Design Thinking & Collaboration for Innovation

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Innovation & Design Thinking

• Innovation is the successful translation of new ideas into tangible societal or commercial impact; the actualization or realization of inventions to create value

• Design thinking “a method of meeting people’s needs and desires in a technologically feasible and strategically viable way”

Design thinking is integral to the innovation process
Successful Innovation: The 3 Core Principles

- Solve the Right Problem
- Solve the Problem Right
- Take Risk & Fail Fast

Design Thinking as a human-centered, prototype-driven process provides a unified framework for successful innovation.
Solving the Right Problem: Focus on the “Need”

- Start with the problem – Not the solution
- Know the “Job to be done”
- Understand the customer’s needs & aspirations

“I never perfected an invention that I did not think about in terms of the service it might give others... I find out what the world needs, then I proceed to invent.” ... Edison
Ethnography: Understanding human behavior and context

- The naturalistic observation and recording of people and practices (socio-technical studies of people at work)
- Focusing not just on what people say but what they actually do
- To gain insight into their problems, unarticulated needs and wishes, and barriers to technology adoption
- And to translate gleaned insights into actionable recommendation.

Curriculum Tip 1: Ethnography
Solving the Right Problem: The Utility Value

Nice-to-Have Vs Need-to-Have: “Will people pay for this idea?”
“What is the payback”? 

Curriculum Tip 2: Fundamentals of Economics
Solve the Problem Right: User Centric Design & Agility

- Think beyond the technology
- Innovation does not happen in the lab
- Co-Innovation: Making the customer an integral part of the innovation process

Curriculum Tip 3: Ethnography, Rapid Prototyping, “Living Labs”
Beware of the game of broken-telephone
The Reality of Research to Innovation

- Most ideas never meet expectations
- Some ideas slightly exceed expectations
- A small number of ideas greatly exceed expectations

"The best way to have a good idea is to have a lot of ideas" Linus Pauling

"Golden Goose"
Minimize time through the loops ..... and capitalize on the lessons learned

Design thinking minimizes the uncertainty and risk of innovation & Agile development accelerates innovation

Curriculum Tip 4: Lean Methodologies & Agile Development
### “Lean Start-Ups”

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<tr>
<th>Traditional Approach to Innovation</th>
<th>Lean Approach to Innovation</th>
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<tbody>
<tr>
<td>• Elaborate planning</td>
<td>• Experimentation</td>
</tr>
<tr>
<td>• Intuition</td>
<td>• Customer feedback</td>
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<tr>
<td>• Big design and specs up front</td>
<td>• Iterative design</td>
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<tr>
<td>• Waterfall development</td>
<td>• Agile development</td>
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- Practiced by most start-ups today
- Now taught in business schools.
Global Innovation

- Developing markets
  - Pose some of the greatest challenges of our times
  - Are highly constrained environments that necessitate creative problem solving
  - Are a great test-bed for global markets

- Design thinking, Empathy, and Lean approaches critical for innovation success in these markets

Curriculum Tip 5: Immersive experiences in developing countries
Take-aways

- Turning Ideas into successful innovations is challenging

- Successful innovations combine Technology, User Insights & Business Models

- Design Thinking and Lean Approaches critical enablers for innovation success

- Global perspective builds “character”