How to investigate the self to be a more empathetic designer

What happens when identity becomes the centerpiece of the design thinking process?

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ABSTRACT

From observing students in classes over the past few years and prior course evaluations we found that our students are distracted, busy, anxious, and extrinsically motivated. This insight helped us to empathize with students and identify their mindsets in order to begin planning an upper-level graphic design course for the 2020 spring semester. We hypothesized that if we taught students the Design Thinking process with their identity and socially constructed reality as the centerpiece, that it would shift students' motivation from being extrinsically to intrinsically motivated and solve the other mindset issues.

Guiding students through the Paseo Protocol along with exercises from the d.School at Stanford, we helped them discover and understand their identity and socially constructed reality. Using this understanding we had students find design opportunities around their values. We then engaged students through the hexagons of design thinking to empathize, ideate, define, prototype, and test their ideas with the community they belonged to.

Our process encouraged students to consider the marginalized parts of their identity and amplify those as a focus of the projects. As they were a part of the demographic in the value area they were researching, they had insight into the problems and could test assumptions and effectiveness with similar user value groups through user interviews and prototype testing.

Incorporating elements of sociology, psychology, and communication theory made this semester truly interdisciplinary and engaging — in-person and online. Throughout the course, we saw students grow as individuals and designers making connections between their own identities and realities and the overlap with the users they were designing for/with. By designing solutions for/with a community the student was in, they avoided the academic savior complex and were personally connected to the project. They built valuable skills by learning about themselves, how to navigate complexity, motivation, and working with users.

Keywords: Identity, Design Thinking, Design, Pedagogy, Quarantine, Teaching, University, Students, Drake University

Introduction

Picture it, Des Moines, January 2020.

We — Neil Ward, Assistant Professor of Graphic Design and Lisa Rossi, Journalist turned Design Thinker — are brainstorming how to organize and teach an upper level team-taught graphic design course for the Spring semester of 2020. The course in question is ART 116: Content and Audience with 13 junior and senior graphic design students. A required mid-level graphic design course that focuses on research and analysis in relation to specific audiences and contexts to produce appropriate content that connects with the demographic.

As sunlight filled the freshly painted, carpeted, and redesigned studio in Carnegie Hall on Drake University's campus we engaged in the first hexagon of Design Thinking (DT) (figure 1). From observing students in other classes and reading prior course evaluations we found that our students are distracted, busy, anxious, and extrinsically motivated. This insight helped us to empathize with students and identify their mindsets (figure 2). The more we talked about how to guide students through the DT process the more we were able to define our problem as shifting students' motivation from being extrinsically motivated to being intrinsically motivated. By doing this, we felt the other mindset opportunities would naturally resolve themselves.
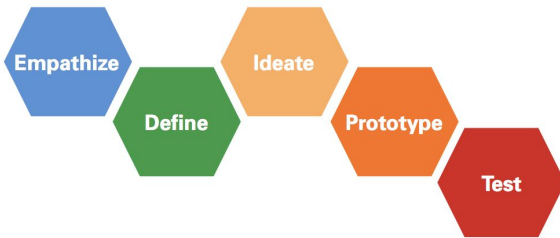

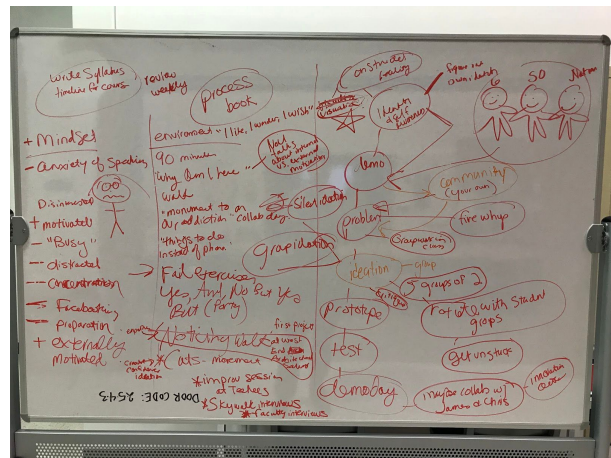Figure 1 - Design thinking process from Institute of Design at Stanford

Figure 2 - Brainstorm session on student mindset opportunities.

Moving to ideation we saw an area of opportunity to include a 6th hexagon: Identity (figure 3). This addition would blend our problem statement along with many critiques of DT; that it is linear, is intended to design for and not with a user, and lacks a feedback loop.
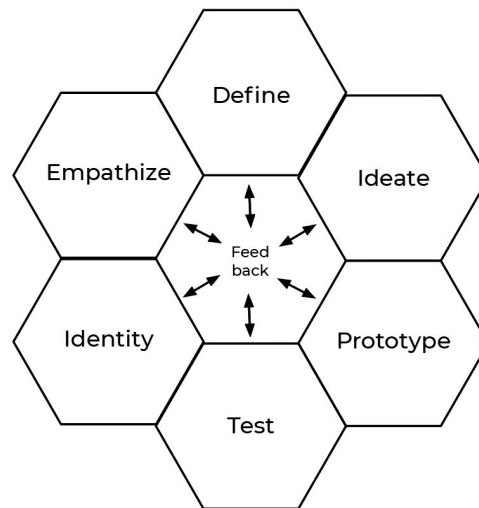
Figure 3 - The 6th hexagon Identity along with a centralized feedback loop

Our 6th hexagon consisted of guiding students to develop a strong understanding of their identity and constructed reality. Specifically, how that connects to their values and the problems that they see surrounding those values. With students self-identifying these problems to solve, it put the student in the demographic they are designing for. Avoiding the academic savior complex and allowing students to personally connect with it. Thus shifting students' motivation from being extrinsically motivated to being intrinsically motivated to help others and continue/complete the project.

Structuring the course to support student learning through the 6th hexagon and feedback loops posed a unique challenge especially during the second half of the semester when we delivered the course content online.

We prototyped the semester in two, seven week modules. The first seven weeks would consist of working and guiding students through their own identity and constructed reality before beginning the first project, which was a brand identity for the 2020 UCDA Design Educators Summit. Planning and prototyping class discussions around what identity is (the memories, experiences, relationships, physical characteristics, and values that create oneself[1]), in-class activities of salient elements of their identity and speaking briefly about why they identify with it, interviewing techniques, and discussion of how all of these elements of identity make up each students constructed reality[2] and how those realities make up a diverse perspective in class when reviewing work, interviewing users, and interacting with the world. During our own prototype of these activities we made a note to point out to students that to understand and design for humans effectively, you need to understand yourself. Also, that our identities change over time and to encourage self-awareness and reflection on how their identity impacts their daily lives.

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[1] https://www.psychologytoday.com/us/basics/identity

[2] Our identity along with our interactions with others and life experiences construct our reality* or the lens that we view the world through. - Social Construction of Reality: Peter Berger and Thomas Luckman

Transitioning to the second project, which was self-motivated and open-ended, we wanted to connect, expand on, and deepen the students' understanding of identity and constructed reality that was started at the beginning of the semester. Learning about the Paseo Protocol[3] through the Equity by Design workshop at Grinnell College, we wanted to incorporate this into our 6th hexagon for students to take a focused introspective look at themselves. The questions include how they connect to elements of their identity, how those elements are perceived by others, their values, what they are currently feeling, their constructed reality, their biases, and privileges. From here we would plan to guide students through DT by having students research issues and opportunities around their values to create a how might we statement (define), ideate solutions based on that statement (ideate), pick the best solution and bring it to life the best they can (prototype), submit it to their users for feedback (test), refine and iterate to completion, while incorporating identity and feedback loops throughout each step.

What We Accomplished

Finally, we tested our prototype in the spring semester of 2020 at Drake University. How did it go? Well the following is documentation and evidence of our prototype.

DECONSTRUCTING THE PROCESS

The sixth hexagon or should we say the missing hexagon is Identity.

The Design Thinking process has been critiqued as linear, but just like the creative process, we sought to move in and out and between all of the hexagons as needed. So while we say the missing hexagon is Identity, please know that it is not intended as a 6th and final step after test, but rather a hexagon that we explore and visit throughout the process (Figure 3).

At the start of the semester, prior to project one, we asked students to think about and reflect on the salient elements of their identity that they are reminded of daily. We defined identity as the memories, experiences, relationships, physical characteristics, and values that create one's sense of self[4]. To get students genuinely engaged in this exercise, we shared elements of our identities. Ward stated salient elements of being tall, a cis gendered male, and an educator. On being tall: Each day putting on clothes that are too short in the arms or torso, getting into and out of a vehicle with the seat pushed all the way back, and constantly watching for low objects to avoid head trauma. On being a cis gendered male: Each day looking in the mirror and connecting with his male features, being addressed as he/him/his, and wearing male gendered clothing. On being an educator: Each day wanting to learn more by reading and contributing education to each interaction. Rossi stated salient elements of her identity included her status as a white person and being a caretaker and a woman. On being a white person: Acknowledging all the unearned privileges she must grapple with daily. On being a caretaker: Assuming the responsibilities of feeding, clothing, transporting, and organizing schedules for her children and husband. On being a woman: Each day connecting with her female characteristics and wearing feminine clothing and make-up.

