



American Association
of Colleges of Nursing
The Voice of Academic Nursing

TOUCH AND GO REMOTE

Transforming a Collaboration Process From Analog to Virtual

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DESIGN  NURSING

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01 INTRODUCTION

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OUR PROCESS

TOUCH AND GO

The Touch and Go process divides collaboration modalities into intense and relaxed. We value collaboration but also realize discipline specialties need time to break away and focus.



Intense collaboration: Research and Validation



Relaxed collaboration: Conceptualization



RESULTS

PRE COVID-19

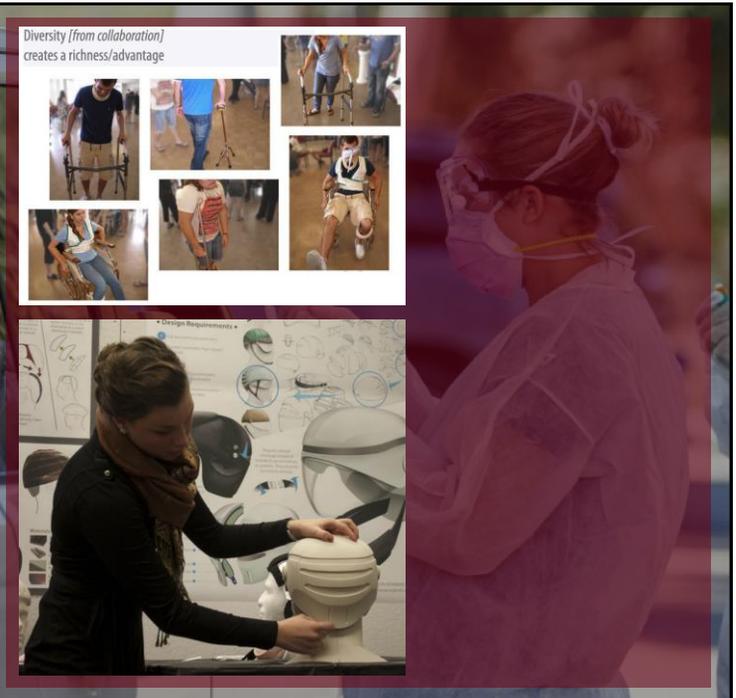
Before COVID-19 we stressed the importance of face-to-face interactions with stakeholders and prototype as much as possible.



Face to face interactions



Make it!





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PROJECT SET-UP

The co-LAB grant was in response to low CO-OP employment and then collaboratively investigating community solutions to conditions associated with COVID-19 and the those most affected.



EXTERNAL COLLABORATION

Partnering with NIOSH gave us direct access to researcher on the pandemics front line

"NATIONAL INSTITUTION OF OCCUPATIONAL SAFETY AND HEALTH"



CO-OP

Our two CO-OP students researched the COVID virus history, identified markets most affected, and developed a guidebook to assist in the studio launch



STUDIO

Collaboration between Industrial Design and Community Health Nursing. Used guidebook to determine project topics and general reference.

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SPRING 2021 CO-OP

During our CO-OP semester the realities of remote collaboration became apparent. Wi-Fi issues, meeting scheduling, and content review

-  Rural communities lack reliable access
-  No F2F meetings = The need for flexibility
-  Digital content = review when it fits your schedule

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INDL4044
UC FORWARD
COLAB:
**COVID-19
PREVENTION**

SUMMER 2021



CO-OP
RESULTS

Once we hit our stride, tasks were completed on time. Students met virtually with NIOSH researchers. They gained knowledge conducting literature reviews. The findings culminated in the completion of a Historical Timeline and a research guidebook that helped launch the Summer Studio

