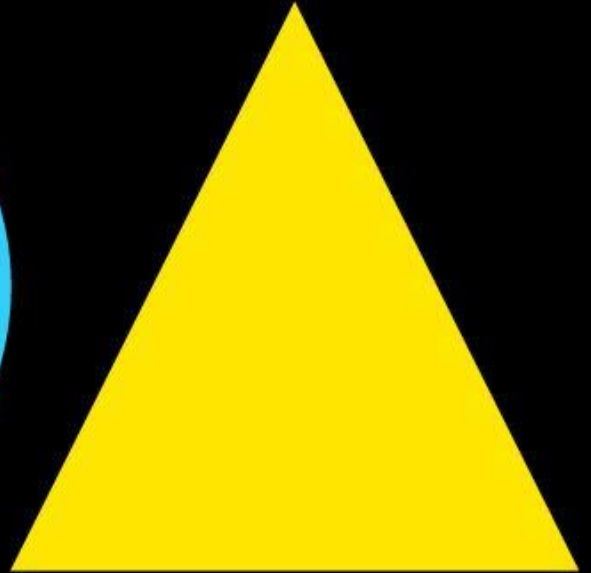
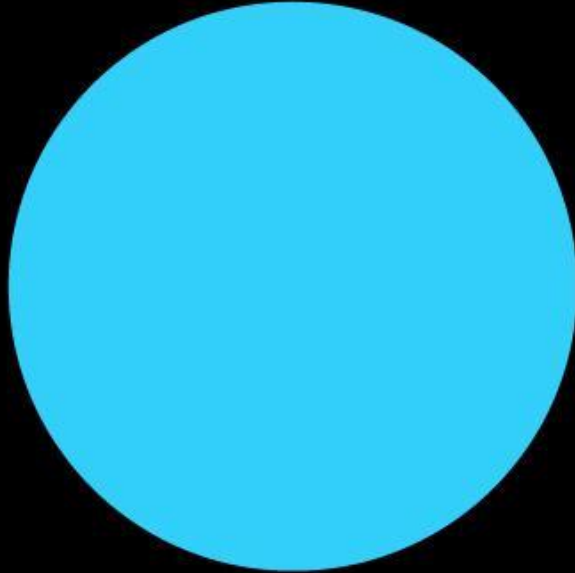
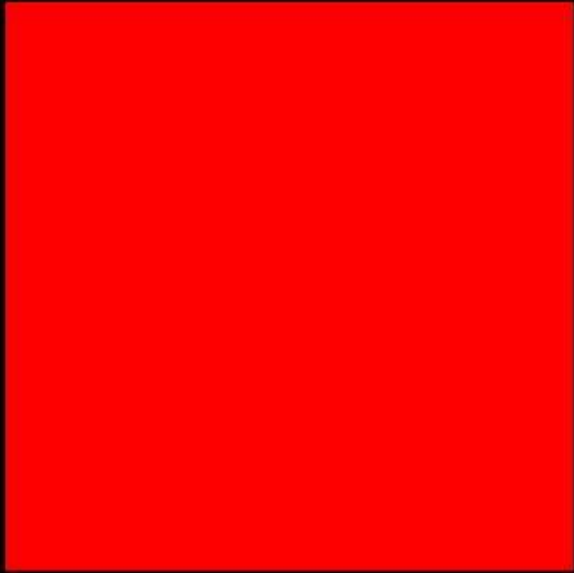


