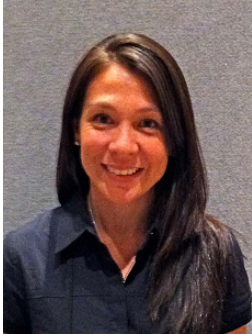


## How to Generate Design-Thinking Across Disciplines



On February 23, 2018, students and faculty of the Data Science for Dynamic Intervention Decision-making Lab (d<sup>3</sup>lab) within the Quantitative Methodology Program (QMP) participated in a special design-studio meeting. Drs. Billie Nahum-Shani and Daniel Almirall lead the d<sup>3</sup>lab, which is comprised of students and faculty across disciplines that collaborate on the development of novel methodologies and behavioral theories for the construction of adaptive interventions and just-in-time adaptive interventions (i.e., interventions in which mobile devices are used to provide support in a timely and ecological manner).

The design studio was led by d<sup>3</sup>lab Visiting Scholar, Dr. Lisa Militello, and moderated by Richard Anderson, an expert in human-computer interaction (HCI) design-thinking. They are both part of TECHquality, an initiative of Health 2.0, sponsored by the Robert Wood Johnson Foundation. The goal (and challenge) of a design studio is to *rapidly* create and iterate solutions, forcing participants to generate lots of ideas to improve user experience.

Richard began the design-studio with a brief overview of design-thinking, emphasizing the following basic pattern: define the problem, create solutions, critique one another's ideas, iterate/refine, and converge. First, the d<sup>3</sup>lab was separated into smaller, workable groups (5-8 participants) and asked to identify a "problem" to attempt to "solve" during the session. Next, participants were given ~5 minutes to create 6-8 'rough' ideas of their proposed solutions. Within the small groups, members were asked to take turns (~3 minutes each) rapidly presenting their ideas for feedback and critique. Without input from others, members were given 5 minutes to sketch their opinion of the single best solution. The last step was to converge the best sketched concepts into a viable solution. When all goes well, the design studio process will yield a prototype solution to the defined problem.

For a design studio session to be successful, participants need to bring an open mind and an interdisciplinary approach to promote "out of the box thinking." Logistically, all that is needed are sharpies, pencils, blank paper, and a setting that enables participants to sketch design concepts without looking at what the others are doing. Time keeping is vital to the process to promote rapid creation and feedback without getting "stuck" on one aspect. Duration of a design studio may vary in time, but can be completed in as little as one-hour. The design studio exercise was well-received and appreciated by d<sup>3</sup>lab members, there are tentative plans to incorporate this style of brainstorming into future meetings and training workshops provided by lab members.