-  Historical Timeline
-  Guidebook
-  Lessons Learned

HISTORICAL TIMELINE: THE VIRUS

Coronavirus History
1965-2019

- 1965**
Virus EBOLA is cultivated from a boy's cold. ("The first common virus strain?")
- 1967**
Using EBOLA, Scientist grow another new human virus with similar morphology. OC-43
- 1978**
The last known case of small pox locked from a U.K. laboratory. **Evening Mail** "Mystery of why father never knew spread of other disease" **SMALLPOX VICTIM DIES**
- 1984**
Virus 229E is isolated from a medical student with a cold. It is distinct from other known respiratory viruses. "The second Corona virus."
- 1968**
The term "coronovirus" is coined.
- 2003**
An outbreak occurs of Severe Acute Respiratory Syndrome (SARS) in China, a new human coronavirus team.
- 2004**
SARS links from Beijing lab on at least two separate occasions.
- 2004**
Researchers report isolating a coronavirus, later named NL63, from a child with pneumonia.
- 2005**
Researchers in Hong Kong discover another coronavirus, HKU1, in two patients with pneumonia.
- 2009**
H1N1 becomes the first pandemic declared by the WHO. H1N1's more common name is the swine flu. **H1N1 is an influenza rather than a coronavirus.**
- 2012**
Researchers isolate a new coronavirus in a man from Saudi Arabia with pneumonia and kidney failure, later named MERS-CoV.
- 2014**
U.S. identifies midwestern Ebola and it escapes the lab.
- 2017**
China builds its 1st biosecurity level 4 (Biosafety level 4) laboratory—the highest level (classified) to work with airborne pathogens that have no known vaccines in Wuhan.
- 2019**
Wuhan, China's government reported on hearing dozens of cases of pneumonia from unknown causes.

Human Development & Interaction

HISTORICAL TIMELINE: CVD-19 PANDEMIC



SOCIAL

ECONOMIC

TECNOLOGY

HISTORICAL TIMELINE



SOCIAL

ECONOMIC

TECNOLOGY

GUIDEBOOK

COVID-19 VIRUS BACKGROUND

COVID-19 Basic Understanding

COVID-19 is an acronym for Coronavirus Disease 2019. Coronavirus is a family of viruses that can cause the common cold, severe acute respiratory syndrome (SARS), and Middle East Respiratory Syndrome (MERS). The novel coronavirus that causes COVID-19 is a new virus that has not been previously identified in humans. It is believed to have originated in an animal, possibly a bat, and then spread to humans. The virus is highly contagious and can spread from person to person through respiratory droplets. It can also spread through contact with contaminated surfaces. The virus has caused a global pandemic, with millions of people infected and hundreds of thousands of deaths. The impact on the economy has been significant, with many businesses closing and supply chains disrupted. The demand chain has also been affected, with many people staying at home and not going to work or school. This has led to a decrease in demand for many goods and services, which has in turn led to a decrease in production and a global economic slowdown.

Susceptibility What is the Risk?

Approximately 50% of people are susceptible to COVID-19. Of those who are infected, approximately 50% will become ill. The risk of becoming ill is higher for older adults and those with underlying health conditions. The risk of severe illness and death is also higher for these groups. The risk of becoming ill is also higher for those who are in close contact with someone who is infected. The risk of becoming ill is also higher for those who have traveled to areas where the virus is spreading. The risk of becoming ill is also higher for those who have been in a crowded indoor space for a long time. The risk of becoming ill is also higher for those who have been in a public place, such as a shopping mall or a restaurant. The risk of becoming ill is also higher for those who have been in a public place, such as a shopping mall or a restaurant. The risk of becoming ill is also higher for those who have been in a public place, such as a shopping mall or a restaurant.

Symptoms What are they?

Common symptoms include fever, cough, and difficulty breathing. Other symptoms include loss of taste or smell, sore throat, runny nose, and fatigue. Symptoms typically appear 2-14 days after exposure to the virus. The severity of symptoms can vary from mild to severe. Some people may experience a mild illness that resolves on its own, while others may experience severe illness that requires hospitalization. In some cases, COVID-19 can lead to long-term health problems. Symptoms of COVID-19 include: Fever, Cough, Difficulty breathing, Loss of taste or smell, Sore throat, Runny nose, Fatigue, Headache, Muscle aches, Diarrhea, Nausea, Vomiting, Skin rash, Hair loss, and Loss of consciousness.

Grade-Schools The Why

Grade-schools are a key location for COVID-19 transmission. Children are in close contact with each other and with teachers. They are also in close contact with family members when they return home. This makes grade-schools a high-risk environment for the spread of the virus. The risk of transmission is also higher in schools that have large classes, poor ventilation, and no social distancing measures in place. The risk of transmission is also higher in schools that have children from high-risk backgrounds, such as those with underlying health conditions or those who are immunocompromised. The risk of transmission is also higher in schools that have children who are in close contact with someone who is infected. The risk of transmission is also higher in schools that have children who have traveled to areas where the virus is spreading. The risk of transmission is also higher in schools that have children who have been in a crowded indoor space for a long time. The risk of transmission is also higher in schools that have children who have been in a public place, such as a shopping mall or a restaurant. The risk of transmission is also higher in schools that have children who have been in a public place, such as a shopping mall or a restaurant.

