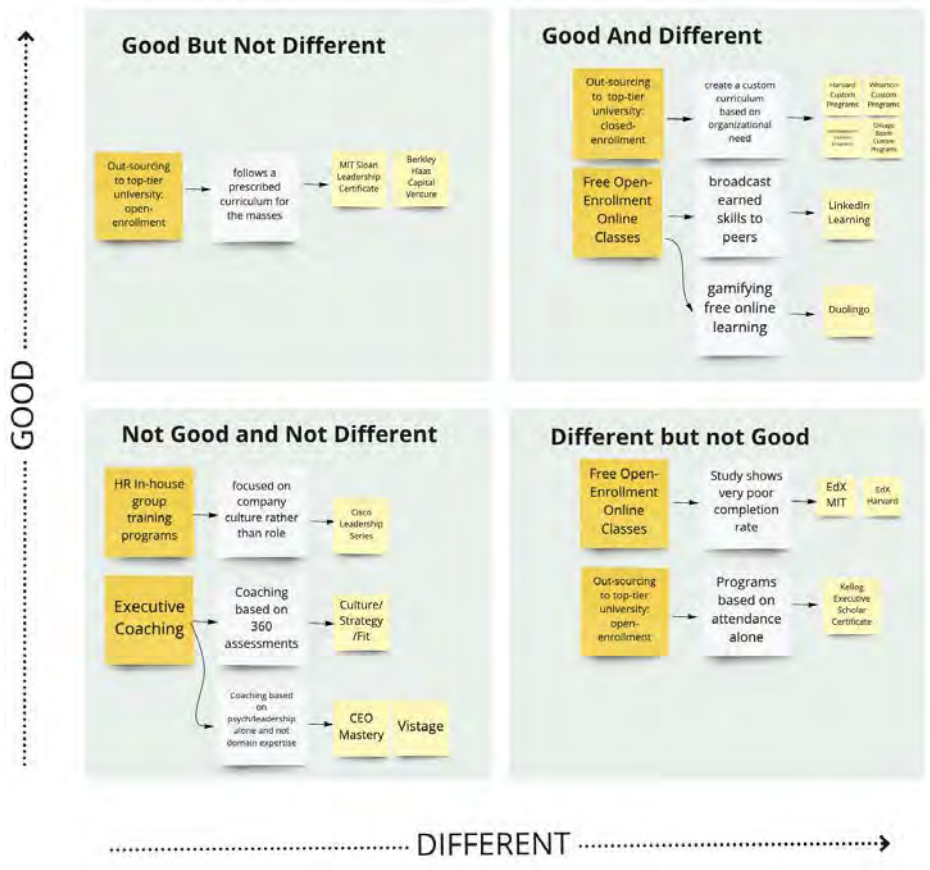
Executive Corporate Training
SWOT



Executive Corporate Training
Different and Good

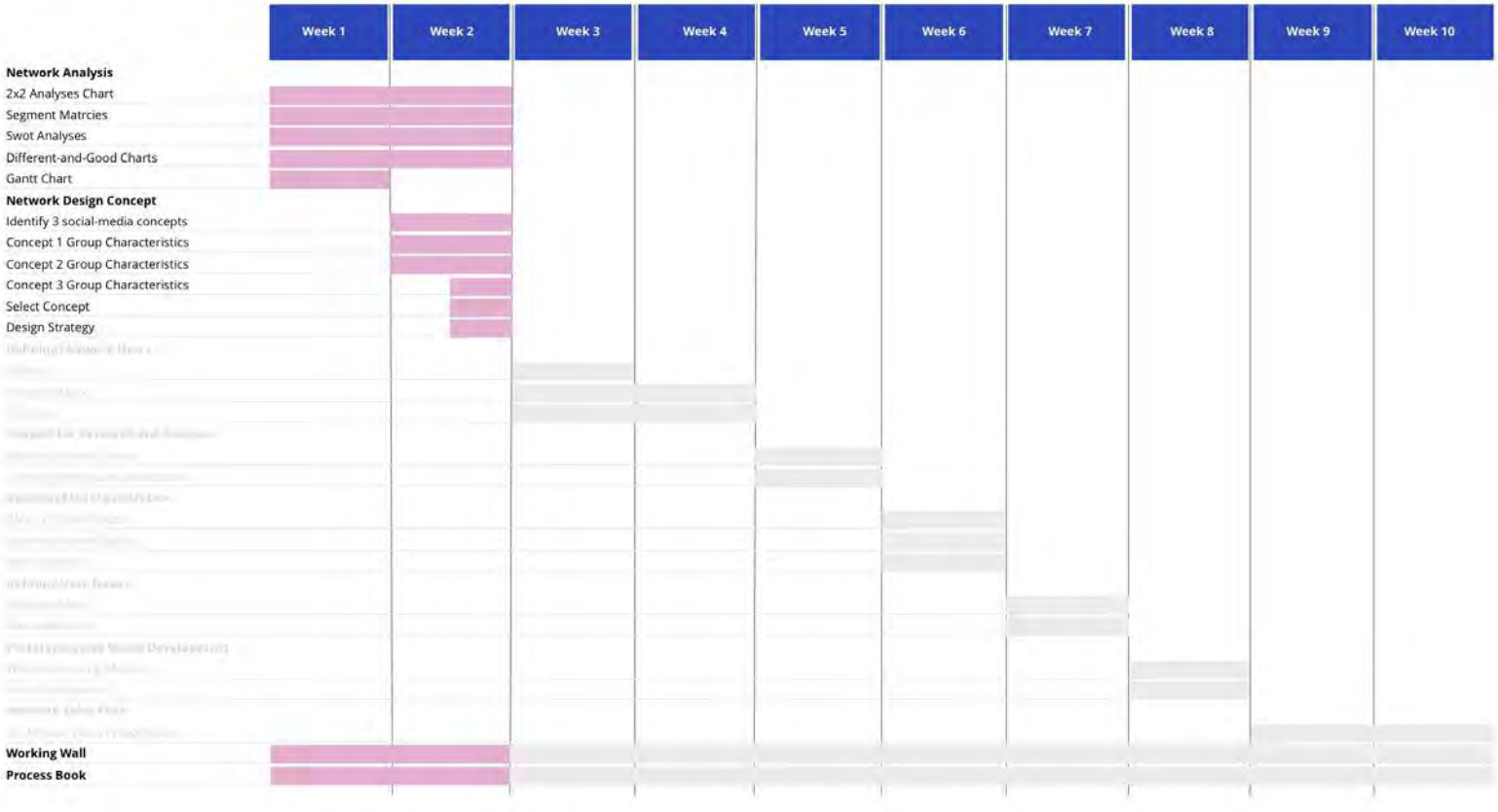
Using the same competitors from our 2X2 analysis, we plotted these businesses into categories of different and good.

Miro Board



Part Two
Network Design Concept

Gantt Chart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High School Education Technology

Defined User Groups

The user groups of high school education technology include students, teachers, parents, and leadership.

Using secondary research, we evaluated each of these collaboratively in Miro.

Miro Board

High School Education Technology

Key Takeaways

Fostering a positive creative environment for students will be beneficial for their careers if you prepare them prior to college.

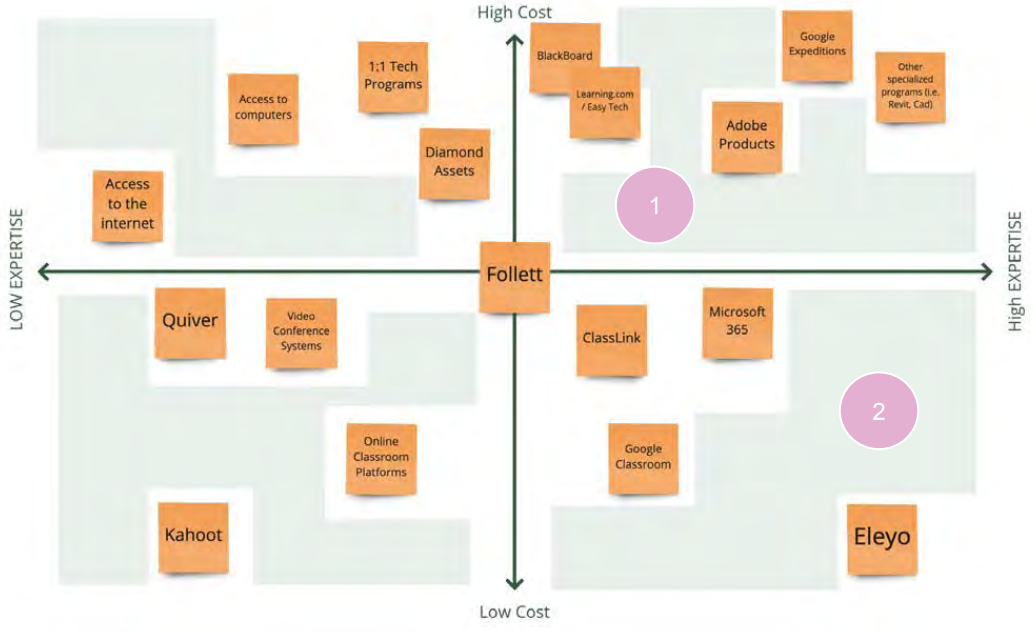
The traditional K-12 education system discourages and can potentially kill creativity, which is becoming essential for a successful career

High School Education
Opportunity Analysis

High School Education presented fragmentary “white spaces” of opportunities (depicted in green).. We assumed the following to be of the greatest benefit to high school students:
1.) moderate cost & high-expertise
2.) low-cost & high-expertise.

In light of the research from our design education network, we began to notice a gap in high school education technology that is specific to design education.

We decided to **consider** opportunities in the High School Education matrix for further analysis.



Design Education
Defined User Groups

Unlike our high school ed tech category, design education does not include parents. Instead, we found that advisors and recruiters played a more central role in the network.

Using secondary research, we evaluated each of these categories collaboratively in Miro.

Miro Board

Design Education
Key Takeaways

Universities are finding new ways to connect with students using online platforms; they are seeking new features to support their needs

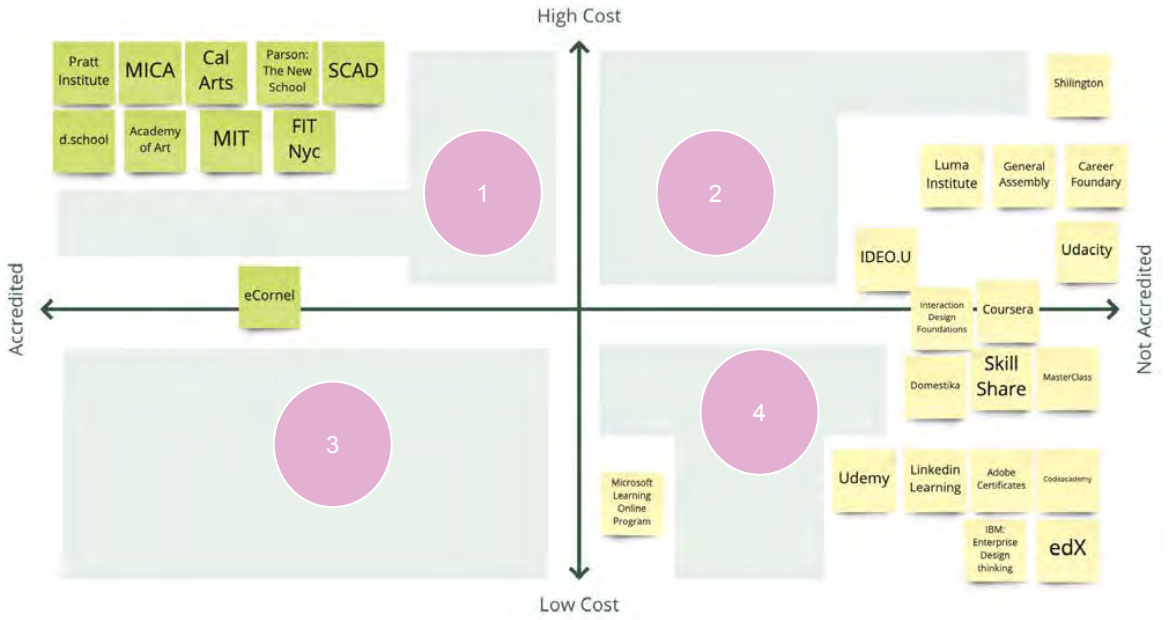
Giving students access to the technology and networks they never had in high school will help them prepare their essential skills before college

Design Education
Opportunity Analysis

We noticed that there is a significant gap in the 3rd quadrant, which is the low-cost and accredited design education.

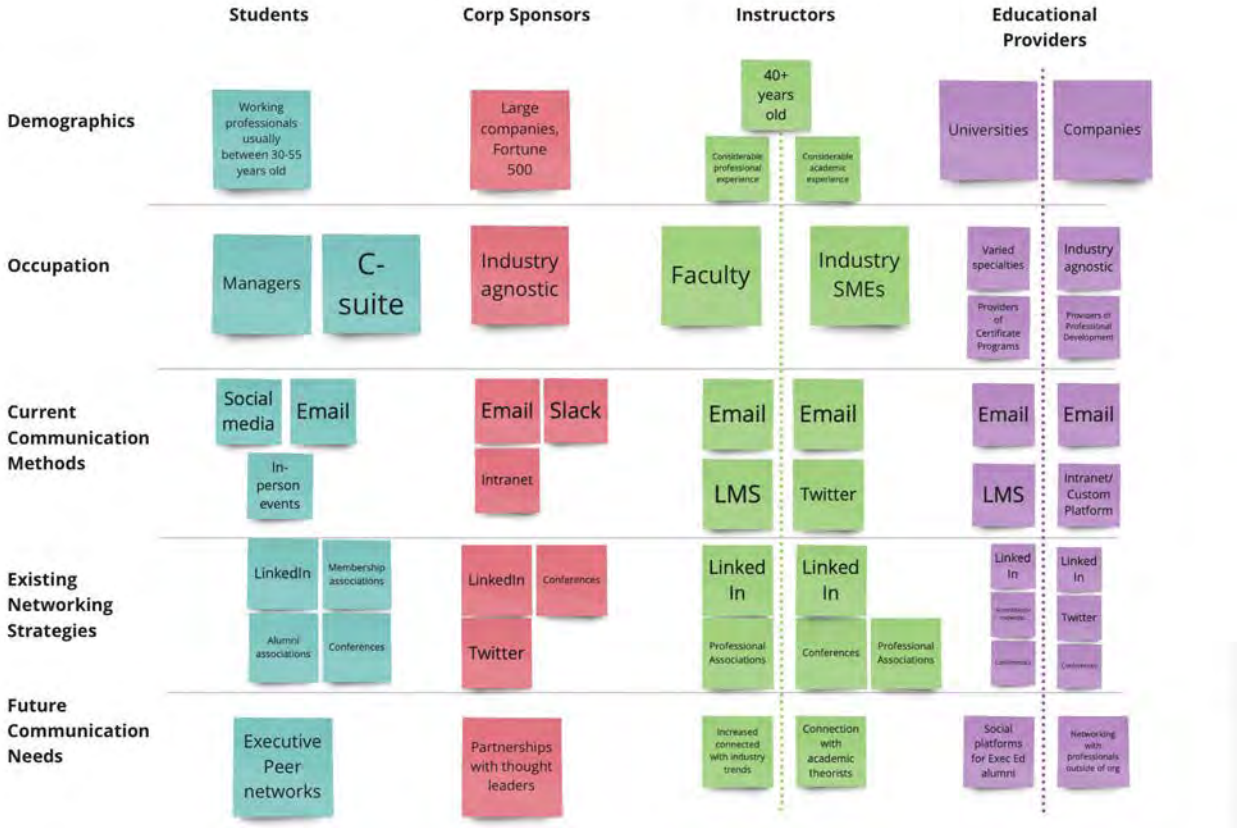
After comparing this with the two other concepts, we noticed that there is a gap between highschool and creative universities. There is an opportunity here for a pre-college program to help fill in that gap.

We also noticed most of the education technology taught at high schools are not design related; therefore we **considered** opportunities related the design education platforms for students.



Executive Corporate Training

Defined User Groups



Executive Corporate Training

Key Takeaways

Executives desire to connect with other executives in the field, which is best achieved in open-enrollment programs

Companies benefit from connecting with domain thought leaders outside of their org, and university faculty benefit from a tether to industry practicalities

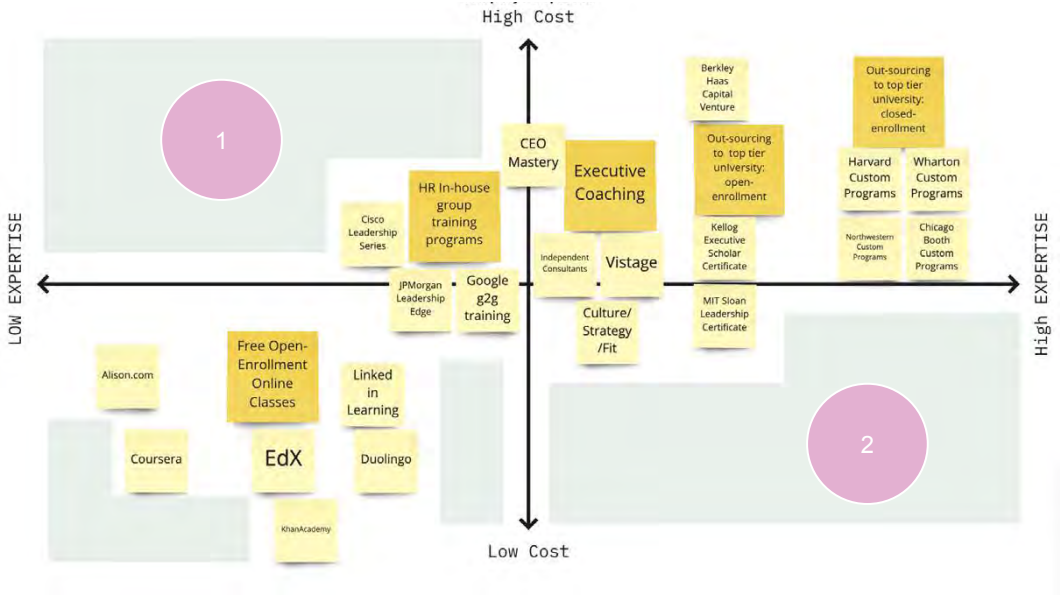
The lessons received by executive corporate training can only take root if the sponsoring company is open to change

Executive Corporate Training
Opportunity Analysis

Executive Corporate Education presented “white spaces” of opportunities in two quadrants: the extremes of
1.) high-cost and low-expertise, and
2.) low-cost & high-expertise.

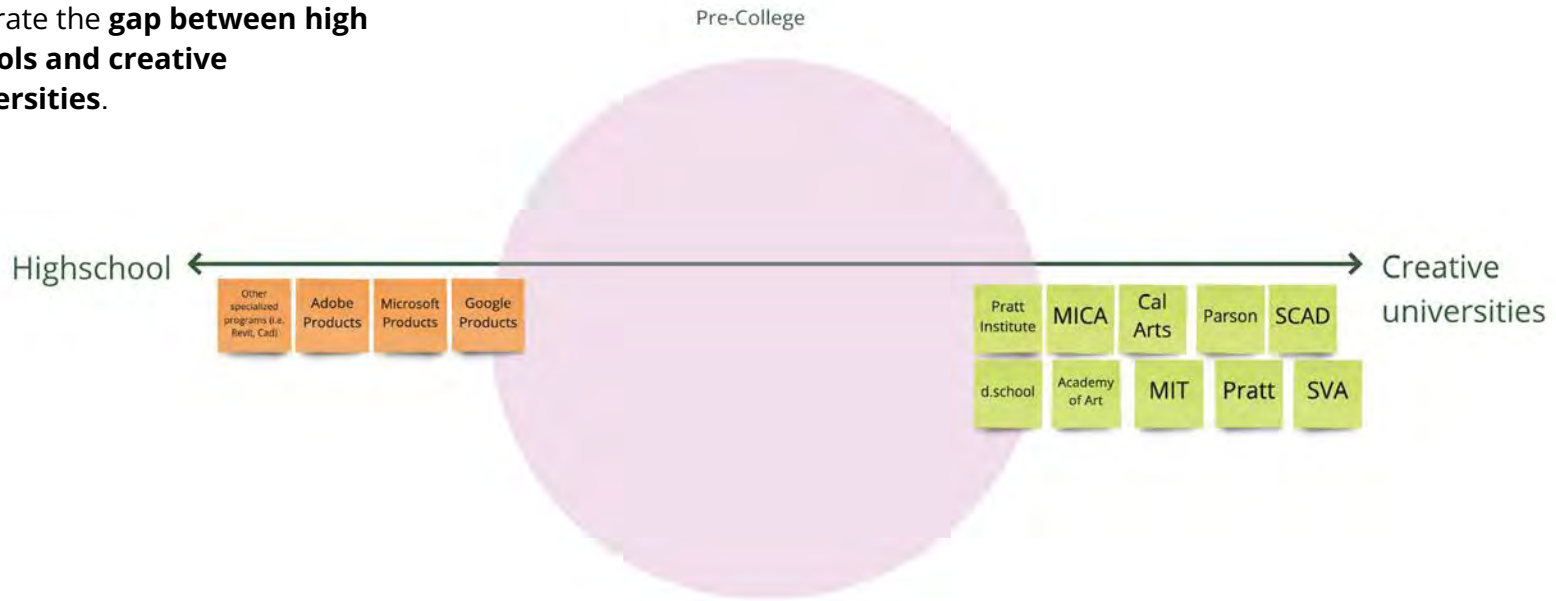
A high cost, low-expertise program for executives would face an obvious lack of desirability in the marketplace. On the other hand, a low-cost high-expertise program would appear to be positioned for high demand. However, in comparing this white space against our secondary research, we saw that executives and their sponsoring corporations do not place a significant emphasis on affordability. They are typically high-earners with money to invest in top-level expertise. Additionally, the instructors providing top-level expertise would require payments to reflect their status, which we did not feel could be adequately budgeted for in a low-cost program.

We decided to **not pursue** opportunities in the Executive Corporate Education network.



Concept Selection:
Pre-College Creative Education

We decided to rearrange our data in a timeline format to illustrate the **gap between high schools and creative universities**.



Creative Brief: Value Proposition

For high school students **who** want to be prepared for university-level creative education, **(our)** pre-college educational platform will prepare students with the up-to-date creative tools they need to know for college-level classes to help them succeed and be agile in the fast-growing industry.

We do this by partnering with universities to create a unique framework for high school students by offering a platform that is tailored to the student's interests in creative needs within their intended area of study, **unlike** similar after-school and summer programs such as SCAD's "Rising Star" program or the YMCA offerings.

Our program will help high schoolers to get the knowledge of digital products and fundamentals for creative education before entering college. The program will increase access to digital design products and creative education to position students for success.

Creative Brief: Value Proposition

Who

For high school students who want to be prepared for university-level creative education and for universities who want to better prepare prospective students.

What

A pre-college educational platform that consists of creative tools, lessons, and educators necessary for success.

Why

To bridge the skill gap between high school and creative university curriculums for fundamental preparedness.