Abilities Design

A new framework to brainstorm for accessible solutions



Hello, my name is John O'Neill

He, Him, and His

Assistant Professor of Graphic Design

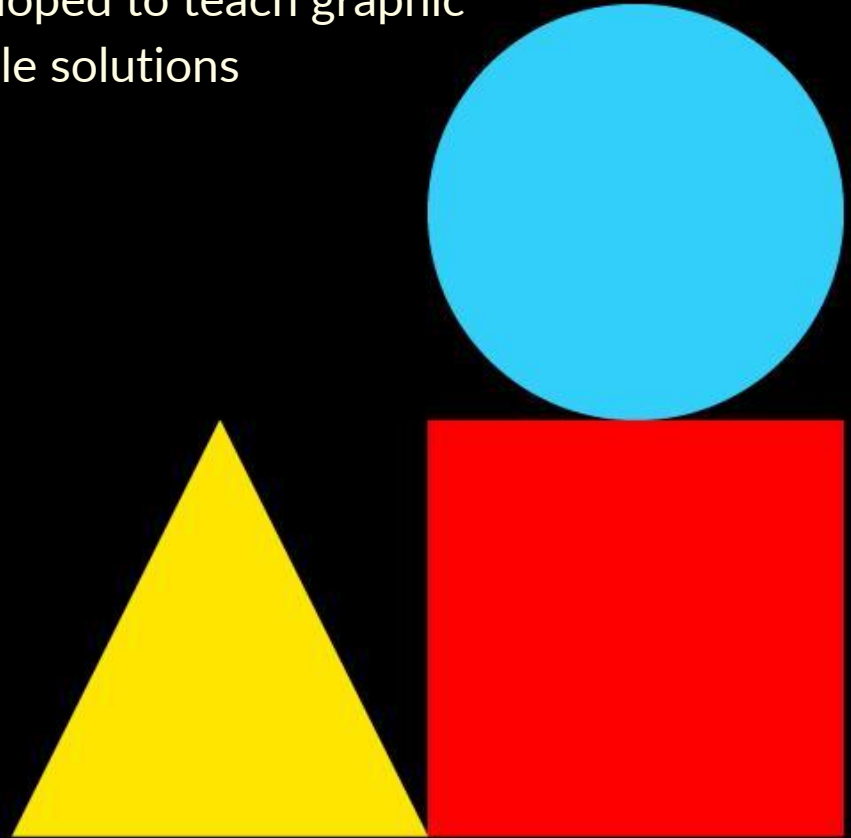
University of Minnesota Duluth

I teach UX (interactive) design courses

My research and teaching focus is on the topic of accessibility

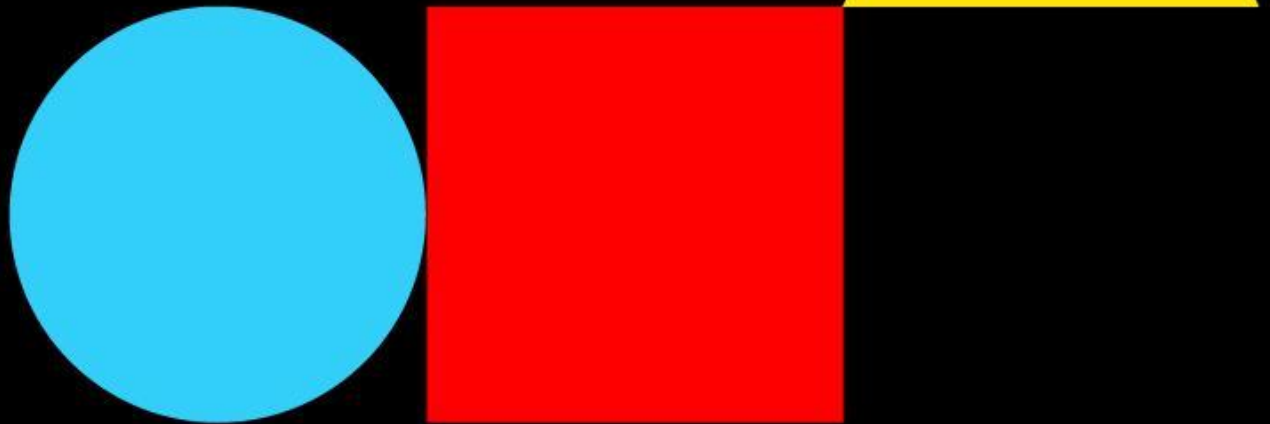
Abilities Design is a method that I developed to teach graphic design students how to design accessible solutions

Maybe you can use it too



Abilities Design is the framework to generate ideas using the principles and methods of Universal Design, Universal Design for Learning and Inclusive Design

The goal for using Abilities Design is to brainstorm innovative accessible solutions that will tap into everyone's abilities



Let us explore the following:

1. Discuss how the digital and physical experiences are merging together, which requires us to find innovative ways to design accessible and inclusive solutions
1. Outline how the Abilities Design framework can help generate ideas
1. Explain how my students are using Abilities Design for their projects
1. Outline how you can use Abilities Design

As my creative practice, research, and teaching evolves, it is becoming clear that there is a shift happening in graphic design

However, the shift is not very easy to define

Not long ago, graphic designers developed
campaigns and brand systems

with clearly defined media and applications, including logos, brochures, posters,
websites, and more

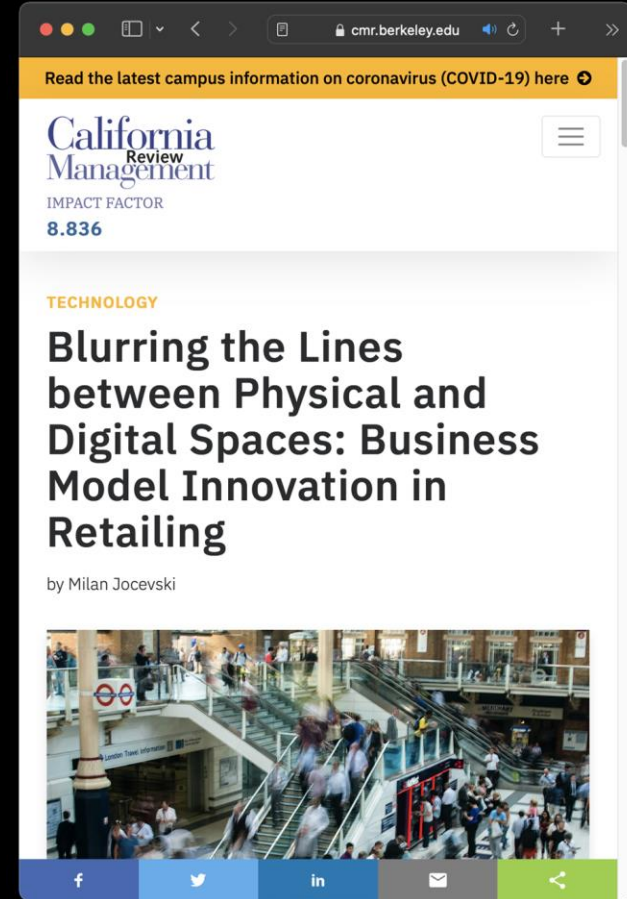
These mediums are becoming more blended with how they are made, displayed, and experienced

Transmedia, dynamic data, and other technologies are merging where graphic design ends and another discipline starts

Physical and Digital
Environments Are Merging
Into One Experience

You have physical spaces and digital experiences that are merging together

Each aspect of this merging experience must be accessible



Other digital and physical environments and devices go beyond the Web Content Accessibility Guidelines (WCAG) scope

They may also have to deal with the United States American Disabilities Act's (ADA) compliance for physical spaces

Everrrrrrrything
Must Be Accessible

I am fascinated by the depth and breadth of accessibility solutions that people encounter in their physical and digital environments,

and how those solutions are branded and communicated to the world

Likewise, I am intrigued by the processes and methods to brainstorm ideas that make all aspects of industrial products, mobile products, as well as physical and digital environments accessible

The various touchpoints that people encounter to experience a brand — whether digital or analog — can impact the graphic design industry

(and not just UX design)

Exploring the touchpoints of various places, things and information is how I teach different aspects of accessibility to my students

