The 5 Chairs Challenge

Goal: To encourage students to gain confidence iterating on designs based on human needs, while working with different materials.

Design Thinking Modes: Empathy, Define, Prototype, Test

Difficulty: Intermediate

Duration: 45 minutes

Group Size: Groups of 3-4 working individually and in groups, up to 40 participants

WHAT is it?

The 5 Chairs activity encourages students to design models of chairs based on design principles they pull from user profiles. This activity also encourages students to iterate on their designs and practice using different materials.

WHY teach it?

This exercise is a great way to push students to build, test and iterate while keeping their designs grounded in a human's needs. This activity also encourages critical thinking by asking students to synthesize their user's profile to find their needs. Students must also demonstrate resilience in the face of challenges or frustrations.

Lesson Plan

Materials:

- Story Cards
- Sharpies
- Paper
- Scissors
- Corrugated Cardboard

- Pipe Cleaners
- Modeling Clay
- Tape
- Toothpicks

Instructions:

Get groups into groups of 4

- 5 Chairs
  - Pass out story cards, one per group
  - Build two design principles (needs) into your prototypes - 5 minutes
    - Have students highlight two needs they see in the description of their user
      - Explain design principles as rules for building based on needs of user
    - One more design principle: your chairs have to reflect your own style as a designer, if your goal is to create something delightful/cool for your user
    - Share out
  - We are going to build 5 iterations of your design using different materials
    - What do I mean by iteration?
    - Build iterations on your own

- Build 5 chairs
  - Draw a Chair 3 minutes
    - Using the provided Sharpies, draw three sketches of a chair on a piece of paper.
  - Cut a Chair 5 minutes
    - Using ONLY your scissors and the sheet of corrugated cardboard, make a standing representation of your chair
  - Bend a Chair 4 minutes
    - Using as many or as few of the provided pipe cleaners, make an expression of your chair.
  - Mold a Chair 5 minutes
    - Using the provided clay, make a model of your chair.
  - Assemble a Chair 5 minutes
    - Using tape and toothpicks, build your chair.

- Discussion Questions 5 minutes
  - What was it like to build your chairs using the design principles you identified?
  - What was it like to create different iterations of your design?
  - What did you change along the way? What did you learn from your prototypes?
  - Did anyone get stuck at any point? What was that like? What did you do to get unstuck?
  - Which material did you enjoy working with the most? Why?
  - Which material did you like the least? Why?
  - Which material best expresses the essence of the chair your drew?

*Inspired by Scott Doorley, Grace Hawthorne & the Quarterly Co. Team

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