Where

Virtually-based platform in USA

Creative Brief

Problem Statement

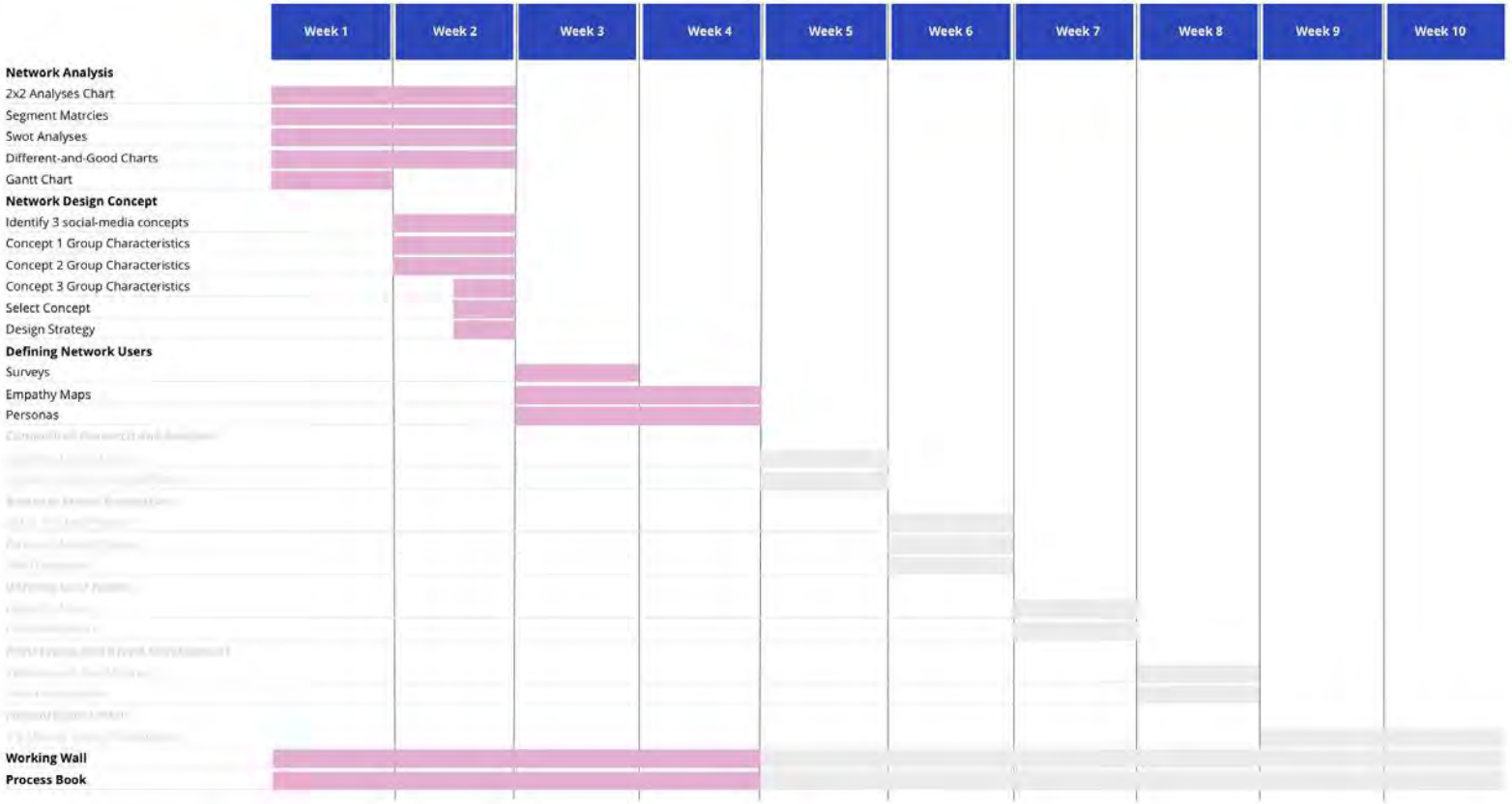
High school students are entering their college-level courses unprepared due to a lack of exposure to design tools and fundamentals, resulting in decreased student retention rates and higher dropout rates at creative universities.

Opportunity Statement

To create a pre-college educational platform that bridges the skill gap between high schools and universities.

Part Three
Define Network Users

Gantt Chart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User Groups

Students in High School

Underclassman Design Students

University Professors

University Staff

Through surveys and interviews, our group sought to understand this skill gap by gaining a better understanding of the following user groups:

Students in High School :

12 surveyed
2 interviewed

Underclassman Design Students:

6 surveyed
3 interviewed

University Professors:

6 surveyed
2 interviewed

University Staff:

4 interviewed

How might we use design management methods to bridge the skill gap between high schools and creative university curriculums for fundamental preparedness?

Questionnaire Guide

For: High School

#1 On a scale of 1-4, how prepared do you feel to go to college?

#2 On a scale of 1-4, how prepared do you feel to go into your desired career straight out of high school?

#3 Do you know what you want to study in college and pursue as a career?

#4 What are you doing to pursue what you're passionate about or what you want to study in college?

#5 Is there anything you wish you have done or want to do to put you in a better position for your future education and career?

For: Underclassmen

#1 On a scale of 1-4, how prepared did you feel coming into college?

#2 On a scale of 1-4, how prepared technically did you feel coming into college? (Software knowledge, fundamentals of your program)

#3 On a scale of 1-4, how effectively have your previous college classes (if you've had any) prepared you for your future classes?

#4 How do you learn skills that you need that aren't taught to you to thrive in your program?

#5 Is there anything you wish you had done or known going into school?

For: University Professors

#1. On a scale of 1-4, how prepared are your underclassman students entering college?

#2 On a scale of 1-4, how prepared technically are your underclassman students? (Software knowledge, fundamentals of your program)

#3. Could you see your school ever running a virtual pre-college program to better prepare your admitted students?

*Why or why not?

*Do you feel that your content could be packaged into a virtual course?

*Why or why not?

Questionnaire Guide

For: University Staff

#1. On a scale of 1-4, how prepared are your underclassmen entering college?

#2 On a scale of 1-4, how prepared technically are your students coming into college? (Software knowledge, fundamentals of your program)

#3. What measures does your school take to identify prepared students in the prospective student/admissions stage?

#4. What measures does your school take to prepare incoming first years for their declared majors after they've matriculated?

#5. Have you offered a pre-college program?

If yes,

*In what ways was it successful?

*In what ways could it be improved?

#6. Could you see your school ever running a virtual pre-college program to better prepare your admitted students?

*Why or why not?

*What would your goals be?

*Would you offer credits for the program?

Survey Results

Students In Highschool	HighSchool Grads Applying to Universities	Pro College Program Teachers	University Professors
#1 On a scale of 1-4, how prepared do you feel to go to college? 2.3/4	#1 On a scale of 1-4, how prepared did you feel coming into college? 2.6/4	#1. On a scale of 1-4, how prepared are your underclassman students entering college? 2.5/4	#1. On a scale of 1-4, how prepared are your underclassman students entering college? 2.5/4
#2 On a scale of 1-4, how prepared do you feel to go into your desired career straight out of high school? 1.3/4	#2 On a scale of 1-4, how prepared technically did you feel coming into college? (Software knowledge, fundamentals of your program) 2.2/4	#2 On a scale of 1-4, how prepared technically are your underclassman students? (Software knowledge, fundamentals of your program) 1.8/4	#2 On a scale of 1-4, how prepared technically are your underclassman students? (Software knowledge, fundamentals of your program) 2.5/4
#3 Do you know what you want to study in college and pursue as a career? 2.6/4	#3 On a scale of 1-4, how effectively have your previous college classes (if you've had any) prepared you for your future classes? 2.8/4		

In Depth Interview
Interior Designer / IIDA Representative

Perine Ihab

Age: 27 Years old
Gender: Female
Profession: Student and Interior Designer
Education: Interior Design - NJIT
Location: New Jersey
Hobbies and Interest: Personal Development and marketing
Connection: Linkedin, Groups on FB, instagram, Whatsapp, Texting.

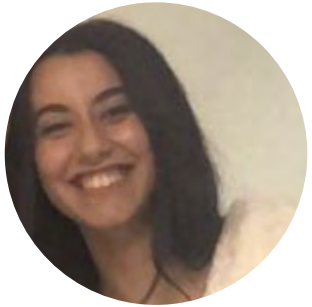
Interview Summary:

I chose a creative career because I don't like memorizing things. I like thinking outside of the box. I like hands on projects more than taking tests.
I started off my career in architecture, then after I changed it to interior design. I noticed everything about architecture is focused on the exterior design but I seemed to like interior design more.

I was in private school in California, called Woodberry. I declared an architecture major there before moving to Jersey and getting into NJIT. Before getting into school I was only aware of one design program -the rest I had no idea about. School offered one credit classes that were focused on design programs that we were required to know. The classes were not a requirement but they were for free and it was a pass or fail class to help the students in need. I thought their system was really great because it helped me a lot. The classes were focused on these programs: Adobe, Drawing, Rino, and Grasshopper. When I moved to Jersey and got accepted into NJIT they did not offer any help with these programs. If it wasn't for the classes I took back in Cali, I would have really struggled with catching up on all the design programs that I had to be aware of getting into their interior design program.

Before getting into school, I wish I knew what were the different options career-wise. I wish they were transparent about the pay rate and what can my degree lead me to.
I was part of the IIDA who orients students at the pre-college program at NJIT and one of the students asked me about the pay rate of my major and the Dean gave the sense that interior designers are really highly paid. Unfortunately that is not true -interior designer are the least paid designers in the industry and they struggle the most with getting jobs and getting licensed.

In Depth Interview
Architect Student



Marina Mina

Age: 24 Years old
Gender: Female
Profession: Architect Student
Education: Architecture - NJIT
Location: New Jersey
Hobbies and Interest: Singing, drawing, Podcasts, public speaking.
Connection: Slack, Instagram, Whatsapp, LinkedIn, Zoom, email

Interview Summary:

I was not hesitant about choosing my major, I was sure I wanted to study architecture. I knew it would give me possibilities to be in any artistic field. I did my own research when I was in high school and I knew this major would benefit me. I picked NJIT because it was close to where I live, and there is also a huge Coptic community with people who have the same background. This was the only architecture school in New Jersey at the time I applied.

I had no idea about the design programs that we were going to use. I did not know what Adobe or Rino was. High school did not even introduce any digital design programs. NJIT just sent video tutorials for Rino only. There wasn't any mentoring or classes that helped support me with the design programs I was required to know. If it wasn't for my friends at studio and in my classes, I would have failed the program. I had so many challenges and one of them was when illustrator crashed 30 minutes before my final presentation and my professor did not even help me. I remember how I felt that day and I really struggled to manage how to backup my own work and how to be organized with my files. Through many failures I managed to learn by myself how to backup my work and use the right programs for the right projects. But that was a very long learning process.

Autocad was not introduced to us until much later. Professors don't tell us what the essential design programs are that we need to know -not only for school, but also for work. They seem to let us figure it out on our own and that was really hard.

I wish I knew about Autocad and getting more familiar with it before. I needed certain skills to get me more prepared and get me ahead of the game.

In Depth Interview
Adjunct Professor of Graphic Design

Name Hidden

Age: 30 Years old
Gender: Male
Profession: Sr. Graphic Designer and Adjunct Professor
Education: BFA Graphic Design
Location: New Jersey
Hobbies and Interest: Design, typography, education, business
Connection: Instagram, LinkedIn, Zoom, email, texting

Interview Summary:

I have taught graphic design intro classes to freshmen students. The great thing about the program is that we do not expect the incoming students having any knowledge in the essential design programs. The reason why we have the intro graphic design classes is they are focused on the Adobe basic skills -and we teach students by assigning projects that will help them get the basic skills.

I personally put all the effort I can to hand off all my skills to these students. Some catch the skills quicker than others. The intro classes are required in graphic design to be able to register for advanced programs. When students don't take these classes, they struggle really hard in their junior and senior year.

When we had to go suddenly virtual during the pandemic, students and faculty were shocked and we had to be lenient on students. It has been almost a year since that happened and we have been really lenient on students, but I am afraid that how lenient everyone is will affect the quality of the graduating students in the real world. Some of the challenges while teaching design on Zoom is that we do not have a studio-like environment and more hands on projects. I also struggled with not knowing if students are actually attending classes or not. I had challenges to manage the tough students online. Students stopped taking projects seriously, and we have to compensate. The more accessible schools are the more you get students that don't care. We will always have students that would care and some wouldn't. Educators have to work with each student individually and grade them on how hard they try because not all of them come from the same background.

In Depth Interview
Adjunct Professor of Graphic Design

Name Hidden

Age: 29 Years old
Gender: Female
Profession: Sr. Product Designer and Adjunct Professor
Education: BFA Graphic Design
Location: New Jersey
Hobbies and Interest: UI/UX, baking, Disney World
Connection: Instagram, Linkedin, Slack, texting, Facetime

Interview Summary:

High school professors helped me to be prepared for college-level design classes.
My parents were concerned about design as a career, so they let me take the pre-college programs for the best design schools (SVA). I took all of the knowledge from my teachers at high school and SVA teachers and brought it in my freshman year.

After graduating, I was asked to teach as an adjunct professor. Some of the issues I noticed with students is not all of them could afford owning a Mac to have the programs installed on their personal computer (inequality in "access to technology"). So they had to rely on the Macs at the computer lab, but they weren't always available for the students. I'm glad that my school could afford offering the computers to students and also offer a renting service for other equipment that they would need.

I think that universities should consider socioeconomic difference in decision-making

Pre-college programs are extremely helpful for educators. For students, it could be virtual, but the only thing that could be a real challenge is the craft and the hands-on aspect of learning.

In Depth Interview
Associate Dean of University

Name Hidden

Age: 50+ years old
Gender: Male
Profession: Associate Dean and Adjunct Professor
Education: MA Economics
Location: Pennsylvania
Hobbies and Interest: Running, travel
Connection: Linkedin, Texting, email

Interview Summary:

My role is the middle-man between academic departments and our Dean. I work with faculty, things like accreditation, operations, and advising students when they are having more significant difficulties.

When admitting students, we look for requisite skills, but this gets complicated because we also want to ensure we also admit underrepresented students, or those with atypical but impressive background. If a student has been admitted and we know there's a gap in their technical skills, we'll require that they take a course over the summer before they start our program in the Fall. These programs have to be at an approved university to make sure that it's up to our standards, and students must earn a B or higher.

We offer a few summer/ pre-college programs every year. The summer programs we offer are designed to attract students to our university, "test them out" to see if they could handle the curriculum, and give them an opportunity to see if this was really a field they wanted to pursue. We switched our recent pre-college summer program to virtual because of COVID, and it was successful in exposing students to technical content. It can't say the students felt a huge amount of bonding/camaraderie like they would have if we did this in person, and that's generally something we want to achieve in everything we do at the school.

In Depth Interview
Asst. Director of Academic Services

Name Hidden

Age: 33 years old
Gender: Female
Profession: Academic services professional at a university
Education: BA Mathematics
Location: Pennsylvania
Hobbies and Interest: Fitness, baking, volunteering
Connection: Linkedin, texting, email

Interview Summary:

I've worked in Academic Services for about six years and sit on several admissions committees. I run queries on data about our students to better understand trends about their academic performance. These reports are helpful from an admission's perspective, because we can analyze students who are perhaps unprepared for school and look for a common denominator they might share. This typically presents itself as a student who was admitted despite not having experience with a particular technology -in our case, Python.

But there are a lot of reasons why we might decide to admit someone without this experience, even though we can see a clear pattern where it might spell trouble in their first year of adapting to coursework. We need diversity and varied experiences in the classroom. Pre-college programs are one way to expose underrepresented groups to our school, with the hope that they will eventually apply here for their degree when the time comes.

Retention rates matter to the reputation of a school. If we admit only 15% of applicants, and say only 80% of them stay at the university, that paints a certain picture about the school that we don't want. We're a difficult school but we want our students to succeed. As far as grad schools, we don't have as much concern about retention rates. By that point, students really know they want a career in that space so they stick with it.

In Depth Interview
Pre-College Program Manager at University

Name Hidden

Age: 28 years old
Gender: Female
Profession: Administrator of undergraduate and graduate education at a university
Education: MA Higher Education Administration
Location: Pennsylvania
Hobbies and Interest: Cycling, baking, reading
Connection: Instagram, Facebook, texting

Interview Summary:

I've run some pre-college Summer Programs in the past and I help review applications for our degree programs with our Admissions Team.

As far as undergraduate admissions, if a student is admitted into a program but is weak in technical skills, they have to take summer pre-reqs before starting a program with us. This isn't financially lucrative for us, but we want to set up our students for success before they get here. Some of our programs have a hard time with recruiting, so we don't have a lot of applications to review. That's obviously when we really make exceptions on our wish list of technical qualifications.

One way of increasing enrollment is pre-college programs. That's why we run them. Again, they aren't financially lucrative- they actually cost a lot of money to run, but it's worth it because I'd say at least half of the students end up applying to our university. We don't offer credits for this- the credits are earned at the student's home institution while they do a summer program with us—almost like a study abroad. The goal of our pre-college programs is to expose them to the culture of the university and get a student excited about us. Otherwise, we've found a lot of people are too scared to even apply to our school for a degree.

Takeaways
High School Students

Through open-ended survey responses and interviews, we discovered the qualitative key points listed below that will be used throughout the duration of this project.

I would've liked more creative classes to help build my fundamentals

I want to share my creative passion with the rest of the world

Design classes were far and few between in high school

Learning software I need took 6 months to a year

There are some parts of the creative industry that I was unaware of

I'm unsure how long it will take me to learn the programs I need

Takeaways

Underclassman Design Students

Through open-ended survey responses and interviews, we discovered the qualitative key points listed below that will be used throughout the duration of this project.

Students were not aware of the design programs they were going to use in design programs. Highschool did not introduce any of the programs

There wasn't any mentoring or classes that supported students with the design programs they were required to know. University expected students to teach themselves the programs

Students wished to know what were the programs they were going to use before getting into freshmen year, to be prepared

Some universities offered support and training for design programs for free

Takeaways

University Professors

Through open-ended survey responses and interviews, we discovered the qualitative key points listed below that will be used throughout the duration of this project.

Universities should consider social economic difference in students

Pre-college programs are extremely helpful for educators and for students

The challenges with virtual learning are the craft and hands-on assignments

Had challenges to manage the tough students online, as some stopped taking projects seriously

The more accessible schools are the more you get students that don't care

Educators often work with each students individually and grade them on how hard they try because not all of them come from the same background

Takeaways
University Staff

Through open-ended survey responses and interviews, we discovered the qualitative key points listed below that will be used throughout the duration of this project.

Students who are weak in tech skills must take summer pre-reqs at our university before starting their program

We've offered pre-college programs to high schoolers as a recruiting pipeline -hopefully they end up wanting to pursue a degree with us

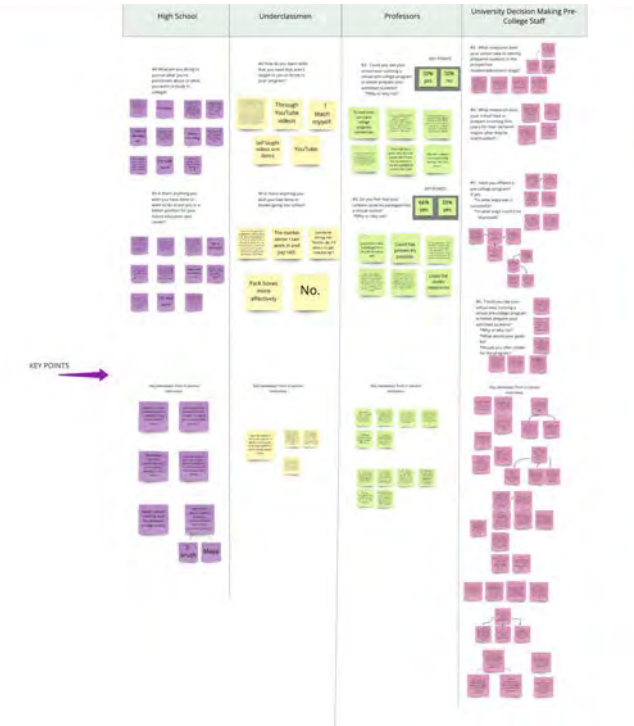
Undergrads who had previously done the summer program were better prepared and performed better academically than their university peers who had not done the summer program

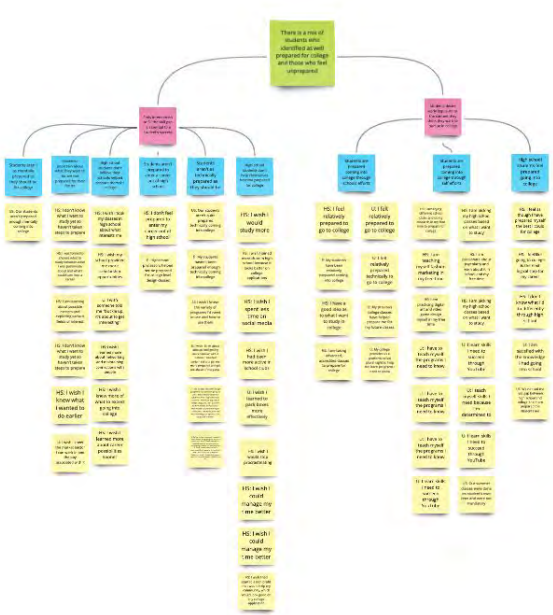
If a pre-college/summer program would improve retention rates, that would be important for an undergrad program

The goal of our pre-college program is to expose underrepresented students to our school

We lose about $100k when we offer a pre-college program -but it's worth it for diversity initiatives. If we wanted to charge instead of scholarship students, we could make a lot of money on pre-college programs

Affinity Map





Miro Board

Affinitization Insights

STUDENTS

1 We found a relatively even **mix of students who identified as well prepared for college and those who feel unprepared**. Of those who feel well-prepared, many cited self-teaching to familiarize themselves with their desired fields through resources like Youtube. Only one of our surveyed or interviewed participants had reported attending a formal training or education outside of highschool, like a pre-college program.

UNIVERSITIES

2 Universities described thorough admissions processes to vet applicants to their programs. At the same time, these same university employees described making **frequent exceptions to their admissions criteria to honor diverse backgrounds and meet enrollment quotas**. The most common exception cited was technical experience in their chosen major.