I hope that my students, regardless of their design passions, learn why accessibility is important for all design solutions

Most importantly, I want my students to have a framework for achieving accessibility in the design work that they produce

I call this method Abilities Design

Abilities Design May Help You
Brainstorm Innovative Ideas
For Accessibility

I aim for my students not to perceive disability as a problem they must solve

Liz Jackson, one of the speakers for this conference, discussed at length for other conferences that society believes disability is a problem to be solved

Abilities Design Teaches
Students About the
Intersectionality of People

This approach helps students not to perceive people with disabilities as "other" or make them feel as though they have to be their ally

In this context, this makes people with disabilities “less than”

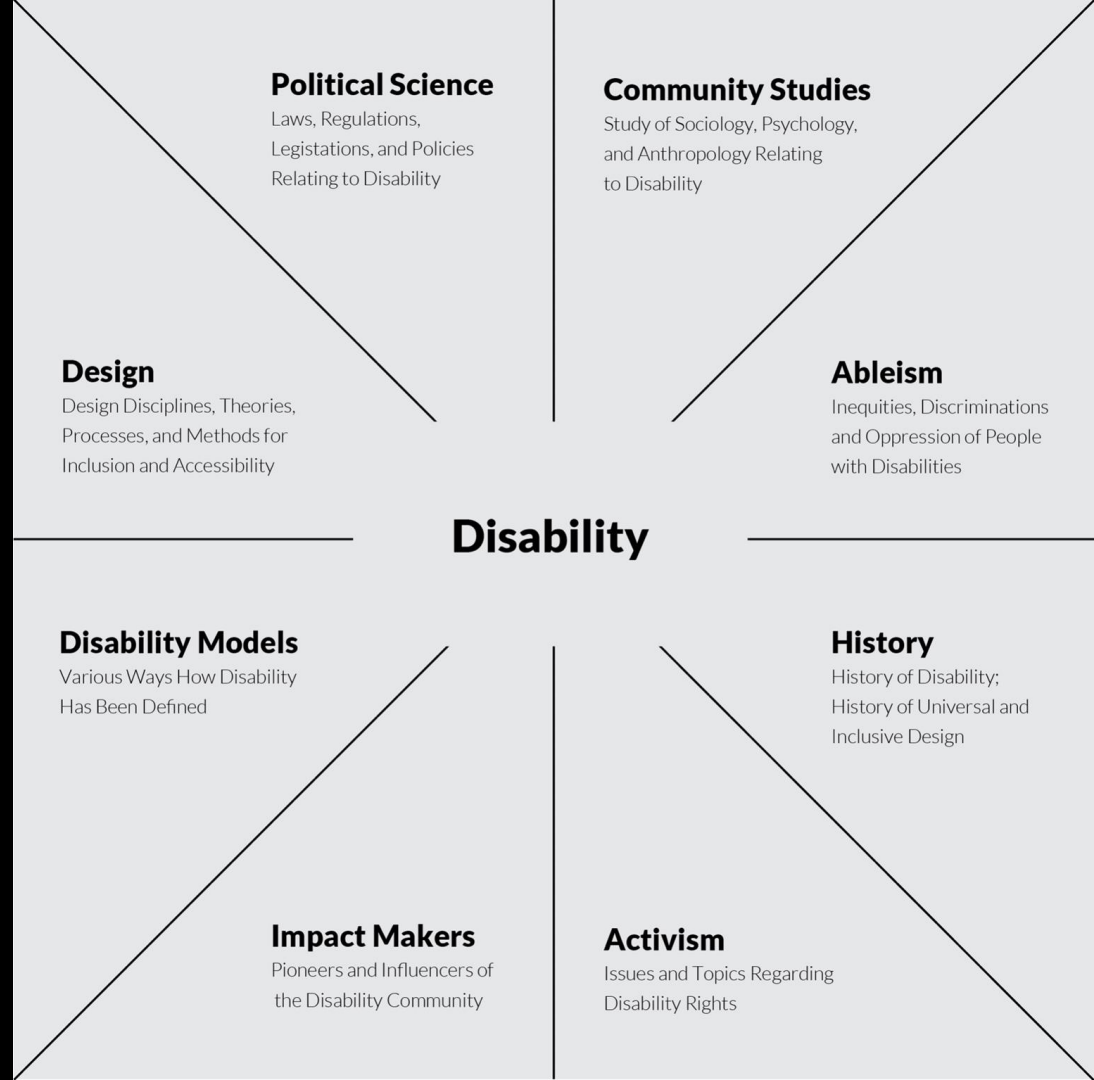
The idea of ally goes back to what Liz Jackson said regarding how society believes disability is a problem to be solved and therefore people with disabilities are perceived as needing help

The notion of ally also creates a "us" vs. "them" mentality

Abilities Design Teaches
Students About Different
Aspects of Disability Studies

Before the brainstorming and prototyping stages begin, I introduce my students to the current on-screen diagram, which lists various topics of disability studies

