# How User Experience is Practiced: Two Case Studies from the Field

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## Abstract

In this paper, we present two case studies describing how two organizations practiced User Experience (UX) in the summer of 2017; both were 'in-house' departments in consumer-facing companies in the Chicagoland area of Illinois. We conducted 16 interviews (involving 22 people) with leadership and practitioners, and observations (job-shadowing) with 14 of those we interviewed. Key takeaways included: (a) practitioners came from a variety of backgrounds resulting in multidisciplinary teams; (b) leadership desired UX employees that were generalists; and (c) inexpensive tools designed for UX were common for creating artifacts and facilitating communication resulting in a dynamic tool-scape. These findings have implications for instructors teaching in UX and students in UX programs; we also argue the findings will interest UX practitioners who are curious about sharing and learning from each other.

## Author Keywords

HCI/UX professions; Agile; observation; interviews

## ACM Classification Keywords

K.7.1 The computing profession: Occupations.

**Practitioners Company A**

Senior Industrial Designer

Senior Interaction Designer

Senior UX Designer (2)

UX Researcher

UX Designer (2)

Senior Human Factors Engineer

Manager of UX Design Team for Mobile

**Practitioners Company B**

Research Manager

Product Designer

Creative Director of Visual Design

Senior Visual Designer

Product Design Manager

## Introduction

In this project, we are exploring how Human Computer Interaction (HCI - aka User Experience (UX)) is practiced in industry. In this paper, we present case studies from two organizations we partnered with in summer of 2017; both were 'in-house' departments in consumer-facing companies in the Chicagoland area of Illinois. We conducted (a) 16 interviews (involving 22 people) with leadership and practitioners, and (b) job-shadowing observations with 14 of those that we interviewed. The significance of the larger project, which these case studies are part, is to explore how HCI/UX is practiced to inform: (a) instructors teaching in related areas; (b) students looking to enter UX professions; and (c) practitioners interested in learning from each other. The rapidly changing nature of HCI/UX makes studies like this one important.

*Motivation and Background*
HCI/UX is a rapidly changing field; technologies, user expectations and user needs rapidly evolve [2]. One driver of HCI's continued evolution is new perspectives. People from diverse backgrounds have introduced new methods and novel ways to think about the scope and practice of HCI. For example, HCI's early years witnessed the introduction of cognitive psychology's effect on HCI practice and education with influential concepts from prominent authors that included Card, Moran and Newell [1]. As graphical user interfaces evolved, influential thinkers were attracted to the field bringing their perspectives and concerns including usability (e.g., Nielson [5]), the need to consider affordances (e.g., Norman [6]), and the importance of studying context in technology design (e.g., Suchman [8]). The expansion of HCI/UX foci persists as practitioners and academics continue to find new ways

to research and develop technology-related products, services and associated phenomena.

We argue that one reason HCI is so dynamic is because of the symbiotic relationship between academia and industry; i.e., industry practice influences how HCI is taught and academia influences how it is practiced. One challenge of teaching HCI, therefore, is assuring that courses/ programs are relevant to professional practice.

Related work in this area argues that rapid changes in technology-related work is a critical reason for identifying (and re-identifying) job responsibilities required in industry (e.g., [4]). In other related work, ACM's 'Interactions' published a series of articles in 2005 focused on UX professions that included reflections on what made for 'good' UX [3]. In 2011-2012, we conducted a survey of HCI professionals aimed defining HCI/UX job titles and responsiblities [7].

In this summary abstract we focused on: (1) Organization/leadership: How are teams composed? What does leadership look for in UX employees? And (2) HCI practitioners: How do they define their job responsibilities? What are their peer to peer interactions? What tools/methods do they use? What artifacts do they create? What are their backgrounds?

## Methods

In the next sections we discuss our participants, our data collection, and analysis methods.

*Participants*
Our leadership interview at Company A was a one-on-one with the Director of UX Design; our leadership interview at company B was a group interview with the

Figure 1: Rough Flow Diagram (for Visual Designer at org B)



Figure 2: Company A: UX Organization Diagram

VP for Digital UX and six individuals in other leadership roles. We interviewed and job shadowed nine practitioners at Company A and five at Company B in summer 2017; see sidebar on page 1 for job tiles.