Grade-Schools SET Factors/Benchmarking

Key factors for setting up a safe school environment include: Ventilation, Cleaning, and Social Distancing. Ventilation is important because it helps to reduce the concentration of the virus in the air. Cleaning is important because it helps to remove the virus from surfaces. Social distancing is important because it helps to reduce the risk of close contact between people. Other factors include: Masking, Hand Hygiene, and Avoiding Large Gatherings. Masking helps to reduce the risk of transmission through respiratory droplets. Hand hygiene helps to reduce the risk of transmission through contact with contaminated surfaces. Avoiding large gatherings helps to reduce the risk of transmission through close contact between people. Benchmarking is important because it helps to identify best practices and to measure progress. Benchmarking can be done by comparing a school's performance to that of other schools that are doing well. Benchmarking can also be done by comparing a school's performance to that of industry standards. Benchmarking can help to identify areas for improvement and to set realistic goals. Benchmarking can also help to motivate staff and students to do their best. Benchmarking can be done in many ways, including: Self-assessment, Peer review, and External review. Self-assessment is done by the school itself. Peer review is done by other schools. External review is done by an outside organization. Benchmarking can be done at the level of the school, the district, or the state. Benchmarking can be done for a wide range of factors, including: Academic performance, Student behavior, and School climate. Benchmarking can be done for a wide range of factors, including: Academic performance, Student behavior, and School climate.

Grade-Schools Before & After Pandemic/Potential Concepts

Before the pandemic, schools were often crowded and had poor ventilation. After the pandemic, schools have implemented many safety measures, such as social distancing, mask-wearing, and improved ventilation. Potential concepts for improving school safety include: Improved ventilation, Social distancing, Mask-wearing, and Hand hygiene. Improved ventilation can help to reduce the concentration of the virus in the air. Social distancing can help to reduce the risk of close contact between people. Mask-wearing can help to reduce the risk of transmission through respiratory droplets. Hand hygiene can help to reduce the risk of transmission through contact with contaminated surfaces. Other potential concepts include: Avoiding large gatherings, Masking, Hand hygiene, and Avoiding Large Gatherings. Masking helps to reduce the risk of transmission through respiratory droplets. Hand hygiene helps to reduce the risk of transmission through contact with contaminated surfaces. Avoiding large gatherings helps to reduce the risk of transmission through close contact between people. Other potential concepts include: Improved ventilation, Social distancing, Mask-wearing, and Hand hygiene.

