

# User Experience Careers

How to Become a UX Pro, and How to Hire One

*Susan Farrell and Jakob Nielsen*



WWW.NNGROUP.COM

48105 WARM SPRINGS BLVD., FREMONT CA 94539-7498 USA

Copyright © Nielsen Norman Group; All Rights Reserved. To get your own copy, download from: <http://www.nngroup.com/reports/user-experience-careers>

---

## Copyright Notice

This report is a gift for our loyal audience of usability enthusiasts. Thank you for your support over the years. We hope this information will aid your efforts to improve user experiences for everyone.

This report is free, but it is still copyrighted information that may be updated from time to time, so please don't distribute this file or host it elsewhere.

Do not link directly to the PDF file (which may be rehosted at different cloud services). Instead, we encourage you to distribute the following link to this report's summary page on our website, in order to reduce PDF shock and to allow people to decide whether to download it themselves:

<http://www.nngroup.com/reports/user-experience-careers>

The survey data reported here was collected in 2013. The information presented is not just a snapshot in time, however. It is a compendium of professional advice based on experience gained over many years. Although the list of particular popular tools will likely lose some currency, the advice given throughout the report and the general information about UX will be useful for a very long time.

Thank you!



**Report Authors:** Susan Farrell, Jakob Nielsen

## Contents

<b>Executive Summary</b> .....	<b>5</b>
<b>Overview</b> .....	<b>9</b>
<b>What is User Experience?</b> .....	<b>15</b>
<b>Overview of User Experience Disciplines</b> .....	<b>19</b>
<b>What do Usability Professionals Work On?</b> .....	<b>25</b>
<b>Job Satisfaction</b> .....	<b>28</b>
<b>What Kind of People Do Well in UX Positions?</b> .....	<b>30</b>
<b>Roles, Activities, and Skills</b> .....	<b>33</b>
<b>Formal Education</b> .....	<b>40</b>
<b>Informal Education</b> .....	<b>57</b>
<b>How to Get Ready to Do the Work</b> .....	<b>65</b>
<b>Digital Tools for UX Activities</b> .....	<b>72</b>
<b>Where the Jobs Are and How to Get One</b> .....	<b>77</b>
<b>Lessons Learned from Your First Year in UX</b> .....	<b>90</b>
<b>Job Titles of People Who Have UX Responsibilities</b> .....	<b>96</b>
<b>Learn More</b> .....	<b>99</b>
<b>Appendix A: Job-Satisfaction Quotes</b> .....	<b>100</b>
<b>Appendix B: UX Activities by Frequency</b> .....	<b>122</b>
<b>Appendix C: Education</b> .....	<b>123</b>
<b>Appendix D: Advice on Getting Started in UX</b> .....	<b>136</b>
<b>Appendix E: Design Tools</b> .....	<b>146</b>
<b>Appendix F: Analysis Tools</b> .....	<b>151</b>
<b>Appendix G: What Interviewers Look For</b> .....	<b>155</b>
<b>Appendix H: Questions That Interviewers Ask</b> .....	<b>162</b>

**Appendix I: What Helped Most in Your First Year? ..... 171**  
**Acknowledgements ..... 189**  
**About the Authors ..... 190**

---

## Executive Summary

When we teach our training courses, one of the most frequently asked questions is, “how do I get a user experience career?” Obviously, getting some training is a good start in any field. But there’s much more to it. And although some advice can be gained from the myriad of existing careers books, the UX field is sufficiently unusual that general-purpose books can’t tell you all you need to know.

So how do we find out what it takes to have a strong career in the user experience field? By turning to our love of empirical data and finding out from people who actually work in the field.

### SURVEY DATA

Some 963 user experience professionals completed our survey hosted by SurveyMonkey.<sup>1</sup> Additional respondents helped us improve the questionnaire through several rounds of pilot testing, and we also collected responses with a paper survey from 47 of our conference participants and 5 of our beta testers.

Our respondents were divided almost equally between people in the beginning of their career (6 or fewer years in a UX-related job) and more experienced staff (7+ years as a UX pro). This mix gives us a good view into the full range of careers.

70% of respondents live in the United States, the U.K., Canada, or Australia. It is true that these countries are some of the world’s most advanced in terms of UX maturity and therefore have disproportionately many UX jobs. We would always expect them to be well-represented in any project to assess UX careers. Even so, the proportion of our respondents from these four countries is too high and represents a bias caused by the fact that our survey instrument was in English.

### PEOPLE LIKE IT

Before you read further, let’s get to the bottom line. Is it even worth considering a UX career? Yes, according to the people who have one. Respondents rated their career satisfaction as 5.4 on a 1–7 scale. Sure, all is not perfect in UX land, but this is still pretty good. Also, the satisfaction responses are heavily skewed toward the happy end, with 17% giving the perfect score of 7 and only 1% giving the terrible score of 1.

---

<sup>1</sup> Some questions had fewer responses, because survey respondents tend to drop off during longer surveys like this one and some questions were optional.

We don’t advocate the use of surveys very often in UX, because surveys are a poor method for evaluating the usability of a user interface design — we prefer direct observation of how people interact with each screen, one person at a time. But careers stretch across decades, so it’s impossible to perform direct observation of workers, one person at a time, as they progress through their careers. Also, for the kinds of things we were interested in for this project, the self-reported nature of survey responses is not as problematic as it is for resolving design questions. When we ask, for example, whether people have a master’s degree, most respondents can provide an accurate answer even though we’re asking them to recall something that might have happened many years before. Thus, we feel that a survey was a good way to get data about UX careers.