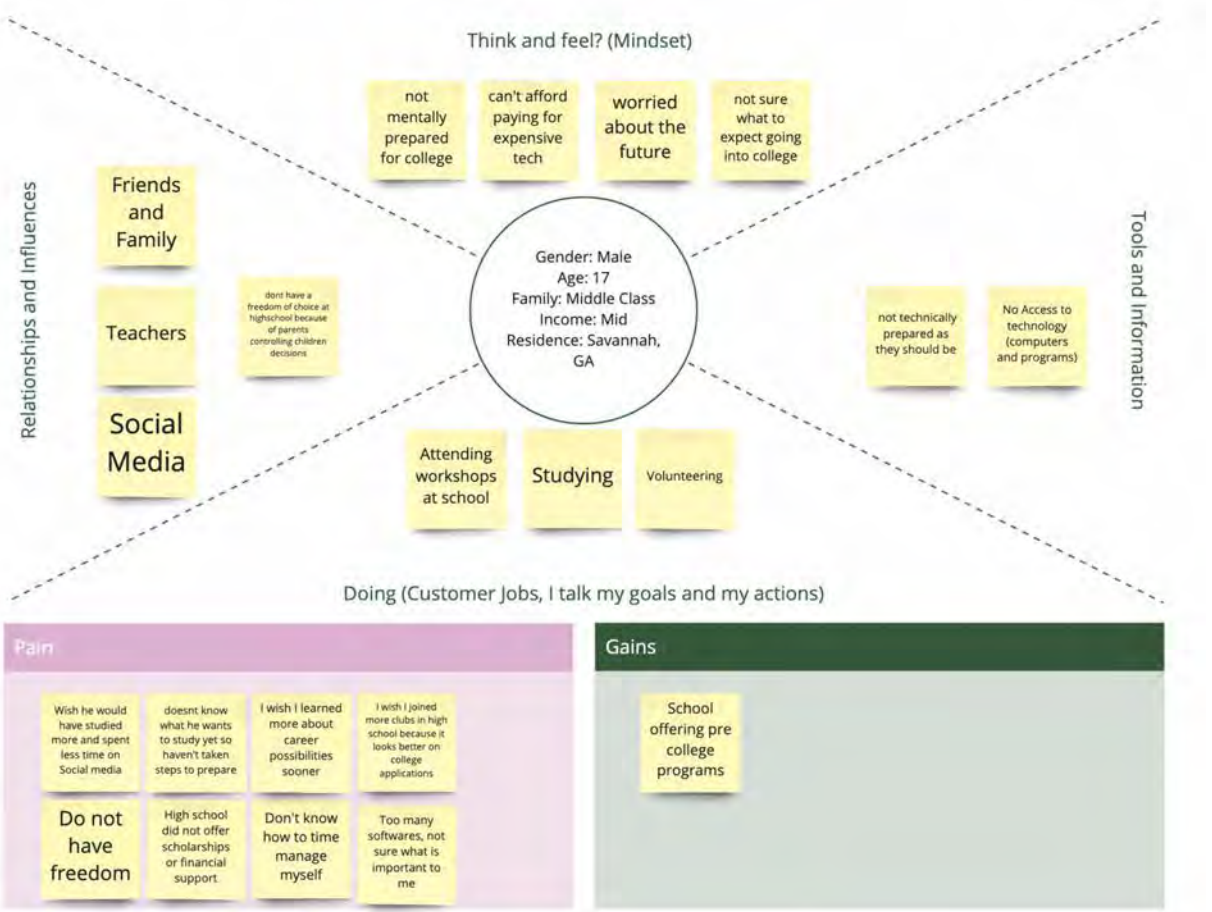
3 This skill gap is most commonly compensated for by offering mandatory intro courses at the beginning of the first year and by professors working with students individually to address their unique backgrounds. Professors described **early intervention to fill the skill gap as essential to a student's success**. The earliest described options we identified in our interviews were for students to pursue relevant courses offered by their high schools (which may or may not be offered), or by attending a pre-college program offered by universities.

PRE-COLLEGE PROGRAMS

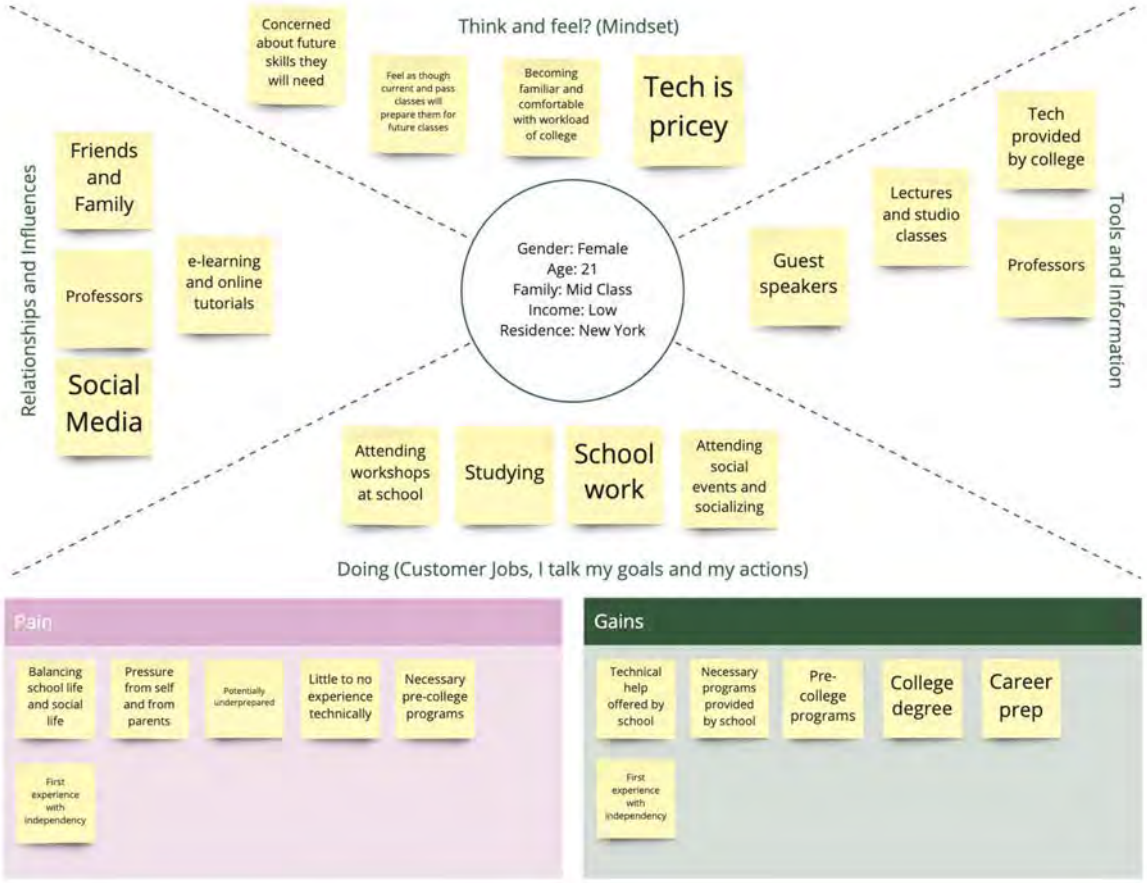
4 Universities are incentivized to offer pre-college programs because it generates a pipeline of talented students from unique backgrounds. By teaching technical skills to high school students before they apply to college, they are able to **address inequality in education, increase enrollment, and improve retention rates.**

5 High school students are incentivized to attend because pre-college programs offer a university experience (if in-person), financial benefits (usually a stipend during the pre-college program and/or a scholarship upon admission into a degree program), and **exposure to the content they think they want to pursue**.

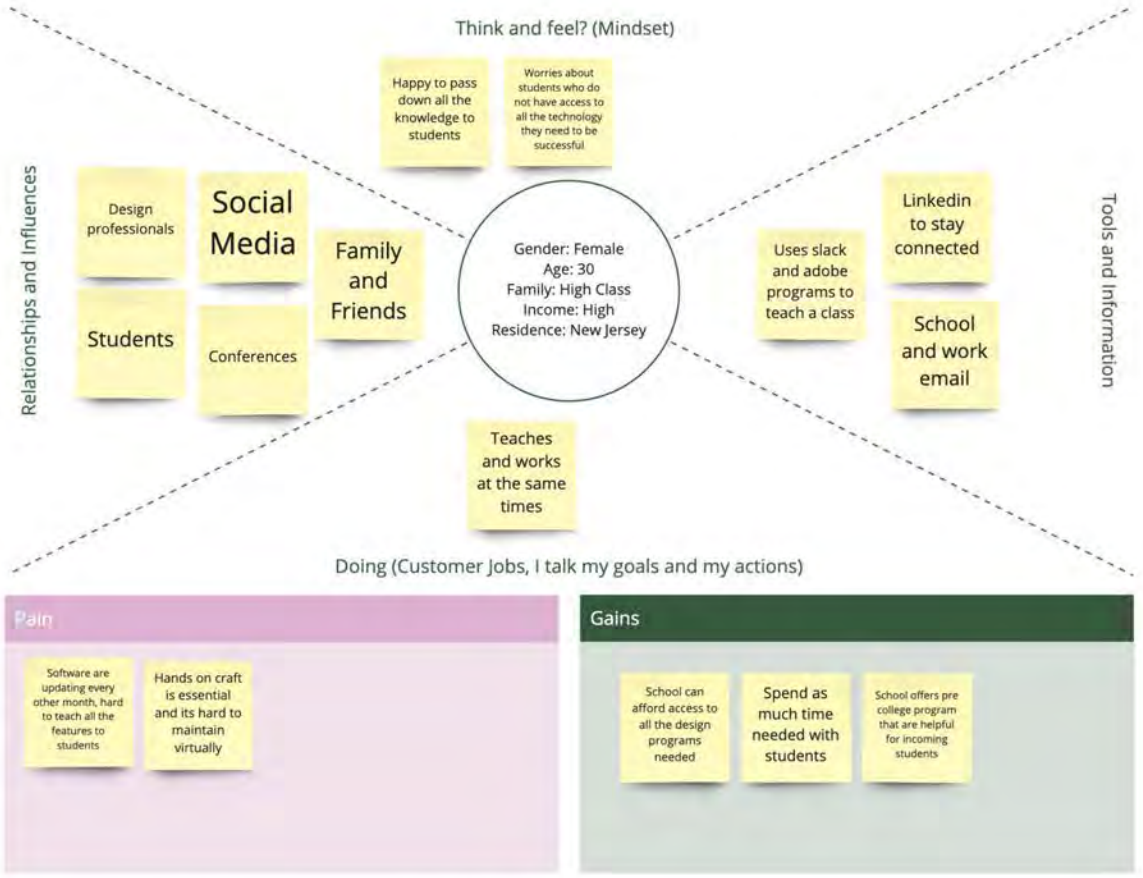
Empathy Map
High School Student



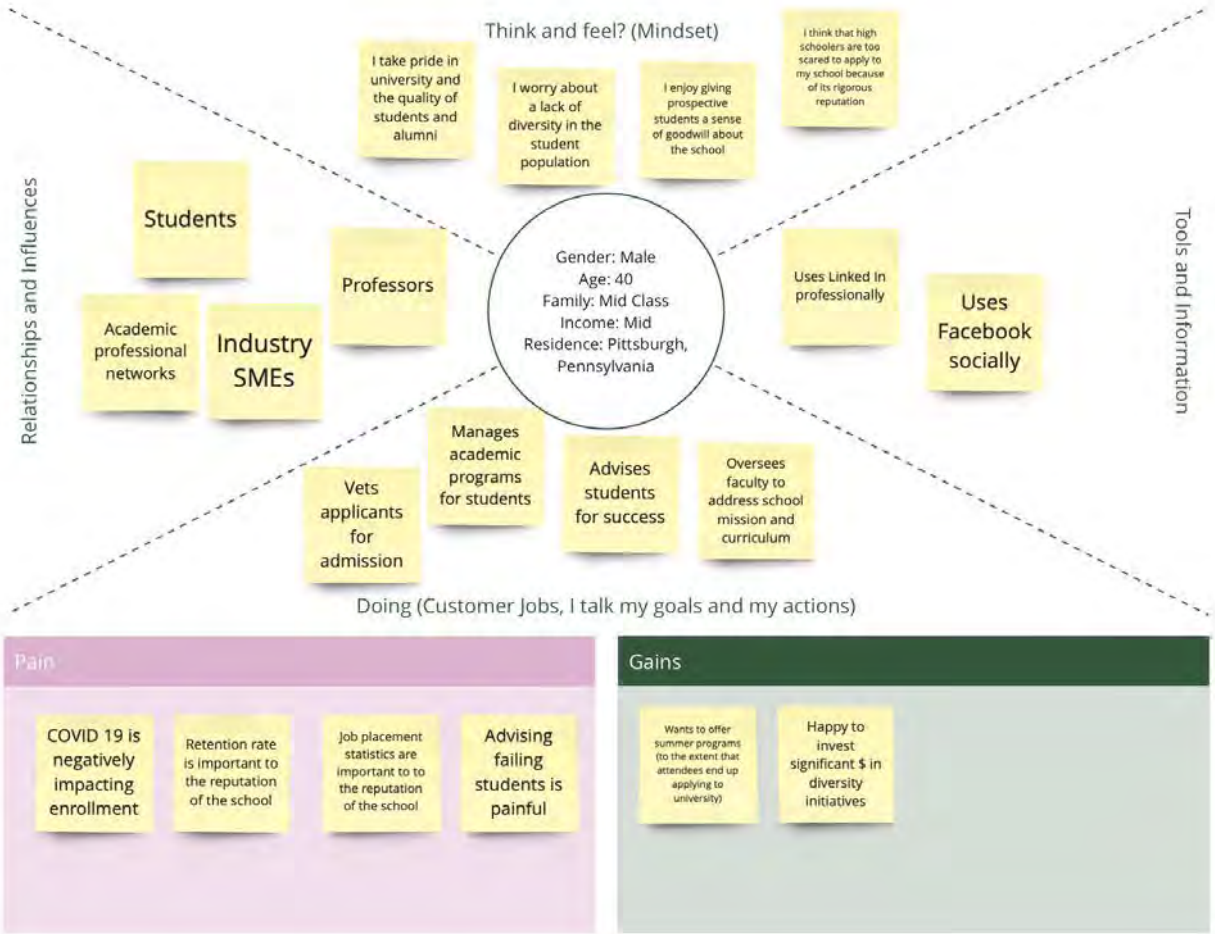
Empathy Map
Underclassman



Empathy Map
Professors



Empathy Map
University Staff



Network User Research

Personas- High School Students

Name: Rebecca
Age: 16
Location: Philadelphia, PA
Profession: Student, Hostess
Areas of Interest: Graphic design, fashion merchandising, animation
Connections: Teachers, counselors, friends & family, boss
Notes: Rebecca knows that she wants to be in fashion media and merchandising. Her high school offers basic level photography and graphics classes, so this is where she can show those interests off within her projects. She is looking at schools in Paris and NYC.

Name: TJ
Age: 17
Location: Milwaukee, WI
Profession: Student
Areas of Interest: Architecture, engineering, interior architecture
Connections: Friends and family, teachers, counselors
Notes: TJ is interested in civil engineering and architecture. He is aware of the course rigor this is going to hold, but his goal in life is to become a structural engineer for big cities. He also enjoys drawing and building furniture.
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Network User Research

Personas- Underclassmen

Name: Ryan
Age: 19
Location: New York, NY
Profession: Graphic Design Underclassman
Areas of Interest: Graphic design, design thinking, UX design, business, entrepreneurship, technology
Connections: Friends and family, professors, industry workers, peers
Notes: Ryan is an underclassman in design school in New York City. Since leaving high school, Ryan noticed that his passion for design did not line up with his technical skills or his fundamentals in graphic design, causing him to focus more on his abilities and execution as opposed to big-picture education. Ryan is frustrated that his skill level holds him back from accomplishing what he wants to, and wishes he was educated on design basics before going to college.

Name: Shelby
Age: 18
Location: Los Angeles, CA
Profession: UX Design Underclassman
Areas of Interest: UX design, UI design, design thinking, social events, extended learning opportunities
Connections: Friends and family, professors, peers
Notes: Shelby was introduced to UX design during an after school lecture circuit in high school about various types of design. Being exposed to various types of design in high school allowed Shelby to understand the different types of design and narrow down the options for what she would like to study in college. These after school lectures also allowed Shelby to do her own research on types of design and expose herself to fundamentals and skills necessary to succeed in college.

Network User Research

Personas- Professors

Name: Jensen
Age: 43
Location: Boulder, CO
Profession: Professor, Head of the Architecture Department
Areas of Interest: Architecture
Connections: Teachers, counselors, friends & family, boss
Notes: Jensen started out his career as a junior architect then moved his way up to senior architect - focusing on healthcare and ambulatory spaces. He is noticing that while technology is advancing, the students are not. He is curious to see where the field will be in 5-10 years. He worries about the graduation rates.

Name: Harley
Age: 32
Location: Atlanta, GA
Profession: College professor, interior designer
Areas of Interest: Graphic design, interior design
Connections: Coworkers, family and friends, bosses, students
Notes: Harley is a mother of 2 children. She works at an interior design firm that focuses on boutique and hospitality design. She enjoys growing connections with her students because she is thorough with her teachings and always looks forward to where they will end up in their careers.

Network User Research
Personas- University Staff

Name: Olivia
Age: 27
Location: Clemson, SC
Profession: Graduate Program Assistant
Areas of Interest: Landscape architecture
Connections: Co-workers, family and friends, supervisors, students
Notes: Olivia graduated from Clemson's Landscape Architecture program in 2016 and decided seek employment at her alma mater. She enjoys working closely with students, answering their questions and providing support. Because her workload is lessened in the summer, she also assists other departments coordinate two pre-college programs, and likes to see high school students gaining exposure to the topics she studied while she was a student herself.

Name: Joshua
Age: 38
Location: Dallas, TX
Profession: Admissions Director
Areas of Interest: Marketing, education, tourism
Connections: Family and friends, professional networks, university leadership, students
Notes: Joshua had originally planned to become a teacher but after pursuing his MA in Education, decided to work in admissions due to his other interests in hospitality and tourism -he loves to make prospective students feel welcome at his school. Joshua is in charge of managing a team of staff that recruits quality candidates to his university. His job became very high stress during COVID, when in-person education was impacted and enrollment numbers decreased.

Next Steps

HS Students: With the low to average scores of preparedness the high school students felt, we can find an opportunity window to expand their knowledge and make that "rating" of preparedness rise to the 3-4 star range. ***How can we do that with our program?***

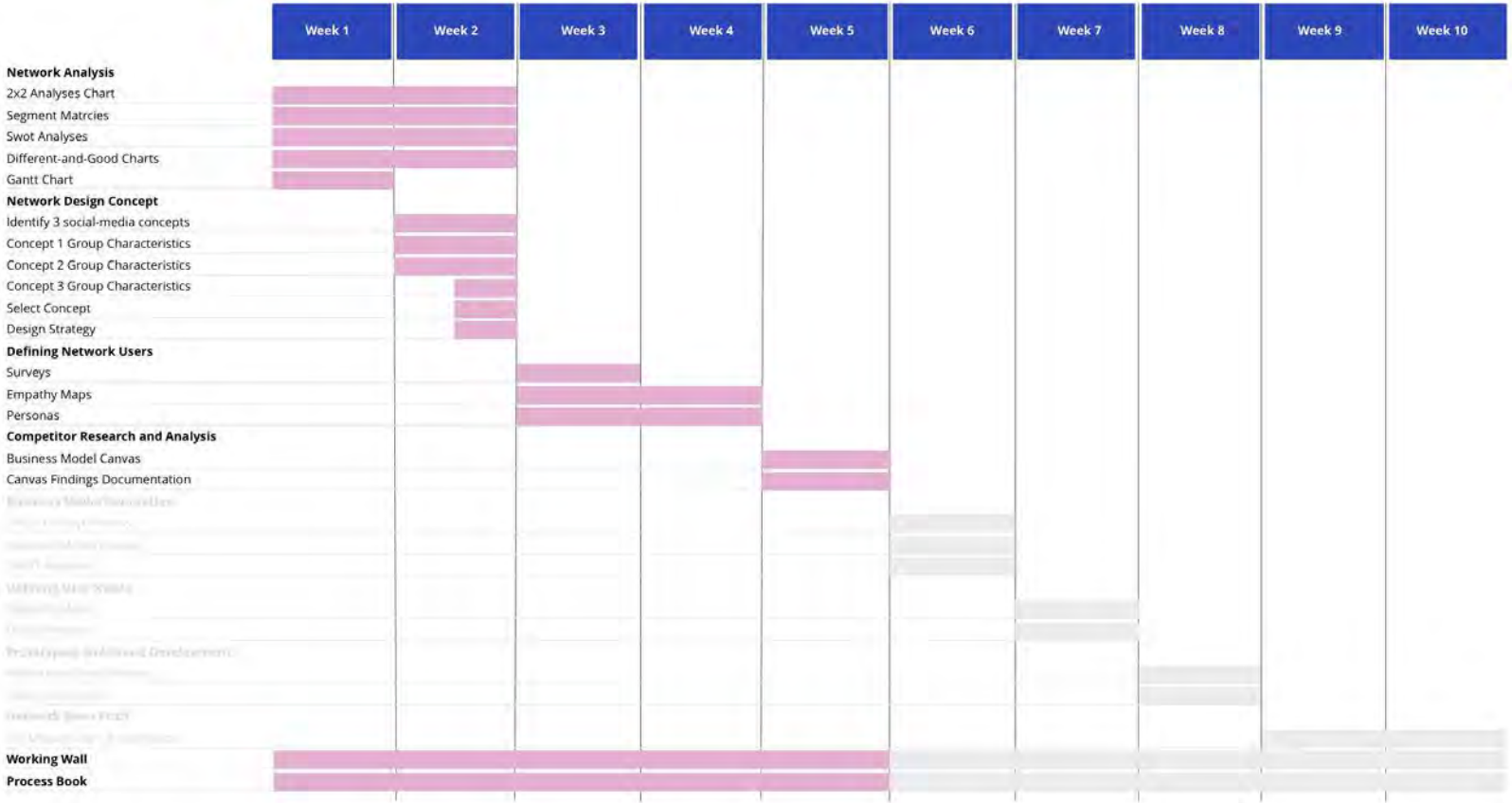
Undergraduate Students: With this user group, you see the confidence rating increase when referring to their ability to use programs related to their prospective career choice. With the interview questions, the majority of them have taught themselves how to use programs that are being taught to them. That is not necessarily a strike on professors and curriculum. These programs take time to learn; the students just do not have enough time in their undergraduate life to perfect these skills. Sites like YouTube and LinkedIn learning are cited tools for self-teaching. An opportunity rises with this within the filaments of time frame. ***How can we give these students more time to refine these skills prior to entering college?*** (Ex: If a student starts learning their junior year of high school as opposed to their freshman year of college, this will give them 6 years of experience as opposed to 4 once graduated)

Professors: Some of the users that were interviewed and surveyed believe that an enhanced curriculum can be taught virtually and through a pre-college program. Others cited college-specific problems, such as lack of resources and funding, as reasons why these programs wouldn't work. This red flag turns into an opportunity by reallocating resources and infrastructure surrounding professors, student-teachers, and students themselves. ***Can we find a way to integrate teaching high-school students through utilizing undergraduate and graduate students? What is a universal program interface that differs itself from the existing competitors?***

Staff: Though interviewed university staff members have detailed criteria for admitting students into their programs, they also have the ability to make exceptions for unique candidates. Admitting students who do not fully meet all technical skill criteria not only helps meet their targeted enrollment numbers, but it acknowledges inequality in education and allows for a more diverse student body. Because a pre-college program can fill the gap in technical skills of incoming first year students, ***how can we help universities see that a pre-college program can address inequality in education, increase enrollment, and improve retention rates?***

Part Four
Competitor Research & Analysis

Gantt Chart


Week 1
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Week 9
Week 10
Network Analysis
2x2 Analyses Chart
Segment Matrcies
Swot Analyses
Different-and-Good Charts
Gantt Chart
Network Design Concept
Identify 3 social-media concepts
Concept 1 Group Characteristics
Concept 2 Group Characteristics
Concept 3 Group Characteristics
Select Concept
Design Strategy
Defining Network Users
Surveys
Empathy Maps
Personas
Competitor Research and Analysis
Business Model Canvas
Canvas Findings Documentation
Working Wall
Process Book

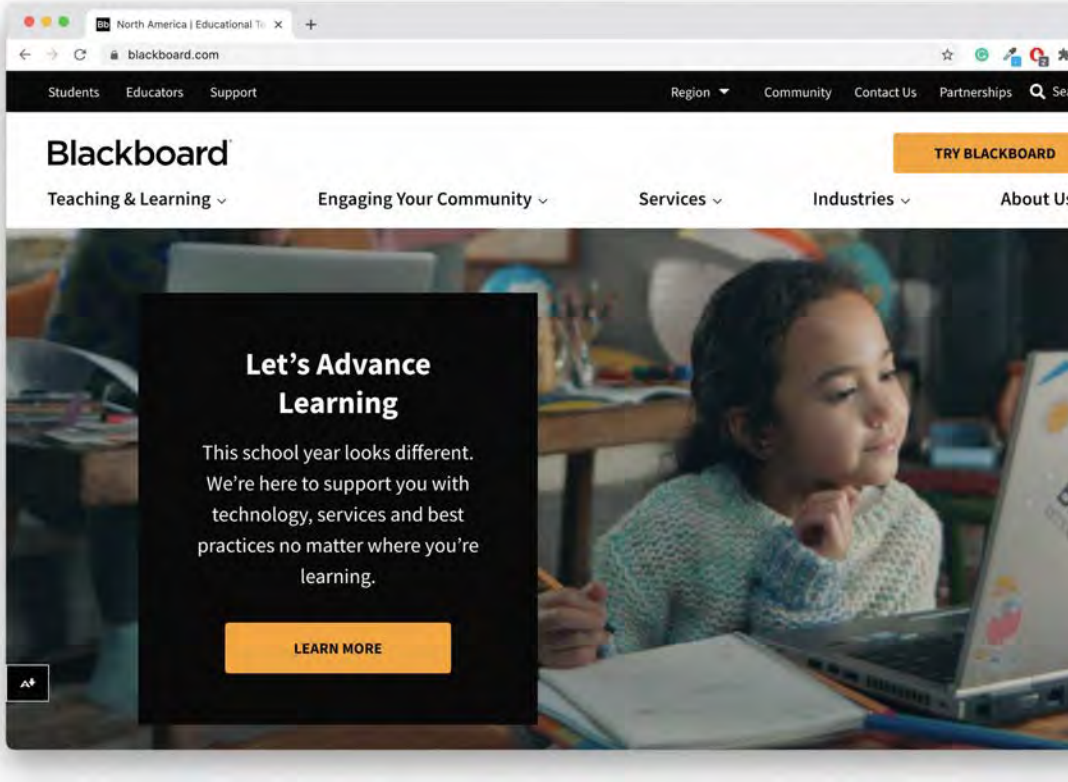
Introduction to Competitors

Two of our top competitors in the market are Blackboard and Kahoot. As they represent two different approaches to education technology, we analyzed their business model to uncover their strengths and weaknesses in this section.

