Week 1 - Lecture 1-2 - Creative Design and Innovation

Have you ever heard the phrase, “Necessity is the mother of invention.”  In essence, it is saying that inventiveness and ingenuity are stimulated by difficulty. This proverb first appeared in English in 1519 in a slightly different form, “Need taught him wit.” For example, “Mary was driving her Jeep through the desert, when the Jeep’s fan belt broke. Mary used her stockings to make a temporary fan belt.”

Nowhere else is the need greater for innovation than it is in healthcare. Beset with issues of costs, quality, access, continuity, staffing shortages, and demographics, healthcare is ripe for innovation. Not only in the United States but also throughout the world.  We will explore the Stanford University design school (dschool) methods of innovation and creative design.  Legendary psychologist and Stanford professor Albert Bendura has shown our belief systems affect our actions, goals, and perceptions. It is just for that reason that Systems thinking in healthcare is an essential ingredient of innovation.  It provides the foundation upon which new ideas can blossom, take shape, and become reality.  As management moved from a mechanistic philosophy to one of a humanistic philosophy, so too has innovation.

If one believes that they are not creative, then looking for innovative ways to address the issues facing healthcare, is not something they are likely to do. However, if people rediscover that creativity and innovation are not the sole domain of artist, writers, and architects but reside within all of us, then the next great idea for transforming healthcare can come from anyone.

Creative confidence as discussed by Tom and David Kelley is about believing in your ability to create change in the world around you. It is the conviction that you can achieve what you set out to do.

Sir Ken Robinson in his outstanding 2006 TED Talk, paints an elegant portrayal of how “Schools Kill Creativity.”  He points out that many highly talented and creative people think they are not because the educational system is not designed to foster creativity.

The five steps of creative design and innovation taught at the dschool  are: Empathize, Define, Ideate, Prototype, and Test.

Empathize

Empathy is the foundation of human-centered design.  Healthcare is a calling and empathy for the suffering and healing of others is the bedrock of healthcare delivery.  For creativity and innovation to flourish, you have to observe people and their behavior in the context of their lives; engage in interviewing people to find out what is important to them and immerse yourself in what your user experiences and experience it for yourself.

You need to understand the people for whom you are designing innovative ways to meet their needs. The problems you are trying to solve are rarely your own. You must build empathy for the users.

Define

During the define mode, you unpack and synthesize your empathy findings into compelling needs and insights. The define mode will lead to two outcomes, you develop a deep understanding of your users and the design space and based on that understanding, you come up with an actionable problem statement: your point of view.  The define mode explicitly expresses the problem you are working to address. At times, you may need to reframe the problem based on new insights you have gained through your design work.

Ideate

Coming up with radical design alternatives are the underpinning of the ideate mode. It is leaving no stone unturned and leaving no idea out of consideration. The broader the depository of ideas created, the better. It is during the ideate mode, that you transition from identifying problems to exploring solutions for your users.

Prototype

Developing prototypes is the means for getting ideas and explorations, out of your head and into the physical world. Prototypes can take many forms. A prototype can be a wall of post-it notes, an interface, a storyboard, a mockup of a room etc.

The most useful prototypes are the ones that allow people, to experience and interact with them. For example, a new ICU is under consideration in a construction program and the physicians, nurses, housekeepers, maintenance workers et al, all have differing ideas on how the room should be designed. A creative member of the team suggests that a mockup of a room be built. For a couple of hundred dollars in sheetrock and 2x4s, a mockup is built in a warehouse. All of the end users get to play with the space. At the end of the process, everyone is in agreement on the design layout of the room.  Had the prototype of the room not been created, the ideal ICU room for this organization would not have been built.

Test

Getting feedback on your solutions is a key outcome of testing. You test to refine your prototypes and solutions, learn more about the user and to test and refine your point of view.

Changing your mindset does not require that you switch careers or move to Silicon Valley.  It is not necessary to become a design consultant or quit your job. The world desperately needs more creative office managers, policy makers, real estate agents, and healthcare leaders. No matter what your profession is, when you approach it with a creative mindset, you’ll come up with new and better solutions and more successes. Creative confidence can inspire whatever work you already do because you gain a new tool to enhance your problem-solving practices without having to abandon any of your existing ways of doing things.

**Sources:**

The Free Dictionary of Idioms and Phrases;[http://idioms.thefreedictionary.com/ (Links to an external site.)](http://idioms.thefreedictionary.com/)

-Creative Confidence, Unleashing the Creative Confidence Within Us All, Tom and David Kelley, 2013

-TED Talk: Do Schools Kill Creativity?[https://www.ted.com/talks/ken\_robinson\_says\_schools\_kill\_creativity#t-931452 (Links to an external site.)](https://www.ted.com/talks/ken_robinson_says_schools_kill_creativity#t-931452)

-Stanford University d.school bootcamp bootleg