*Data collection*
In our interviews with leadership we asked about the organization and hierarchy of their teams. We also asked what they looked for in a new hire. We asked practitioners about their backgrounds, job responsibilities, interactions with peers, tools they used, and artifacts they created. All interviews were audio recorded and transcribed. Two 2-person teams job-shadowed the 14 practitioners for three hours; we were at Company A on-site for five days and Company B for three days.

*Data analysis*
We evaluated our notes for our three research areas descriptively; i.e., noting organizational hierarchy, tools, artifacts, methods, interactions, and methods of communication/collaboration. For the observations, we also created diagrams to visualize peer interactions (for an example, see Figure 1); we combined and simplified the diagrams in this paper to exemplify common interactions we observed for each role.

## Findings
The two organizations we profiled in this paper were both in-house UX groups; both worked on B2C products and on products that supported other departments within their companies. We organized this section to as summaries of the two research question areas: (1) Organization/leadership; and (2) HCI/UX practitioners. (In some cases, participant quotes were slightly edited for grammar and parsimony).

*Organization description/Leadership interviews*
The Director of UX Design (pseudonym: Lester) for company A described his UX Design department as one of three sister departments; the other two were (a) industrial design and (b) user research. Lester's educational background was in industrial design.

Lester managed 25 people, most of who were assigned to one of four teams: (1) mobile; (2) desktop; (3) front office/sales support; and (4) visual design team that supported the other three; see Figure 2 for an org diagram. He also had four people who were 'floaters' between teams; he described them as 'higher performing people' who were assigned to support teams as needed. When asked to define 'higher performing', he told us "*people who employ rapid ideation and great design process… also who communicate well and who are fun to work with.*"

When looking for new hires Lester told us that he looked for 'generalists': "*…there are certain designers that have different types of skillsets but we like to blur the boundaries. I think in other organizations you have information architects and those are different people from animators and so on…we like to say… if you are an information architect you should learn to animate and if you are an animator then you need to learn how to do layout and understand hierarchy and workflow*."

The interview with company B leadership included the VP of UX Design (Justin) and five people who reported to him: UX Director (Paul), UX/Design Director (Isabel), Creative Technology Group Lead (Mary), and two Portfolio Managers (Vicky and Mia). The interview also included a UX Research Manager (Stella). See Figure 3 for a company B's org diagram.
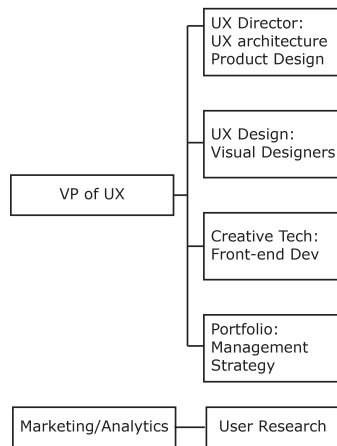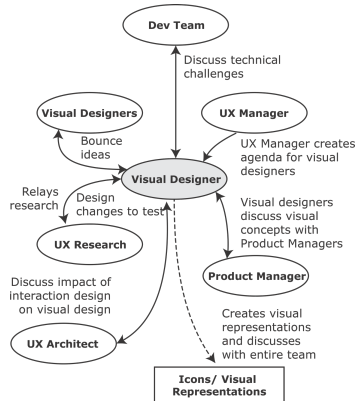
Figure 3: Company B: UX Organization Diagram



Figure 4: Visual Design Interactions at Org B

When asked what they looked for in employees, Mary told us that she looked for technical expertise but also desired some less quantifiable qualities, "*Natural curiosity, right? Just trying to understand how things work. A passion for people and solving problems, and then collaboration.*" Like Lester from Company A, they agreed that UX generalists were desired; Stella said, "*it would be really great to have talents who can have a wide range of skill sets.*"

*HCI/UX Practitioners*
We organized the 14 practitioners we observed and interviewed into similar role categories: (a) visual design; (b) product design; (c) UX design; (d) user research; and (e) industrial design.