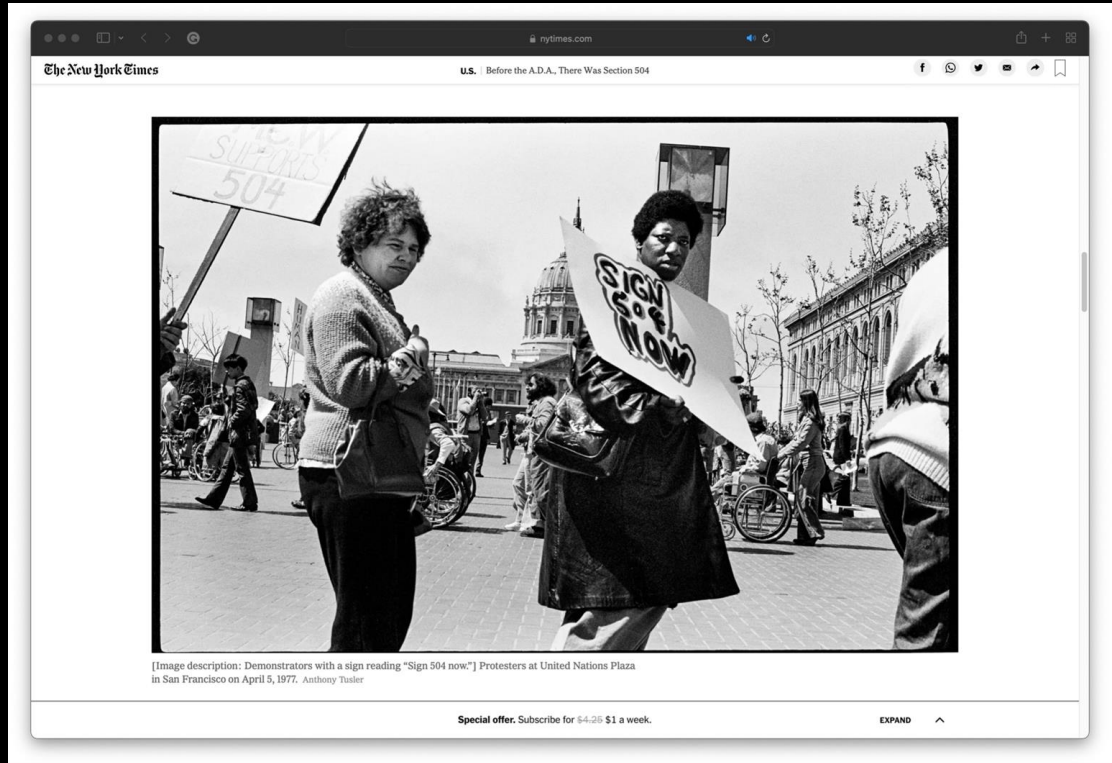
Students are engaged in different activities learning about these aspects



They study the Section 504 Sit-in that took place in 1977

Image description: Screenshot of a New York Times Article about the 504 Sit-in

The Screenshot consists of a black and white photograph of a middle-aged black woman in front of the Capitol Building holding a “Sign 504 Now” protest poster



Students also study the work
of Patty Moore

She is considered to be the
Mother of Universal Design

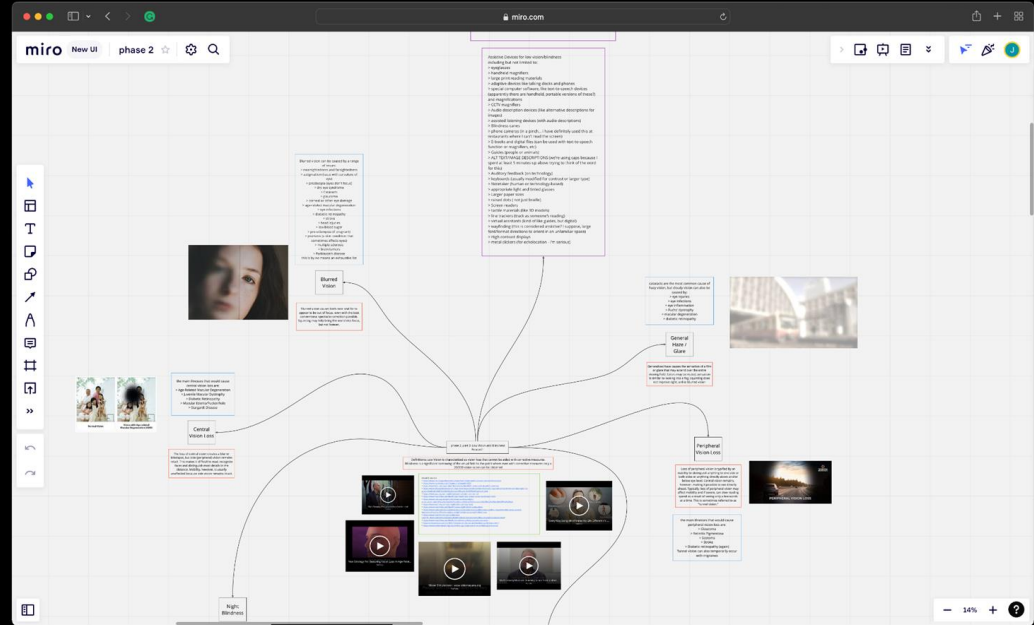
Video description: Patty Moore is
being interviewed and video recorded
talking about her project where she
wore makeup, clothes, and body
devices to appear as an elderly person



Students document their research by developing diagrams

Image description: A mind map diagram of research about the blind and low vision communities

The diagram was made using the Miro whiteboard application



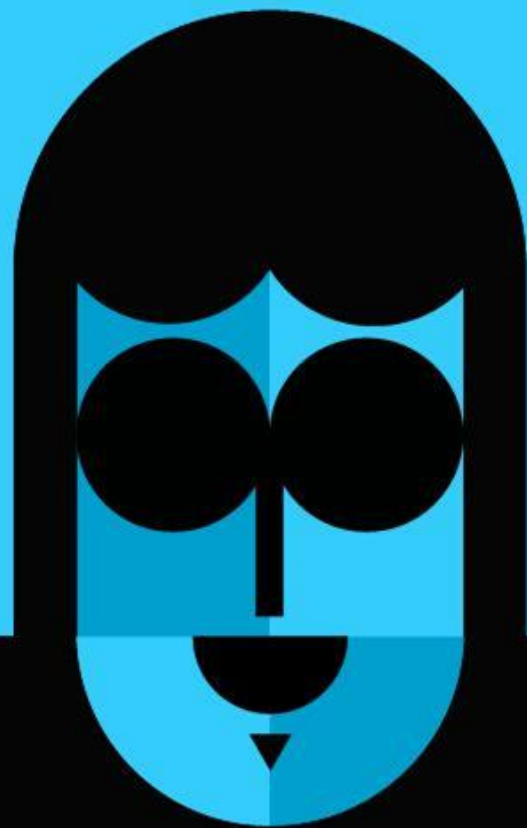
Studying the Microsoft Persona Spectrum Model of Disability makes an impact as they take on the disability studies activities

The model states that three kinds of disabilities exist

For example ...

