



How to Conduct Lean UX Research: Supporting Agile Development Process

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Agile software development process gained tremendous popularity recently, adopted by many companies to deliver high-quality products through iterative launch and testing. In contrast to the traditional Water Fall model, in an Agile environment the design and development teams collaborate very closely and there is little step-by-step procedure or upfront planning – decisions are made and solutions are implemented on the fly, in a highly iterative and flexible manner.

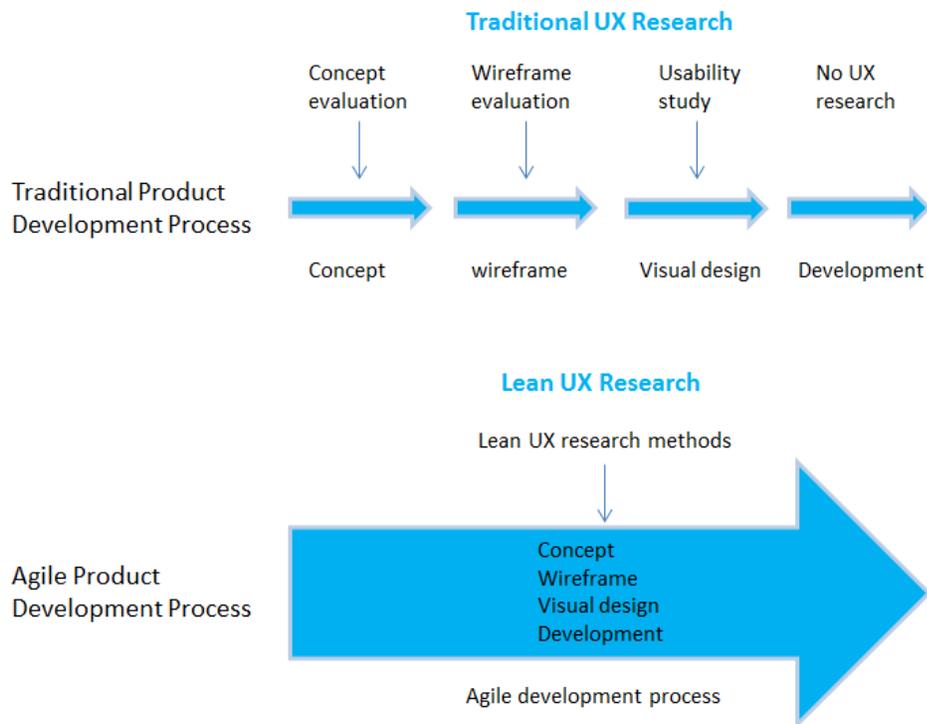
However the lack of planning and lead time in the process apparently poses a major challenge to user experience research. Remember, UX research is supposed to bring a strategic perspective into software development, helping the product team understand the big picture and focus on the right things to work on based on user insights. But the making-decisions-on-the-fly mindset underlying the Agile process makes conducting UX research seemingly hard to do and unnecessary.

So here are the questions:

Is UX research even needed any more in an Agile environment?

If so, then how do we conduct UX research in this context?

The answer: **Lean UX research** – conducting research in a quick-but-not-dirty way.



Test-and-Learn is Not Enough – Garbage in, Garbage out

A common objection to conducting UX research under the Agile model is that we can simply launch, conduct A/B testing, and learn from the testing results. Using real market data to validate products, there's no more need for UX research.

But a fatal flaw exists in this premise. Test-and-learn – choosing winners among variations through A/B tests – can only tell you which version is better but fail to answer *why* it's the case. More importantly, it cannot tell you if there's another, untested version, that's better than all the variations you A/B tested, due to the lack of insight into "why".

Furthermore, test-and-learn doesn't come free. It takes time and effort, not to mention great skills, to do it right. To begin with, you need to form good hypotheses, then create variations that can effectively test the hypotheses, and then take a lot of time analyzing the results. And, you know what, most A/B tests don't even give you clear data because the variations are not that different in terms impact on user behavior.

It is what we would call "garbage in, garbage out" – Not knowing what matter to users, you're unable to develop variations that will give you insight about how to impact user behavior.

To know what really matter to users, you have to rely on UX research that generates *in-depth, qualitative* understanding of users vs. products.

Agile = More Effective UX Research

When you look closer, you'll find that the Agile process not only makes sense in supporting a faster, more effective software development process, it's a great opportunity for UX research to truly influence the final output! Traditionally, under the Water Fall model – the product team moves through strategy -> research -> design -> development in clearly defined steps – we can plan research way in advance and has the luxury of conducting very comprehensive and thorough studies. However, because research and development are very separated in the process, researchers have very limited influence on getting the team actually implement the research findings!