[3] Paseo Protocol originally created by the National School Reform Faculty and adapted by David Clifford, Tania Anaissie, and Antoinette Carroll (Creative Reaction Lab ©2019)

[4] https://www.psychologytoday.com/us/basics/identity

We asked students to document up to five salient elements of their identity by drawing an outline of their hand on a sheet of paper and in each finger write an element. (figure 4, 5) Five seemed to be an appropriate number of elements. We gave students class time to think about this and then between class periods add to it.

In preparation for the next class, we printed out a general selection of high-level elements of identity (place of origin, age, political opinion, culture, physical appearance, race, religious beliefs, economic status, language, familial standing, sexual orientation, gender, ethnicity, dis/ability) and hung them around the room. When students returned we asked them to reference their homework and stand under the element that they connected with the *most*. We asked those that were comfortable to explain why they identified with it[5].
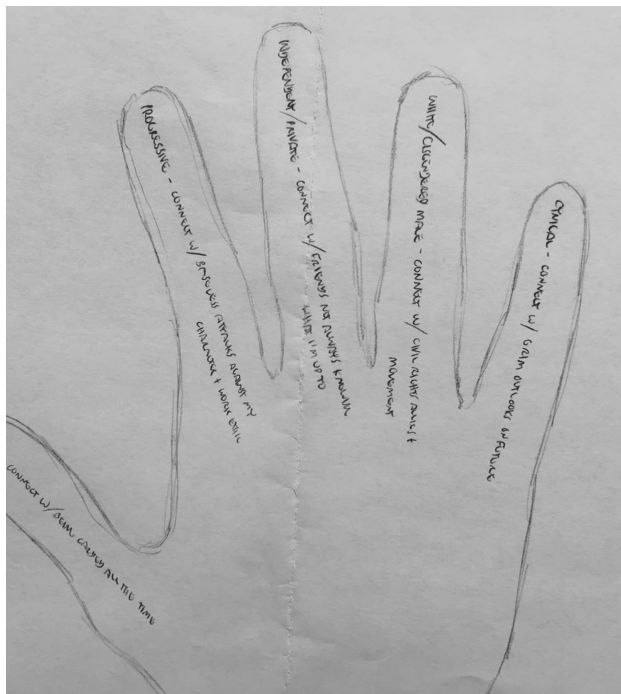

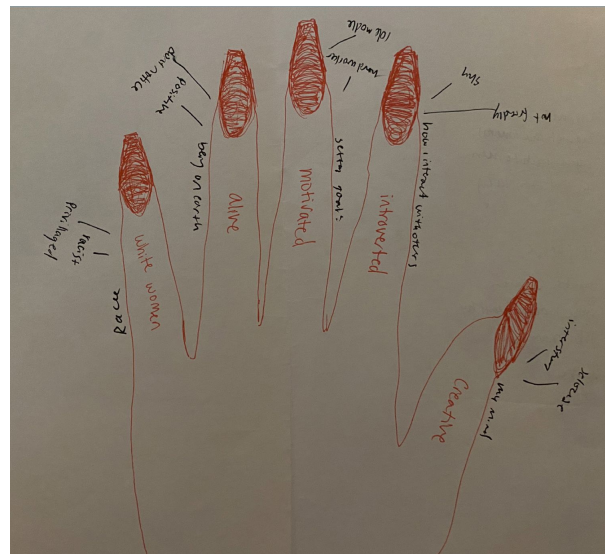*Figure 4 - Hunter Beyer: Young, Progressive, Independent/private, White cis-gendered male, cynical*

Figure 5 - Melissa McElin:
Creative, introverted, motivated, alive, white woman.

As students spoke about connecting to familial standing (being a daughter, sister, and caretaker), physical characteristics (being tall, short, having red hair) and gender (being a woman, being queer) we added that understanding the salient elements of your identity helps to better understand your view of the world and how you empathize and communicate with others. In Communication theory this is called social construction of reality — Our identity along with our interactions with others and life experiences construct our reality or the lens that we construct

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[5] "POP-OUT: Empathy as a Tool for Difficult Conversations ...." https://dschool.stanford.edu/classes/pop-out-empathyasatool. Accessed 11 Jun. 2020.

and view the world through[6]. For example if we work at a retail store our interactions in the world will be filtered and constructed through the experiences of working in that store.

We continued this exercise and discussion with two more salient elements and then shifted gears to ask which elements they identify with *least*. Again we asked for students to explain their choice. As they were discussing identifying *least* with dis/ability, culture, and place of origin we added that recognizing this helps to indicate unseen areas and opportunities to learn more.

We challenged students to design their identity. The parameters were that it had to fit in the classroom and the material and form had to support the student's identity and socially constructed reality (figure 6, 7, 8).

Figure 6 - Sophie Gray:
collage around the words woman, student, jewish, creative, and friend.

Figure 7 - Javairian Estell: Metaphoric image
around the words black, tall, and artistic.
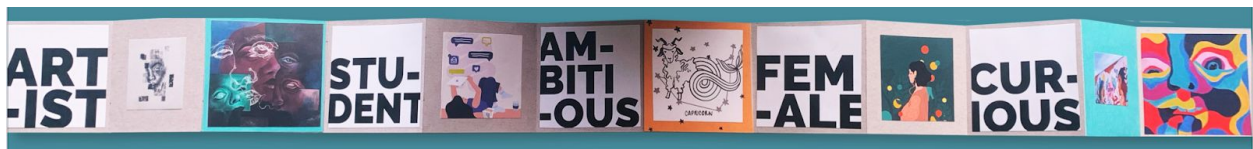
Figure 8 - Katie Segler: An accordion book around the words artist, student, ambitious, female, and curious.

Seeing that our class had many different identities, social constructed realities, and unseen areas we made sure to reiterate that because of this each student is a valuable resource for brainstorming, feedback, and learning about

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[6] Berger, Peter L., and Thomas Luckmann. *The Social Construction of Reality*. Anchor, 1967.

unseen areas. Adding that their participation in class, feedback in critique, and ideas to solve problems are all guided and filtered by their identity and socially constructed reality.

Progressing into project one — the UCDA DES identity and brand — it was important for students to acknowledge and apply the identity and social constructed reality work we just engaged in. [*Notice the word engaged. Using the word completed would have indicated it was merely a checklist item to achieve and forget.*]

As a quick exercise to understand how identity and socially constructed reality impacts idea generation and assumptions about an audience, we moved all the chairs into a circle and had students interview Ward to create a personal logo napkin sketch for him. Asking Ward about hobbies, favorite colors, the last book he read, and other things helped students to understand Ward's identity and create sketches that would appeal to him rather than sketches that would appeal to the students. Students revealed their sketches and talked about what inspired them about the interview to create the logo for Ward.

Engaging deeper with interviewing, we had students create questions for past attendees of UCDA DES for insights into the form and feeling of the brand. Using the information gleaned from individual research and the interview questions, students created sketches and developed a brand guide for the Summit that would appeal to the design educators that attend it (Figure 9).

Figure 9 - UCDA DES: Human Centered logos

Proceeding to project two — A self defined project that aligns with student identity and values by exploring the problems that they see surrounding those values — we returned to the identity work from the beginning of the semester.

Using the five finger and designed identities, we layered on the Paseo protocol[7] to enhance our students' understanding of themselves and their realities. During an online class session we asked the students to explore their identities deeper by asking:

- How do you connect to those elements of identity?
- How are those elements perceived by others?
- What are your values?
- What emotions are you currently feeling?
- What are your biases?
- What are your privileges?
- We did not have time to get into the last question of the Paseo protocol, which is what are your powers?

By honest reflection of these questions, students deeply analyzed themselves and acknowledged their values. We then guided students through researching these areas in order to find opportunities for design as the basis for project two.

As they were a part of the demographic in the value area they were researching, they had insight into the problems and could test assumptions and effectiveness with similar user value groups through user interviews and prototype testing.

Speaking of testing, we required students to interview at least two other users in their value area/demographic while moving through the empathy and define hexagon to hone their how might we statement and confirm or negate their assumptions on their ideas. It was important at this stage for students to employ managing their identities and socially constructed realities to be able to listen and observe their own bias in relation to the user. Self-awareness vs objectivity was our goal. This helped to refine their ideas and move them along into the prototype and testing hexagons with their value area/demographic.

With students self-identifying these problems to solve, it also put them in the demographic they are designing for, avoiding the academic savior complex, and allowing the student to personally connect with it through their identity. Helping to shift students' motivation from being extrinsically motivated to being intrinsically motivated to help solve problems in their "community" and continue/complete the project.

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[7] Paseo Protocol originally created by the National School Reform Faculty and adapted by David Clifford, Tania Anaissie, and Antoinette Carroll (Creative Reaction Lab ©2019)

PROJECT ONE

Empathize Hexagon

How empathy and identity interact with each other in project one? We need this part still.

Was this asking the five whys in class and active listening

Define Hexagon

Once students received training in listening and relating what they heard to their own identity, they had to undertake the hard work of selecting a problem to solve.

