MODULE

5 Intro to Prototyping and MVPs

"The waves of life will push you around, unless you have a speedboat"

-Zen Philosopher Dave

Introduction

This module introduces the student to the basics of different MVP's and different prototypes, how they should be created, and how they can be implemented into their own social entrepreneurship ventures. They will also practice to make prototypes of their own, both physically with cheap materials and imaginary, when we give them problems and they have to draw out a solution.

Objectives

1. Students should be able to differentiate between the different methods of prototyping.
2. Students will get a hands on approach to ideation and prototyping, following the framework of design thinking.
3. Give students an opportunity to understand feedback and apply back to their own products/ constructions

Agenda

1. Explain prototyping and MVP, along with the different types of each and how they can be used (15 min)
2. Introduce the activity with the boats and give them and their groups time to prototype and create a model they believe could go the farthest. (15–20 min)
   a. Make students draw out a blueprint of their design and make them get it approved by the facilitators.
   b. Give them 2 square feet of aluminum foil and tape so they can build their designs.
3. Bring the students to the pool. Every class will get their own lane in the pool, and we will use industrial sized fans to blow the boats. Their final locations will be marked with tape and this information will be recorded (10–15 min)
4. The facilitators will give feedback to each group and the last 10 minutes of the class will be spent on the students redesigning their boats to make them even better. (10 min)

Prototyping and MVP (15 min):

High Fidelity vs Low Fidelity Prototyping

1. High fidelity prototypes act in a way where the user is given a closer look at what the finished product will look like. Since these pre production prototypes are more expensive to make, there is more realism and allows the producers to get better feedback from user testing. However, with more focus on detail, they tend to take longer to manufacture and can delay the project if the producers decide that changes need to be made.

   ○ Examples: 3D printed designs, software that has been refined to be close to the final product.

2. Low fidelity prototypes are constructed with emphasis on exploiting errors in a certain product while also being cost effective and easily made. These models are often simply made and specific design features are not included. Low fidelity prototypes can range from scaled down models to sketches. However these simplistic designs can come at the cost of hindering the realism of the product and may remove a lot from the user's experience.

   ○ Examples: sketches, paper cut outs, simple models created on software.

MVP vs Prototypes (what's the difference?)

1. Both MVP's and prototypes allow a company to view its idea or product though a hands on approach. However MVP's are regarded as more professional and polished versions while prototypes can be constructed just to see what the product looks like in a tangible way.

2. Prototypes are often far from perfect and are made to view the errors in the product which are cheap and cost effective. MVP's can be considered prototypes since they still give the producer insight into what the final product will look like but not all prototypes are MVP's.

Different Types of MVPs
[Explain that each group will have to make one of these MVPs.]

1. **The Video MVP**
   a. Demonstrating what your product does can be better than just asking customers if they're interested in your product. Interest can be gauged much better by the number of customers actually sign up for your product.

2. **Wizard of Oz MVP**
   a. Sometimes your product will need a lot of time to program due to its

complexity. In these cases, it can be difficult to create an MVP because all of the main features of your product will take time to develop. A solution to this has humans do the work instead of code.

3. **Concierge MVP**
   a. This type of MVP works by serving one customer extremely well. You pour all of your resources into this customer and learn as much as you can about what he or she likes and dislikes about your product. Then you add one more customer and repeat until you start seeing patterns. This MVP model allows you to learn what exactly creates value for your customers. Eventually, you will need to devote time to creating a product that can automate this high level of service, but when you do, you will not be wasting resources because you have a basic set of problems that you know you need to solve.

4. **The Newsletter MVP**
   a. Offer some information about your product's main features and ask customers to give you their email addresses if they are interested in receiving more information about your product. This type of MVP is super simple and can be done by anyone regardless of their technical skill. It is not as good as building a low quality product, but it does allow you to partially gauge what problems you are solving for customers.

5. **Vapor-wear MVP**
   a. Create a website with a call to action conversion button that leads to nothing. Use the data on how many people clicked the signup button to see if people are interested.

MVP Ideating Time:
1. Students will be given time to work within their groups and process what type of MVP they may need to pursue in order to solve their problem. Facilitators will bounce around at this time, prompting student thought, pushing for more research in their target audiences, and guiding students to create and plan for an effective MVP trial in the upcoming weeks. Facilitators may also want to prompt students to work outside of class on MVP / Prototype development.

Supplemental (On Campus):
Plane Activity (35 min)

Materials:
- 2 Sheets of paper

- tape

Prototyping (2 min):
1. Explain that they are going to have to build a plane and will move the farthest when blown on by a fan. [Students will be in their project groups to make this boat.]

- **Only** given materials can be used

– No further materials will be provided

Testing (10 min):
2. Test out prototypes.

   a. Measure how far the boat travelled.

Understanding Feedback (10 min)

1. Bring students back to the classroom and have them each talk about their experience

   a. How far did your plane go?

   b. What went wrong & what went right?

   c. Have facilitators give additional comments.

2. Have students understand how to take feedback and find ways to apply it back to their constructions.

   a. After feedback is given, ask the students what they would change if they were to do the activity again, or what changes they would have made to their plane if they had more resources.