SESSION 01

INTRODUCTION TO PARTICIPATORY DESIGN
LEARNING OBJECTIVES

By the end of this session, you will be able to:

□ Identify different types of participatory design (human-centered design, co-design and user-generated design)

□ Identify the potential benefits and challenges of using a participatory design approach

□ Identify important factors to consider when selecting a participatory design approach

□ Identify each stage of the design process and understand how it works

Online Course Curriculum

Session 1
Introduction to Participatory Design

Session 2
Team Formation & Mindsets

Session 3
Information Gathering & Problem Framing

Session 4
Ideation & Concept Selection

Session 5
Prototyping & User Feedback

Session 6
Measuring Impact & Reflection

Theory  Hands-On
At MIT D-Lab, we believe that design can and should play an important role in international development. Good design can lead to products and systems that can help improve the lives and livelihoods of people living in poverty and address the challenges they face. The design process itself, however, is also a powerful tool for community development—when people are involved in the creation of technologies that improve their lives, they gain confidence and develop an increased confidence in their capacity to change their situation and solve their own problems.

Types of Participatory Design

<table>
<thead>
<tr>
<th>Human Centered Design (design for)</th>
<th>Co-Design (design with)</th>
<th>User-Generated Design (design by)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designers work with users and other stakeholders to get input and feedback on the design of products or services and the needs they address. However, much of the design work is done by the designers.</td>
<td>Users and other stakeholders participate actively on the design team throughout the design process and work with designers to develop a solution.</td>
<td>Users and other stakeholders are the primary participants on the design team and they develop their own solutions.</td>
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</tbody>
</table>
Participatory Design Spectrum

design FOR

design WITH

design BY

Introduction to MIT D-Lab Design Philosophy

by Amy Smith / Founding Director of MIT D-Lab
Participatory Design: Engaging users and other stakeholders in the design process.

If this is done well, it has the potential to lead to better outcomes—whether building capacity of communities or creating products that better meet the needs of users, all with the end goal of alleviating poverty.
Potential Benefits & Challenges of Participatory Design

There are a number of potential benefits when using a participatory design approach, some related to the product and others related to the participants in the design process. However, there are also a variety of challenges that may need to be addressed in order for the design process to be successful. Below, drawn from our own work and additional sources as cited, is our review of some of the most important benefits and challenges of participatory design.

### Potential Benefits of Participatory Design / Product

- Product or service that is more responsive to user needs[^5^, ^6^, ^9^, ^13^]
- Better quality products or systems[^9^, ^10^, ^13^]
- Faster speed to market[^1^, ^5^, ^7^, ^10^, ^13^]
- More efficient product development[^1^, ^13^]
- Ideas that are more original[^8^, ^13^]
- Higher satisfaction of customers[^9^, ^10^, ^13^]
- Increased loyalty of customers[^10^, ^13^]
- Stronger customer relationships[^1^, ^5^, ^13^]

### Potential Benefits of Participatory Design / Community

- Increased skills and knowledge[^D-Lab^]
- Changing the way community members think such as having greater agency and confidence[^6^, ^D-Lab^]
- Shifts in gender roles[^D-Lab^]
Potential Challenges of Participatory Design

- Need for additional technical expertise [4, 5, 7, D-Lab]
- Scarcity of time, interest, financial resources [4, 5, 6, D-Lab]
- Additional resources required to engage end-users [6, D-Lab]
- Intellectual property ownership rights [3, 5, 7]
- Increased management complexity [5, 7]
- Language and translation challenges [6, D-Lab]
- Information overload [5]
- Cultural or social barriers [6, D-Lab]
- Complex need for patience, humility and proper mindset for engaging end-users [D-Lab]
### Key Considerations for Selecting an Approach

This table provides some initial guidelines on which type of participatory design approach may be more or less appropriate depending on what you are trying to achieve. These guidelines are based on our experience in the field implementing these approaches. However, all of this depends on how you implement the participatory design processes.

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical nature of the product or program</td>
<td>If the product is technical in nature, human centered design (HCD) or co-design may be better if users do not have technical expertise to design the product.</td>
</tr>
<tr>
<td>Time required to participate in the design process</td>
<td>HCD may require less time of the participants. More time is likely required with co-design and user-generated design.</td>
</tr>
<tr>
<td>Ownership of the product or program</td>
<td>Potentially greater with co-design or user-generated design, as people are more actively involved in the design. However, it is possible to have ownership with HCD if the process is set up properly.</td>
</tr>
<tr>
<td>Building capacity of participants to develop their own solutions</td>
<td>Potentially greater opportunities to develop capacity with co-design and user generated design</td>
</tr>
<tr>
<td>Language and translation issues</td>
<td>Less of an issue with user-generated design if all of the team members speak the same language, but there could still be translation issues with user-generated design if there is a training component. This is potentially more of an issue with co-design, where there are many different stakeholders with different backgrounds on the design team.</td>
</tr>
<tr>
<td>Buy-in from a variety of stakeholders</td>
<td>Potentially greater with co-design and HCD as many different stakeholders are engaged in the process.</td>
</tr>
<tr>
<td>Resources required</td>
<td>Potentially more resources required for co-design and user-generated design.</td>
</tr>
<tr>
<td>Intellectual property issues</td>
<td>An issue that must be addressed in all three approaches.</td>
</tr>
<tr>
<td>Group power dynamics</td>
<td>An issue that must be addressed in all three approaches.</td>
</tr>
</tbody>
</table>
Case Study: MoringaConnect

MoringaConnect is a young social enterprise linking 2,500 small farming families throughout Ghana to the global market of Moringa-based foods and cosmetics. They train farmers on the latest permaculture techniques and provide organic seeds, fertilizer, and financing for land preparation as needed. MoringaConnect has employed participatory design throughout its development, adopting different approaches to address different product and business design needs.