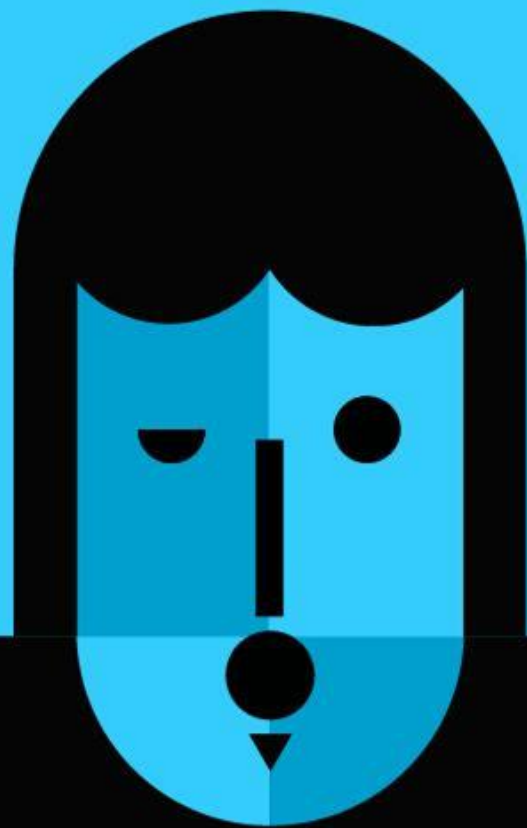
Permanent Disabilities

Blindness



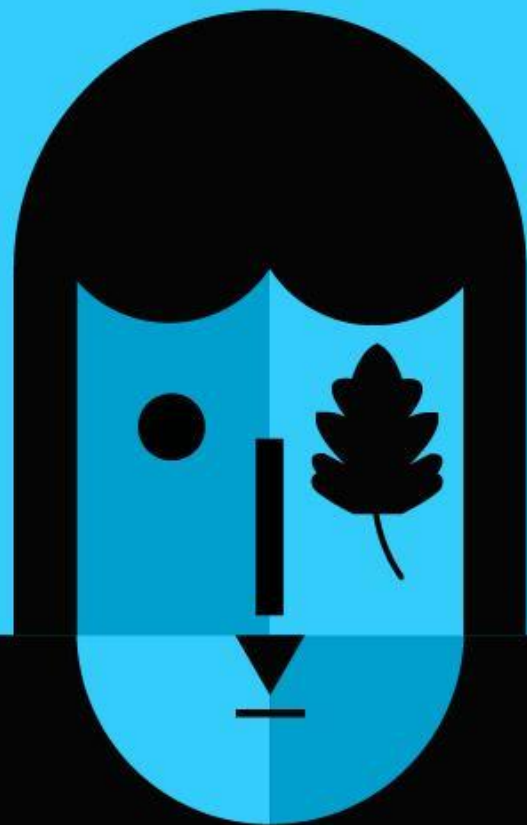
Temporary Disabilities

Swollen Eye



Situational Disabilities

Interrupted View



Abilities Design Explores Universal Design, Universal Design for Learning, and Inclusive Design

Once students finish researching various aspects of disability studies, they examine the differences and similarities between Universal Design, Universal Design for Learning, and Inclusive Design

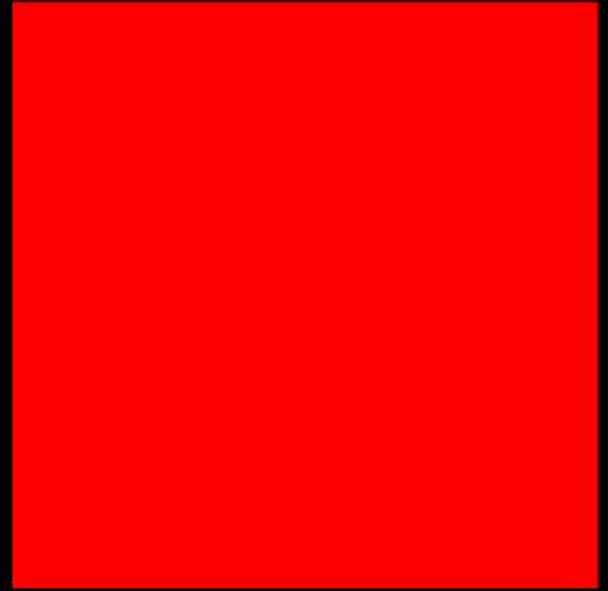
This activity aims to make them realize that different design approaches exist for creating something that is accessible for diverse disabilities

Like everything in life, Universal Design, Universal Design for Learning, and Inclusive Design have pros and cons

However, "outside the box" ideas are born when students generate ideas for design solutions that combine different principles and methods from Universal Design, Universal Design for Learning, and Inclusive Design