In an Agile environment, however, due to the fact that teams interact more frequently and more closely, UX researchers are able to conduct research to support the ever-changing team needs and turn insights into actions quickly.

And that's what "lean" UX research is all about.

A How-to Guide of Conducting Lean UX Research

Then, how do we deal with timeline and planning pressure? That requires researchers to be creative and leverage alternative methods. Let me go through them one by one.

Conduct UX research to complement A/B tests

Given that a big part of the Agile process is test-and-learn – test here typically refers to A/B testing – we can conduct UX research to complement A/B testing. A typical way to do this is to conduct a usability study on the different variations currently being A/B tested. Given that the product is already live with the different variations, it's very easy for us to test the product, as there's no need to do prototyping or wireframing in preparing for the usability study.

Conducted in conjunction with A/B testing, the usability study can tell us “why” one variation is better than the other, and if a better solution outside of the variations tested exist.

Case study:

*At one point I was asked to conduct a usability study to evaluate the variations of a live-site A/B test in order to encourage users' shopping behavior. Whereas the A/B test gave us some early indication of which design would fare better, I used the usability study to provide in-depth UI and content recommendations, pointing out solutions that exist outside of the four variations A/B tested. **End result:** combining insight from the UX research with data from the A/B test, I helped the client create an experience in which users were much more likely to go through the shopping flow, and we saw a truly dramatic lift in revenue as a result.*

Conduct UX research throughout product development cycle

Traditionally UX research is supposed to be conducted before the development stage. Given the rapid iterations of product development, that leaves little room for conducting research. The thing is, exactly due to the iterative nature of the Agile development process, you can conduct research *during* the development phase (through a QA environment) or *after* a product is launched. Why's that? Well, because the insight will turn into action for the next release, which could be just weeks away.

Another benefit is, testing QA versions or live products saves us lots of time on creating prototypes for testing, and can yield better insight because the product is fully functional and users can explore it in their natural ways to give context-relevant feedback.

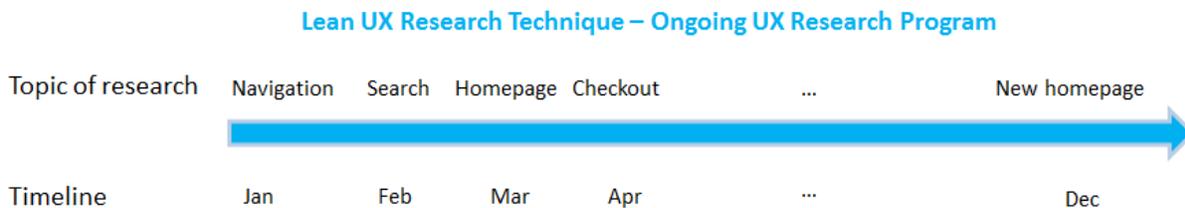
In an Agile world, there's no wrong time for conducting UX research!

Case study:

Much of the UX research I conducted for a client recently happened after the product launches. The findings and insights went a long way in driving the improvements of the next release, and the following release, and so on – due to the rapid development cycle, we went through the incrementally improved releases quickly, absorbing user insight collected from the usability studies. During the process, we didn't slow down a bit for the development to wait for the research to happen as the studies were conducted on the live site. **End result:** Through multiple rounds of testing and product releases, I helped the client launch a very successful new feature on their website.

Develop ongoing user research program

You can put in place an ongoing research program with a pre-determined testing schedule and ongoing recruiting effort. For example, your company can conduct user interviews on a monthly basis, with different topics for each month. Because the schedule is fixed and known in advance, the team is able to plan and recruit participants with a lot of lead time. In an Agile environment, due to the speediness of development and design changes, you will always find something worth testing every month (see the graph below).



Case study:

I've conducted such ongoing UX research for a client. Each month, we received requests from various product teams in terms of topics to test and we planned accordingly. After the monthly user interviews, we shared the findings immediately after the user interviews to give the team quick feedback. **The end result:** The program, while being very cost effective, had informed the company of up-to-date usability issues and user concerns on an ongoing basis – and led to quick solutions and many new product ideas to fill the gaps.

Leverage existing data

What if you really, really don't have any resource for conducting any UX research? That does happen if there's little organizational support for conducting research or if you're a very limited budget or experience for such research.

Well, another research alternative is instead of conducting a separate study, we can leverage existing industry analysis and research reports to extract consumer insight and develop guidelines to shape the product features and design. There're plenty of industry analyses, both paid or free, that can be leveraged.

On the design side, Nielsen Norman Group provides a lot of free UX design guidelines, covering almost every area of UI design. On the product management and business planning side, you can leverage industry analyses from Corporate Insight, Kasina, and Forrester, all consulting firms providing syndicated research reports, to help teams focus on the right product features.