IDENTIFIED TOPIC SPHERES

GUIDEBOOK

Topic Opportunity Areas/Concept Ideas Findings from Our Research and *NIOSH

Topic	Location / Opportunity Area	Potential Concept Ideas
Grade-School	Classrooms, Hallways, Cafeteria, Recess, Bus, Bathroom, Water Breaks/Fountain, Extra-Curricular Activities, Mental Health, Protecting Teachers, Social Distancing	Products that kill bacteria on papers when turned in or for personal items [LVC]. Redesign of a student desk, Transportable covid station, *Portable ventilator/filtering units for a room or cubicle, Apps that track bubble/family groups and advises who/how many are coming together with risky members
Bar/Restaurant	Main Dining, Kitchen, Counter/Bar, Waiting Area, Bathroom, Checkout/Registry, Capacity Limits, Calling Orders, Staff to Take-Out, Social Distancing	DIY kit for PPE indoor seating blockade (that, RECA). More intimate or connected solution to allow in good blockade for groups that are in the same circle, Better insulated cheap to-go boxes, *Transparent barriers for better communication and aesthetics, Portable ventilator/filtering units for a room or cubicle, Apps that track vaccinated/immune vs. non-vaccinated/immune and provide advice when grouping close together, Apps that track bubble/family groups and advises who/how many are coming together with risky members
Travel/Transportation	Departure/Check-in, Security, Gate, Plane, Baggage Claim, Food/Shop, Bathrooms, Water Fountains, Boarding, Restroom, Restoring Customer Confidence, Fuel Emissions/Consumption per Passenger, Layovers, Subway Stations, (waiting to inside of train), Train, Shipping Industry (FedEx, UPS, Amazon)	LVC station for security bins to go through so security staff isn't taken away from doing their typical job; Ways to pool/create modular seat pans [see layer redesigns ex.], *Portable ventilator/filtering units for a room or cubicle, Transparent barriers for better communication and aesthetics.
Negative Repercussions of Mandated Preventative Measures	Harm to Environment, Harm to Animals, Hindered Communication (Auditory, Visual, Kinesthetic), Face Scan Access, Eye Irritation, Ear Irritation, COVID/Asthmatic, Hearing Impaired, Confusion of How to Properly Use or Dispose of Certain Preventative Measures (Gloves, Masks, Hand Sanitizer)	*Non-fogging masks for glasses wearers; Masks without gaps; Masks with droplet shields; Ventilated powered filtration/cooling mask; Environmentally-friendly (Durable with easily replace straps/rope piece, Easily cleanable, Reusable, Biodegradable - Dissolve in lake/ocean but not during a shift with most breath, degrades in landfill); Durable and fashionable - Outer color fabrics to fit wardrobes. Transparent face masks to allow lip-reading and better interpersonal communication (two options: low cost version, higher cost version)
COVID-19 Dead	Morgues (Treatment of Bodies, Personnel), Hospitals (Initial Handling of Deceased, Personal Safety), Funeral Homes (Prepping Bodies, Helping Families)	LVC body bags, Space solutions in morgues, safely move bodies without expelling air or fluid from them or hurting the mover, available PPE for Coroners, cleaning products or solutions, closure for families/friends with family/friends, *Ergonomics/Lifting designs for body bag handling, access, transport, storage - Contact Jack U [NIOSH/CDC]
Nurse Protection	Hospitals (Safety for Nurses), Senior Living, Testing facilities, Vaccination Sites	Available PPE for Nurses (either a different reprocessing method or easy to produce products), solutions for mental strain, helping families of healthcare workers stay safe, better cleaning solutions, *Apps that track bubble/family groups and advises who/how many are coming together with risky members, Portable ventilator/filtering units for a room or cubicle
Testing/Vaccine Processing	Pop-Up sites (Administering, Shipping, Personnel, Clients), Hospitals (Nurses, Patients), Labs (Testing, Packaging, Handling), Homes (kits, telehealth)	Ways to be vaccinated/tested without going into hospitals, administering the vaccine, other safety precautions other than masks after vaccinations, ways to compare vaccines before getting them.
Entertainment	Sports (Football, Basketball, Soccer), Concerts/Performing Arts/Indoor (Casinos, Arcade Restaurants), Active Indoor Entertainment (Rock Climbing, Cym, Bowling, Yoga, Entertainment Centers), Active Outdoor Entertainment (Amusement Parks, National Parks, Public Park, Ski Resorts)	Easy to clean equipment, Tools to help clean tough equipment or spaces (Bowling ball finger holes, Rock climbing holds), Solutions to keep fans safer, *Portable ventilator/filtering units for a room or cubicle, Apps that track vaccinated/immune vs. non-vaccinated/immune and provides advice when grouping close together, Apps that track bubble/family groups and advises who/how many are coming together with risky members, Transparent barriers for better communication and aesthetics.



SUMMER STUDIO SETUP

At the end of Spring Semester, there were many course modality unknowns. We planned for the worst

- Identify NIOSH studio mentors
- Refine the Touch and Go process
- Implement experimental collaborative tools from Spring CO-OP

SYMPTOMS OF FLU OR COVID		SYMPTOMS OF COVID
 fever	 sore throat	 loss of taste or smell
 congestion or runny nose	 headache	 nausea, vomiting or diarrhea
 fatigue &/or muscle body aches	 cough	 shortness of breath or difficulty breathing

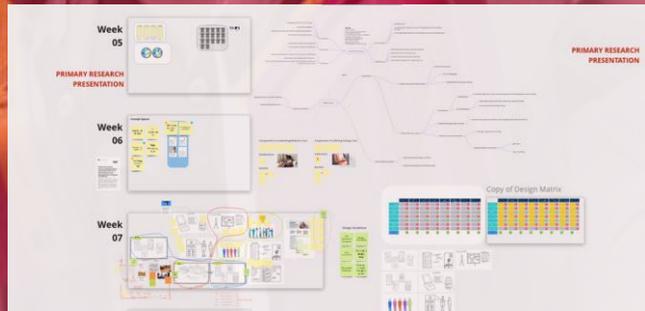
SETUP VIRTUAL TOOLS

Using Spring Semester as a model, we found MIRO whiteboarding platform ideal for milestone delivery, team collaboration, and professor reviews. This system was excellent for tracking project progress



