Ideation Module

Foundations of Engineering Practice

ES1050

Western Engineering

Ideation Module

- Ideation is important to good design

- How to select, apply, adapt and extend appropriate engineering tools
  - Brainstorming method, affinity diagrams, why-why diagrams
- Implement the Engineering Design Process to identify and address the client's needs
  - Use of why-why diagrams to investigate needs and cause of design problem

Module Learning Outcome

Pre-assessment
Ideation Method: Mash-up

A Mash-up is a brainstorming method to bring together unexpected elements to generate new ideas.

Gives your pet a chance to contribute

Self-Propelled Belly Brush

Dogs are like everybody else. They want to belong; they want to be a part of the family. But so often those feelings are frustrated by their sense of "differentness."

If your dog is troubled in this way, the Belly Brush is just what the vet ordered. When chore time rolls around, and the family is all there pulling together, strap a Belly Brush on your little fellow, give him a chance to join the family, and watch his spirits soar.

Steps for a Mash-up

(1) FRAME

Articulate a challenge in form of a "How Might We" question

(2) NARROW

Pick two broad categories that are unrelated to each other, but tie into the "How Might We" question

Steps for a Mash-up

(3) GENERATE

Come up with as many experiences as possible within each category

(4) MASH-UP

Combine items from the two categories to develop new ideas

Mash-up Pre-assessment Exercise

Your task is to complete this exercise within 15 minutes.

The challenge is: "How might we mollify delayed passengers at airports?"

Category 1 is "Elements of the airport experience"

Category 2 is "Experiences that people enjoy"

Mash-up Pre-assessment Exercise

ES1050

"How might we [mollify](#) delayed passengers at airports?"

Category 1 is "Elements of the airport experience"

Category 2 is "Experiences that people enjoy"

Category 1: Elements of the airport experience	Category 2: Experiences that people enjoy
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Mash-up Pre-assessment Exercise

Mash-up: Combine items from the two categories

Mash-ups
1.
2.
3.
4.
5.
6.
7.