Visual Designers (Org B)
Two participants worked in visual design; see Table 1.

| Pseudonym | Org | Title | Years @Job | Years @Field |
|---|---|---|---|---|
| Chad | B | Creative Director of Visual Design | 3 | 15 |
| Alyssa | B | Senior (Sr.) Visual Designer | 1 | 6 |

Table 1: Visual Designers

Chad was responsible for visual consistency; he primarily was "*in-charge of the icon library and the overall visual language.*" Alyssa reported to Chad; both had BA degrees in graphic design.

Sketch was the most common tool they used. Deliverables included icons and visual representations of screens. See Figure 4 for a diagram representing their interactions with other teams.

PRODUCT DESIGNERS (ORG B)
Two participants were product designers; see Table 2.

| Pseudonym | Org | Title | Years @Job | Years @Field |
|---|---|---|---|---|
| Edward | B | Product Design Manager | 9 | 15 |
| Jennifer | B | Product Designer | 1 | 2 |

Table 2: Product Designers (Org B)

Edward described the product designers at Company B as a conduit between research and design: "*We are kind of jack of all trades…we do user research, we do interaction design, …and visual design.*" Edward managed 14 product designers across three locations (including Jennifer). Jennifer and Edward both had BS degrees in psychology; Edward also had an MS in HCI.

Common artifacts they created were annotated wireframes; they used Zeplin (Sketch plug-in) to create their artifacts. See Figure 5 for an interaction summary.

USER EXPERIENCE /INTERACTION DESIGNERS (ORG A)
Six participants were UX and Interaction Designers at company A and had similar job interactions as the product designers at company B; see Table 3.

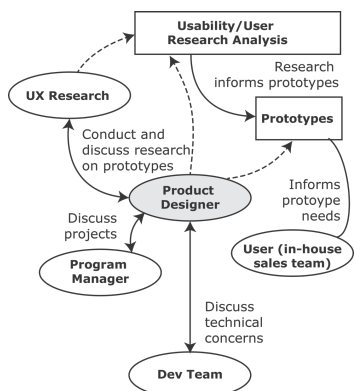| Pseudonym | Org | Title | Years @Job | Years @Field |
|---|---|---|---|---|
| Ken | A | Sr. Interaction Designer | 3 | 10 |
| Jay | A | Sr. UX Designer | 4.5 | 4.5 |
| Valerie | A | UX Designer | 1 | 2 |
| Christine | A | Manager of UX Design for Mobile | 3 | 5 |
| Irene | A | Sr. UX Designer | 2 | 2 |
| Vince | A | UX Designer | 1 | 4 |

Table 3: UX and Interaction Designers (Org A)

Figure 5: Product Designer Interactions at Org B (dashed lines = artifact creation)
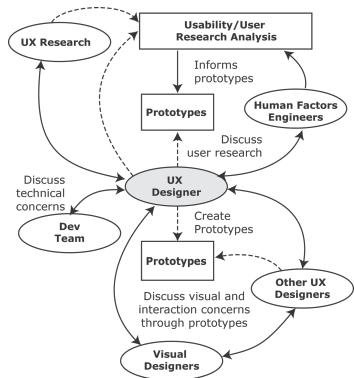


Figure 6: UX Designer Interactions at Org A

Ken, Jay and Valerie were three of the 'floaters' described by Lester. Valerie described their responsibilities: "..*we basically tackle everything from research to wire-framing, conceptualizing things to testing*". Ken and Jay's background were in visual design and Valerie had an MS in HCI.

Christine managed three mobile UX designers; she was "*responsible for making sure that all the design works done for mobile apps.. is delivered and run smoothly.*" Vince and Irene both worked under Christine. Irene described their jobs: "*I design for users who are out in the field, who are mobile, using tablets, iPads, other kinds of technology as opposed to sitting at a desk in an office somewhere.*" Vince's background was in software engineering and Irene's BS was in Interaction and Industrial Design.