Our strategy involved first training students in four approaches: listening for a problem, defining a problem, moving it up a level, and brainstorming and executions based on a problem - into their project based on their identity in the second half of the semester. We then asked them to apply that knowledge to a problem and work collaboratively with their peers to analyze their users' needs to open up a path for solutions.

In project 1, we trained them in problem solving through a variety of methods designed to link observations to problems to solutions. We used personal journey maps to surface personal challenges. We trained them how to craft a problem statement expansive enough to inspire solutions. Finally, we provided them with a prescribed end goal (a brand identity for the UCDA Design Educators Summit) and asked them to work within its constraints, incorporating interior and graphic design into classroom activities.

JOURNEY MAPPING

To begin orienting students to the idea of moving from empathy to defining a problem, we used the tool of journey maps. Using the Intro to Design Thinking framework from Stanford[8], we asked participants to make a journey map at the start of every class that charted the high and low points of the day before, starting from the beginning of the day until their last activity. We then asked them to interview each other about a low-point in the day, and then write a statement about how they might help their partner (Figure 10). At this point, we only wanted students to become familiar with the language and mindset of problem solving and we aimed to keep it engaging by examining everyday problems that related to their lives and their identities. Students reported to us they were working on problems related to crammed academic schedules, stress, fitness and motivation to complete homework. We knew we had to keep pushing them to look at problems in a deeper way, so we moved on to the next level.

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[8] "d.school Starter Kit — Stanford d.school." https://dschool.stanford.edu/resources/dschool-starter-kit. Accessed 10 Jun. 2020.

Figure 10 - Students journey mapping in the design studio at Carnegie Hall, Drake University

HOW MIGHT WE (HMW) FRAMESTORMING[9]:

Our next challenge was to move students from naming a problem, to removing the implied answer from the problem statement[10]. Many students' initial work on problems were focused on reinventing an academic schedule when the actual problems may have remained unarticulated. Was the student in the right major? Were they taking proper care of themselves outside of class? Was the instructor engaging? For frame-storming, we instructed students to get in pairs and stand up together by a white board, each with a marker in hand. They were then instructed to interview each other (Figure 11, 12) about a recent problem that showed up on their journey map using the prompts: "Why? What is this really about? And, What would happen if you solved your problem?" We then instructed students to write another problem statement based on the answer to that last question. For example, if a student said she needed to finish her homework, her partner may have asked: And what result would that engender? She might say: I'd feel satisfied. The pair then had to rewrite the initial problem statement from HMW help this person finish their homework, to HMW help this person feel satisfied with their academic work?

We aimed to push students to slightly broader problems that would crack open the door of more possible solutions. We continued to ask students to practice their skills of defining and redefining problems by working together in groups to dig deeper on individual students' problems and redefine problem statements. Students in part 2 of the class demonstrated a deft understanding of defining problems, but reported in student evaluations that these early exercises were uncomfortable for them. There were awkward silences at times as students struggled to reflect deeply on their own problems. For the next iteration of this course, we plan to design conversations between small groups of students as opposed to larger groups.

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[9] "Three Ways To Reframe A Problem To Find An Innovative ...." 8 Sep. 2015, https://www.fastcompany.com/3050265/three-ways-to-reframe-a-problem-to-find-innovative-solution. Accessed 10 Jun. 2020.

[10] "The Achievement Habit." http://achievementhabit.com/. P. 65 Accessed 10 Jun. 2020.

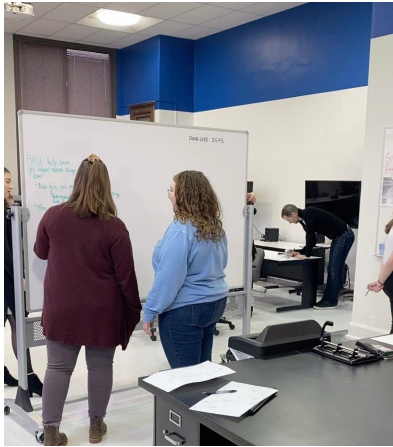To move to the next phase of our training, we wanted to instruct students in how to link solutions to a defined problem.

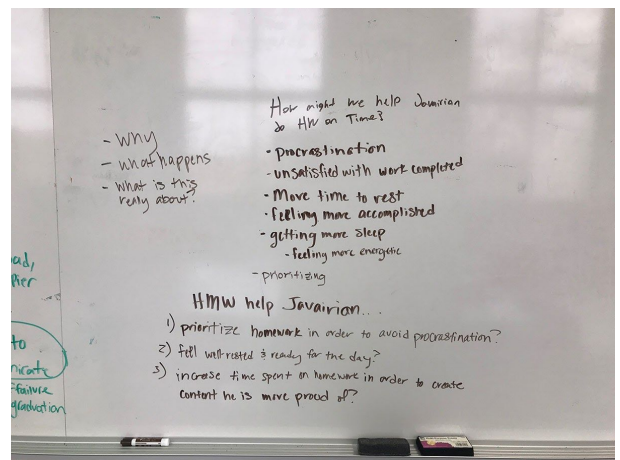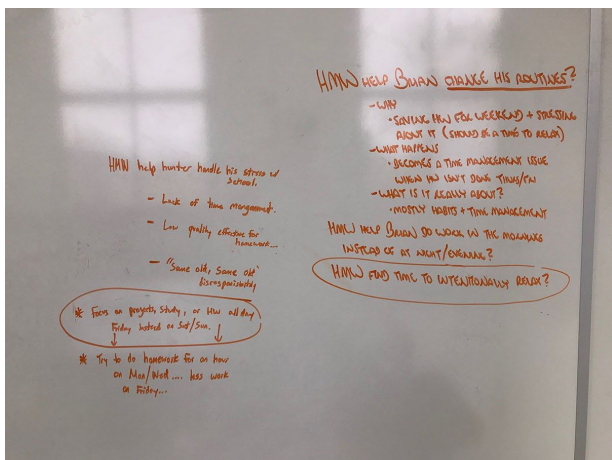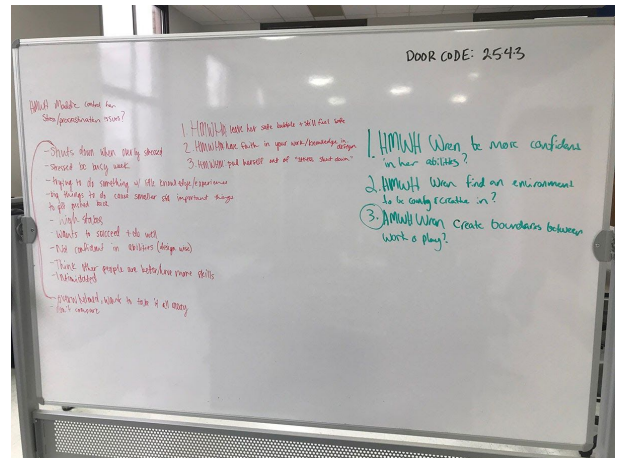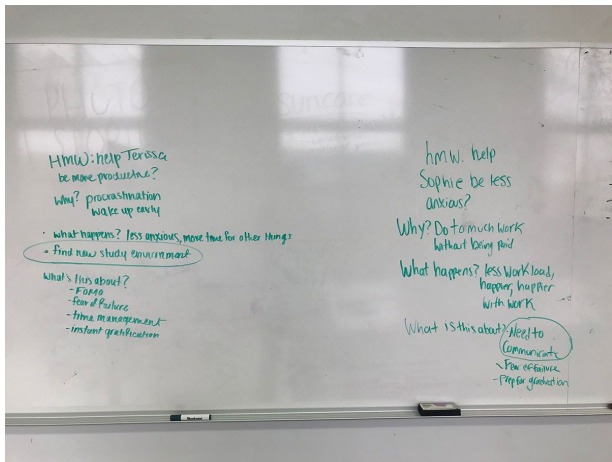Figure 11 - Maddie Willey interviewing Wren Kress

Figure 12 : HMW Statements

USING A DEFINED PROBLEM TO DIRECT SOLUTIONS

We also wanted students to get the initial experience of brainstorming and thinking with their hands while responding to the provocation of a problem statement. Inspired by Stanford Professor of Engineer Bernard Roth's handling of this issue in his courses at Stanford -- he asked students to simply "find something in his life that bothered him and fix it[11]," -- we asked students to create a classroom environment that supports creative problem solving. We challenged them to consider the problem and rearrange the room to build effective conversations around common student issues (Figure 13). We divided students into two teams and asked them to create two different solutions, one using desks, the other using just chairs. For several class days, the classroom was completely transformed as we experimented with different ways of solving the problem of the classroom environment.

Figure 13 - Students beginning to rearrange the classroom

WORKING WITHIN A CONTENT CONSTRAINT:

Finally, in Project 1, we tasked students with solving a communication problem: How could they create a logo that would tell succinctly the story of the upcoming human centered design conference? Students were challenged to defend their logos and marks according to how they communicated with color, shape, concept and sizing to tell the story of the project. Ward coached students to weigh on whether the designs were effective or not -- and to pitch alternative ideas that could better solve the problem.