Let us talk about

Universal Design



Here are the pros and cons of Universal Design

Pros

There are times and situations when Universal Design solutions are appropriate

Cons

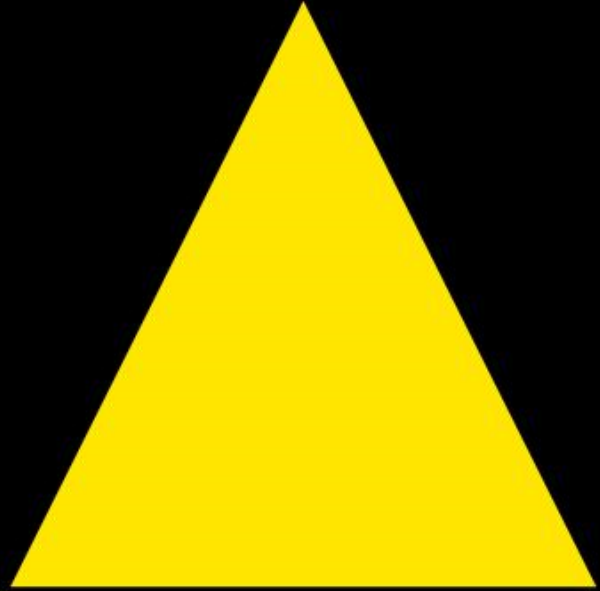
Universal Design solutions consider the needs of the many

Thereby, they do not address the unique needs of individuals

One-size-fits-all approaches often do not work, especially for people with disabilities

Let us talk about

Universal Design for Learning



Here are the pros and cons of Universal Design for Learning

Pros

Universal Design for Learning extends learning opportunities to more people regardless of their abilities, age, or circumstances

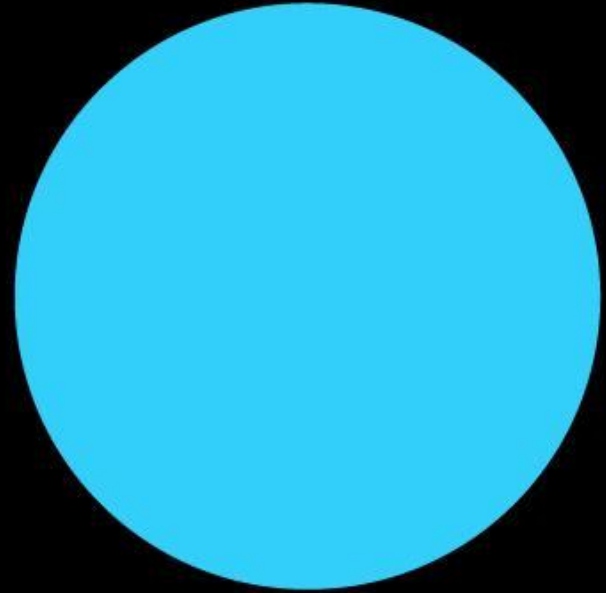
Cons

People learn new information in a variety of ways beyond a singular approach

Universal Design for Learning needs a suitable environment and equipment to be most effective

Let us talk about

Inclusive Design



Here are the pros and cons of Inclusive Design

Pros

Inclusive design solutions address the unique needs of individuals

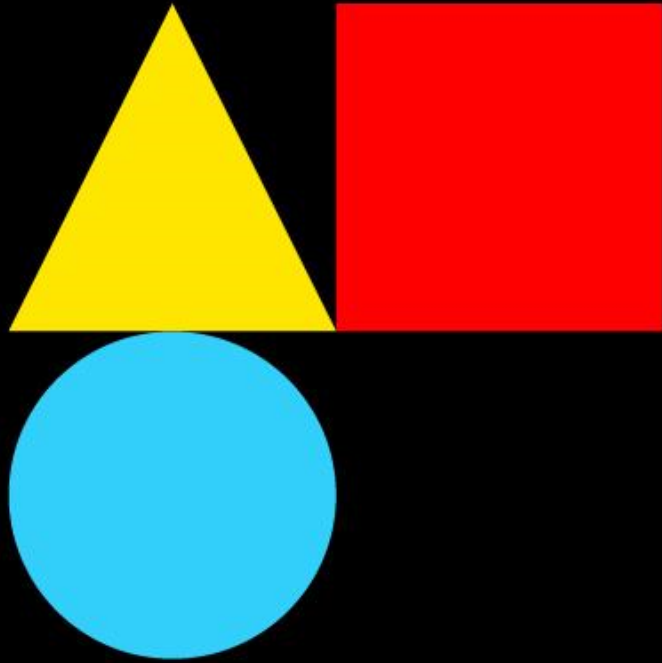
Cons

It is not possible to make everything adaptable

Adaptability can result in complexity and make things more expensive

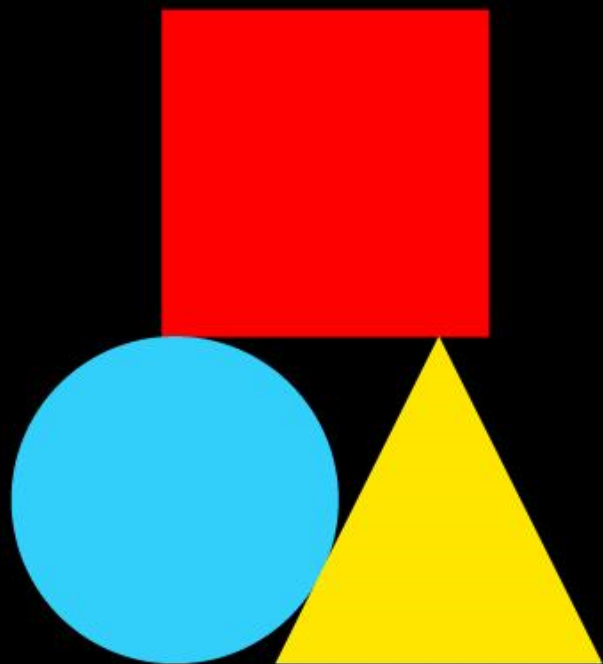
The students take the best parts of Universal Design, Universal Design for Learning, and Inclusive Design to develop ideas that can be innovative for solving accessibility and inclusivity barriers

This framework aims to make it click with them that there are different approaches to design something that is accessible for a diverse set of disabilities

