Unknown Unknowns: How to uncover innovative solutions to problems you didn't know you had?

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A UI component tests extraordinarily well in labs, culminating in sweeping changes to the overall design and profound insight into your users' mental model. In hindsight, the new feature seems obvious, yet previous labs failed to indicate that there was a problem with the original design. How do you know when a design that's good enough, really isn't?

Thought Starter Questions

1. What are your 'well, duh…' experiences?
2. What clues should a practitioner look for that might indicate that a design is only barely sufficient to support the user's task?
3. How do you overcome a mediocre design and push it to something really great?
4. If users can't be expected to articulate their needs, are there other members of the project team who might be able to provide insight?
5. What techniques are particularly helpful for uncovering unmet needs?
6. What does a great idea feel like?
7. What facets of a user's life do you pay particular attention to in order to identify key analogies?
8. When is a pedestrian (obvious) design okay? When is a novel solution truly called for?

Executive Summary

4 participants were actively involved in this hour-long discussion, each representing such diverse fields as medical, financial and software development. Discussions were conducted with 1 to 3 participants at a time.

Evidently this is a fundamental question with which usability practitioners struggle, and reliable solutions are seemingly hard to come by. Though each participant could relate to the issue and offer their own examples, the discussion did not result in any conclusive recommendations. Participants seem to focus more on managing the issue rather than implementing any single particular solution, and over the course of the discussion described several strategies they use to mediate it.

Discussion Details

Signs of a Successful Design

In order to answer the question of how to design an innovative solution, it's important to know how you'll know it when you get there. What does a successful design look like? What does it feel like? It was easier for participants to articulate the warning signs of a barely successful design than to describe tangible evidence that a design had excelled at supporting the users' mental model. Signs that a design is just barely usable include:

- the design is inefficient
- there's no big 'ah-ha' moment
- users CAN use the tool but, when asked, seem reticent to commit to doing so

While defining exactly what makes a design successful - or the observable signs of its success - was difficult, each participant had experienced instances of great design. Simplicity and obviousness were two clues cited. Yet they recognized success more by their own emotional response, their own willingness to fight to get the design implemented despite any known obstacles.

Strategies for Idea Generation

One of the recurring themes from the discussion was that the usability lab is the wrong stage of product development – and the wrong technique - to hope to identify innovative ideas. By the time you're testing a design, it's too late to be concerned with fundamental idea generation. Rather, the period for ideation comes long before any usability testing, supporting the need for upfront usability as early in the project process as possible.

What happens during these periods of ideation is the most important factor impacting the quality of the final design. Participating usability practitioners cited the value of a fresh perspective in generating truly usable, innovative solutions. Specific examples included:

- **Add a New Member to the Team** – Knowledge and experience can be a double-edged sword. It can prevent wasted effort on concepts sure to be unsuccessful in the end, but can also inhibit the creativity required to generate novel ideas. To mediate this, some teams will deliberately include a practitioner unfamiliar with the problem space. The hope here is that this new member of the team will be less creatively constrained by "known" obstacles and their openness may shed new light on old problems. Project teams and whole industries have a tendency to get siloed. The new team member may also introduce concepts and solutions from other industries which may have faced similar types of problems.

- **The Design Walk-Around** – Participants also frequently pressure test their designs with other usability practitioners or colleagues particularly skilled in thinking out-of-the-box. They will informally review their designs while still in a rough stage, conducting ad hoc usability tests, gathering feedback and generating ideas for improvement.

- **Break Out of the Cube –** Each of these techniques are geared towards introducing fresh ideas and opening up to new influences. At the very least, when faced with a problematic design, participants deliberately get out of the office environment in search of inspiration.

- **Try Something Absurd –** And finally, practitioners will spend time working through designs that may at first seem absurd or technically impossible. Even though the design itself may not be workable, it may generate other ideas that are.

On the opposite extreme, an alternative strategy used by participating practitioners to push their designs to be more usable is to introduce obstacles. Specific examples of this strategy include:

- **Break the Convention** – When designs have become conventions through repeated use, it's easy to assume that the common design is the best design. This strategy requires the project team to design an alternative solution to the standard approach. This alternative may prove to be better than the convention, or the practice of coming up with an alternative may spark ideas on how to improve the convention for this particular problem space.

- **More More More** – Many practitioners challenge themselves to create at least three distinct designs for any single problem. This strategy forces the team to stretch their imagination, to consider all possibilities, instead of stopping at the first idea that sounds decent. The hope is that the team designs not just any workable solution, but a solution that will truly support the needs of the end user.

Who else

While several participants cited incorporating feedback from other practitioners or designers to boost their odds of success in the ideation stage, surprisingly few mentioned innovative strategies for incorporating feedback from end users. One of the significant conclusions from this discussion, then, is that the people most critical in the ideation of truly innovative designs may not be end users but colleagues who have a very special perspective. These teammates are the key to the ideation process in that they have both expertise in the problem space as well as a deep knowledge of the needs of the end users. This unique perspective makes them ideally positioned

to provide deep insight into the needs of the end user and to dream up innovative solutions to meet those needs.

Conclusions

This question turned out to be particularly difficult to address in the Idea Market format since many practitioners related to the problem but struggled to articulate how it could be resolved. It seems to be a fundamental issue of our work and can best be addressed by implementing upfront user research and collaborative design with key experts and colleagues skilled at out-of-the-box thinking. It also speaks for the value of ensuring that usability practitioners within an organization have the opportunity to work on projects in problem spaces in which they have little experience, as well as the importance of seeking design concepts outside the context of their field.