Business Model Canvas Blackboard

Valued at over $700M, Blackboard is one of the largest and oldest Ed Tech platforms in the marketplace. Their Learning Management System (LMS) can be implemented for a variety of learners, including K-12, higher education, government employees, and medium to large businesses. As an annual Blackboard subscription averages $160K per year, their target customer does not include small businesses or one-off instructor led courses.

Due to a significant number of acquisitions and key partnerships, Blackboard offers various tools and functionalities that can be implemented into the LMS. The core functions include storing and displaying course content, facilitating student/instructor collaboration, and reporting (grading, tracking attendance, etc.).



Blackboard

Key partners
What are your key partners to get competitive advantage?

- Test schools
- Development Team

Key activities
What are the key steps to move ahead to your customers?

- Development
- Marketing
- Platform management
- BisDev
- R&D
- Innovation
- Sales

Key resources
What resources do you need to make your idea work?

- Software
- Server Space
- Leadership team
- Employees

Key propositions
How will you make your customers' life happier?

- Digital connection for classes
- Submission library for tracking student work
- Attendance tracking
- Grading functionality
- Student collaboration
- Web conferencing
- Mass notifications
- Storage and display of course content
- Automated plagiarism detection

Customer relationships
How often will you interact with your customers?

- Personal assistance
- Self service
- Collaborative

Channels
How are you going to reach your customers?

- Word of mouth
- Cold calls
- BlackBoard site
- Sales reps
- Webinars and events
- Emails
- Customer representatives
- Account reps

Customer segments
Who are your customers? Describe your target audience in a couple of words.

- Higher education institutions
- K-12 schools
- Government
- Medium to large businesses

Cost Structure
How much are you planning to spend on the product development and marketing for a certain period?

Revenue Streams
How much are you planning to earn in a certain period?
Compare your costs and revenues.

- Annual subscriptions

Blackboard SWOT Analysis

Blackboard

Strengths

- Large customer base
  - 50% of high schools, 80% of top academic institutions, 75% of all universities use it
- Highly successful history of acquisitions (over $500 million)
  - Eliminates competition and gives BB entry into new markets
- Brand awareness

Weaknesses

- Difficulty in supporting usage increases
  - BB LMS increase of 400% since start of COVID
- Overturned patent means competition from similar EdTech companies
- Design and Tech issues for users
  - Feature creep from so many acquisitions: "bloated over complicated design"
- High Cost

Opportunities

- Anticipating significant growth for online education in Asia-Pacific
- Anticipating growth for online education in South America
- Worldwide: in-person education moving to virtual during COVID

Threats

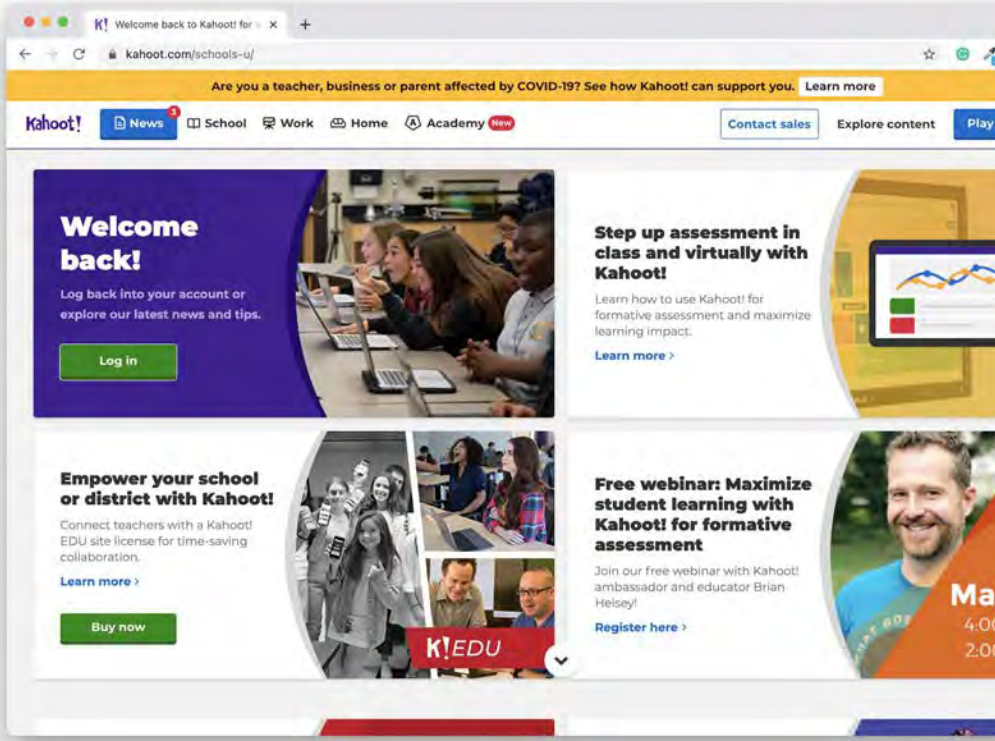
- Open source learning as alternative
- Budget cuts in education
  - FInancial strain in education is emphasized dramatically by COVID

Kahoot
Business Model Canvas

Kahoot is a game-based learning platform, not a full LMS like Blackboard. With Kahoot, educators and presenters can create quizzes that are broadcast live during classes -leading to increased user engagement, formative assessment, and collaboration.

The targeted users (the quiz-takers) are employees, students (K-12 and higher ed), and children.

Kahoot is free for teachers. It is a profitable business due to its successful investor relations and $6 a month subscription per user for business accounts.



Kahoot!

Key partners
What are your key partners to get competitive advantage?

- Subscribed businesses
- Content creators

Merged/ Acquired:
*Poio
*Dragonbox
*Actimo
*Drops

Key activities
What are the key steps to move ahead to your customers?

- Development
- Marketing
- Platform management
- BisDev
- Sales
- Subscription content creation
- FERPA/COPPA verifications

Key resources
What resources do you need to make your idea work?

- Software
- Server space
- Company values
- Premium content
- Design
- Leadership & employees

Value propositions
How will you make your customers' life happier?

- Increased student engagement
- Simple setup
- Collaborative classroom environment
- Gamified learning
- Business education
- Polls to live-tailor instruction
- Formative assessment

Customer relationships
How often will you interact with your customers?

- Self service
- Personal assistance
- Co-creation

Channels
How are you going to reach your customers?

- Word of mouth
- Strategic partnerships
- Targeted advertising
- Website
- Customer representatives

Customer segments
Who are your customers? Describe your target audience in a couple of words.

- Teachers
- Students
- Businesses
- Children
- Employees

Cost Structure
How much are you planning to spend on the product development and marketing for a certain period?

- Platform Development
- Investor relations
- Sales
- FERPA/COPPA certification
- Privacy/ Risk/ Cybersecurity

Revenue Streams
How much are you planning to earn in a certain period?
Compare your costs and revenues.

- Premium toolkits
- Special business content
- Subscriptions

Kahoot
SWOT Analysis

Kahoot!

Strengths

- Positive effect on learning performance
- Positive effect on classroom dynamics and morale
- Positive effect on student attitudes and anxiety
- Very low and flexible pricing
- Easy registration and use
    - Used by 50% of US teachers and 97% of Fortune 500s

Weaknesses

- Technical issues
- Can create “time stress” in students
- Can instill fear of losing in students
- Difficult for student to catch up if a concept is missed
- Difficult to monetize in current model
    - No advertising opps when children = users
    - Free version of product is good enough, so many do not pay to upgrade

Opportunities

- Gamification in EdTech has and will continue to experience steady growth
    - Supported by COVID and increased/ more creative online learning

Threats

- Products are simple and easy for competition to replicate
- Popularity of gamification in EdTech

Business Model Canvas Insights

	Blackboard	Kahoot!
Fundamental Differences in Business Model	• Vast number of M&As/ "Key Partnerships" • Beyond the LMS, Blackboard offers consulting and recruiting services • Existing Large customer base • Customer exit barriers	• Ease of registration and use • Collaborative competition setting • Diverse content • Premium education toolkits
Fundamental Similarities in Business Model	• "Old school feel" as opposed to slick apps that younger gen is accustomed to • Designed around individual courses, not students as central consumer	• Free/cheap online learning platform • Self-service relationships • Setup and prep work required • FERPA/COPPA Compliant

Blue Ocean Framework Insights

Blackboard®

ELIMINATE
Platforms designed around the creation of individual courses (rather than collective learning experience)

RAISE
Student-centric product design standards

REDUCE
Feature Creep: Partnership features that are extraneous to what the user (student) needs access to

CREATE
LMS experiences that resemble what younger gens expect with their apps (clean, intuitive)

Kahoot!

ELIMINATE
Simple elements not reliant on complex backend foundations

RAISE
Free offerings to continue making education more accessible

REDUCE
Reliance on third party content creators

CREATE
Gamified learning that requires little to no effort from teachers

Moving Forward

What did we learn?

Comparing and contrasting business models gave insight on how to cultivate our program platform into a feasible solution.

Positives noted for Kahoot include low pricing, positive student interactions, and enhanced learning environments.
Positives noted for Blackboard LMS include a large customer base and technological teacher-to-student communication.

Negatives that we hope to avoid would include high costs, student stress, and an "old-school" interface within our solution.

Continuing

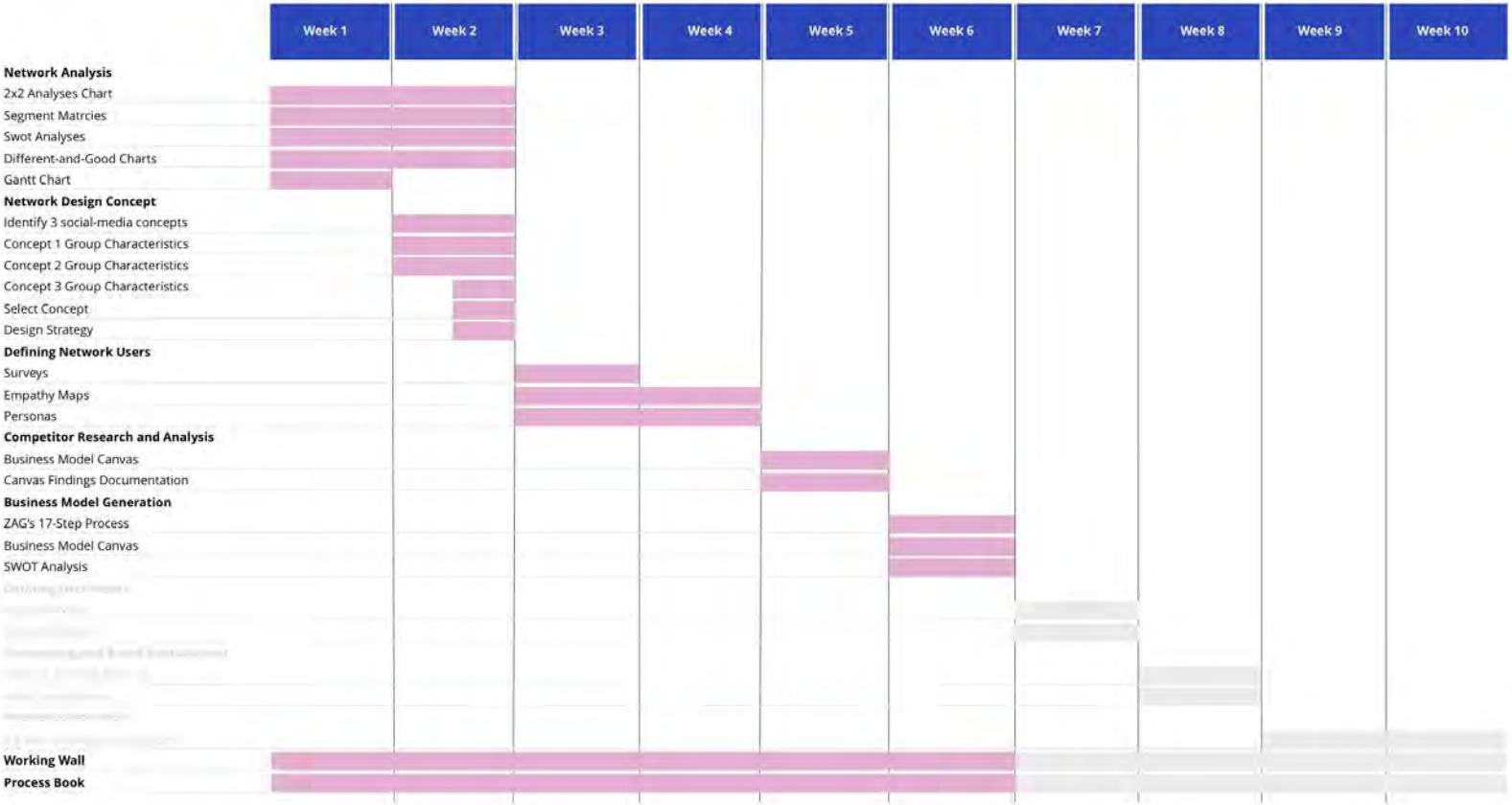
Exploring business models of similar programs to the one we are creating gives us an opportunity to take the strengths of the respective models and implement them in our project as we progress further into our solution specifications.

We wanted to highlight weaknesses to compare how our business model will fit into the market that we are targeting.

How can we ensure that our program strengths outweigh weaknesses?

Part Five
Business Model Generation

Gantt Chart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Swot Analyses
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Concept 2 Group Characteristics
Concept 3 Group Characteristics
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Competitor Research and Analysis
Business Model Canvas
Canvas Findings Documentation
Business Model Generation
ZAG's 17-Step Process
Business Model Canvas
SWOT Analysis
Working Wall
Process Book

Overview of Our Business

Following the insights that we gained from our competitor analysis and ongoing information collection from user research, we began idea evaluation exercises. Using those conclusions, we then developed a large-scale business model of our company, KERN. We then translated our model into a 17 Step Zag and ACBQ, which presented our first draft of our business's brand and pitch.

Creative Matrix

Now understanding our competition from the previous exercise, our group decided to employ an additional activity to generate new ideas via the Creative Matrix.

The Creative Matrix helped us to identify our features and functions while analyzing them against the Five E's of the customer journey.

We came up with features like **reviewing portfolio and applications** for students, **renting equipment** to students if needed to make learning accessible, **completing accredited courses** to gain necessary skills to close skill gap, and other features that will help make us unique in the market.

Miro Board

Value vs. Difficulty

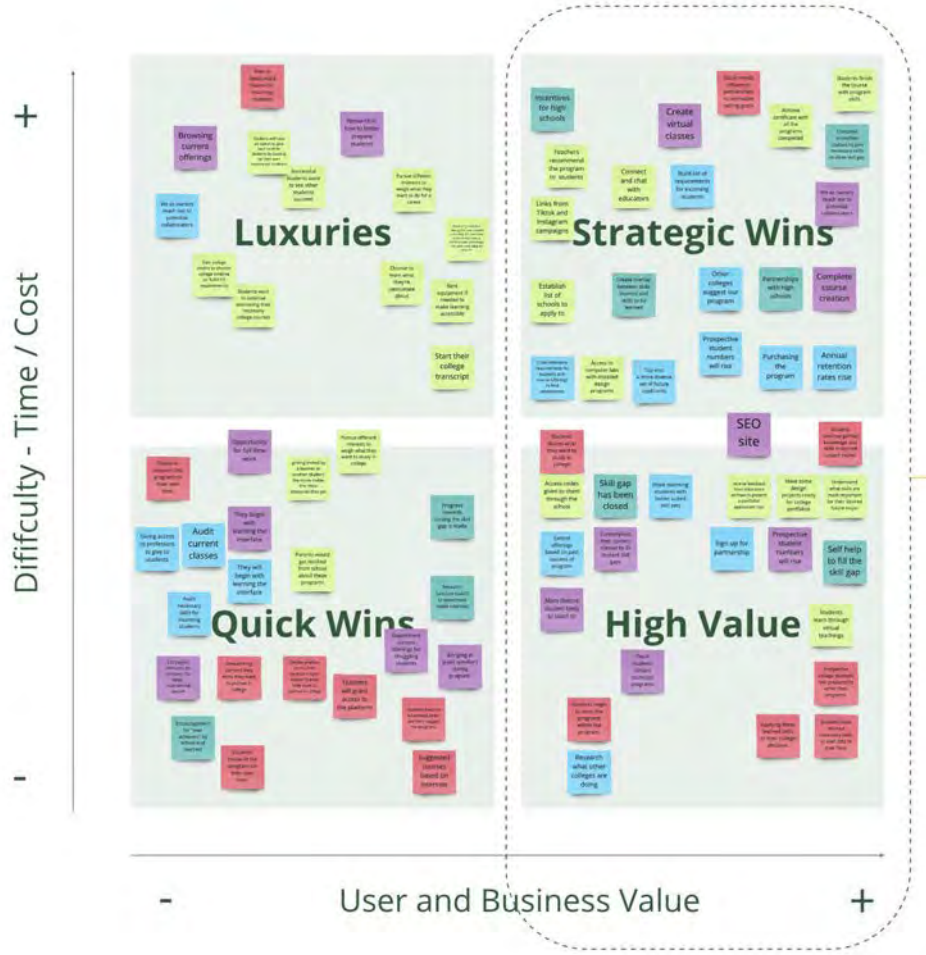
Using the same findings from the Creative Matrix, we moved these stickies into a Value vs. Difficulty framework, which evaluated all of our ideas.

From a university perspective, we found a primary strategic win (utmost value but also demand on our resources) to be **establishing partnerships with colleges** to offer our platform and the virtual courses they need. Similarly, it will be a top strategic win to deliver on our promise of **increasing university enrollment, diversity, and retention**.

From a high school student perspective, we found high value in helping students **understand what they want to pursue in college**, exactly **what skills they would need**, and **access to the coursework that would make them amore prepared** first-year student at a college, as well as **a more attractive candidate** to be accepted into their desired college. In this same vein, we found that **offering portfolio and application advice** as a part of their coursework to be of high value and minimal to moderate difficulty.

A detailed view of our analysis can be found here:

Miro Board

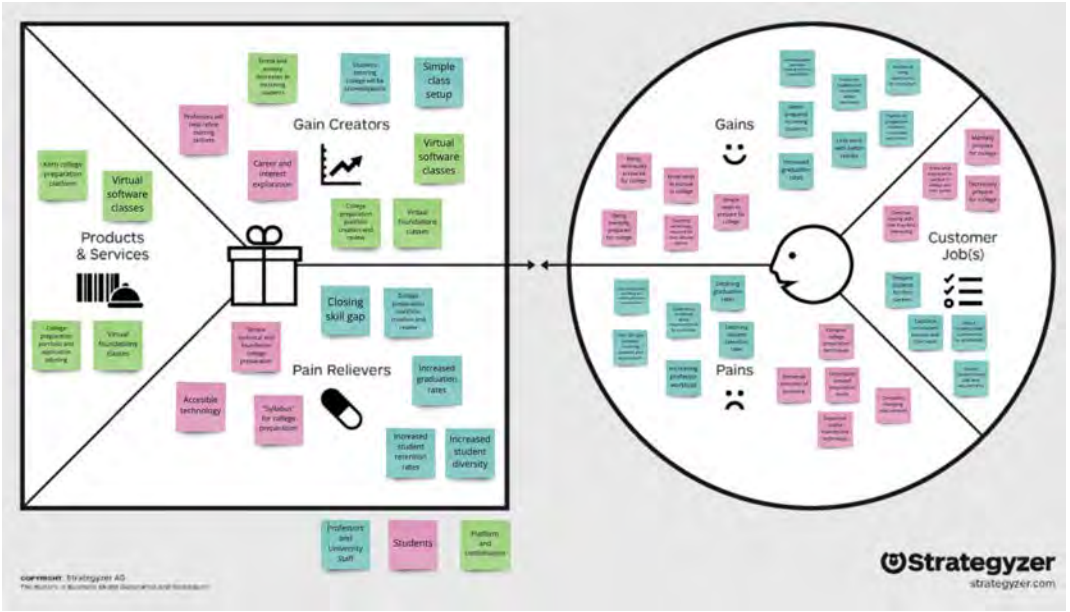


The Value Proposition Canvas

A Value Proposition Canvas was then created to identify our features and functions.