Our next step was to guide students to use everything they learned about defining a problem and apply it to a more open-ended solution.

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[11] "The Achievement Habit." http://achievementhabit.com/. P. 64. Accessed 10 Jun. 2020.

Ideate Hexagon

Our ultimate goal for ideation was for students to unearth an uncommon need of their user and fulfill that need with a novel solution. All the while, we wanted them to use their own judgement and intuition to guide them forward, cultivated from their investigation into their identity. To do that, we needed to train them first in recognizing their own needs as worthy of solutions and how to work collaboratively while being aware of their status and identity. We were also in crisis, which could not be ignored. Students needed to recognize the evolution of their identities and needs in the midst of a changing world. Finally, we needed to educate them on the landscape of their own brains, and how their brains would change if they stretched themselves to seek uncommon solutions. Students generated more than 20 ideas each for their user, including a trove of "bad ideas," to further clarify their path to experimenting with one solution. In future classes, we will aspire to Seelig's example, who often asks for at least "100 solutions to a given problem[12]."

JOURNEY MAPPING

We continued to use the journey mapping tool to teach ideation as a way to teach students to chart their own identity, values and behaviors and experiment with solutions to their various problems. A journey map is a chronological and emotional map of the day, where students use illustrations to signify high points and low points according to their emotions. This was a helpful exercise - and it continued to be as it introduced students to the other hexagons, but it also raised questions on whether there should be a full intro to design class available, where students chart days and experiment with solutions to their various problems.

SMALL GROUP BRAINSTORMING

Our next step was to train students to consider how their identity is communicated through their words and body language during ideation -- and how that can either enhance or detract from the goals of ideation.. To do this, we role played a good brainstorm and a bad brainstorm, adapted from workshops in improvisational theater[13] storytelling[14], and high and low status behaviors in a business setting[15]. For the scenarios, we showed two act-outs of brainstorming sessions. In the first one, Ward wrote down ideas for a party on a marker board while Rossi sat down, shoulders hunched, legs splayed carelessly, and offered ideas with the caveats "Yes, But." We acted out a second scenario, where Ward and Rossi both stood by the marker board, angling their bodies towards each other. As each person had an idea, they wrote it on a sticky note. They used the words "Yes, And" to build on the ideas of each other and generated many more ideas and a more enjoyable collaboration. We guided students in a reflection about the two scenarios, asking them to consider how behaviors related to identity in collaborative environments. We reflected on how body language communicates status. A person sitting down and barking out orders while another person stands communicates a difference in status in favor of the one sitting. We also talked about how simple changes in language could enhance the quality and quantity of ideas, such as moving from "Yes, But" to "Yes, And." We then

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[12] "Creativity Rules: Get Ideas Out of Your Head ... - Amazon.com." https://www.amazon.com/Creativity-Rules-Ideas-Your-World/dp/0062301314. Accessed 19 Jun. 2020.
[13] "The Second City." https://www.secondcity.com/. Intro to Improv Intensive, Dec. 16-20, 2019. Accessed 18 Jun. 2020.
[14] "POP-OUT: Storytelling for Inclusion — Stanford d.school." https://dschool.stanford.edu/classes/pop-out-storytelling. Accessed 18 Jun. 2020.
[15] "John S. Knight Journalism Fellowships ...." https://jsk.stanford.edu/. JSK SPEAKS Workshop with Kay Kostopoulos "Acting with Power" Jan. 17, 2018. Accessed 18 Jun. 2020.

sent students to practice their own brainstorming, by thinking of questions they would ask Ward in efforts to design a logo based on his interview. Students demonstrated understanding of the concept by standing at the marker boards, taking turns to contribute and generating creative questions in a non-judgmental environment.

Ideate Hexagon

We reiterated the expectations from previous design courses to generate numerous initial ideas based on visual research and the problem at hand. Making sure to point out that their ideas come from their individual perspective of the world, their lived experiences, identity, and socially constructed reality. It was necessary for us to help students realize this and guide them past their knowledge base and expand their visual knowledge and conceptual connections.

PROCESS

When we began ideation for project one students were directed to research and document — for their process books — the mission, vision, and identity of the UCDA organization, the idea and prior identities behind the UCDA Design Educator Summit, along with word associations and images connected to the idea of Human and Centered (The theme of the UCDA DEC). Students were guided to create a visual competitor audit of conference identities; both general conference identities and conferences that connect with the theme of Human Centered. From the word association and images connected to Human and Centered along with an emotion of their choice (that they would align with their conference identity), students created a visual thesaurus to help with inspiration and ideation.

We had students read *A Designers Research Manual* for a quick review of Graphic Design History, why research is important in design, and the difference between qualitative and quantitative research along with *Designing Brand Identity* to realize a brand is not just a logo but something emotional that appeals to a users senses. In class we looked at many books including *Logo Modernism*, published by Taschen, and *Logo, Design, Love* by David Airey. We also visited Pentagrams website and the blog *Under Consideration; Brand New* for trends and contemporary examples of branding and identity.

Receiving feedback from past attendees of the UCDA DES provided insight and additional inspiration for students to begin ideating on a logo that communicated Human and Centered through sketches. During five rounds of critique, students sketched out their initial ideas on paper and presented the concept behind each along with a few tone words, to a small group (2-3 students) of their peers in critique. Each student brought their own identity, perspective, and knowledge of design to provide feedback to their peers on which concept/visual was the strongest to move forward with based on research and DES interview feedback. We mixed the students up for each round of critique and focused on feedback to create and refine the strongest concept/visual to appeal to the UCDA DES demographic.

Students enjoyed this method of critique stating "I realized how vital getting feedback is to a project. (both positive reinforcement and critiques on what is not working)." and "I would often go into the critique thinking an idea I had created would be good to go, and then someone would say something I never would have thought of myself. Having

just one more pair of eyes on a design can be a game changer, but having a whole classroom look at your design was definitely even better."

After students had finished the first part of project one they needed to expand the formal elements of their logo into a brand style guide. Since we informed students at the beginning that that the strongest identity would be chosen and applied to all touchpoints of the 2020 Design Educators Summit[16], they needed to create a brand style guide for UCDA to apply their identity. We looked to Drake University's own brand style guide[17] and discussed what it includes, how it functions, and why it is important. Students turned in their process books and brand guides before Spring Break and the winning identity can be found at https://www.ucda.com/events/51/.

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[16] Chosen identity was designed by Katie Segler, a junior double major in Graphic Design and Painting
[17] Drake University branding style guide: https://bit.ly/2Aqi4zM
[18] "The Second City." https://www.secondcity.com/. Intro to Improv Intensive, Dec. 16-20, 2019. Accessed 18 Jun. 2020.
[19] "POP-OUT: Storytelling for Inclusion — Stanford d.school." https://dschool.stanford.edu/classes/pop-out-storytelling. Accessed 18 Jun. 2020.
[20] "John S. Knight Journalism Fellowships ...." https://jsk.stanford.edu/. JSK SPEAKS Workshop with Kay Kostopoulos "Acting with Power" Jan. 17, 2018. Accessed 18 Jun. 2020.

logo based on his interview. Students demonstrated understanding of the concept by standing at the marker boards, taking turns to contribute and generating creative questions in a non-judgmental environment.

Prototype Hexagon

Prototyping for project one came in the form of analog sketches and digital renderings during iteration which expanded into the brand style guide.

Once again returning to identity and socially constructed reality, when students began digitizing their logos, they had to recognize the work they were producing was not for themselves or for their peers but for the design educators attending the DES. Students had to consider another person's identity and socially constructed reality in order to apply their knowledge of formal design elements to inspire and appeal to them.

Feedback on their prototype/sketches happened during small critique sessions. Students printed out their digital logos large and small (the size of a dime) to see how they would communicate along with the readability/legibility at different sizes. We discussed the formal elements of design (contrast, tension, emphasis, scale, unity, depth, balance, shape, form, line quality, color, movement) and appropriate typography in critique, based on their research and understanding of the DES attendees. Once refined to completion, students moved on to create a brand style guide based on the formal elements of their logo.

In the brand style guide students were required to find and provide mockups for signage, lanyards, publication covers, tote bags, app badges, social media, and the website. Visually prototyping how their identity systems would roll out to all of the consumer touchpoints.

Test Hexagon

For project one, testing happened in critique and was connected to prototyping and ideation. Students would present their work, test out how it was communicating in critique and gather feedback, then prototype and ideate their way forward to the next critique. The cycle would continue into the next critique until the project was due.

Students ideated and prototyped based on collective research, inspiration, and the answers to the user interviews. Developing empathy earlier on in the semester, students exercised this skill when looking at each project through the lens of the user and providing feedback from that perspective instead of the students own identity/socially constructed reality.

PROJECT TWO

Empathy Hexagon
It was March 23 when we returned to online-only school after spring break. Drake administration had sent students home from campus. Students were suddenly studying from their childhood homes or isolated in their campus

apartments. And we as professors were just taking in the new information that the world has shut down, and we all now must behave as if a wrong choice might imperil their own lives and the lives of others.