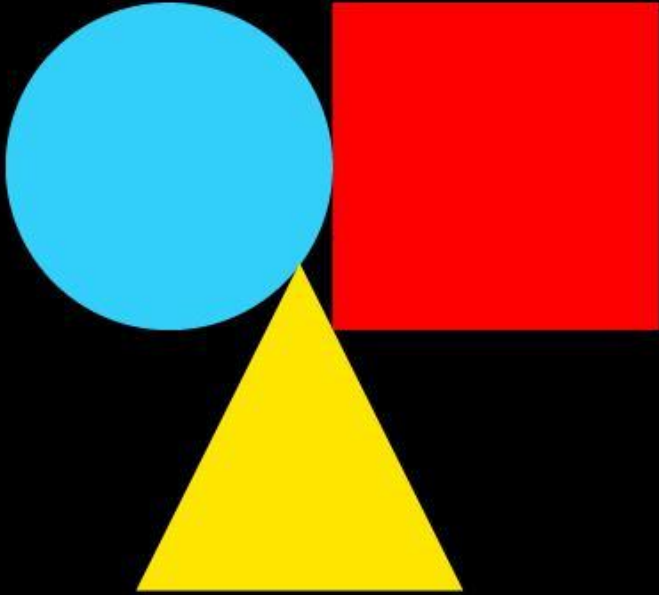


The principles and methods of Universal Design, Universal Design for Learning, and Inclusive Design can merge in a variety of ways to find interesting connections and patterns

There is no right ...