Within the value proposition canvas, we broke up pain relievers and gain creators as those for students, those for professors, and those for both parties. While most points can be applied to both parties, some are more one sided than others. However, upon completion of the value proposition canvas, we realized that each pain reliever and gain creator is mutually beneficial to both students and professors.

A detailed view of our analysis can be found here:



Miro Board

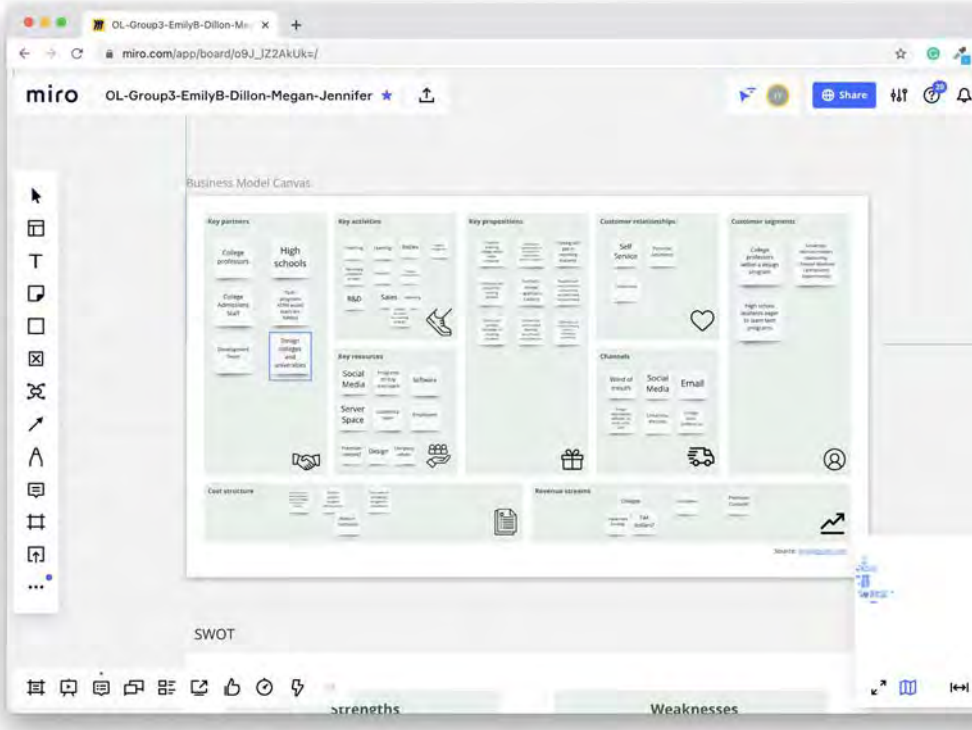
KERN
Business Model Canvas

KERN is a multi-sided platform that is partnered with design universities to address skill gaps they see in their first-year students. By working with instructors to move their content into our virtual platform, we are able to target high school students who might be unprepared for a college program otherwise.

Key activities of the business include platform development / maintenance, sales and marketing to establish university partnerships (who are the payees of the platform), and E&D in terms of delivering on innovative education.

A detailed view of our analysis can be found here:

Miro Board



Key partners

College professors

High schools

College Admissions Staff

Tech programs KERN would teach (ex: Adobe)

Development Team

Design colleges and universities

Key activities

Teaching

Learning

BisDev

Platform management

Purchasing programs to teach

Innovation

Program Development

R&D

Sales

Marketing

Schools purchase our teaching program

Key resources

Social Media

Programs to buy and teach

Software

Server Space

Leadership team

Employees

Premium content?

Design

Company values

Key propositions

Students entering college will be better prepared

Professor's expectations can be higher for students who used our program

Closing skill gap in incoming students

Professors will help refine existing skillsets

Portfolio review / application advice

Students will have access to courses they wouldn't have had otherwise

Stress and anxiety decreases in incoming students

Universities can increase diversity, enrollment, and retention

Universities can make $ (charging students, increasing enrollment)

Customer relationships

Self Service

Personal Assistance

Collaborative

Channels

Word of mouth

Social Media

Email

Design Association's websites Ex: AIGA, IxDA, DMI

Universties Websites

College fairs/ conferences

Customer segments

College professors within a design program

University decision makers (leadership / finance directors / admissions departments)

High school students eager to learn tech programs

Cost structure

Design programs and copyrighted content (ex design programs) to teach

Tech to support program infrastructure

Sales team to evangelize program to universities

Platform maintaince

Revenue streams

Colleges

Subscriptions

Premium Content?

Department funding

Tax dollars?

KERN
SWOT Analysis

Strengths

- Two prong sales pitch for universities:
  - Financially: by meeting enrollment quotas (by generating a pipeline of prospective students). Universities can determine how much to charge students for pre-college program (and when to scholarship)
  - Mission: by increasing diversity (fill skill gap and address education inequality), increasing retention
- Virtual education in high demand due to COVID
- Fewer capacity limitations than traditional in-person programs
- Dramatic cost savings to student or sponsoring university
  - no lodging, meals, transport, etc., compared to traditional in-person programs

Weaknesses

- Slow turn around time to create courses if accredited
  - Rigorous approval process and less flexibility for professor's curriculum design
- Program is not designed to offer 'on-campus' cultural experience that in-person pre-college programs can boast

Opportunities

- Virtual education trend is projected to outlast COVID
- Little competition: there is currently a gap in the market for outsourced virtual pre-college programs

Threat

- Universities that have/will develop the infrastructure to create our platform themselves
  - During COVID, schools are dramatically upscaling their own e-learning at a fast pace
- Completion of our pre-college programs does not guarantee admission or preference into university
  - If participants in our program were overwhelmingly rejected from universities, our sell becomes difficult to make to high school students and universities

Zag: 17 Steps

1. Who Are you?

An EdTech platform connecting high schoolers to college professors

2.What do you do?

We fill the skill gap for high school students entering college to adequately prepare them

(targeting design colleges initially)

3.What's your vision?

To close the skill gap that exists between high schoolers going to college and college expectations

Zag: 17 Steps

4.What wave are you riding?

Ed Tech Wave and self-help

5.Who shares the brandscape?

College prep courses offered by companies and colleges themselves

High schools that are partnered with universities to offer transfer credits for completion of certain courses

EdTech platforms
(there is a gap in the market in terms of combining all three of the above)

6.What makes you the only?

We are specially partnered with universities to identify and fill skill gaps they see in first year students

Our content is highly tailored to help students prepare themselves for a particular college and program

7.What should you add or subtract?

Add: help students understand their options when choosing a school/program and the exact skills they need to address their skill gap + teach them the skills and application/ portfolio review for students applying to schools.

Remove: EdTech features that are not designed for GenZ (high schoolers)

Zag: 17 Steps

8.Who loves you?

Universities who want to increase their enrollment/diversity/ retention

Students who want to learn digital skills that will help them in college to get a head start

Students who need guidance and advice before going to design school, and students without access to specific education

9.Who is the enemy?

Cost of expensive equipment and digital platforms (accessibility) and Lack of digital product skills and knowledge.

10.What do they call you? (Name)

Kern
(in typography it means the measuring point from one letter to another)

11.How do you explain yourself? (tagline)

Close the Gap.

Zag: 17 Steps

12.How do you spread the word?

Word of mouth: College administration, professors, students, teachers, community leaders, and parents

Founders will reach out to schools and stakeholders

Social Media, Universities websites, and Design Association's websites. (Ex: AIGA, DMI)

13.How do people engage with you?

By using our digital platform to connect with educators in universities and gain skill sets needed,

Hosting Events: Virtual and on ground, and Social media: Live sessions and post engagement

14.What do they experience?

Students learn through virtual teachings, teachers teach students certain technical programs,

Students complete courses to gain necessary skills to close skill gap

15.How do you earn their loyalty?

We earn loyalty through consumer's success using the program, staying transparent in business practices, and upholding expectations of both universities and high school students

Zag: 17 Steps

16.How do you extend your success?

We extend our success by listening to input from users

We utilize modern social media such as Tik Tok and Instagram

We work closely with our partners (universities).

17.How do you protect your portfolio?

Branding, transparency, and continuous research on similar programs

A,B,C...Q

A: Meets Expectations

KERN is a EdTech platform that provides virtual pre-college courses to fill the skill gap for high school students entering design universities -making more high schoolers better prepared for their first year.

- We research other colleges and establish partnerships with them to fill the skill gaps they see in their specific programs
- We work with the instructors of these universities to package their courses into impactful learning for GenZ
- We allow universities to charge and/or scholarship students to participate in our platform to meet their own financial and mission-based goals (increased diversity / reduce dropout rates for freshmen)

B: Creates Confidence

KERN is a EdTech platform that helps high school students understand their options when choosing a college and design related major, and shows them the competencies and pre-college courses that a student can pursue at a college to make them an attractive candidate and future student.

- By marketing our platform to high school students, we generate a pipeline of new prospective students to universities
- We provide students with access to feedback from educators on how to present a design portfolio as well as general application tips

A,B,C...Q

C: Creates Anticipation

KERN is a EdTech platform that focuses heavily on research and innovation so that we can deliver educational content in the best format for GenZ (current high schoolers)

- We break from the traditional mold of Learning Management Systems and design courses that are based on the student's whole learning experience (rather than merely setting up individual courses)
- We employ new trends in learning, like gamification
- We use social media for campaigns to meet our high school audience

Q: Recontextualize

Pre-college programs have long been touted as beneficial to both universities and the high school students who attend them. From generating revenue to universities during slow summer months, to investing in the community by outreaching to highschool youth, to doubling the odds that a disadvantaged student will enroll in college, the list of benefits is long.

To meet the needs of today's virtual world, not to mention the necessity during COVID-19, KERN is an EdTech platform that breaks the mold of traditional pre-college programs and offers them online.

We take the work out of packaging content for you, collaborating with your faculty and content to employ the latest in educational methods to meet the needs of today's high schoolers.

With KERN, you can create courses that fill the skill gap that you see with incoming first-year students, and charge and/or scholarship students to your courses as you see fit so that you can meet the specific goals of your university.

Branding (Work in Progress)

KERN:
In Typography Kerning is the measurement of the space between letters.

We were inspired by design and typography and our goal is to close the gap and help students achieve skills that will bring them closer to success.

Tagline:
Close the Gap

Reflection

We began Part Five with the creative matrix to brainstorm features and ideas based on the personas that we have created. Then by using the Value vs. Difficulty chart we categorized our ideas into four categories: luxuries, strategic wins, quick wins, and high value.

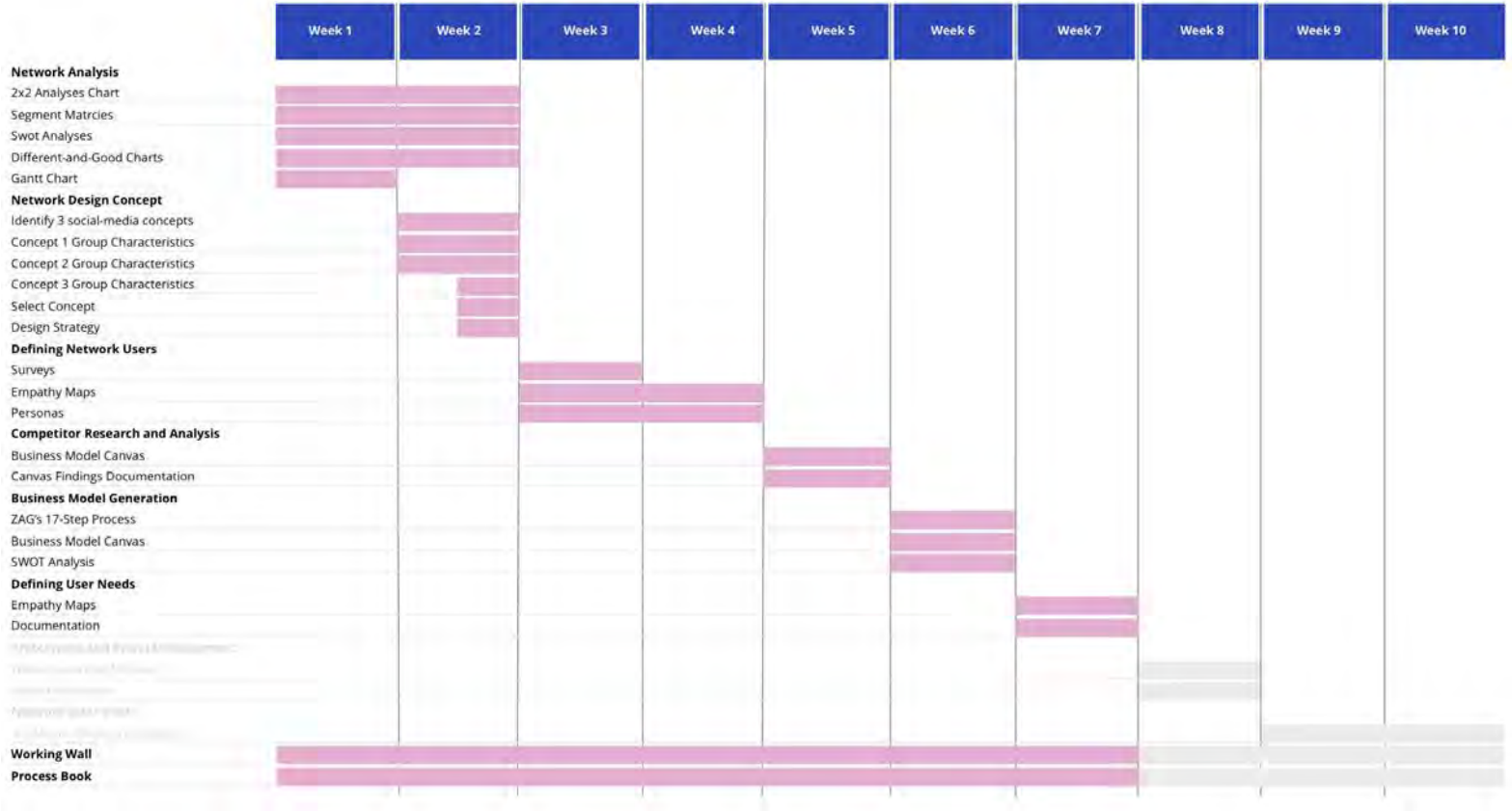
Next, we completed the Value Proposition Canvas and Business Model Canvas, SWOT, 17 Step Zag and ABCQ.

We are in the process of finalizing the branding of KERN.

Part Six will allow us to move these insights and learnings to better define our user needs by reworking empathy maps for our personas.

Part Six
Defining User's Needs

Gantt Chart


Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Network Analysis
2x2 Analyses Chart
Segment Matrcies
Swot Analyses
Different-and-Good Charts
Gantt Chart
Network Design Concept
Identify 3 social-media concepts
Concept 1 Group Characteristics
Concept 2 Group Characteristics
Concept 3 Group Characteristics
Select Concept
Design Strategy
Defining Network Users
Surveys
Empathy Maps
Personas
Competitor Research and Analysis
Business Model Canvas
Canvas Findings Documentation
Business Model Generation
ZAG's 17-Step Process
Business Model Canvas
SWOT Analysis
Defining User Needs
Empathy Maps
Documentation
Working Wall
Process Book

Introduction

The two user groups who will be using the digital products throughout the course will be high school students and professors. Therefore, we decided to focus on these two user groups by updating the empathy maps and creating user scenarios. This led us to two prototypes: one is mobile for high school students and the other is a website for professors.

We did not include university staff in this unit, due to their lack of direct interaction with the platform. Though they remain an important customer and partner to deliver Kern, their primary activity with Kern is in terms of purchasing and coordinating the deployment of the product, not interacting with the digital products directly.

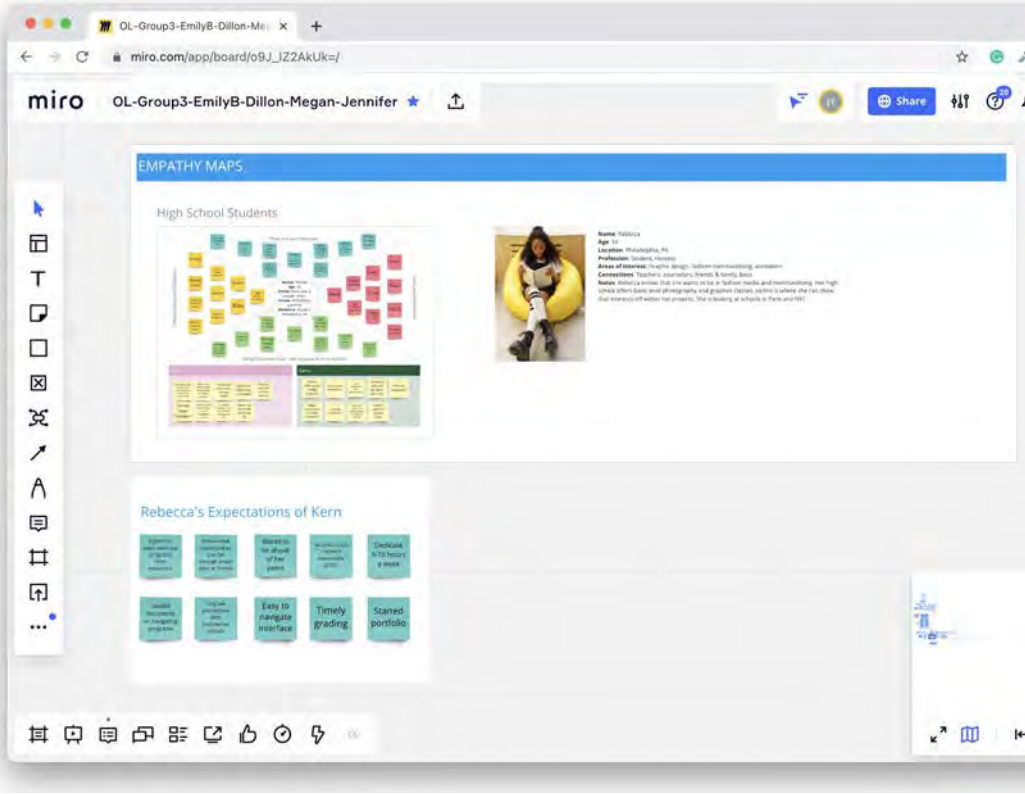
Updated High School Student Empathy Map

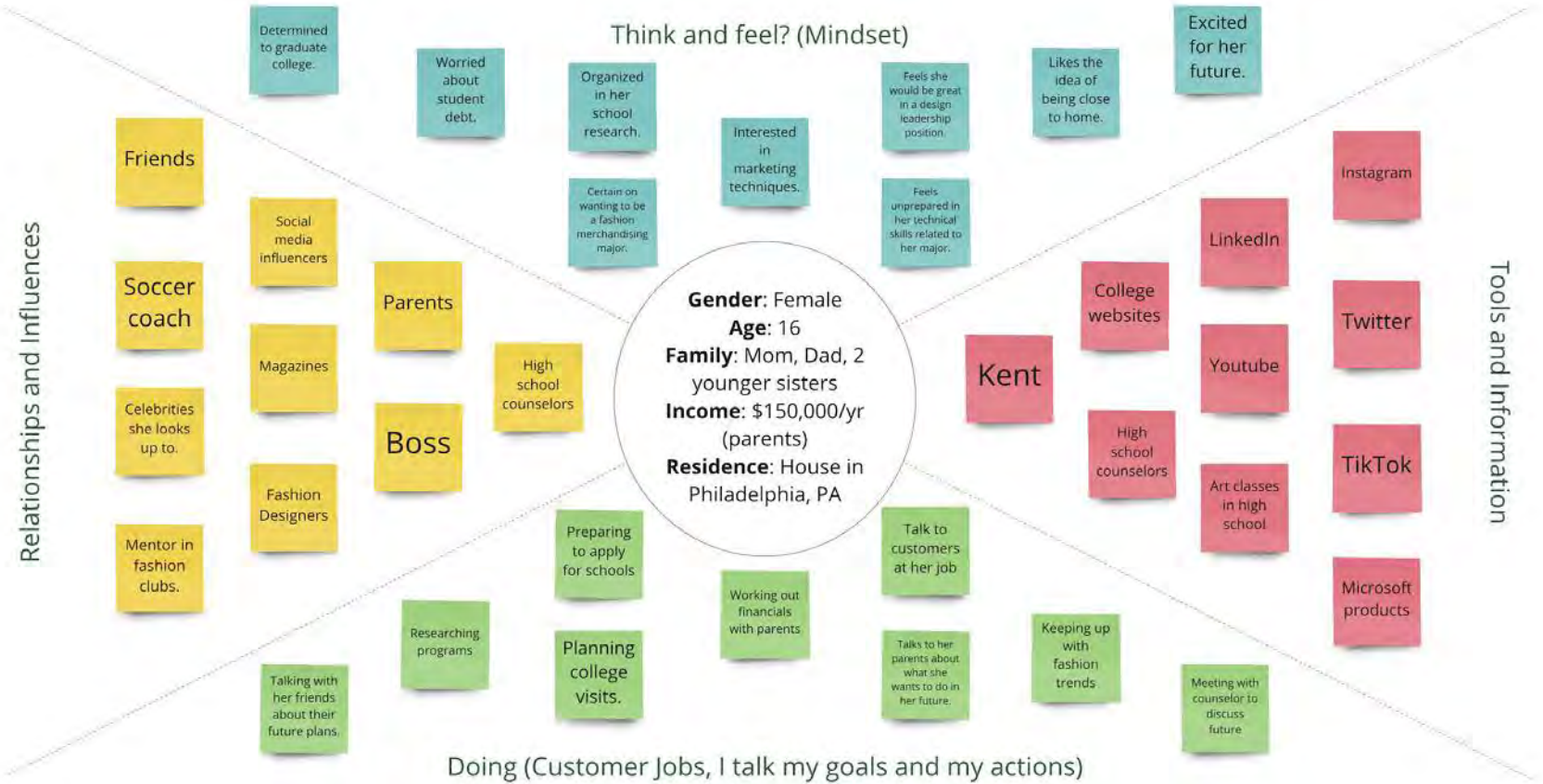
We revisited our high school empathy map to more closely examine this user group's day-to-day and how these activities can specifically relate to our product.

Students have a mixed range of emotions when it comes to college courses. They are **excited**, **nervous**, and want to feel as **prepared as possible**.

We established that high school students are looking to **grow connections** and refine their **technical skills** to better prepare themselves for their prospective career path. They **rely on their current connections to guide decisions**.