We had a formidable challenge because the personal challenges they were suddenly confronting were immense.

We decided to proceed with our plans for an open-ended project guided by the rigor of design thinking and identity frameworks. We set out to discover whether COVID-19-related restrictions could cause constraints that would push our students to more creative heights, while also provoking a reflection into their well-being and growth.

We asked students to again consider multiple parts of their identity, including their race, age, ability or disability status and body type. They then had to choose what part of their identity they most strongly felt[21]. From that decision, they were required to choose a user group and a demographic to build their project for. For example, students who most strongly identified as female artists would then build a project for female artists. Students who most strongly identified with having a learning disability would investigate the problems of students with learning disabilities.

As professors, we confronted a growing understanding that students were traumatized and stressed by the changes brought on by the global pandemic and this also had, very suddenly, became a part of their identities as well. We grappled with how to maintain engagement and motivation in times of great stress. We decided to follow the lead of Drake Assistant Professor of Practice in Marketing, Heidi Mannetter. Shortly after students were sent home from campus, she sent them an email asking students for "COVID-19-related disruption complaints" as the first step to proposing solutions. We decided to incorporate this reflection into our design and identity work as a way to bring to light the specific hardships and constraints our students were facing. We asked them to share 13 problems, otherwise known as a bug list[22], that they believed that their chosen user group was encountering as a result of social isolation. We expected them to mine their own life for inspiration in building this list, because they shared the primary identity of the user.

Our concerns about student well-being were validated. They reported that they believed people who shared their primary identity were facing peril to their mental and physical health as a result of the pandemic isolation measures. One student told us of artists struggling to create amid anxiety and fears over access to food. Another said he worried that isolation was causing him -- and others like him -- to become obsessed with exercise and fitness. They also reflected on how their identities as students had been disrupted. They said people who shared their identity had lost their routines, internships and study abroad experiences. Many were now back in homes from high school, feeling as if they had gone back in time. Our next challenge was to inspire them to consider how knowledge of their own stress could help others. We asked them to review all the pains, constraints and issues that they listed. We then asked them

[21] "POP-OUT: Empathy as a Tool for Difficult Conversations ...." https://dschool.stanford.edu/classes/pop-out-empathyasatool. Accessed 1 Jun. 2020.
[22] "Creative Confidence by Tom & David Kelley." p. 118. https://www.creativeconfidence.com/. Accessed 1 Jun. 2020.

to pick one problem they would want to solve, by constructing several "How Might We" statements, a sentence prompt that helps define how a student would improve a situation for a key user[23].

Finally, we asked them to pick a statement that they, personally, were most excited to work on. We picked this criterium because we prioritized steering students towards projects they would find personally meaningful. We hoped that this single event of social isolation would unsettle them and push them to discover a mission intertwined with their own identity and act on it in a way they never could before[24].

Students submitted the plans on our online course website and we offered feedback to each one, ensuring that problems were not too narrow or too broad; and that they were choosing a user group that reflected their identity.

For our next step, we had to prepare them to conduct user interviews with someone who shares their own primary identity and may be confronting the problem they sought out to solve. We coached them to ask questions about life in isolation that would reveal motivations, unmet needs (barriers) and stories that reveal deeper values and goals[25]. We also trained students in interviewing through the lens of shared identity. Even with shared identity, a design thinker and a user still have different constructed realities. We taught this by advising students to avoid using the phrase "I know how you feel," and acknowledging users' stories and comments as a path to developing solutions that would help others[26].

We assigned students to conduct two user interviews. We asked them to investigate their problem statements, the majority of which intersected between identity, isolation and a specific challenge students observed happening in isolation. They filled out a reflection questionnaire that challenged them to reflect on the uncommon needs of their user. To build the form and make the link between identity and empathy, we relied on a Nov. 9 lecture at Stanford's d.school from Stanford Graduate Diversity Recruitment officer Joseph Brown[27]. He said there is an interplay between empathy and identity. "We build self awareness, which informs how we understand others," he said. "Our reflection on others reacts with our own building of self awareness."

In the form, we asked: How did your users' experience differ from your own?" We designed this question to be disruptive. And it was. This proved to be the first significant turning point in this project.

Sophie Gray was one of those students who saw an immediate shift. Inspired by her own reflection on living with a learning disability, she set out to help students like her get help in the classroom. She interviewed a student and

[23] "The Book | Creative Confidence by Tom & David Kelley." p. 119; 237-239 https://www.creativeconfidence.com/book/. Accessed 1 Jun. 2020.
[24] "Books - Tina Seelig." p. 75, 77
http://www.tinaseelig.com/books.html. Accessed 1 Jun. 2020.
[25] "Just Enough Research: Hall, Erika: p. 53-54 9781937557102: Amazon ...."
https://www.amazon.com/Just-Enough-Research-Erika-Hall/dp/1937557103. Accessed 1 Jun. 2020.
[26] "POP-OUT: Empathy as a Tool for Difficult Conversations ...." https://dschool.stanford.edu/classes/pop-out-empathyasatool. Accessed 1 Jun. 2020.
[27] "POP-OUT: Empathy as a Tool for Difficult Conversations ...." https://dschool.stanford.edu/classes/pop-out-empathyasatool. Accessed 1 Jun. 2020.

learned that this student suffered "great anxiety when going to talk to professors during office hours." Gray immediately noticed a distinction between this students' experience and her own. Gray wrote that she will "never understand the anxiety and fear [the person she interviewed] deals with." For Gray, this opened up new questions about how learning disabilities are often under a shroud of ignorance and shame. It provoked her to look at the problem in a new way.

In another example, student Matt Butler, a parent to a small child, started the isolation amid the pandemic wondering how parents like him could stay engaged with work and study while also "educating and engaging" children. His interview with another father in the same situation surprised him. This dad *enjoyed* the increased amount of family time and reported that the family was much closer as a result of social isolation measures and business closings. Butler was surprised how "upbeat" the person he interviewed was. By allowing his own experience to interact with his user, Butler was able to pick out what was significant and perhaps otherwise unseen: That family time for some people during the pandemic may actually be a moment that is to be cherished.

The next step for students was translating what they heard into a problem they could potentially solve.

Define Hexagon

FRAMESTORMING USER INTERVIEWS

Knowing we had laid the groundwork for students in terms of problem-solving, we started to deepen the shift from the focus on their own identity and problems, to the problems of their user. In this time, the project began to morph into an exercise of how a students' identity, behaviors and problems related to the problems and behaviors unfolding during a global crisis. Our hope was that deep investigation and reflection would reveal uncommon and unspoken needs of the user, ultimately, resulting in a novel solution.

As part of the interviewing, observation and empathy phase, we assigned students to write a minimum of nine problem statements, again directing them to Seelig's framestorming with the hopes of uncovering otherwise hidden needs. We wanted them to experiment with different levels of specificity and depth to their problems statements, as well as reflecting what problems they were personally most drawn to solving.

We offered feedback on each students' reflections on their interview and their problem statements, with a goal of challenging them to consider different users and framing and to ensure the problem matched documented user insights.

For example, Maddie Willey's initial problem focused on helping visual learners during online courses. She interviewed students and learned of the great lengths they went to to supplement course information that did not contain the visuals they needed to absorb the information, including consulting YouTube and other educators.

Her interviews also revealed another problem: That students were noticing a lack of movement in their day after going all online as a result of COVID-19 social distancing restrictions. We pushed her to consider a problem that examined how lack of movement hinders a student's energy and creativity.

We also challenged students to look beneath the surface of what their users' were telling them. One student interviewed someone who struggled to focus on her school work before the pandemic and continued to do so after isolation. That raised the question: Is isolation the problem? Or is it engagement and motivation towards her course of study? Or was it even deeper, perhaps, a problem of loneliness?

SHARING THE STORY OF A USERS' PROBLEM
When the time came to meet as a class, we again challenged students to consider the range of possibilities that might present themselves to the problems they had just defined. We wanted them to consider what was different about this project. They no longer were bound by a directive on what kind of content to build. In the first project, they had to build an identity and brand for a Design Summit. In the second project, the definitions for using content filtered through their identity and values for solving a problem were expansive.

We asked them to consider all the possibilities of what could be "content," eliciting answers ranging from art and building communities to simply -- any sort of communication or information.

Our next step was to reach a higher level of sophistication in terms of how they communicate about their users' problems to their classmates. We trained them using the story spine, a technique from improvisational theater[28] that provides prompts for storytelling, starting with "once upon a time," and ending with "the moral of the story is."

We had a secondary goal for teaching them the story spine at this moment. We wanted them to experience laughter and improvisation as a way to unlock the creative brain[29]. This was an adjustment from earlier in the semester, when we noticed that the define hexagon of design thinking training depleted their energy.

We placed students in groups of two, again, learning from earlier training that larger groups failed to produce the deep level of reflection that groups of two achieved..

We gave them instructions to share the "story" of their interview, connecting what we learned about effective storytelling from the story spine to the challenge of communicating what they heard. Our goal was to equip them with communication prompts so a partner could successfully work collaboratively with them to document the users' behaviors, value, motivation, pain points, needs and problems.

