Where Innovation Belongs in User-Centered Design

[Jake Truemper](#) on March 9th, 2011

Usability is often viewed as being inherently risk-averse, and even at odds with innovative ideas. The usability practitioner seeks to meet users' expectations – or "mental models" – eliminate surprises rather than capitalize on them, and follow standards that provide consistency with outside interfaces. User experience designers employ design patterns that have been proven over time, and utilize prototyping tools that encourage the use of established pattern libraries. User testing also tends to focus on the first use, making it very difficult for seemingly innovative ideas to beat out the familiar and immediately recognizable user interfaces that employ well known design techniques.

As if to prove the point that usability hampers innovation, Apple CEO Steve Jobs has been quoted suggesting that the company best known for it's innovative products shuns market research and doesn't involve users in the design process. It seems as though these quotes are often misused to suggest that Apple doesn't perform user testing (which they certainly do), but the underlying assertion remains: don't listen to users because users don't know what they want.

Whether UX practitioners care to admit it, many of these claims are true. UX professionals don't tend to be the greatest advocates of innovation, and our designs are often limited to what others are doing and the depth of our pattern libraries. These are the side-effects of lazy design, however, and not the nature of User Experience. User Experience designers have a unique opportunity to become the facilitators of holistic design and the advocates of innovation. By combining traditional user-centered activities

with a greater emphasis on creating engaging designs we can bring usability into alignment with innovation in the design process. Here are some thoughts on how:

Changing Self-Image

We can come up with innovative products with a UCD approach.

Practitioners often view themselves as champions for the end user, defending helpless users from the villainy of miscreant designers and developers who would have them jump through flaming hoops to accomplish a task. While being an advocate for the end user is a noble cause, a broader view of responsibility to the user can produce superior results.

User Experience can no longer be just about ease of use, counting clicks, and conforming to standards; we as practitioners need to become the architects of beautiful user experiences. We can no longer just evaluate design, or even just create good design ourselves, we have to be able to foster user-centered creativity in our project teams at large to witness a truly user-centered experience come to life. Beautiful experiences start from the moment your user hears about your product and includes everything from your marketing message to ease of use, engaging interactions, and emotionally enriching design.

Apple can sell products with the same function and specifications for 20% more than competitors because they've created such an engaging holistic experience. We have to see the big picture, and if we don't, someone with a wider vision will turn out an innovative idea that will send us to the back of the unemployment line.

Get to Know Your Users

Whether you choose to conduct marketing research or not, few will question the notion that we need to understand users to design for them. As Nico Macdonald suggested in Beyond human-centered design? "Understanding users more completely permits design creativity to be focused where it will have the greatest impact, leading to more innovation, not less."

True, Steve Jobs swears off focus groups and is said to be fond of Henry Ford's quote "If I'd asked people what they wanted, they would have said 'a faster horse,'" but does that mean user-research holds back innovation? While there is certainly some validity to the notion that users rarely think far beyond small alterations to preexisting solutions, focus groups are clearly not the shining example of user-centered design techniques.

Users will often say something that is immediately contradicted by their actions, and any good user researcher knows to pay greater attention to what the user does than what they say. It's also the researcher's responsibility to try to understand the disparity. Since focus groups strongly focus on what users are saying, with no validation by actions, this probably isn't the best technique to employ in most cases. Other user-centered techniques are more appropriate for strengthening an understanding of a user base.

Ethnographic studies (such as contextual inquiry) and user personas are well suited to embolden innovative design. By watching users interact with interfaces in the context of their own home or workplace we learn a tremendous amount about them. These ethnographic techniques also help us to understand process flows comprehensively. By understanding these flows at a high level, user experience practitioners can identify opportunities to break down and rebuild a new process flow that forsakes the vestigial practices that have compounded over time, and brings in those missing elements that users find ways to incorporate on their own.

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Furthermore, if we take ethnographic data and create user personas, we can help proliferate a user-centered thought-process throughout the development team. A user focus needs to persist in all aspects of an organization, and personas create a shared understanding of who the user is and initiates thinking for those end users.

Place a greater emphasis on design

Probably the most unfortunate aspect of user testing is that a significant segment of the User Experience community has operated under the belief that any design when placed

in front of users can then be evolved into an ideal solution. This notion often leaves projects with very little time allocated to up-front design, and quality suffers for it. The initial prototypes that are created are not well thought out and do not include innovative concepts, and in cases where multiple prototypes are being tested, they are often too similar to each other to provide any significant user data. Truly innovative design takes time, a lot of thought, and a variety of unique perspectives.

In order to change this practice user experience professionals and project leaders need to identify the importance of innovation in a design, and allocate sufficient time and resources to dreaming up innovative concepts. In Innovation by Design, Gerard H. Gaynor comments, "When brainstorming sessions deal with a new product or process they require extreme preparatory work, followed by a three-to-five day immersion session, and by subsequent evaluation, reexamination, and redesign sessions." Innovation isn't always going to be a priority, and won't always be justified in a time or budget sensitive project, but for many interfaces including time for innovation is the difference between being a short-sighted follower and an industry leader.

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As Gaynor suggests, brainstorming sessions require extensive preparation to be effective. All too often visioning meetings get caught up in circular conversations, focus too much on altering current designs, or veer off course. A good plan is essential to draw out creative concepts and keep discussion away from current design problems and fixes.

Dream. Doodle. Design.

After dreaming up several potentially innovative concepts it's important that UX designers avoid jumping directly into prototyping tools that utilize pattern libraries. At Interaction 11 Tim Wood aptly referred to pattern libraries as "the clip art of interaction design." Working from established patterns is clearly not going to promote innovative designs, so rather than start your design in Axure, iRise, or Balsamiq; start by whiteboarding, doodle ideas out on a piece of paper, and when a concept is sufficiently developed, then dive into prototyping tools.

Draw innovative ideas from everywhere

Another commonly held belief that persists in the User Experience community is that interaction design belongs only to UX designers. The suggestion is that users are not designers, and should be curbed away from offering design ideas in testing. While this thought is accurate to a degree (for the reasons stated previously) it often devolves into

an arrogance in design, or even territorial defensiveness. Innovation is inspiration, and inspiration can come from anywhere.

According to Eric A. von Hippel, 77% of scientific instrument innovations come from users. This is a staggering statistic that really calls into question the idea that a facilitator of user testing should shut down any design talk by the participant. This indicates that testing facilitators need to stay open-minded when it comes to users and design ideas. A test session can certainly be derailed by a user focusing click-by-click on altering an interface, but that doesn't mean a facilitator can afford to shrug off all user-lead design ideas.

Developers also have a place in the creation of innovative ideas. Often times the people who build the products are the ones to think "wouldn't it be cool if…" and can be an incredible source of innovative concepts. A good developer is going to be excited about working on something unique and engaging as well, and if involved in brainstorming and user testing, can become incredible advocates for user-centered design. Involving developers in the process and respecting and nurturing their ability to innovate will again move towards user-centered thinking from the entire project team.

Summary

While user-centered designers haven't always been the greatest advocates for innovation there is incredible potential for UX professionals to become the champions of innovation and the leaders of holistic design. User Experience practitioners are in a unique position to reach out to users and across silos in pursuit of a beautiful user experience.

Furthermore, while innovation can come from anywhere only User Experience practitioners are equipped to evaluate whether a user population is willing to adopt an innovative idea. Innovation is inherently risky, and Usability can mediate that risk through testing.

Perhaps greater consideration needs to be given to how innovative ideas are evaluated in order to avoid focusing on the first use, but there is a place for User Experience in an world where innovation is king.

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