Miro Board




Think and feel? (Mindset)
Determined to graduate college.
Worried about student debt.
Organized in her school research.
Interested in marketing techniques.
Feels she would be great in a design leadership position.
Likes the idea of being close to home.
Excited for her future.
Certain on wanting to be a fashion merchandising major.
Feels unprepared in her technical skills related to her major.
Relationships and Influences
Friends
Soccer coach
Celebrities she looks up to.
Mentor in fashion clubs.
Social media influencers
Magazines
Fashion Designers
Parents
Boss
High school counselors
Gender: Female
Age: 16
Family: Mom, Dad, 2 younger sisters
Income: $150,000/yr (parents)
Residence: House in Philadelphia, PA
Kent
College websites
High school counselors
Tools and Information
Instagram
LinkedIn
Twitter
Youtube
TikTok
Art classes in high school
Microsoft products
Preparing to apply for schools
Working out financials with parents
Talk to customers at her job
Researching programs
Planning college visits.
Talks to her parents about what she wants to do in her future.
Keeping up with fashion trends
Talking with her friends about their future plans.
Meeting with counselor to discuss future
Doing (Customer Jobs, I talk my goals and my actions)

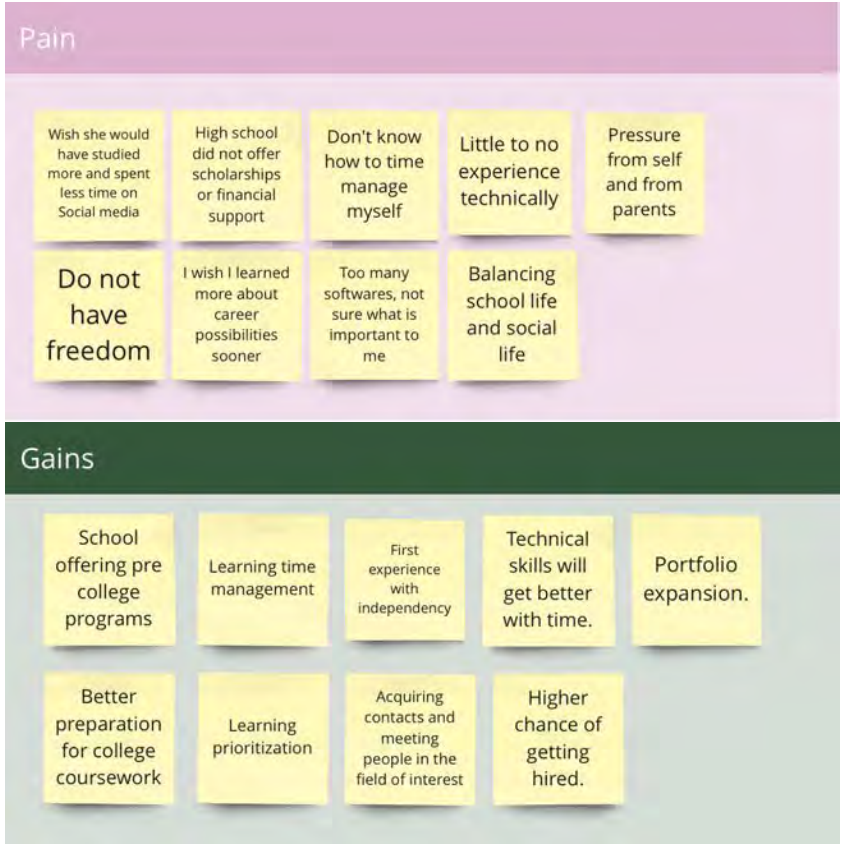
High School Students Pain and Gains

We narrowed in on pains and gains of the high school student user group to identify needs and wins that have relevance to our product.

High school students **do not have the freedom or independence** that they will inherently have once they enter college. With that being said, the **push of their connections** around them (parents, teachers, coaches) can kickstart foundational prioritization skills needed in their later years.

Some students have the **natural drive** to want to better themselves. They value preparation and want to get a leg up on their education. With the use of our product, they will be **gaining technical skills** relevant to their coursework within their majors.

They know that with the right preparation methods taught by the right professors, they will **learn time management**, gain **portfolio building skills**, and grow their **independency**. Kern can be a **guiding tool** for both the students and the professors.

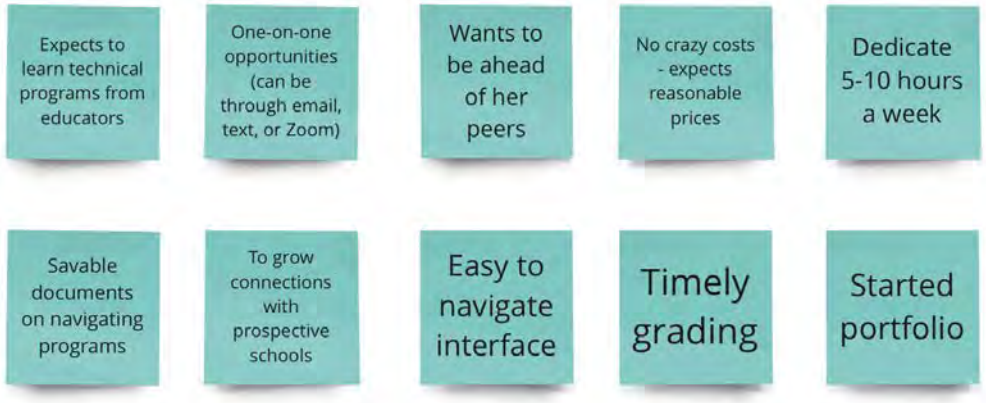


Expectations from High School Student Empathy Maps

Now with a deeper understanding of high school students as a user group, we were able to better understand their expectations of our brand.

EXPECTATIONS OF KERN INCLUDED:

1. An easily navigable interface that speaks to younger generations
2. An opportunity to make connections with prospective schools and their contacts, setting them ahead of her peers
3. Reasonable costs / opportunity for scholarships
4. To complete the program with a more complete portfolio than they entered with



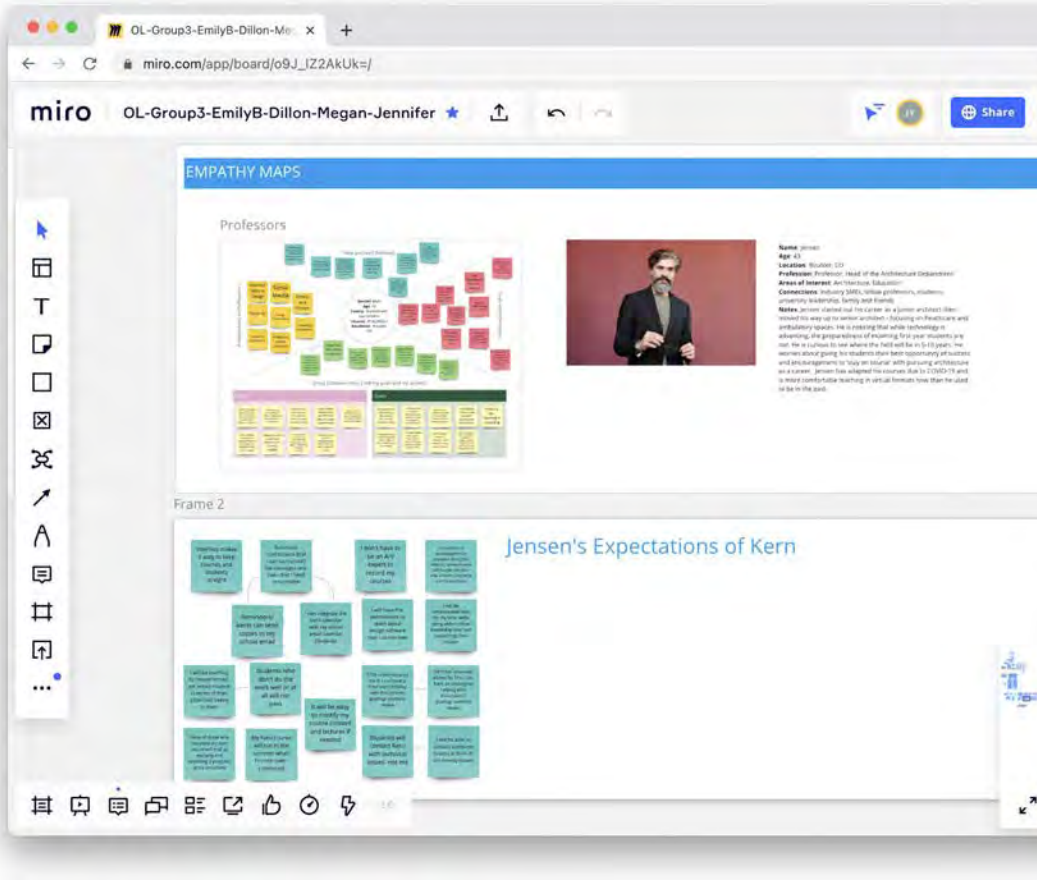
Updated Professors Empathy Map

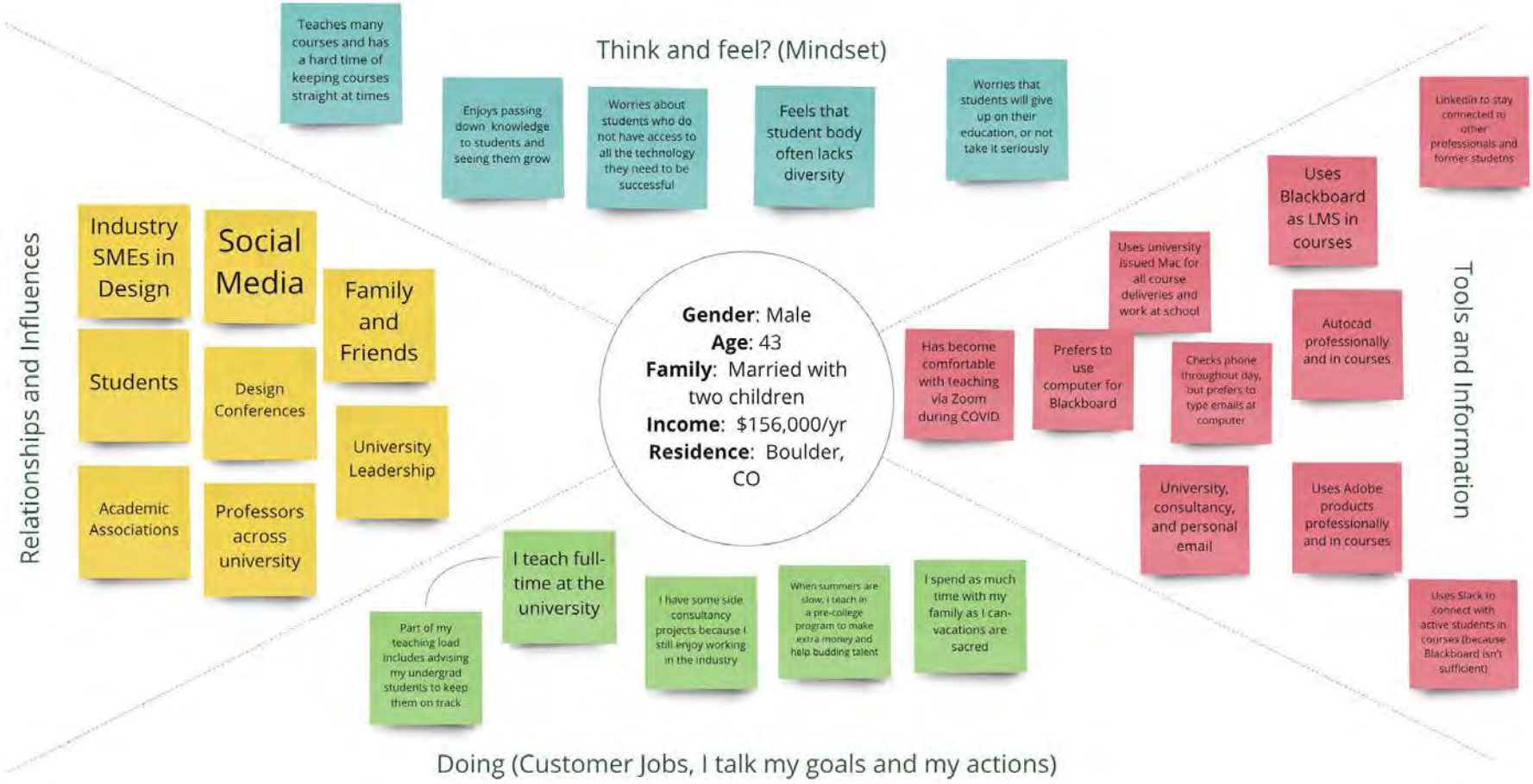
We revisited our professor empathy map to more closely examine this user group's day-to-day and how these activities can specifically relate to our product.

We began to see a pattern of **feeling disoriented** by the number of courses and students being taught, as well as the need to **constantly refresh content**.

We established that professors typically foster **academic professional relationships**, but equally, ties to the **industry and subject matter experts** in the topic the teach.

Miro Board




Think and feel? (Mindset)
Teaches many courses and has a hard time of keeping courses straight at times
Enjoys passing down knowledge to students and seeing them grow
Worries about students who do not have access to all the technology they need to be successful
Feels that student body often lacks diversity
Worries that students will give up on their education, or not take it seriously
Relationships and Influences
Industry SMEs in Design
Social Media
Family and Friends
Students
Design Conferences
University Leadership
Academic Associations
Professors across university
Gender: Male
Age: 43
Family: Married with two children
Income: $156,000/yr
Residence: Boulder, CO
Tools and Information
Uses Blackboard as LMS in courses
Linkedin to stay connected to other professionals and former studetns
Uses university issued Mac for all course deliveries and work at school
Has become comfortable with teaching via Zoom during COVID
Prefers to use computer for Blackboard
Checks phone throughout day, but prefers to type emails at computer
Autocad professionally and in courses
University, consultancy, and personal email
Uses Adobe products professionally and in courses
Uses Slack to connect with active students in courses (because Blackboard isn't sufficient)
I teach full-time at the university
Part of my teaching load includes advising my undergrad students to keep them on track
I have some side consultancy projects because I still enjoy working in the industry
When summers are slow, I teach in a pre-college program to make extra money and help budding talent
I spend as much time with my family as I can- vacations are sacred
Doing (Customer Jobs, I talk my goals and my actions)

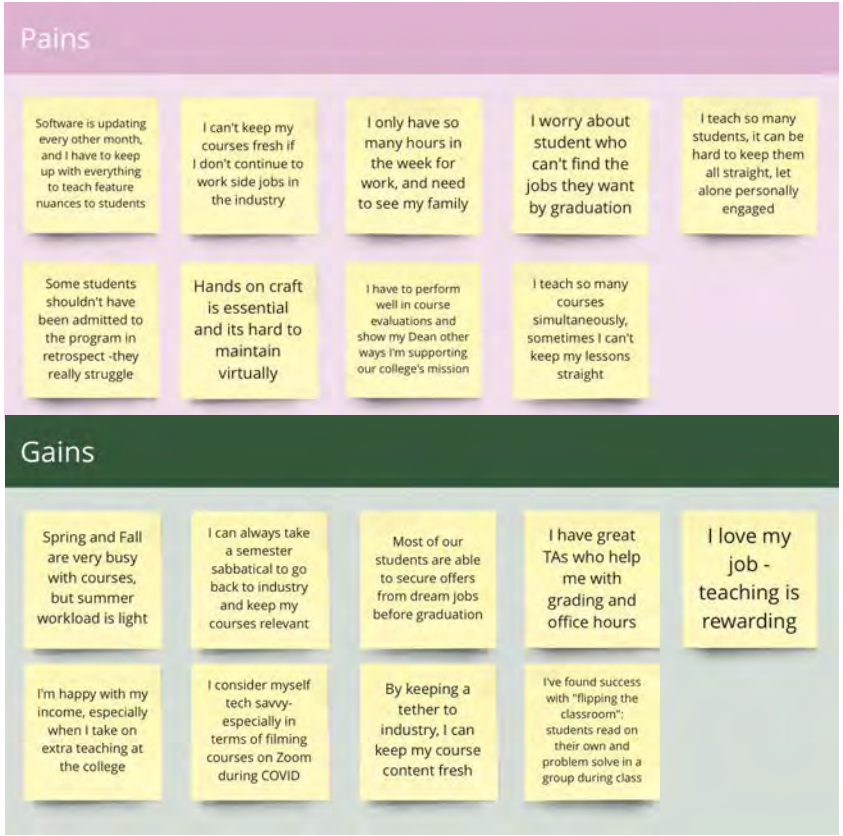
Professor's Pain and Gains

Similarly, we narrowed in on pains and gains of the professor user group to identify needs and wins that have relevance to our product.

Adding to our key takeaways from the empathy map, we found that despite often heavy seasons of workloads, professors report satisfaction in their jobs due to **believing in the mission of their work**, and appreciate the **help they receive from TAs**.

While they value hands on teaching and project work, they have also become **more comfortable with technology and teaching virtually** due to the necessary transition period during COVID-19.

They feel that part of their job is learning and employing **new teaching strategies** like "flipping the classroom" to encourage **meaningful group work** and **want to see their students succeed** by doing well in class and moving on to successful careers in their fields.

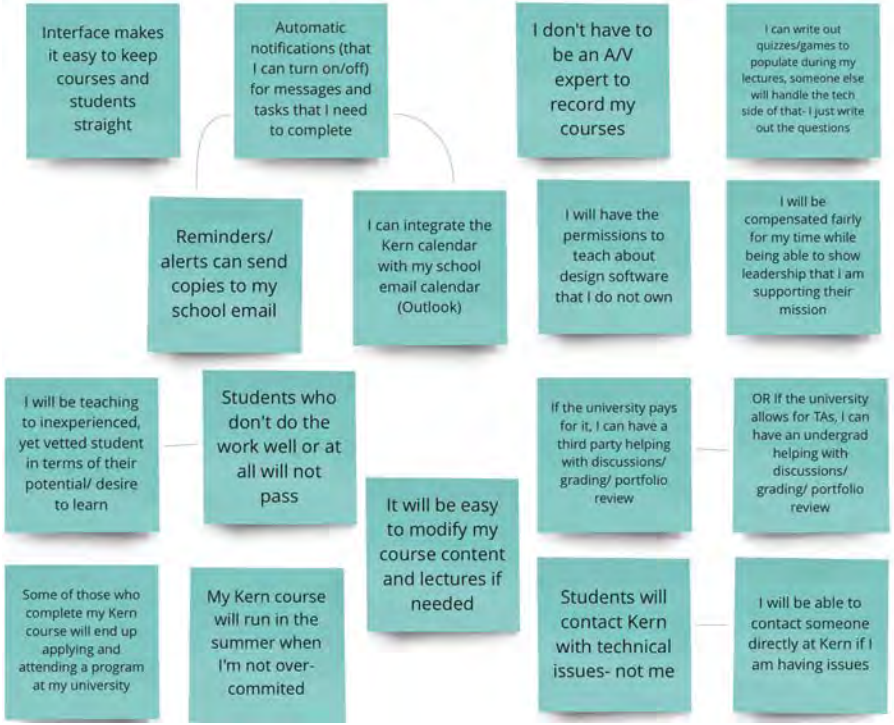


Expectations from Professor's Empathy Maps

Now with a deeper understanding of professors as a user group, we were able to better understand their expectations of our brand.

EXPECTATIONS OF KERN INCLUDED:

1. An intuitive interface to navigate courses and keep student work and interactions straight
2. Automatic notifications from Kern directly to the professor's email
3. A/V and technical support to create and manage Kern courses
4. The ability to teach a Kern course when their schedule permits
5. The ability to hire additional support to manage the course (grading, discussions, scheduling appointments, etc)
6. The permissions to use and teach the software needed for class lessons (ex: Adobe products)
7. Teaching to highschool students who are prepared to learn
8. Teaching to highschool students who are likely to apply to the program the professor teaches at their university



Feature List
from ABC...Qs/ Empathy Map Expectations

MUST HAVE

Classes to prepare students for college work in design majors

Portfolio feature to demonstrate/improve student preparedness

College to partner with for content and professors

A/V and technical support

The permissions to use and teach the software needed for classes

Ability for students to feel connected to colleges

SHOULD HAVE

Features that appeal to Gen Z

Intuitive interface for both students and instructors

Automatic notifications integrated into university and high school student's email
*Structures to ensure timely grading

Flexible scheduling for professors and students

Ability for professors to give feedback to students

COULD HAVE

Gamification aspects

Technology lending programs

The ability for instructors to hire third party assistance as teaching assistants (TAs), or work with TAs at their university

Integration with college LMS's for easy content upload

Marketing campaign targeting high school students

Kern employees specializing in content creation

WON'T HAVE

Courses designed for those outside of design majors (though this will be explored upon success of initial business design)

A guarantee of admission to the colleges by completing the Kern pre-college program

User Scenario 1

Student Signing up and Completing a Kern Course

Name: Rebecca
Profession: Student, Hostess
Areas of Interest: Graphic design, fashion merchandising, animation
Connections: Teachers, counselors, friends & family, boss
Notes: Rebecca knows that she wants to be in fashion media and merchandising. Her high school offers basic level photography and graphics classes, so this is where she can show those interests off within her projects. She is looking at schools in Paris and NYC.

Persona: Rebecca | 16 | Philadelphia, PA

User Goal: Rebecca is a senior but doesn't know where she wants to apply. She is intimidated by the idea of applying for a design program because she hasn't had exposure to similar content in high school and does not have a portfolio.

User Task: To sign up and complete a virtual pre-college program.