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[28] "6 lessons journalists can learn from improv - JSK Class of ...." 8 Mar. 2018, https://medium.com/jsk-class-of-2018/6-lessons-journalists-can-learn-from-improv-593c1eed1e47. Accessed 10 Jun. 2020.
[29] "Neural Substrates of Spontaneous Musical Performance: An ...." 27 Feb. 2008, https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0001679. Accessed 10 Jun. 2020.

For future iterations of the class, we will take a longer time to chart the transformation as a result of this collaboration, a process we integrated later in the semester during prototyping and testing. What new insights did the conversation produce? How did that change the definition of the problem?

Students now had to begin the hard work of considering how they would help the person they interviewed. With the constraints they had to solve the problem and access to existing resources around their home/apt their next step was ideation.

Ideate Hexagon

Our ultimate goal for ideation was for students to unearth an uncommon need of their user and fulfill that need with a novel solution. All the while, we wanted them to use their own judgement and intuition to guide them forward, cultivated from their investigation into their identity. To do that, we needed to train them first in recognizing their own needs as worthy of solutions and how to work collaboratively while being aware of their status and identity.

We were also in crisis, which could not be ignored. Students needed to recognize the evolution of their identities and needs in the midst of a changing world. Finally, we needed to educate them on the landscape of their own brains, and how their brains would change if they stretched themselves to seek uncommon solutions. Students generated more than 20 ideas each for their user, including a trove of "bad ideas," to further clarify their path to experimenting with one solution. In future classes, we will aspire to Seelig's example, who often asks for at least "100 solutions to a given problem[30]."

HEIGHTENING OUR PERCEPTION

For project 2, we had to consider a new facet of identity: That students' sense of self was changing in reaction to the global disruption of a pandemic. We believed that users were also going through an evolution. We wanted students to ideate for the future, not the past. So, we had to prepare students for these realities. We started by directing them to take a "Noticing Walk." Rossi asked students to take a walk, choosing from the options of their apartments, their rooms, or even, a particular wall. Rossi adapted the final exercise from Seelig, who asks her readers to spend an "hour silently observing one location." Rossi instructed students to take 10 minutes of time to notice their surroundings and write down the observations, problems or ideas that walk inspired, in their notebook[31].

Each student shared an observation that was most interesting to them. Hunter Beyer noticed all the new items crowding his room -- his guitars - amps and equipment, arts supplies and books -- a precursor to big discoveries about his project and himself he would make later in the cycle. Lila Johnson noticed a grandfather clock that hadn't ticked for a long time. Other students provided new insights into the still forming-shape of their Post-COVID identities by revealing the objects and people in their environment, a sleeping spouse nearby, a half-done puzzle at the kitchen

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[30] "Creativity Rules: Get Ideas Out of Your Head ... - Amazon.com."
https://www.amazon.com/Creativity-Rules-Ideas-Your-World/dp/0062301314. Accessed 19 Jun. 2020.
[31] "Books - Tina Seelig." http://www.tinaseelig.com/books.html. Accessed 18 Jun. 2020.

table. We used this exercise to note how heightening your perception can help you notice parts of yourself -- and your user - that are evolving, thus bringing a higher level of intelligence to ideation.

THREE PROVOCATIONS

During early ideation exercises, many of the ideas were surface level. Students wanted to create new schedules, eat healthier and work out, but were not yet pushing the boundaries of change in their own lives. Now they were working on behalf of a user. We wanted them to understand that to pursue novel ideas, the truly innovative, they may have to create something that didn't currently exist, something that college and internships hadn't trained them to build. We wanted to build up their capacities to create change from the unknown, which would create struggle. To do that, we needed to educate them on how the brain grows in reaction to struggle[32]. We had a secondary motivation: We wanted to evolve them from students working for a grade to students working for impact on their users. We had to continue to push them to investigate their own motivations and identity in relation to those of their users.

We started with the first provocation in class, a silent one: What does it mean to be smart? What does that mean to our identity?

We then issued a second provocation: Name a part of your life where you are at the edge of your understanding, that is, the place of struggle that is creating brain growth. By asking this question, we aimed to reframe the new struggles they were experiencing in the post-COVID world as areas that would expand their capacities as human beings. Underneath it all was the mission of the class: push to find solutions for your users that are at the edge of your understanding, those will be more transformative than those in the realm of your current understanding. Once again, we juxtaposed the challenges in their lives and identities against those unfolding for their users.

Students talked about fresh struggles emerging as they sheltered from home. They had more time to watch the people in their lives evolve and wonder how they would relate to them each day as they changed. Johnson, the student who earlier had noticed the broken grandfather clock, shared the struggle of the lack of parameters in her new life, and the struggle to try to "Make time real." And Javairian Estell revealed he was, for the first time, considering the challenge of making art only for himself, and confronting the surprise of his own taste and style. In the class discussions, we reframed these personal challenges as opportunities to expand and grow the brain, especially if we pushed to the edge of our understanding.

Finally, in preparation for ideation, we shared research on the growth mindset from Carol Dweck, making ties between the students' experiences and her advice to learn from criticism and examples of excellence[33]. It was a hopeful message for students with lost opportunities and worries about the future. At this point, they had deeply reflected on their own identity and its evolution. They had reflection on the identity of their user, which was similar to

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[32] "Limitless Mind: Learn, Lead, and Live Without ... - Amazon.com."
https://www.amazon.com/Limitless-Science-that-Unlocks-Potential-ebook/dp/B07CRH312M. Accessed 18 Jun. 2020.
[33] "Mindset: The New Psychology of Success: Dweck, Carol S ...."
https://www.amazon.com/Mindset-Psychology-Carol-S-Dweck/dp/0345472322. Accessed 18 Jun. 2020.

their own. Our final challenge was to push them to realize there was a gap in their knowledge. We needed them to realize that even though they chose a project that reflected their own concerns and identity, that they could rest easy.

Our final provocation was to ask them to consider what aspect of their project they needed to learn more about -- and how might they expose themselves to more knowledge. We wanted to move from a point of interest to compassion to act on behalf of someone else. Students shared they needed to deepen their understanding of mental health and well-being, an underlying concern for many of the students' on behalf of their users.

IDEATION

The student's final task was to team up in group's of two and brainstorm ideas that would the problem of the user each had selected on which to focus their project. We asked students to meet for two rounds of 20 minutes, so each student spent 10 minutes of ideation each with two different partners. Our final question was related to their own intuition: What new questions about their user's problem did they confront during ideation? Students submitted homework further deepening their ideas, including "bad ideas," which were meant to spur even more questions. Following these exercises, students revealed they were still in a state of ambiguity about their understanding of their users' problem and how they could solve it. And a recurring question came up: If we design something for our user, how do we know what will motivate them to use it?

Prototype Hexagon

For prototyping in Project two, our goal was to provide students with further opportunities to learn about their users, explore the problem and the behavior of their users, to prepare for testing their ideas, and to gather inspiration.[34] We continued to juxtapose that with the goal of knowing and developing our own sense of identity. At this point of the semester we were completely online and had practiced talking fluently about our emotions, our abilities to feel different emotions at the same time, about constraints, and their purpose to inspire creative solutions. Students had also begun to demonstrate fluency in collaboration and the ability to offer effective critiques and feedback in small and large group work. They reported to us that **the interactions we designed with their peers were pivotal in the decisions they made on their own projects**, with some students independently seeking each other out outside of class to further deepen their collaboration and interdisciplinary approach to their projects.

IDENTITY AND FEAR

Students told us they were confronting significant questions centering on two important issues:
- How might I change the life of my user with my idea?
- How might I motivate my user to participate in the product/service I have created?

These questions indicated that we had successfully built the bridge to move students from a rigorous examination of themselves to a keen desire to effect change in the lives of their users. It also indicated we made progress towards

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[34] "Design Thinking Bootleg — Stanford d.school." https://dschool.stanford.edu/resources/design-thinking-bootleg. Accessed 24 Jun. 2020.

achieving our early objective of using a process of examining their own identity to increase their motivation to participate in a design-led project.