A word of caution: no existing research data can ever replace conducting customized research for your particular product. Every product is different, every target user segment is different, and every UI is designed differently. Conducting UX research based on your business context is always, always a must for developing great products that users love.

Case study:

*When I was leading UX strategy for a major finance company, I didn't have all the resources to conduct customized research for all the product launches. I frequently leveraged syndicated reports from the likes of Kasina and Forrester, in conjunction with findings from past research conducted internally, to help the eBusiness organization identify product opportunities and UX solutions. **End result:** Our products covered key features competitors offer, and our UI design started with a solid foundation based on past usability study findings.*

Be creative about process

In order to operate under tight timelines, we need to be very creative about research process. Traditionally, user research follows a somewhat rigid process, taking a long while to move through the steps: planning the study, getting stakeholder buy-in, recruiting participants, creating discussion guide, and developing a full report.

But in an agile environment, we need to drastically shorten the cycle by doing more things at once, taking out unnecessary steps, and applying alternative research approaches. For instance, you can use friends and colleagues as participants, assuming they fit your target user's profile, you can create a high-level discussion guide that addresses key research questions but that doesn't contain detailed verbiage used for the interview, and you can write a quick findings report rather than a fully-developed, polished report.

Case study:

*I was able to conduct such informal usability studies, in the form of diary-style short surveys, to influence the design requirements and improve usability of the first launch of an iPhone app for a major financial company. **End result:** The iPhone app, greatly benefiting from the informal user research, later won a Silver award from w3c as well as received a five-star average rating in the app store.*

Agile ≠ Poor Quality

Many people, especially UX and market researchers, fear that in conducting research the “lean” way we’re losing quality in exchange for speediness. Speaking from personal experience, I find the fear unfounded. If anything, the fear reveals a deeply rooted misconception of quality.

Quality of UX research is not about research deliverables – polished research report and pretty PowerPoint presentation graphics – *it’s all about the quality of the product and the kind of user experienced resulted*. Defined as such, the lean UX research approach leads to higher quality because we can more effectively influence product teams in producing great products this way.

This is, of course, given that we’re thoughtful about research methodology – interviewing target users, asking relevant questions, taking great care in extracting user insight, and making actionable recommendations.

Traditional UX Research



Focusing on research deliverables - report

Lean UX Research



Focusing on product deliverables - UX

Case study:

Most of my recent user research projects were lean UX research conducted to support iterative product design and launch. Whereas we shortened the planning and data analysis timeframe, I was able to

consistently influence the teams based on the research findings. **End result:** We've seen measurable improvements in user engagement, reflected in behavioral metrics and subjective user feedback. That's what we care about when it comes to quality of research.

Agile ≠ Lack of Strategy

A common sentiment I heard is: Will the Agile process undermine strategic consumer/customer research and long-term planning? The answer is: Not at all! – If you do this the right way.

Please remember that the Agile process is and will continue to be a software development process, not a strategic planning process. User researchers should continue to partner with strategic decision makers within the company to plan and conduct strategic research. And, that process should happen before the software development even kicks off. The strategic research and lean UX research are not mutually exclusive – actually, you can find lots of synergy by combining the two approaches.

Case study:

*When I was conducting iPhone app usability evaluation in support of an Agile development process, I was at the same time helping a mobile steering committee develop a long-term strategy in defining the next steps of the mobile app road map, leveraging strategic UX research and analysis I did. **End result:** The two efforts converged nicely later in the process, where the successful iPhone app launch benefited from the agile usability testing and contained the product features informed by the long-term strategy.*

Conclusion

At first glance, the Agile process poses challenges to conducting UX research. Some might even think UX research is no longer relevant under this new development model. But looking closer, you'll see that this actually presents much more opportunities for leveraging UX research to actually achieve visible business results. As long as product teams commit themselves to listening to user feedback, having open communication within the team, staying responsive in leveraging user insight, and adopting some of the techniques mentioned above, they will be able to conduct and benefit UX research in this new environment.

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UX Strategized LLC

We are a boutique customer research, strategy, and design consulting firm based in San Francisco bay area. Leveraging award-winning experience and proprietary techniques, we provide end-to-end product strategy, customer research, and UX design support to leading companies. Below is a partial list of companies we have helped:

- eBay
- Yahoo!
- Cisco
- StubHub
- PayPal
- IMVU
- Motorola

We helped these companies achieve significant improvements in the following areas:

- User experience strategy
- New product concept
- Lean UX design & testing
- Mobile strategy and design
- Marketing strategy and messaging
- Online advertising effectiveness
- UX-driven KPIs
- Customer experience strategy
- Usability and conversion

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