Assumption and Dependencies: Eager high school student wanting to learn more about her prospective major


Open the App
Do we need to show this for the prototype?
A question instantly comes up "are you a student or professor?"
Will they have access given to them from Kern, the high school, or the college?
Making an effective mobile interface.
Outline the experience in quick bullet points.
The graphics should be clean and easy to follow.
Create Account/ Set up bio
Do we need to show this for the prototype?
Do NOT ask for payment during this step.
Will there be different types of student accounts (i.e. graphic design, marketing?)
Have a section for personalized interests that are open to see from professors.
Include information on background for scholarship consideration from universities
Include section for academic/volunteer/ work experience
Include a section where students can upload current portfolio samples (which can be updated as they learn from KERN)
Select Location
Prefill?
Could we show job opportunities in the area based on the location?
Give a synopsis of the area. Demographics, climate, etc.
Page makes it clear that you to do not have to take a KERN course based on your current location
Select Major
How many majors are we suggesting?
Dictate list of options based on partner schools
Show examples of people in the professional world that graduated with the same degree.
Show examples of general careers (with descriptions and pay info) you could get into with that degree.
Layout general coursework that major will require
Layout general coursework the KERN course offers
Select Classes
Dictate list of options based on partner schools
Recommended classes based on interests
Give recommendations on how many you should take based on current workload
Clarify if registration in certain classes come with registration to programs such as Adobe, Autocad, etc.
Will they have help from other people such as teachers at their high school?
Clarify if registration in certain classes come with materials or will need to be purchased supplementally
Pricing info
Ability to search for classes by university
Show course duration/ Estimated weekly hourly commitment
Application/ enrollment deadline
Apply to Participate in Classes
Option 1: skip application if not required (free class with limited features)
Option 2: apply for a course that requires application
Option 2b: apply to be considered for sponsorship from university (based on your bio/portfolio)
Add any more info to the sponsorship application process. (Essay? Transcripts?)
Enroll in Classes
What will the enrollment process look like?
Recommended classes based on interests?
There should be a set grace period of unenrollment.
What if a student is waiting to hear if they are scholarshipped before they want to commit to course?
Should have an option to be waitlisted
How will we cap registrations in a course
Payment
Option 1: Pay and enroll
Option 2: Enroll w/o payment (if it's a free KERN course)
Make it free for students and have revenue coming from colleges?
Option 3: Apply for scholarship from university (if available)
Open 4: Enroll in a free course w/ limited features (if university sets it up)
Watch Lecture
Any ways to increase engagement during a video?
I think we know the answer, but is a video the best way to show this content?
Closed captioning on videos.
Possibility of ASL instructor versions.
Will the lectures have the option to save?
Should we give students pre-written outlines to fill in?
Gamified quizzes during interspersed during lecture?
Written toolkit/ takeaways after viewing lecture?
Complete Projects
Gamification aspect?
Will there be some kind of peer review?
Projects should have aspects of real elements (i.e. a local building looking to renovate)
A presentation aspect to help prepare for future presentations they will have to do.
Show passed projects v. projects that need work.
Should professors have office hours?
Submit Final Work
How can we improve on the idea of submitting work?
Who is reviewing?
Are they submitting to Kern or to colleges?
Are we going to review proper portfolio techniques?
Posting examples of good portfolios v. not so effective ones
How do we ensure they are getting some kind of one-on-one experience?
(Optional?) Portfolio Review Process
How can we improve on the portfolio creation process?
These students likely haven't created a portfolio before
Giving them tips for success in portfolio work beyond their time at Kern
Encourage the students to create social media for their design work
Encourage students to create a website.
This could be an extra charge option aside from the courses.
Professors or maybe alumni would get paid extra fees for this because it wasn't be included in the course package
Earn Certificate
Smooth process from sending Kern certifications to universities
University admissions compares Kern completions against applications / follows up with students who haven't applied as appropriate
Provide students w/ crucial contacts to students (i.e admissions)
Students have ability to download certificates so that they can add it to their resume for other purposes (or perhaps applying to jobs at other universities)
User Task
Comment or Question
Idea
Opportunity for Improvement

Wireframes
Student - Mobile

Kern Application is designed for high school students to access courses quickly.

User Scenario 2
Professor Creating and Managing a Kern Course

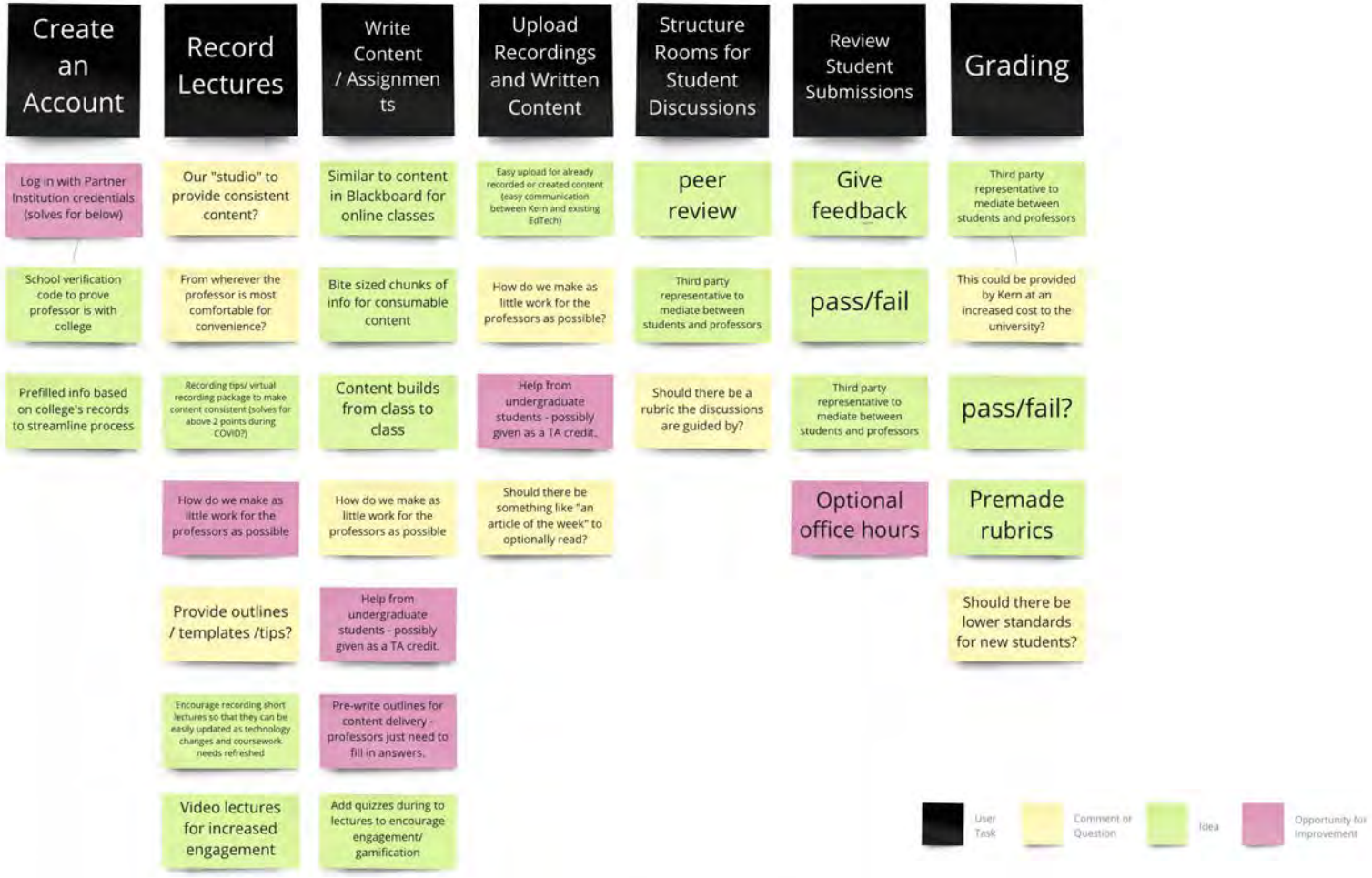
Name: Jensen
Areas of Interest: Architecture
Profession: Professor, Head of the Architecture Department
Connections: Teachers, counselors, friends & family, boss
Notes: Jensen started out his career as a junior architect then moved his way up to senior architect - focusing on healthcare and ambulatory spaces. He is noticing that while technology is advancing, the students are not. He is curious to see where the field will be in 5-10 years. He worries about the graduation rates.

Persona: Jensen | 43 | Boulder, CO

User Goal: Wants a higher graduation rate while helping prepare students in their respective career choices.

User Task: To create a pre-college program course in Kern.

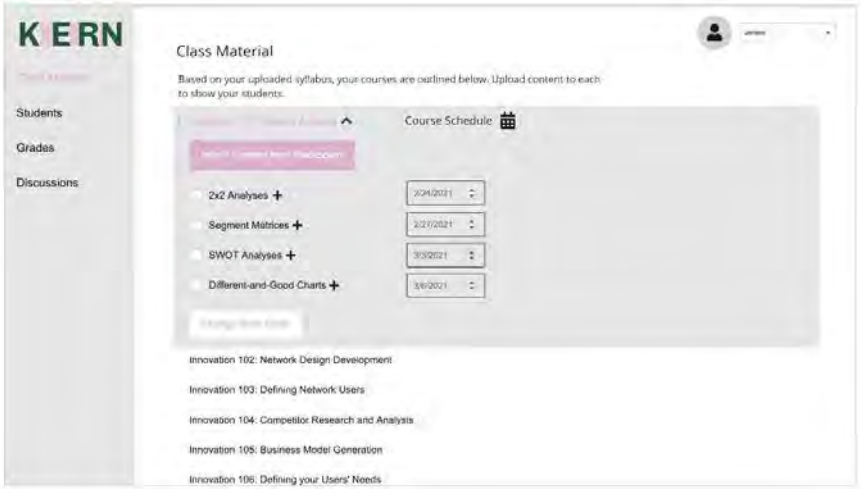
Assumption and Dependencies: Professor, Head of the Architecture Department.


Create an Account
Record Lectures
Write Content / Assignments
Upload Recordings and Written Content
Structure Rooms for Student Discussions
Review Student Submissions
Grading
Log in with Partner Institution credentials (solves for below)
Our "studio" to provide consistent content?
Similar to content in Blackboard for online classes
Easy upload for already recorded or created content (easy communication between Kern and existing EdTech)
peer review
Give feedback
Third party representative to mediate between students and professors
School verification code to prove professor is with college
From wherever the professor is most comfortable for convenience?
Bite sized chunks of info for consumable content
How do we make as little work for the professors as possible?
Third party representative to mediate between students and professors
pass/fail
This could be provided by Kern at an increased cost to the university?
Prefilled info based on college's records to streamline process
Recording tips/ virtual recording package to make content consistent (solves for above 2 points during COVID?)
Content builds from class to class
Help from undergraduate students - possibly given as a TA credit.
Should there be a rubric the discussions are guided by?
Third party representative to mediate between students and professors
pass/fail?
How do we make as little work for the professors as possible
How do we make as little work for the professors as possible
Should there be something like "an article of the week" to optionally read?
Optional office hours
Premade rubrics
Provide outlines / templates /tips?
Help from undergraduate students - possibly given as a TA credit.
Should there be lower standards for new students?
Encourage recording short lectures so that they can be easily updated as technology changes and coursework needs refreshed
Pre-write outlines for content delivery - professors just need to fill in answers.
Video lectures for increased engagement
Add quizzes during to lectures to encourage engagement/ gamification
User Task
Comment or Question
Idea
Opportunity for Improvement

Wireframes
Professors - Web

The user flow Kern website is designed for professors to easily upload content and grade easily.

Class Material



Grades

Reflections

We began Part Six by looking back on our previous empathy maps, how we can refine them to be parallel with our prospective product, and where we will grow based on current pain points within KERN.

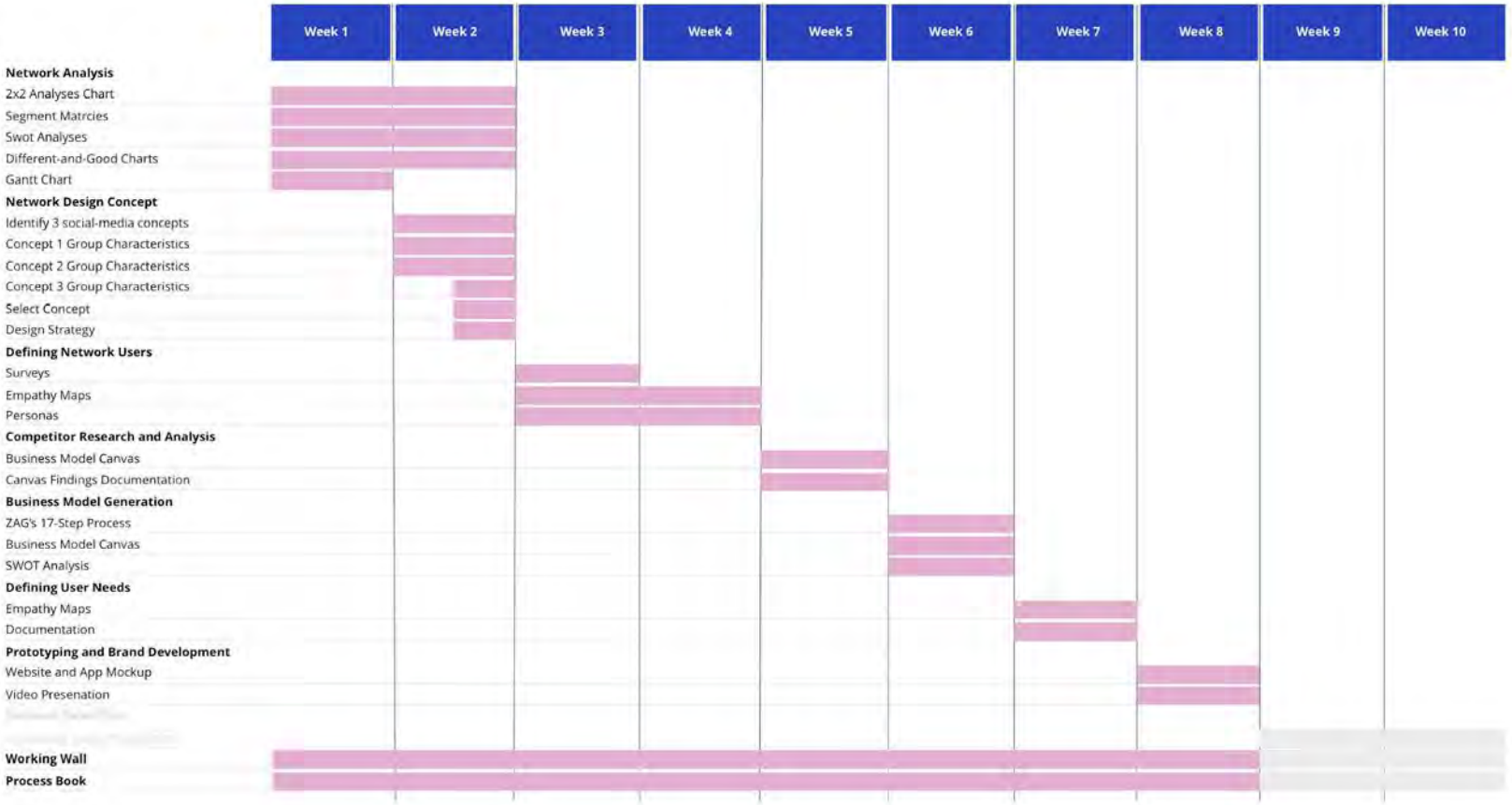
The branding of KERN is nearly finalized. Putting the product with a brand gives it characteristic depth and puts a name to the project face we have been curating over the past 7 weeks.

Prototypes of the interfaces were created to visualize the written content. The emphasis of navigation is important to both of our main user groups.

Part Seven will be focused on finalizing our interface and developing who KERN is as a brand.

Part Seven
Prototyping & Brand Development

Gantt Chart


Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Network Analysis
2x2 Analyses Chart
Segment Matrcies
Swot Analyses
Different-and-Good Charts
Gantt Chart
Network Design Concept
Identify 3 social-media concepts
Concept 1 Group Characteristics
Concept 2 Group Characteristics
Concept 3 Group Characteristics
Select Concept
Design Strategy
Defining Network Users
Surveys
Empathy Maps
Personas
Competitor Research and Analysis
Business Model Canvas
Canvas Findings Documentation
Business Model Generation
ZAG's 17-Step Process
Business Model Canvas
SWOT Analysis
Defining User Needs
Empathy Maps
Documentation
Prototyping and Brand Development
Website and App Mockup
Video Presenation
Working Wall
Process Book

Introduction

In this unit, our group referred back to our personas, empathy maps, and class feedback to create a mood board and fine tune our branding.

With our two user scenarios and wireframes established from the previous unit, our group was able to prototype our two user scenarios:

1. A student signing up and completing a Kern course
2. A professor creating and managing a Kern course

Branding - Moodboard

We used this mood board to brainstorm visuals, typography, colors, and interactions.

Branding - Summary

ROLE OF THE BUSINESS MODEL CANVAS:

As presented in Part Five, Kern is a multi-sided platform for both students and universities (including their instructors who will teach on the platform). In keeping with our Business Model Canvas' Key Propositions, it is important that Kern fosters simplified access to training in design skills, and that the user experience for both students and instructors does not contribute to any feelings of anxiety or overwhelmingness.

Our previous SWOT analysis had identified the creation of in-house university pre-college platforms to be an external threat to Kern.

ROLE OF AESTHETICS:

To combat this threat, it is important for Kern users to know that they are interacting with a well-thought out product with a **clean**, **polished** aesthetic. Functionally, it is important that both student and instructor interactions with our platform are found to be **simple** and not reliant on tech support to complete a task.

Our moodboard exercise also pointed us to the need for Kern to tap into students' feelings of eagerness and excitement when thinking about their future college careers and the preparation required to get them there. We understood that it would be important to establish a color scheme that was both **fun**, but also **calming** to be enjoyable.


KERN

Branding - Logo

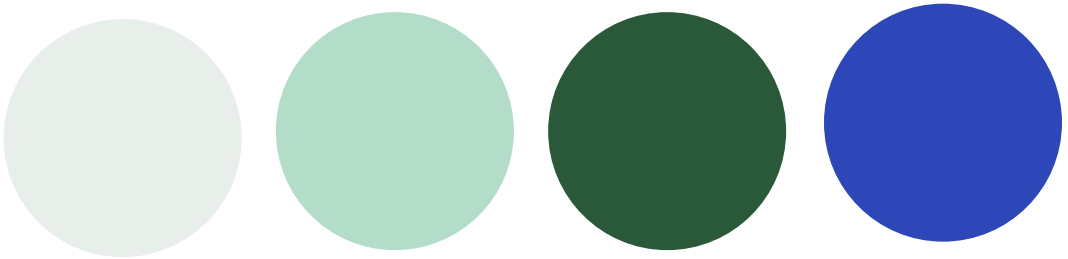
KERN:
In Typography, Kerning is the measurement of the space between letters.

We were inspired by design and typography and our goal is to close the gap and help students achieve skills that will bring them closer to success.

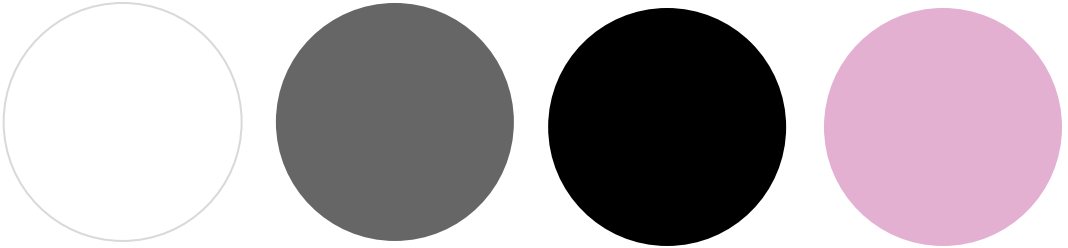
Tagline:
Close the Gap

Branding - Color

Primary Palette:



Secondary Palette:



Prototype -
App for Students

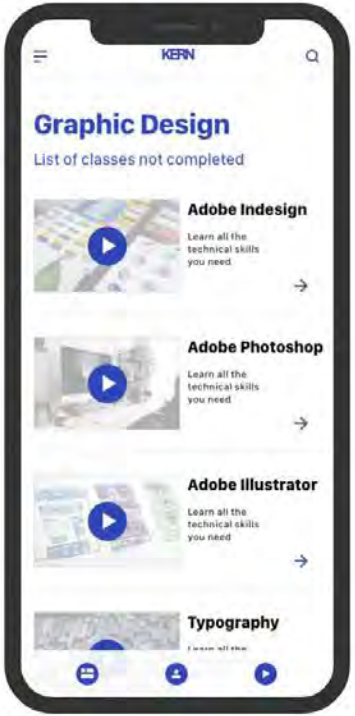
The features we decided to prototype for the students application are: selecting a major, selecting classes, processing payment, watching a lecture, uploading and submitting final work and portfolio projects, and earning a certificate of completion.

Prototype - App for Students

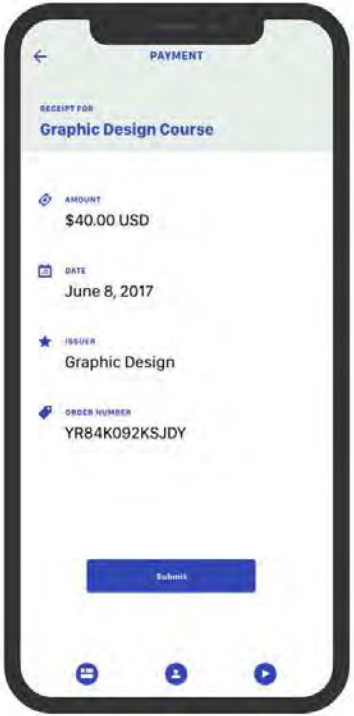
Welcome Screen

Select Major

Select Classes



Payment

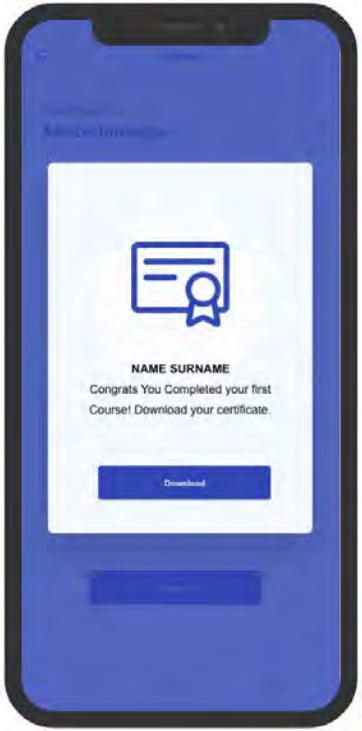


Prototype - App for Students

Class

Upload

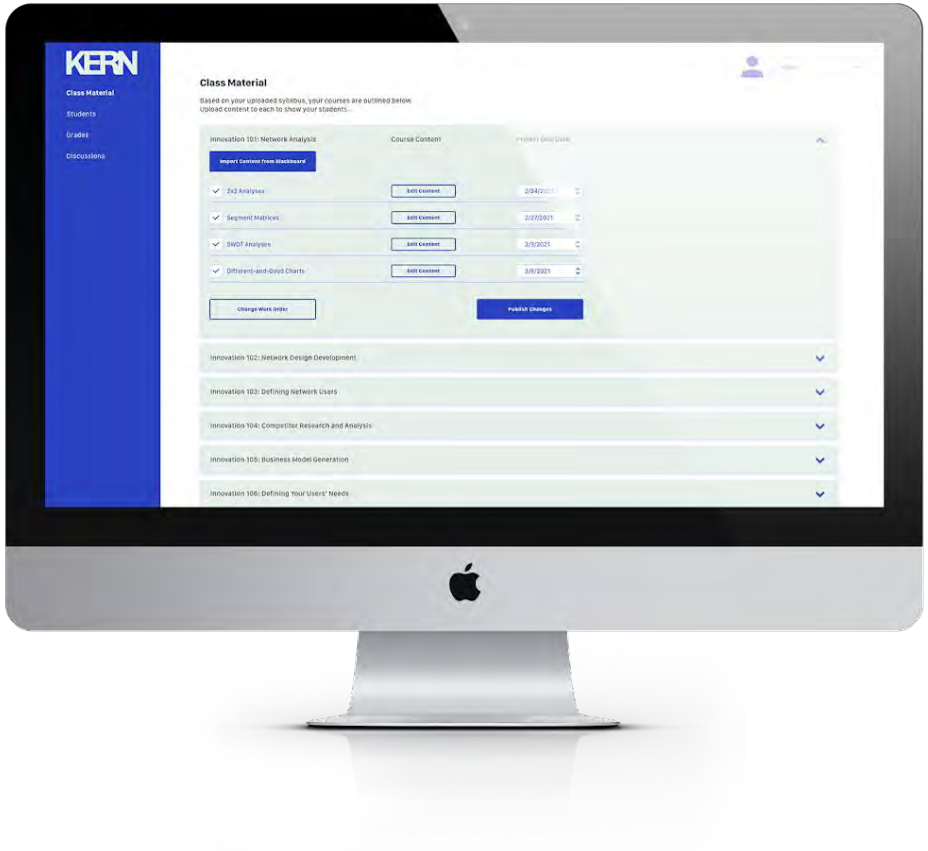
Certificate



Prototype - Website for Professors

UPLOAD:
Once logged in, Kern has created a user-friendly and easily navigable interface for professors to create and post lectures.