The most common tools discussed were Sketch and the Adobe creative suite. Several other prototyping tools were mentioned including Invision and Marvel. Irene described their primary deliverable as "*a document that specifies how an application or a feature is supposed to work… these are going to be wireframes and flows.*" Figure 6 represents the UX Designers' interactions.

RESEARCHERS (BOTH ORGS A AND B)
Three participants were user researchers; see Table 4.

| Pseudonym | Org | Title | Years @Job | Years @Field |
|---|---|---|---|---|
| Fred | A | Senior Human Factors Engineer | 3.5 | 3.5 |
| Jack | A | UX Researcher | 2 | 2 |
| Heather | B | Research Manager | 3 | 15 |

Table 4: User Researchers

Both Fred and Jack were in the user research department at Company A. Fred described his responsibilities: "*What UI team designs as a concept, it could be wireframe, prototype… I take those for user testing with customers.*" Jack focused on fieldwork: "*…my job involves being out in the field with our users, conducting interviews and using immersive research methodologies.*" Jack's degree was in industrial design and Fred's background was in HCI.

Fred used Morae for conducting usability tests; his deliverables were detailed reports summarized in 3-4 slides for communicating to design teams. Jack listed audio recordings, field notes, and photographs among his deliverables. Figure 7 represents a combined interaction diagram for Fred and Jack.

While Heather had a similar job title, her work was very different; she conducted remote user testing with userzoom. Heather had a PhD in Cultural Anthropology.

INDUSTRIAL DESIGN (ORG A)
One Industrial Designer participated; see Table 5.

| Pseudonym | Org | Title | Years @Job | Years @Field |
|---|---|---|---|---|
| Charlie | A | Senior Human Factors Engineer | 10.5 | 10.5 |

Table 5: Industrial Design

Charlie described his work as filling the gap between hardware and software at Company A: "*I work with the user interface group…we collaborate on a lot of hardware and user interface because those have more in common as our org has become tighter.*"
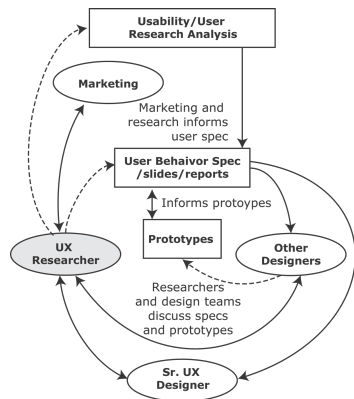
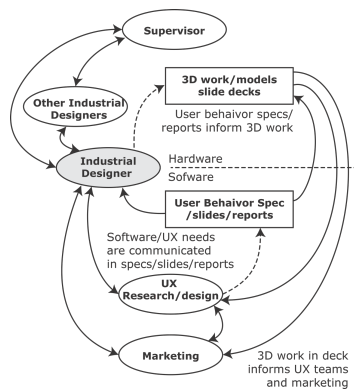Figure 7: UX Researchers Interactions (Orgs A and B)



Figure 8: Industrial Designer Interactions (Org A)

Charlie used 2D and 3D drawing tools. Deliverables included physical models created on 3D printers. See Figure 8 for a diagram representing his interactions.

## Discussion

We presented a summary of two case studies exemplifying a current state of UX practice. There were three key takeaways for HCI academic programs (and to a lesser degree, UX practitioners).

First, our participants came to HCI/UX from diverse backgrounds that included theatre, anthropology and industrial design. Most of our participants did not have degrees in HCI – but instead had transferred their skills. Varied backgrounds strengthened UX teams, indicating the importance of promoting diversity.

Second, related to the first, was the desire for generalists when considering new hires. Academic programs should focus on graduating students with diverse skill sets.

Third, practitioners demonstrated a dynamic adoption of digital tools; inexpensive (and newer) tools designed specifically for UX (e.g. Sketch) were common. Academic programs should consider the dynamic tool-scape in their courses.

*Limitations and Future work*
Findings may not generalize to other organizations. It was/is difficult to recruit companies for the observation portion of the protocol due to confidentially concerns. Agencies are especially sensitive because of client privacy but are likely to practice HCI/UX differently than 'in-house' groups. We plan to address these limitations in future work.

## Acknowledgements

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