MIRO Whiteboarding platform

- New for Nursing, it help remove linear thinking
- Enabled designers to post work for real-time evaluation.
- It created a virtual studio. Students could see each others work as in class



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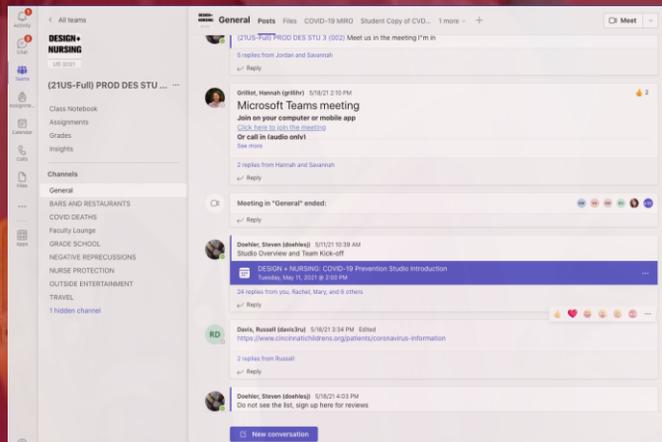
SETUP VIRTUAL TOOLS

For in-class interactions, MS Teams provided the tools to meet in secluded Channels. These channels housed team documents and allowed the faculty to have uninterrupted consultations.



MS Teams Virtual Classroom

- Channels for team privacy and consultations
- Chat for in-class just in time interactions
- Video group discussions or on-on-one
- File management system



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STUDIO SETUP

TOUCH AND GO

Based on the learning from Spring Semester, we shifted time to provide more time for research and less for development

- Devoted more time to collaborative research
- Extended Validation to provide more time to meet virtually with stakeholders
- Opened projects to awareness campaigns, wellness services, and education plans
- Eliminated physical prototypes in favor of virtual
- Reduced Final phase timeline