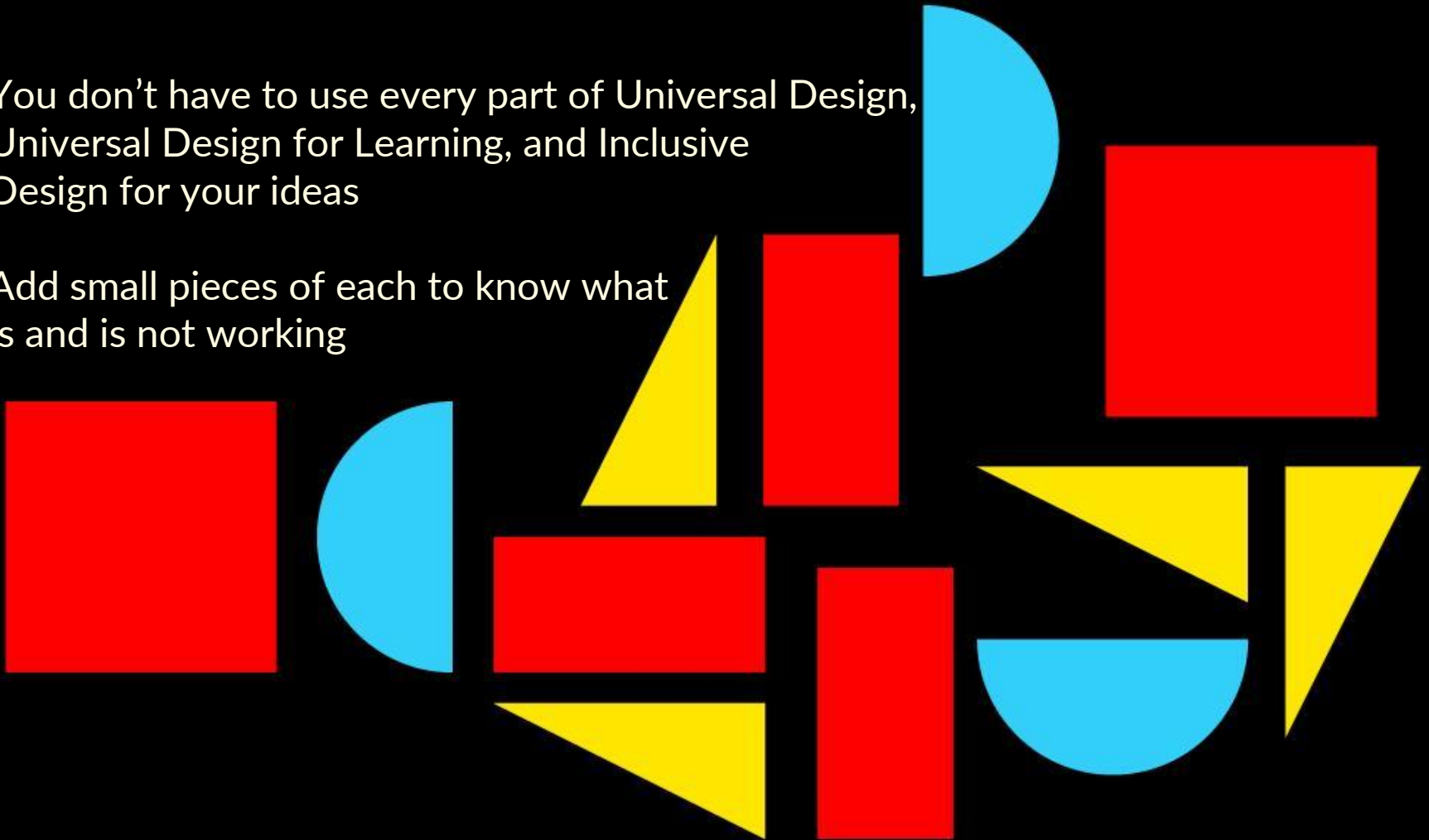


or wrong way to use Abilities Design



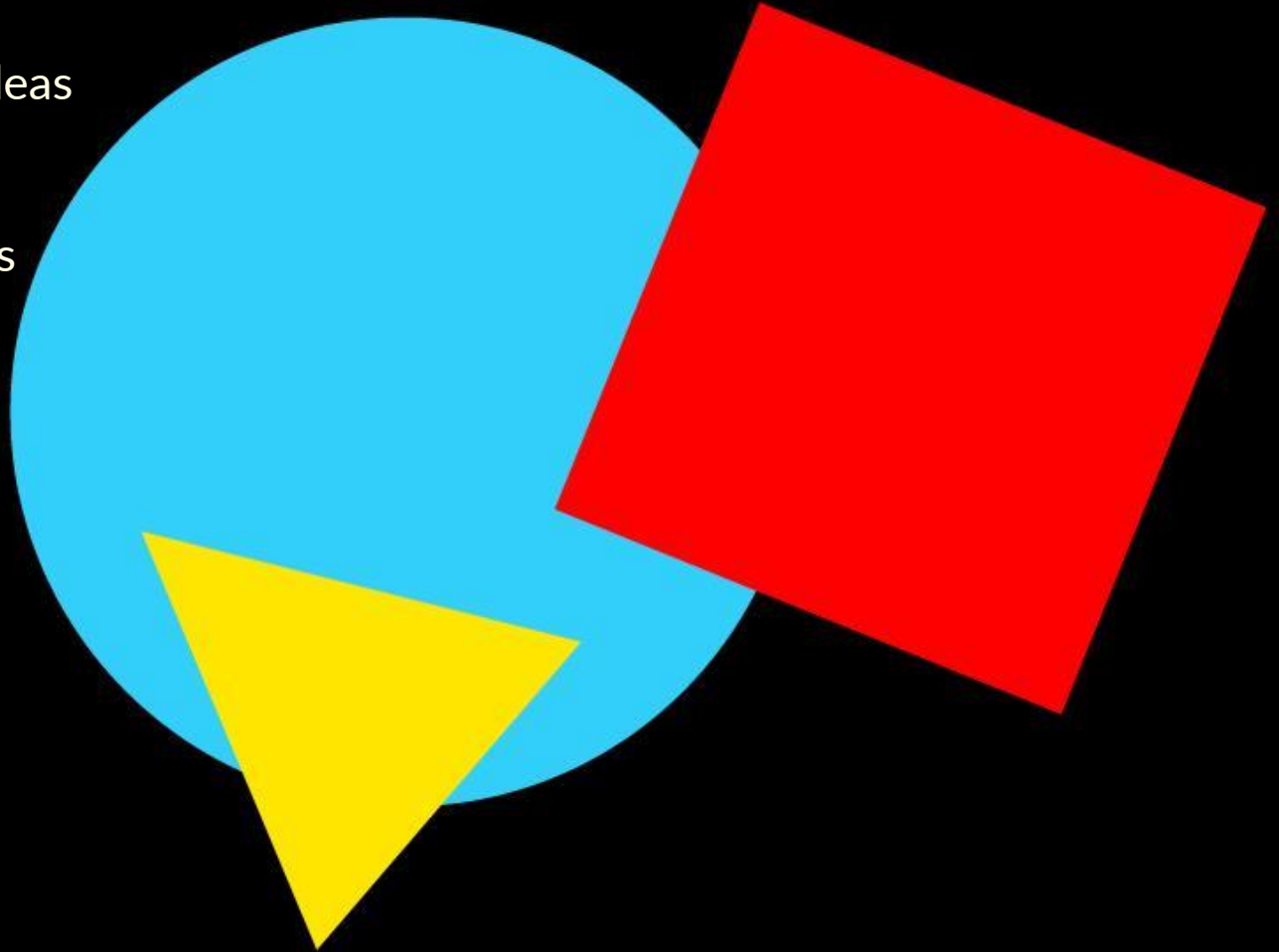
You don't have to use every part of Universal Design,
Universal Design for Learning, and Inclusive
Design for your ideas

Add small pieces of each to know what
is and is not working



Be playful with your ideas

Examine how the
principles and methods
from each discipline
may overlap with
each other



Case Studies

This past fall, I taught Interactive Design II

I assigned students a semester-long project to produce a hypothetical gallery exhibition

Using the Abilities Design Framework, each student designed an app prototype for a tablet that will help visitors interact with the art pieces and the gallery

This past fall, I taught Interactive Design II

Students were also responsible for designing the branding, website, and interior of the exhibition space

Their exhibition design will provide people with low vision or blindness the ability to experience the art or design pieces on display

In years past, students took on a project that asked them to redesign an industrial product that was not accessible

They also redesigned their product's identity and brand



LIBERTY TRAIL GUIDE



These two projects go back to what I said earlier about blending where the graphic design discipline ends and where another discipline begins

Instead of designing brochures and booklets, graphic design students are now designing interiors, visual systems, and industrial products

Here Are the Steps To Using Abilities Design

1. **Identify the user's needs and goals.** This is the first step in the process, and it involves understanding the user's requirements and the goals of the design. This can be done through user research, interviews, and surveys.
2. **Define the user's abilities and limitations.** This step involves identifying the user's physical, cognitive, and emotional abilities and limitations. This can be done through user research, interviews, and surveys.
3. **Design the user interface.** This step involves creating a user interface that is accessible to the user. This can be done through user research, interviews, and surveys.
4. **Test the user interface.** This step involves testing the user interface to ensure that it is accessible to the user. This can be done through user research, interviews, and surveys.
5. **Implement the user interface.** This step involves implementing the user interface into the final product. This can be done through user research, interviews, and surveys.

Start With Disability Studies

Before making a marketing profile or persona, take a deep dive into disability studies

You will gain insights into how people with disabilities encounter the world around them and impact society throughout time

You will also come to realize that inaccessibility = ableism

Examine Universal Design, Universal Design For Learning, and Inclusive Design

Brainstorm how your design projects can utilize those three different disciplines

Evaluate Your Ideas

Develop lists of the pros and cons that each discipline can offer for accessibility and inclusion

Thank You

jloneill@d.umn.edu