Modul 8 Prototype

"I made 5,127 prototypes of my vacuum before I got it right."

- James Dyson

Introduction

The purpose of this module is to explain to the students how creating prototypes works. They will also participate in a hands-on activity to experiment with prototyping. They will apply what they have learned to their SLX projects and have work time to begin creating prototypes.

Student Objectives

- Students will understand how to make a prototype
- Students will build a prototype of their boat for the Boat Activity
- Students will apply prototyping to their SLX project

Agenda

1. How to Prototype Lecture (10 min)
2. Boat Activity (30 min)
3. Project Work Time (20 min)

Facilitation Notes

- Give work time for the boat activity and their SLX projects

Facilitator Guide

How to Prototype Lecture

Lecture Notes:

- This is known as stage 4 in the design thinking process

- A preliminary or sample version of the product is built for testing
- It is meant for testing within the own project team, and to make adjustments and edits quickly
- A prototype should be close to the actual version or product in terms of features, look/appeal, and usability.

“Prototypes are built so that designers can think about their solutions in a different way (tangible product rather than abstract ideas), as well as to fail quickly and cheaply, so that less time and money is invested in an idea that turns out to be a bad one.

Prototypes are often used in the testing phase in a Design Thinking process in order to determine how users behave with the prototype, to reveal new solutions to problems, or to find out whether or not the implemented solutions have been successful. The results generated from these tests are then used to redefine one or more of the problems established in the earlier phases of the project, and to build a more robust understanding of the problems users may face when interacting with the product in the intended environment.

Instead, designers can provide simple, scaled down versions of their products, which can then be used in order to observe, record, judge, and measure user performance levels based on specific elements, or the users’ general behaviour, interactions, and reactions to the overall design. These earlier versions are known as prototypes; they are not necessarily in the medium of the finished product as this may not be cost-effective in terms of time or money.**”**

Boat Activity Prototyping

Purpose: This activity will help students understand how to create prototypes and let them physically create one. They will be able to apply this knowledge to their SLX projects and create effective prototypes.

Materials:

- Cardboard
- Tape

Directions:

- Explain that they are going to have to build a boat and will travel the farthest in the water (will be tested next week).
- Explain that only the given materials may be used and that it must resemble the design that was approved last week.
- Tell them that they have 30 minutes to build their boat and cannot take it home.

Project Work Time (Abstracts due Sunday)

- Give the students the remaining class time to work in their project groups
- Remind them to reflect on prototyping for the boat activity and apply what they have learned for their projects
- Facilitators will bounce around at this time, prompting student thought, pushing for more research in their target audiences, and guiding students to create a prototype for their projects. Facilitators may also prompt students to work outside of class to finish.

Discussion questions (Optional):

1. Reflection time with groups if time permits?
2. How did ideating from the last module affect your prototype? Did you have to change your original plans?

Sources: https://www.interaction-design.org/literature/article/stage-4-in-the-design-thinking-process-prototype