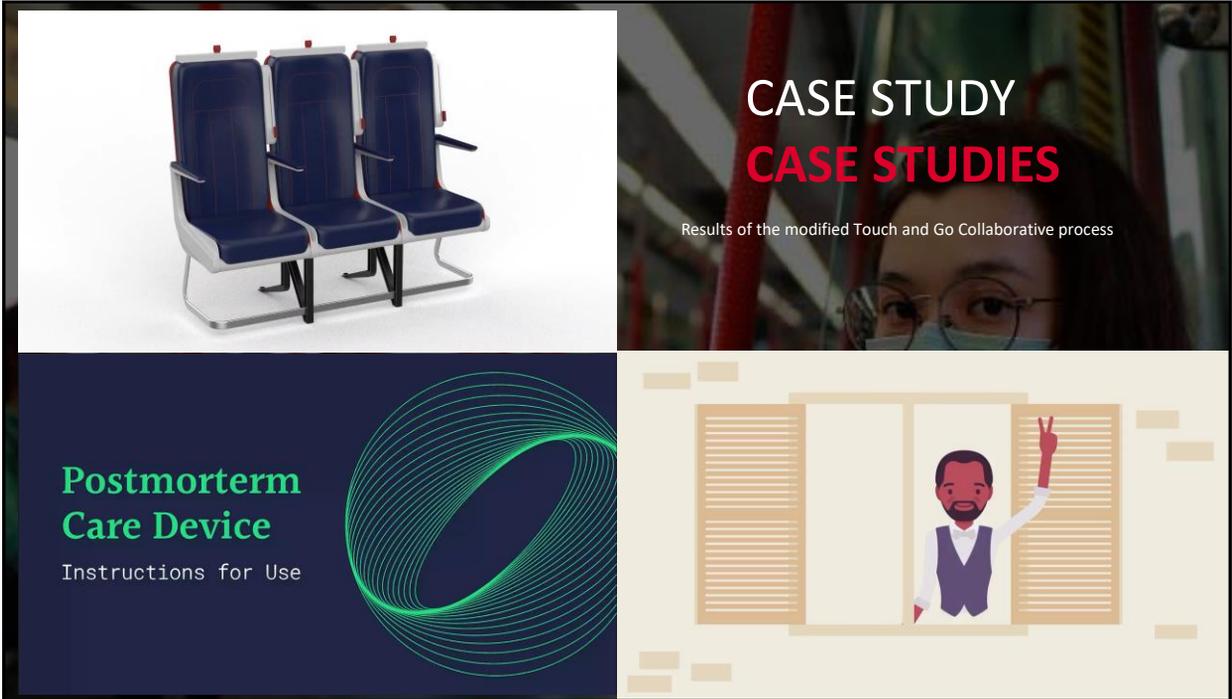
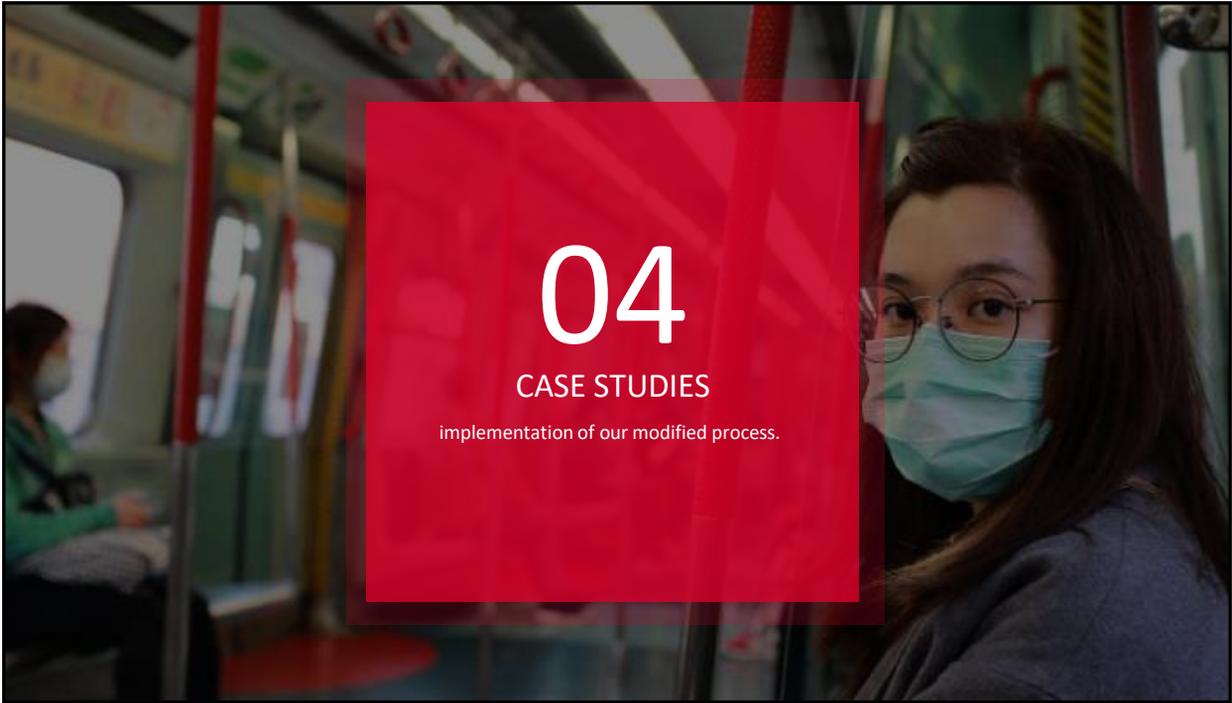
STUDIO RESULTS

BEFORE / AFTER

Pre-pandemic final expectations vs Post-pandemic

- Physical prototyping was not required
- Higher expectations on defining the “why”
- Face to face interactions between students and stakeholders were not required
- Eliminated physical prototypes in favor of virtual







LESSONS LEARNED

OVER TWO SEMESTERS THE AUTHORS DESIGNED, CREATED, AND LEARNED HOW REMOTE TEACHING IN A COLLABORATIVE COURSE CAN SUCCEED AND IDENTIFIED BARRERS FOR OPTIMAL OUTCOMES





PRO's

- Initial research outcomes are comparable in remote leaning
- Shifting to a research emphasis shifted outcomes from product to service solutions
- Having ID student assist with Population Pyramids was positive
- MIRO and MS Teams is affective in our pre-post-pandemic climate
- Service projects were very successful

CON's

- Validation suffered compared to F2F modalities
- Consideration for meeting times conducted over multiple time zones
- Without MIRO and MS Teams the collaboration could not work
- Understanding how to communicate discipline specific knowledge online vs sitting at a table and showing how each other works was a roadblock.
- In a remote environment, a student can hide. Faculty needed to keep close tabs on everyone



TOUCH AND GO REMOTE

THANK YOU

Q&A