Innovative Problem Solving and Design Thinking for Health

Linda A Cyr
lcyr@hsph.harvard.edu

Srikant M Datar
sdatar@hbs.edu
Module 1: Introduction to the Innovative Problem Solving Process
Most Critical Healthcare Leadership Skills

- Critical Thinking / Strategic Planning
- Innovative Thinking / Creativity
- Transformational Change
- Service and Patient Focus
- Quality / Patient Safety Exp.

Source: Spencer Stuart / AHA’s Health Research & Educational Trust, Building a Leadership Team for the Health Care Organization of the Future (2014)
WE CANNOT SOLVE OUR PROBLEMS WITH THE SAME THINKING WE USED WHEN WE CREATED THEM

-Albert Einstein
Course | Objectives

- Distinguish Innovative Problem Solving
- Embrace Innovative Mindset
- Confront Cognitive Biases
- Apply Concrete Design Tools to Healthcare Challenges
What is Innovation?

Activity that provides useable, novel solutions to problems, opportunities and challenges.

A product, process, or model that is novel and useful.
Four Phases

Figure adapted from following sources:
Human Centered Design
as defined by PEOPLE

Source: HCD Toolkit 2ed.
Human Centered Design

Central Premise
Designs that build out from the needs of users – explicit and implicit, articulated and observed – are more effective and more widely embraced than those developed in other ways.

Source: HCD Toolkit 2ed.
Module 2: Clarify: Achieving Deep User / Patient Understanding
Four Phases

Figure adapted from following sources:
“Give me six hours to chop down a tree and I will spend the first four sharpening the axe.”

-- Abraham Lincoln
Guides to help you observe deeply on a range of relevant dimensions. Only some may be relevant to your area of inquiry.

AEIOU
Pain Points
Empathy Maps
Journey Mapping

Above all, Observe Carefully & Deeply
LENSES TO LOOK THROUGH

Activities
Environments
Interactions
Objects
Users
**Activities**  
What is happening? Primary, secondary, peripheral activities?

**Environments**  
Where are things happening? Are there multiple kinds of environments within one larger place? What are the characteristics?

**Interactions**  
Who is doing what with whom? Do interactions seem planned or spur of the moment? Are people interacting with other people? With things? With environments?

**Objects**  
What objects are present and/or involved in activities and interactions described? What seems most/least important? What is puzzling?

**Users**  
Who are the users? Do they vary in characteristics?
A pain point is a moment when a consumer experiences frustration, difficulty, or uncertainty when using a product, service, etc.

Pain points indicate unmet user needs.

Pain points can be explicit or latent.
Helps us understand and categorize user needs – observed and inferred.
A graphic tool used to organize detailed information about an individual’s steps through a process.

It is a useful learning device that can be applied to any context.

Reveal opportunities for further and more careful observation....

Source: HCD Toolkit 2ed.
Experience Map | Redesigning the Blood Drive

STANFORD BLOOD CENTER
EXPERIENCE MAP

"Wearing the sticker around campus after donating gave me the chance to talk to others about donating."

I felt a great sense of community talking to other donors. One of them invited me to give with her again in 8 weeks. I think I will.

"I felt like I was taking a test. I really wanted to pass, to be able to give, but was anxious that travel or an ordinary vaccine might disqualify me."

Source: https://vimeo.com/85317795
Course Administration and Syllabus Review
Mondays & Wednesdays, 8:30-10:20
Kresge 201

Deliverables and Evaluation

- Pre-class Submissions: 45%
- Apply the Concept / Term-Long Reflection: 35%
- Class Participation: 20%
• A series of 2-4 page assignments submitted prior to class. Submissions are mandatory. We expect these to be thoughtfully prepared and submitted on time. The purposes of these submissions are to:

  – Ensure that you have the chance to apply the techniques introduced in class
  – Serve as basis for in-class discussion and shared learning
  – Prepare you for your ongoing “Apply the Concept” exercise

Due dates are typically the night before at 5:00PM.
• **Submission requirements:** All submissions should be submitted to CANVAS as follows:
  
  o Save your submission to a PDF and Name the file in the format below:
    • Last Name-First Name Asst#.pdf
    • Example: Smith-Alex Asst#.pdf

• **Please include:**
  
  o First and last name in header or footer and listed on each page.
  o **Page numbers** on multiple-page submissions.
A term-long exercise that gives you the opportunity to:

- Apply the tools from class to a problem of interest to you
- Submit the best concept you have developed during the term
- After each class session, practice using the tools with your chosen problem
- Keep track of the insights and ideas you generate.

At the end of the term, you will submit a developed concept.
• Active engagement in all class sessions is critical:
  – Arrive prepared to discuss your own assignments, having reviewed and being prepared to comment on your classmates’ assignments as required
  – Active participation in the hands-on, small group work during class
  – Active listening
  – Offer constructive contributions
• **Asst2** – Post to CANVAS by Tuesday, **03/21/17 at 11:59PM**

• Read Jaipur Limb and answer the following:

  1. What are some of the innovations described in the case?

  2. How and why did these innovations happen? Was there a process?

Limit submission to two (2) pages.
• **Asst3** – Post to CANVAS by **Sunday, 03/26/17 at 7:00PM**

• How might you engage workers to improve the patient experience?

  1. Visit a local hospital emergency room or urgent care clinic and simply observe for 30-45 minutes. Apply AEIOU to capture your observations.

  2. Prepare an interview guide and conduct short (e.g. 10-15 minute) interviews with 2-4 low-wage workers. Make note of stories, key quotes and insights regarding what is important to each person.

• Refer to CANVAS for full instructions and submission requirements
END