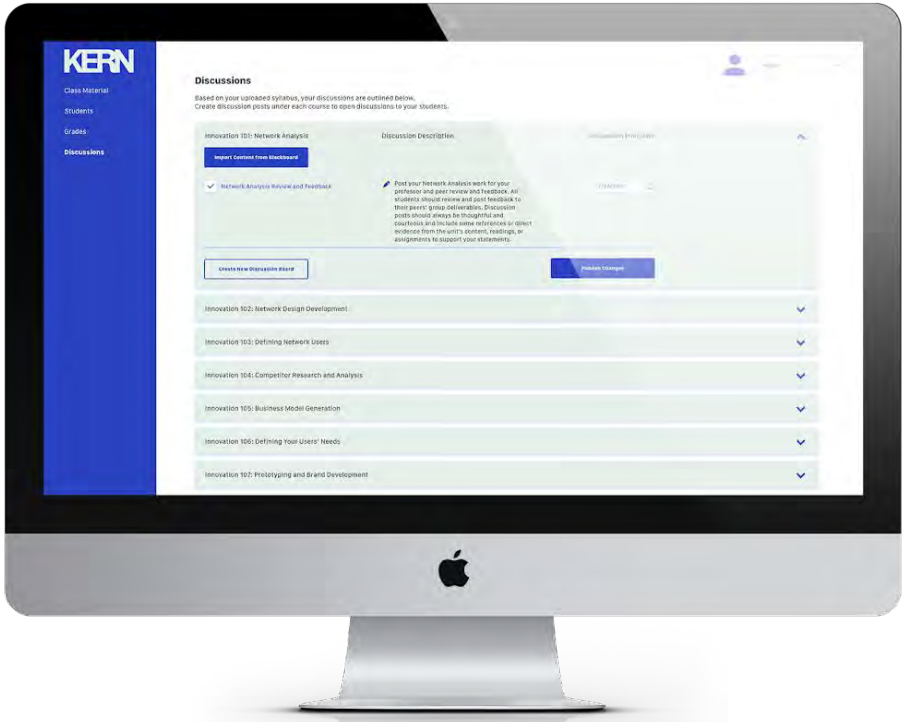
This prototype shows that they can easily import content required for these courses, either directly through Kern or through the easy upload from Blackboard for participating schools.



Prototype - Website for Professors

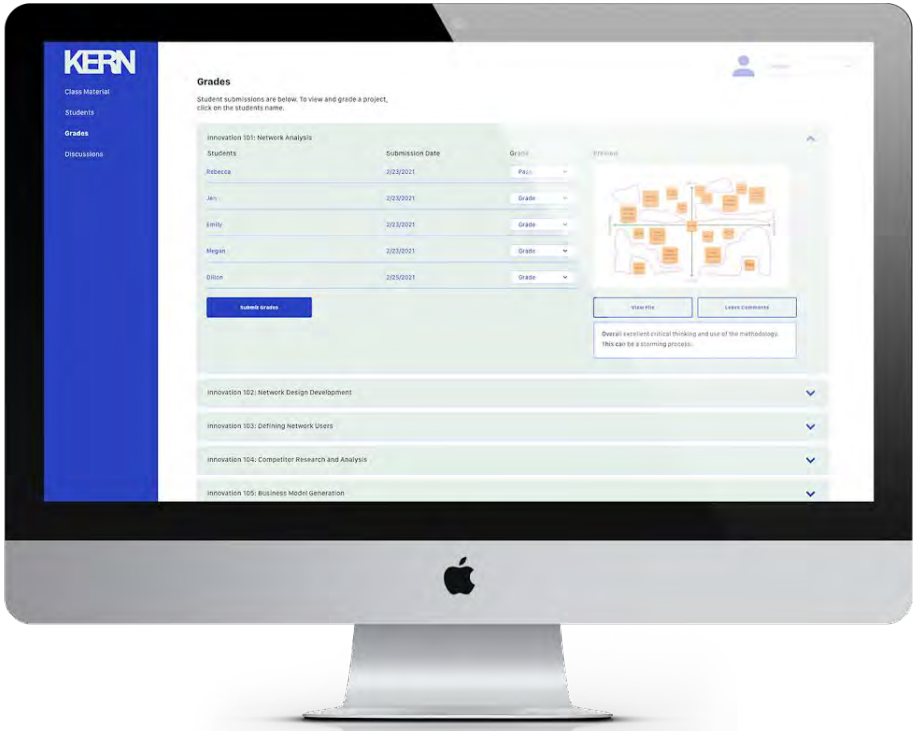
DISCUSSION:
The professors will also have access to oversee discussion posts between peers and work with a third party mediator.

These discussion posts can also be uploaded from Blackboard if they're the same posts used for college level courses.

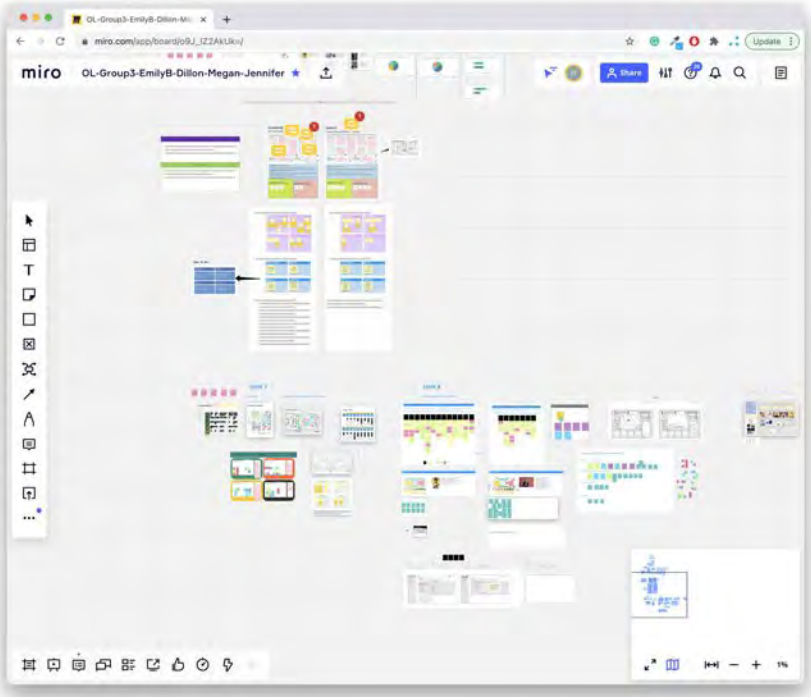


Prototype - Website for Professors

GRADING:
Professors will then be able to track student work, grade projects, and help students build their portfolios.



Working Wall



We recorded our prototyping process in detail on Miro.

Miro Board

Next Steps

With our prototyping and brand development completed, our group is now preparing our final sales pitch.

We will again review our product features and benefits to introduce Kern to our audience- those who would invest in our product.

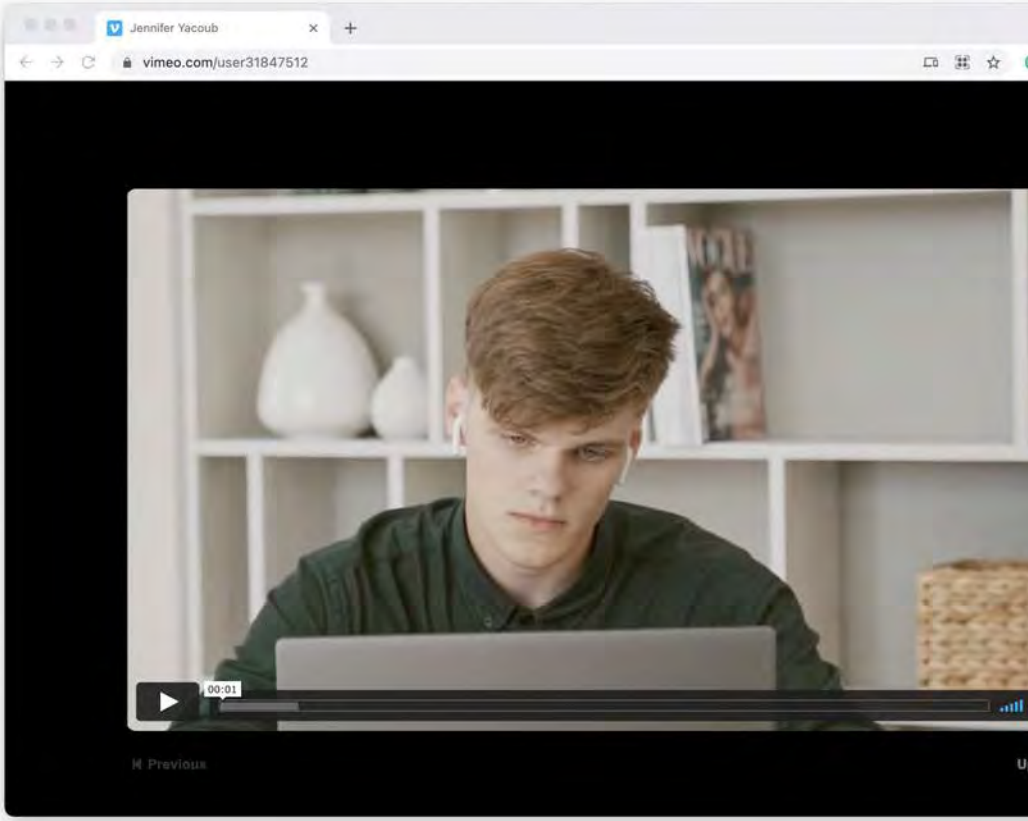
Part Eight
Network Sale Pitch

Conclusion

Kern wants to create an interactive experience for users that fosters growth for students while they learn about their major of interest.

Passionate professors are the reason Kern can cultivate and thrive.

Video



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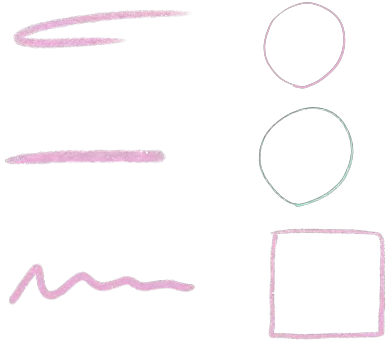
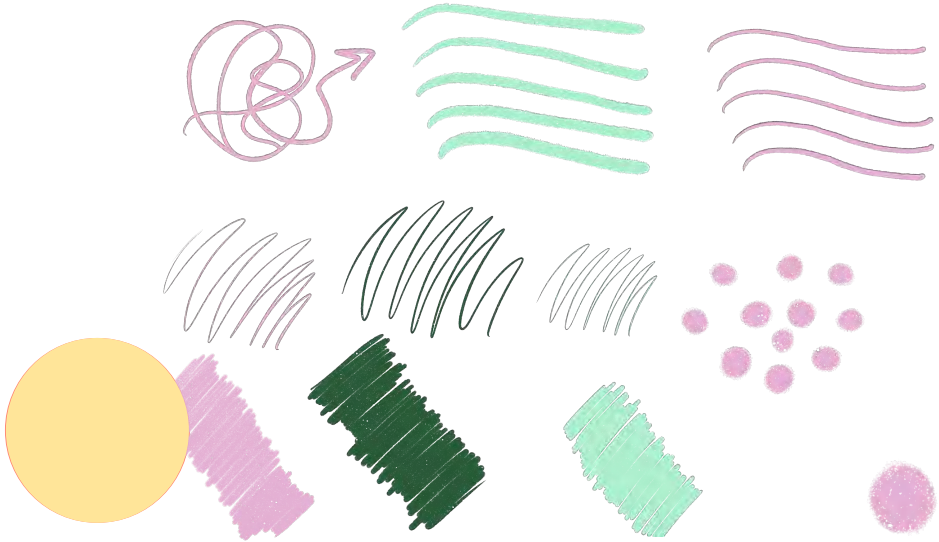
Design Elements (do not include in PDF)

Header - MerriWeather

Body - OpenSans Normal





A,B,C...Q

KERN

A: Meets Expectations

KERN is an EdTech platform that partners with universities fills the skill gap for high school students entering college and adequately prepare them.

Products and Services:

- Teach students certain technical programs
- Students learn through virtual teachings
- Apply these learned skills to their prospective college
- Students begin to learn the technical programs within our platform
- Prospective college students feel prepared to enter their programs
- Students have learned necessary skills to start jobs in their field

Infrastructure and Channels:

- Research what other colleges are doing
- Access codes purchased or given to them through their desired university
- More diverse student body to teach to

B: Creates Confidence

Products and Services:

- Students continue gaining knowledge and skills in desired subject matter
- SEO site
- Students decide what they want to study in college
- Skill gap has been closed
- Extend offerings based on past success of program
- Contemplate their current classes to ID student skill gaps

Infrastructure and Channels:

- More incoming students with better suited skill sets
- Have some design projects ready for college portfolios
- receive feedback from educators on how to present a portfolio/ application tips
- Understand what skills are most important for their desired future major
- Sign up for partnership
- Prospective student numbers will rise
- Self help to fill the skill gap

A,B,C...Q

KERN

C: Creates Anticipation

Products and Services:

- Establish list of schools to apply to
- Create overlap between skills learned and skills to be learned
- Cross reference requirements for students with course offerings to find weaknesses
- Access to computer labs with installed design programs
- Tap into a more diverse set of future applicants

Infrastructure and Channels:

- Using Social Media for campaigns
- Partnerships with high schools and universities

Q: Recontextualize

Products and Services:

- Teachers recommend the program to students
- Achieve certificate with all the programs completed
- Incentives for high schools
- Connect and chat with educators
- Complete accredited courses to gain necessary skills to close skill gap
- Students finish the course with program skills
- Create virtual classes
- Build list of requirements for incoming students

Infrastructure and Channels:

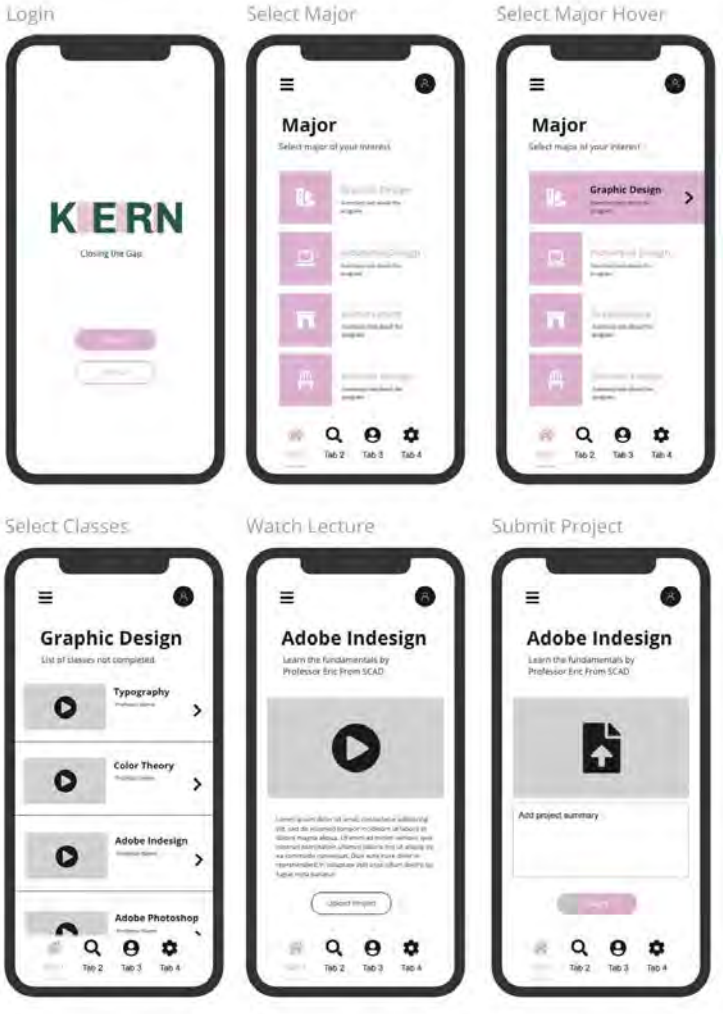
- Social media influencer partnerships to normalize setting goals
- Kern reach out to potential collaborators

Survey Results
High School Students

On a scale of 1-4, how prepared do you feel to go to college?

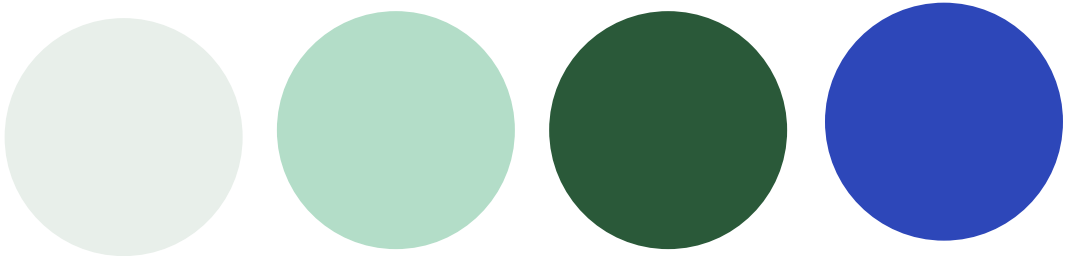
On a scale of 1-4, how prepared do you feel to go into your desired career straight out of high school?

Do you know what you want to study in college and pursue as a career?



Branding - Color

Primary Palette:



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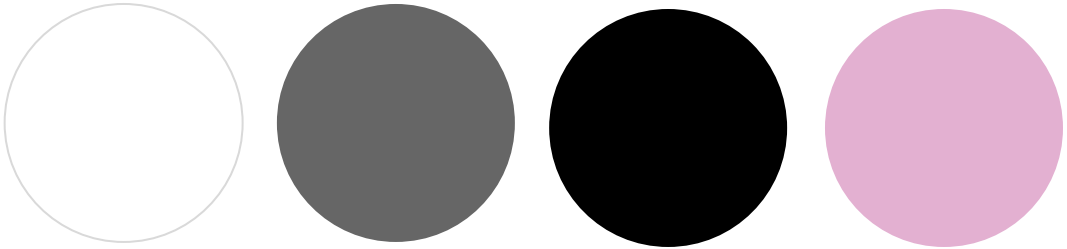
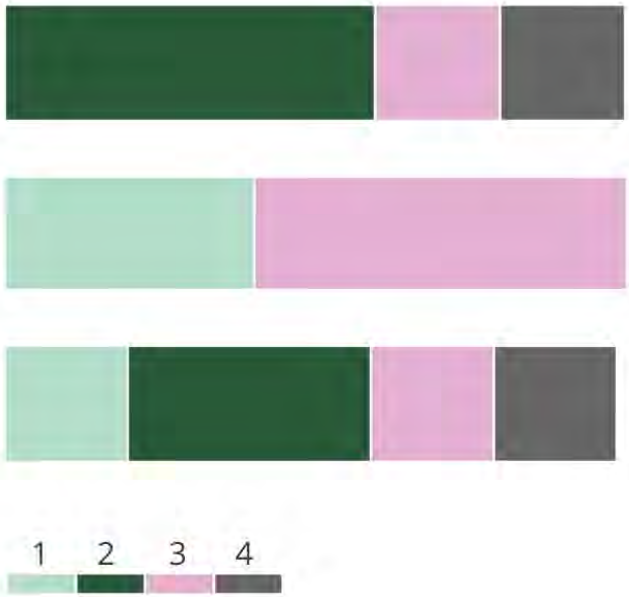


Survey Results
Underclassman Design Students

On a scale of 1-4, how prepared did you feel coming into college?

On a scale of 1-4, how prepared technically did you feel coming into college? (Software knowledge, fundamentals of your program)

On a scale of 1-4, how effectively have your previous college classes (if you've had any) prepared you for your future classes?



Feature List
from ABC...Qs/ Empathy Map Expectations

Must Have (at minimum): Classes to prepare students for college work, portfolio feature to show student preparedness, college to partner with for curriculums and standards, professors from partner colleges

Should Have (would enhance product): Ability for professors to give feedback to students, engaging content for students, third party mediator for decreased professor workload, free classes for students to try out classes in different interests, classes throughout the year to accommodate student schedules

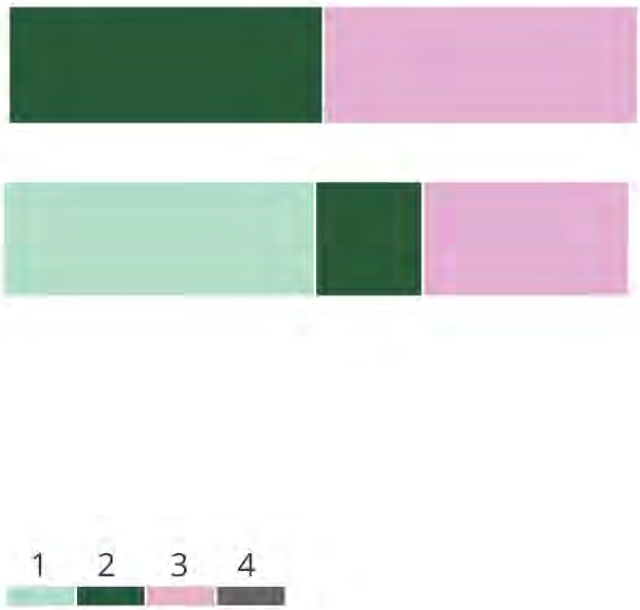
Could Have (future): Integration with college LMSs for easy content upload, gamification features to further engage students, marketing campaign targeting high school students, Employees specializing in content creation,

Won't Have:

Survey Results
University Professors

On a scale of 1-4, how prepared are your underclassman students entering college?

On a scale of 1-4, how prepared technically are your underclassman students? (Software knowledge, fundamentals of your program)



Survey Results
University Staff

On a scale of 1-4, how prepared are your underclassmen entering college?

On a scale of 1-4, how prepared technically are your underclassman students? (Software knowledge, fundamentals of your program)

DRAFT -

For actively performing musicians and event planners who need to construct sound tracks or set lists, (our) this software product will reduce the time spent on preparation for performances and will put control of the audience's experience of performances into the hands of the performers or planners.

We do this by building from the Music Genome Project popularized by Pandora. The program will catalog each song in a performer's repertoire based on a multitude of attributes, and generate set lists of ideal variation and emotional impact over the duration of the set.

Unlike other methods of generating set lists—including set-list software products, which simply store song names and notes about them in a static database—(our) this product uses a complex algorithm that takes into consideration all the factors needed to create the ideal set for each performance. The number of critical factors is too numerous to be retained by human working memory. This product will increase musician productivity and quality and enhance the audience experience. Both of these outcomes will lead to an increase in attendance at live performances, which ultimately contributes to the viability of music as a career and the sustainability of musicians—the purveyors of emotion.