### Human Centered Design

MoringaConnect recognized early on that it is important to engage farmers in the design process to create a product that would meet their needs. Farmers were actively engaged in each iteration of the hand and foot powered moringa sheller. They provided valuable feedback on the prototypes developed by MoringaConnect. The lessons on usability ultimately drove the company to design a motorized moringa de-sheller.

### Co-Design

MoringaConnect created a paper form for their extension officers to use to gather data about the conditions on their farmer’s farms. The data sent was inconsistent and each of the officers interpreted the questions differently. Thus, MoringaConnect invited all of their extension officers for a retreat and worked closely with them to re-create the survey form together, adding help text and context to make it easier to understand. Agents also shared new ideas for how to improve the data collection process such as creating an image reference document and using smart phones to collect data.

### User-Generated Design

Farmers were looking for a tool to remove the white wings attached to the moringa shell. Previously, they had been rubbing the seeds in their hands. With some training on the process of how the foot treadle Moringa seed sheller worked, one of the farmers had solved the problem. The farmer created a simple frame and found the right grid that would remove the wings of the shell without damaging the seed or shell.

Source: by Kwami Williams / Founder, MoringaConnect
Case Study:
MoringaConnect
Kwami Williams & Emily Cunningham, Co-Founders
Assignment 1.1: Participatory Design Approaches

Read through each one of the participatory design situations and identify which participatory design approach (Human Centered Design/Co-Design/User-Generated Design) is most appropriate for each situation. Complete and submit your assignment by September 17, 2017 Sunday 11.59 pm EST at this LINK.
Situation 1

You are developing a medical device that requires technical expertise. You want to create a product that meets user needs. You are less concerned about developing the capacity of the participants in the design process. You do not have a lot of time and resources to engage stakeholders. The participants also do not have a lot of time to contribute to the design process.

Situation 2

You are developing a new clean cookstove that requires some technical expertise. You want to develop a product that meets the needs of the users. To get buy-in, you also want to engage a variety of stakeholders in the design process. You are interested in developing the capacity of various stakeholders through this process. You have the resources you need for the design process and the participants can commit two to three weeks to the solution development.

Situation 3

You are developing a water cart to transport containers of water from the source to people’s homes. You want to develop a product that meets the needs of users. You are interested in building the capacity of the participants in the design process and you would like them to continue to address other challenges in their community. You are concerned about language and translation issues, as most of the users speak the local tribal language.
Design is a creative, abstract, non-linear and sometimes messy process. In order to guide teams through the process, it is often useful to have a framework and a shared vocabulary. At MIT D-Lab, we use a framework that consists of six different stages, starting with the identification of the opportunity, through the development and refinement of the solution and ending with the transition to implementation.

The Essence of Design

Iteration is one most important characteristics of the design process— it is a constant cycle of learning— generating ideas, testing them out, learning from the results of those experiments, iterating again and continuing to adapt and improve the design. This willingness to experiment and learn from the results is the essence of design, and it is critical for creating effective solutions that meet the needs of the users.
Design Process

Introduction to the MIT D-Lab Design Process

by Amy Smith / Founding Director, MIT D-Lab
Assignment 1.2: Select Your Design Project

Now that you understand the design process and the nuances among the different approaches to participatory design, you should be able to identify a project to which you can apply your learnings along the course. As the content of the course will be focused on MIT D-Lab’s Co-Design methodology, we encourage you to identify a project for which Co-Design would be the appropriate approach. Complete and submit your assignment by September 17, 2017 Sunday 11.59 pm EST at this [LINK](https://example.com).

Here are a few pointers to help you identify an appropriate co-design project

☐ Your goal should be not only be to design an appropriate solution for your target users, but also to get buy-in from other stakeholders on the solution to ensure its sustainability. You may also be interested in building local capacity and agency for problem solving but it should not be your main objective.

☐ You and the stakeholders you want to engage in the design process should have enough time and capacity. The process may require the designer and other participants to commit a few weeks of time. This may be spread over several months or concentrated in a short period of time.

☐ You do not anticipate major cultural or power dynamic issues between the different stakeholders you wish to engage. If they exist, they should be manageable with more time, and effort. Translation should also be feasible if necessary.

☐ You have enough financial resources to organize several rounds of design workshops in a way that does not tax your design participants’ time or resources.

☐ You do not need to seek full intellectual property of the solution designed as it will be the result of a collective effort.
Describe the Project

In 200 words / 1000 characters or fewer, Please describe a project for which you would like to apply the co-design process. Clearly articulate the goals of the project, your desired outcomes and anticipated challenges.

In 200 words / 1000 characters or fewer, why is co-design the right approach for this project?
Additional Resources

Videos

- TED Talk: Simple Designs to Save a Life
  Amy Smith (Founding Director, MIT D-Lab)

- IDEO Human Centered Design
  Human Centered Design approach at IDEO.org

- International Development Design Summit
  Amy Smith (Founding Director, MIT D-Lab)

- MIT D-Lab’s Creative Capacity Building (CCB) Program
  Kofi Taha (Associate Director, MIT D-Lab)

- Teso Women Development Initiatives (TEWDI Uganda)
  Betty Ikalany (Founder and CEO, TEWDI Uganda)

References & Relevant Readings


Questions & Comments

Please leave questions or comments regarding Session 01: Introduction to Participatory Design at this [LINK] by September 13, 2017 Wednesday 3pm EST. We will discuss the questions and comments during our Session 01

Session Feedback

Please submit your feedback on the session at this [LINK]. Your feedback is important and will help us improve this online course.