We spent class-time exploring the emotions around these two big questions. At this time, we implemented a two-emotion daily check in[35], with students reporting a mix of emotions, ranging from overwhelmed to excited to anxious. Some of them were already moving along in their project, excited for the path ahead. Others were worried about the end product and its ability to make an impact.
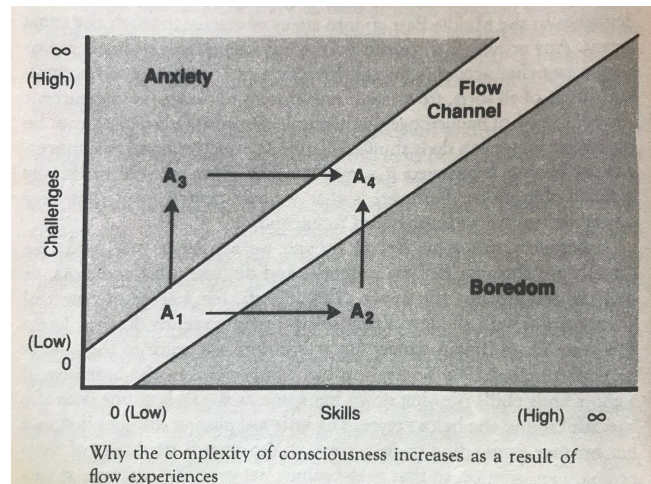

Figure 14 - Flow: the Psychology of Optimal Experience. Mihaly Csikszentmihalyi. Harper Perennial. 2009

We responded by integrating movement into our online classes with a goal of increasing energy and decreasing anxiety. For one class, we asked everyone to stand and count backwards from seven while shaking their hands and feet.[36] Outside of class, we implemented a schedule of one-on-one phone calls to further coach their own self examination of emotions and identity. We guided and workshoped solutions to their concerns and fears they had about their projects. We taught about the levels of stress they were feeling, and how they could reduce those same levels of stress by considering the state of flow (figure 14) in human behavior, achieved by the optimum amount of stress, support and engagement. Finally, we shared stories of artists, such as novelist Ann Patchett, confronting their own level of anxiety at the point of needing to create.[37]

NAPKIN SKETCHES/COLLABORATION

To move ideas from the conceptual to the concrete, we asked students to build two napkin sketches. They were to sketch two different ideas or a facet of the same idea, with the rules that the napkin sketch must have a name and must adequately describe the portion of the problem their idea was solving and how they might test it, a Bonfire

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[35] "How Brené Brown Runs Emotionally Intelligent Zoom Meetings." 15 Apr. 2020, https://www.inc.com/betsy-mikel/how-brene-brown-runs-emotionally-intelligent-zoom-meetings.html. Accessed 24 Jun. 2020.
[36] "This is your brain on improvisation - Fast Company." 25 Oct. 2019, https://www.fastcompany.com/90421354/this-is-your-brain-on-improvisation-and-why-your-creativity-depends-on-it. Accessed 24 Jun. 2020.
[37] "This Is the Story of a Happy Marriage: Patchett, Ann ...." https://www.amazon.com/This-Story-Happy-Marriage-Patchett/dp/0062236679. Accessed 24 Jun. 2020.

Strategy exercise inspired by Jake Knapp's solution sketch's in the Sprint methodology.[38] We gave them five minutes. Our next task was to integrate feedback and evaluation from classmates -- now referred to as their design team -- into their sketches. We placed them in groups of two and then groups of five with the instructions of having a discussion about the napkin sketch using the words "yes, And" before every suggestion. We also instructed them to coach each other to "sharpen" the idea, using the prompts "I like, I wonder, I wish.[39]"

The objective was to brainstorm how to bring the napkin sketch into another three-dimensional form for the purposes of testing. Students later told us that this scripted group work was pivotal in their understanding of their own project and it's path. **"XXX"** They presented napkin sketches that reflected ideas to build a creative community of artists, an instagram feed to tell the stories of people with learning disabilities, and a "survival kit" for families living in isolation. The ideas successfully intertwined with the designers' own identities, but with distinctions for the specific needs of users.

Many students successfully contextualized those needs within our global crisis. For example, Estell, as an artist, set his sights on designing for other artists, creating a community for them on online video (figure 15), the only place they could gather during the COVID-19 outbreak. Gray was designing for a community that was deeply meaningful for her- students with learning disabilities -, and tapping into a facet of the community that had been previously invisible to her: That they felt unseen, which created anxiety in their quest to get answers to their questions in the classroom. Her plan was to tell their stories.
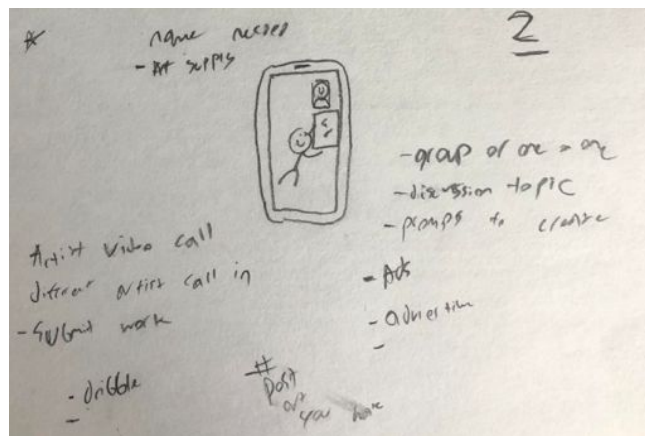

Figure 15 - "Artist video call" by student Javairian Estell, 2020

HIGHER FIDELITY PROTOTYPES
Our next challenge was to push students to bring their napkin sketch into higher fidelity so they could successfully communicate and test their idea with a user. Many students embraced this challenge, posting the first nuggets of their idea on social media and building more highly formed versions of their idea with existing materials like paper and

[38] "The Design Sprint." https://www.thesprintbook.com/. Accessed 24 Jun. 2020.
[39] "I Like, I Wish, What If - d.school."
http://dschool-old.stanford.edu/wp-content/themes/dschool/method-cards/i-like-i-wish-what-if.pdf. Accessed 24 Jun. 2020.

pencil, cardboard and existing communication platforms, including text. Others struggled, wondering what might go wrong and what might not work. We continued to push them "to create an embodiment of their idea,[40]" equipping them with tools to simulate their visions with enough detail so others could offer feedback. Students used both emotional journey mapping informed by the process of participatory design[41] to chart the hypothetical path of the user, storyboarding and the story spine to depict the users' transformation. We also continued to implement one-on-one meetings with students who felt blocked to identify and dismantle constraints to ensure full participation on the project.

The early results were heartening, considering the loss and shock of COVID-19 restrictions. Students pushed through their pain and isolation to investigate their own identity. In that, they found motivation and purpose to work on behalf of others.

SOME PROTOTYPE STANDOUTS

Gray bravely posted to her instagram feed that dyslexia and ADHD causes her brain to "scramble, accompanied by a piece of original art showing a hand grasping at a chaotic mix of numbers and letters (figure 16.) In her class reflection documents, she wrote, "All of the people I interviewed felt as though they had to hide their learning disabilities to fit in." That was enough to inspire her to tell her own story with ambitions of seeking the stories of others.
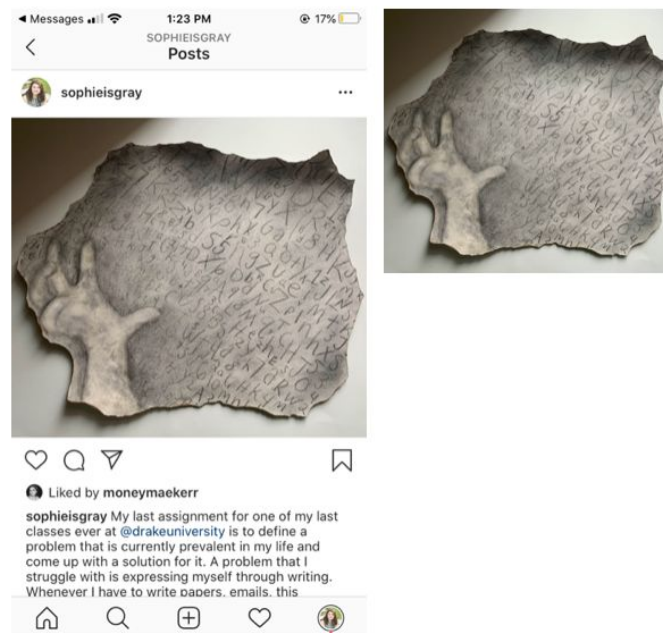

Figure 16 - "Scatter brained" by student Sophie Gray, 2020

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[40] "The Book | Creative Confidence by Tom & David Kelley." https://www.creativeconfidence.com/book/. Accessed 24 Jun. 2020.
[41] From Helen Armstrong's book, Participate: Designing with User-Generated Content

Brian Ortiz methodically merged two parts of his identity - that as a member of the deaf community who is also passionate about fitness - to create customized online workouts for fellow members of the deaf community. He discovered that having a conversation with his users about nutrition and working out helped him with his design. After a few workout sessions, he designed a WOD, or "Workout of the Day," for his test users.

Willey took an inspired leap in her own project to help visual learners succeed in a post-COVID learning environment. Her prototype called "Create a Break" centered around creating a personalized process to help students learning from home take meaningful breaks during their school work to brighten their brains with inspiration and energy.

Test Hexagon

Several students had a major realization after the testing phase in Project 2: that even though the semester was done, their work on their project may not be. By showing a user a product that was also intertwined with their own identity, students articulated not only a product or service to improve upon in future classes or projects, but a leadership mission. Even more stunning, for many, they used the carefully choreographed teamwork in class to dig deep and realize that the problems and issues they uncovered during the class actually transcended the moment of the pandemic.

Finally, we observed another fascinating development among some students: Their project for users merged with projects they conducted on themselves. The process of examining one's identity, reflecting on that identity after interviewing a member of an in-group, challenging those insights by receiving feedback with a diverse class, and experimenting with solutions, led to dual transformations: One for the user and for the self. We started the semester wishing for internal motivation to impact a user beyond grades. This result shows we should have and could have aimed much higher.

PUSHING PAST WORRIES

As testing approached, many students told us they were feeling a mix of stress and anxiety, with worries about how their users would react and if they were making the right choices about the project, its order and its flow. In some cases, students were struggling to progress past the initial napkin sketch.

Our first challenge was to make sure every student had a working prototype to show a user. Some students worried they would have to build entirely new platforms to complete a test of their product. We advised students to view this as a "handcrafted exercise" for one person at a time[42], using existing platforms - even SMS - to test a single process before moving onto more technically complex work. One student had long been planning to make a calendar to chart out fun family activities to ease boredom in isolation. Our advice was to "just make the DAMN calendar" and use it within the family, with the goal of observing their reactions. We advised students to put aside worries and focus on making the prototype and let the users educate the students about what the project was really about. And that advice

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[42] "Brian Chesky on Masters of Scale with Reid Hoffman." https://mastersofscale.com/brian-chesky-handcrafted/. Accessed 7 Jul. 2020.

came with a caveat: User tests could fundamentally alter the course of the project - - and designers needed to be ready for that.

Using question prompts inspired by a Stanford d.school pop-out[43], we directed students to conduct a test by:
- Deciding what aspect of their project they would test and why
- They had to set the test time and commit to watching the behavior of the user as they were using a product or service.
- Finally, they had to decide how to conduct the test - would it be over Zoom? Text message? The U.S. Postal service?

During class group work, we instructed students to push each other to come up with ideas for questions during a test beyond "Do you like this or not?" Students reflected on how they would learn about the emotions, feelings, and reactions to what they built. For future iterations of this exercise, we would advise adding personal reflection for students to again consider how they emotionally reacted to user feedback and how the user's reaction to the product is different than their own, the designer. This is a good chance to teach about how we get attached to what we make, but that designers don't build for themselves, they design for others.

REFLECTING ON THE RESULTS

When students returned from conducting their tests, they reported a mix of excitement and stress. They had passed a major milestone in their project, not only bursting through various barriers that had prevented them from making a solid prototype, but also listening with an open mind to the criticisms that would inevitably come during the first test with a user. We then designed a class to prime them for yet another disruption that should come as a result of rigorous testing. (The first major disruption happened after their first empathy interviews.) Students spent time in teams sifting through what they saw and heard during the test. We wanted them to realize the deeper insights about the user are often left unsaid, which takes analysis and thoughtfulness. Using input from the d.school, we asked each student to share a "surprising insight"[44]. We then asked each team member to reflect on what they heard using the prompt "I wonder if that means X." Finally, we pushed them to act on this new information, and create a plan to improve their prototype before final submission.

Students shared with their instructors the results of the tests and in-class conversations:
- We learned that, for some students, the test revealed a new leadership mission intertwined with their identity that transcended the product or service they had developed. For example, Estell gave his sister an art lesson, part of a test to see if he could help artists "get thoughts on paper." He described the experience, saying "I was the leader, telling her to draw and what to draw." Wren Kress also experienced a leap to leadership. Despite confronting doubts and concerns about her project throughout the semester, she explained in her test that she had a new realization: that her initial mission remained: to build a process to encourage friendship among women. "I started to think more about the users and the friendships I want

[43] "POP-OUT: Mapping Oakland — Stanford d.school." https://dschool.stanford.edu/classes/pop-out-mapping-oakland. Accessed 7 Jul. 2020.
[44] "Design Thinking Bootleg — Stanford d.school." https://dschool.stanford.edu/resources/design-thinking-bootleg. Accessed 7 Jul. 2020.

them to make and not the actual physical product," she wrote. Furthermore, within her test and her collaborative, in-class discussions, Kress said she also made another leap. She started out thinking that her project was about loneliness. She had now reframed it to be about "making strong friendships."

- Many students produced projects that transcended the pain of isolation from the pandemic into broader human issues. Estell's project started because of his own struggle during social isolation as an artist. "It was one of my personal struggles with not just going outside, but when everything seems to be going bad, it feels like you get lost in your own thoughts and it hindered me from creating," he wrote. He summed up in class his transcendence to a higher level. "I once thought [my project] was about artists working in social distancing." Now he found out that it's "about finding a reason to create." Lila Johnson said her project had an early focus of advocating for the minimum level of self care for students with mental health issues. After her test, she had a new growth mindset. It wasn't about the bare minimum of self care, she said. It was about challenging yourself to get better at taking care of yourself.

- Finally, at least one student documented a major personal transformation that coincided with the path of his project. Hunter Beyer wrote in his final paper that he struggled with inspiration and motivation throughout the course of his project, influenced by living in a place he hadn't been in much since high school. It was so low stakes "It almost feels like college is optional," he wrote. His project focused on helping others in his same situation find meaningful hobbies, to "find ways to fill the time." As part of his project, he sat down and thought "critically about what I could do with my given hobbies." Here's where he settled: "For music, I've decided to learn the bass part, rhythm guitar part, and lead guitar part to the song *Walk Away* by Black Sabbath, then record each part individually and put them together in a video editor. Secondly, I've committed to writing something substantial - a fantasy-type novel idea I've had for a little over a year now. Working on these things in the midst of this project was definitely a huge influence on everything I did, starting from the 'empathy' section on."

Reflection And Thoughts

Upon finishing the course and reading all of the students final process books we came up with a few lists that we found might be helpful to those who read this.

There were a number of helpful things that allowed this experience to happen.
- Team teaching with a Design thinking expert/professional
- An even number of students
- Having a flexible space/classroom with mobile-ish furniture
- Framing the course and having students trust us enough to go on the journey
- Energy! We were both excited to teach and engage with DT and the students
- Attending the Equity by Design workshop with Creative Reaction Lab
- A large studio space with multiple areas to conversate and work
- Lots of white boards

There were some things that hindered the course experience.

- Moving the course online took away the ability to see students body language when interviewing and engaging in team work
- Moved a little too quickly through the identity phase, didn't leave enough time for students to fully reflect on and realize their identity
- Some immobile classroom furniture
- Conducting critique separately while simultaneously learning about interviewing

Things to know if you do teach this material in your classroom.

- Reassure students that they will experience failure, anxiety, and general discomfort and it will be ok
- Process books AND specific reflection questions are pivotal to this work/experience
- 12 students is a solid number for doing this type of work
- If you are unsure of how to talk about identity, bring in or chat with a professor from sociology/communication to conduct the identity portion.
- If you can afford it, bring in or Skype in Antoinette Carroll from Creative Reaction Lab for a designing equity workshop
- If you can afford it, bring in or Skype in Lisa Rossi from Bonfire Strategy for a Design Thinking workshop
- Go through each step and show them before letting them go on their own.
- This type of work can be done remotely on Blackboard Collaborate, but is best to do in person
- Be flexible with students, yourself, and the course schedule.

And finally, what we would do differently when we teach this material and course again.

- Pre-req course on identity and designing your own life with a focus on turning daily journey mapping into life changes.
- Focus more on Identity in testing phase
- More small group interviewing; no deep interviewing in large groups
- Clearly connect discomfort with the goal of the mindset exercises
- Growth mindset instruction earlier, rather than later in the course to set the table for transformation.
- Blog post requirement for students to showcase in public their design work and inspire future collaborations.
- Daily journey mapping + two emotion check-in consistently for the duration of the semester. (We stopped journey mapping as part of the transition online and started two emotion check-in halfway through.)
- Rename the course: Identity, Audience and Design.
- Bring in a campus guest speaker to talk about how understanding of their own identity has influenced the design of their mission and impact.
- Schedule small group interviews with design educators instead of doing them over email.

Conclusion

Incorporating elements of sociology, psychology, and communication theory made this semester truly interdisciplinary and engaging — in-person and online. Guiding students through the design thinking process to better understand their own identity (the memories, experiences, relationships, physical characteristics, and values that create one's sense of self) and socially constructed realities (one-on-one interactions with others and life experiences) forced students to confront their own privilege months before privilege and oppression exploded as national conversations.

At the same time, our process encouraged students to consider the marginalized parts of their identity and amplify those as a focus of the project. Reading through the process books Rossi noticed that this focus also had two other impacts: White students were reflecting upon their own privilege early on in the process and students of color were embracing the marginalized parts of their identity and integrating those into their project focuses.

We were amazed as we saw students grow as individuals and designers by making connections between their own identities and realities and the overlap with the users they were designing for/with. Deeply understanding themselves and engaging in research, interviews, and testing with users gave students insight into different identities and constructed realities that challenged and confirmed their assumptions during the ideation, prototyping, and testing process. By designing solutions for/with a community the student was in, they avoided the academic savior complex and were personally connected to the project and motivated to solve the problem.

As we wrapped up the semester and read our students final process books our goal of shifting students' mindset from extrinsic to intrinsic motivation and addressing their distracted, busy, and anxious mindsets by focusing on identity was successful.