Satisfaction with pay and benefits was slightly lower at 5.2. People always want more money. But even here, many more respondents were satisfied than dissatisfied.

Interestingly, the main causes of dissatisfaction all indicate that the respondents do like the field of user experience in itself, but just aren't getting enough of it:

- They want to get more education and training so they can feel more confident in their skills and roles.
- They like UX a lot and want to do more usability activities or steer their job responsibilities more firmly into UX.
- Their current position or company doesn't support them or UX enough, so they probably need a new job.

## **EXTREME DIVERSITY**

The strongest finding from this research is that there is no single defining characteristic of user experience careers. For each of the main points we considered, our respondents provided an immense diversity of answers.

One partial exception to this conclusion is the type of product people work on. 94% of respondents have worked on websites and web apps, so this one platform is something most people have in common and which you should expect to know if you want a UX job.

But even platforms have extreme diversity. 67% of respondents had worked on mobile apps, 60% on enterprise applications, and 54% on traditional desktop software. So there are four different platforms that are common enough that more than half of user experience professionals work on them. But wait, there's more: respondents had worked on 78 different categories of products, from medical devices to home theaters and power grid systems. All of these products need usability and all of these fields employ at least some user experience professionals.

Clearly, these percentages sum to much more than 100%. The reason is that most user experience professionals have worked on more than one platform in their career. The average respondent had worked on 5 platforms. So there's not just diversity between people, there's also diversity within each individual's projects during a career. UX is not a field where you learn one thing and keep doing that all your life. As one of our respondents said, "I grew up in the country. I had to learn how to do anything I was presented with. Because of this, learning the tools and trade of UX has been a fun and exciting journey. I have picked up most of my knowledge from sitting down and doing, making mistakes."

We asked people about their job roles. The most common were user research, interaction design, and information architecture (IA). While these roles are not exactly surprising, it was striking to note that 43% of respondents performed all three of these main UX roles, indicating a high level of diversity of work activity even on a day-to-day basis.

On a more detailed level, when we asked about specific activities such as making wireframes, gathering requirements, or running usability studies, it was also striking how diverse UX professionals' jobs are. Fully 75% of respondents said that they perform at least 16 different UX activities.

UX professionals work in virtually every industry. The largest sector among our respondents was IT with 23% of respondents, followed by finance (11%), healthcare (6%), education (6%), and advertising/marketing (6%).

## **BEST BACKGROUND FOR UX WORKERS**

When asked what characterizes good user experience professionals, one of our respondents said, “If you are a ‘lifelong learner’, in other words, if you are paying attention, you will be able to take previous experiences and apply lessons learned from them to your new situation. That is more important to me than specific skills you might learn in school.”

While most knowledge workers probably benefit from being lifelong learners, the point that this is more important than a specific education is rare and one of the defining characteristics of the user experience field.

Even though continuous on-the-job learning is the most important, 90% of respondents also had a university degree. There’s no single degree to define the field: design, psychology, and communication were the most common major areas, sharply pursued by English and computer science. All of these fields make some sense as a partial educational background for UX professionals, but together those five disciplines accounted for only 45% of bachelor’s degrees. The majority of UX professionals hold degrees from an immense range of other disciplines, from history to chemistry, most of which don’t have a direct bearing on UX work.

The most common educational level was a master’s degree: 52% had at least one master’s degree (some had two, which seems like overkill). Only 6% of respondents were PhDs. Most of the remaining respondents with university diplomas held bachelor’s degrees and 1% had associate’s degrees.

UX pros with master’s degrees follow the same pattern as their colleagues with undergraduate degrees: that is, no pattern. A broad diversity of topics was just as characteristic at this level. One difference is that the most popular master’s degree discipline was HCI (human-computer interaction), which is highly specialized as preparation for a UX career. Fully 11% of respondents with master’s degrees were HCI graduates. This was the only discipline with a two-digit percentage. Other directly-relevant master’s degrees included 5% of degrees in information design, 4% human factors graduates, 3% in each of digital design and technical communication, and 1% for each of interaction design and information architecture. Other top disciplines at the master’s level were MBA, psychology, and library and information science, which are also all related to UX work, even if they’re not directly targeted at such jobs.

It’s clearly eminently possible to have a UX career without a degree in the field, and it’s definitely not necessary to have a graduate degree. Still, if you want to get a graduate degree, it would make sense to aim for a specialization that targets user experience, because the percentage of relevant degrees is much higher at this level among your peers in the field.

Digging deeper than the title on the diploma, we asked people which of the subjects that they studied had actually turned out to be useful. Continuing the diversity theme, there were lots of different things that UX pros claim to find useful. The top scores in order of usefulness were web design, writing, programming, psychology, design, and research methods. Any list where programming and psychology are next to each other is clearly indicative of an interdisciplinary field.

As one respondent said, “the top items for success are to be technically aware, business focused, and an expert in design and usability.” That’s a tall order, but this broad range of skills is nevertheless what’s needed for a successful UX career, and it should guide your choice of courses: no matter what specific degree you might pursue, make sure to study a broad diversity of topics. Even people who will never write production code benefit from knowing something about programming. A good writing course is essential for everybody, considering the importance of communicating with other team members.

We also asked people what courses they wished they had taken. The top scores went to HCI, psychology, and statistics. If you’re still in school, make sure to take courses in these topics so that you won’t have any regrets later.

Ultimately there’s no single-best recommended background for entering the UX field. If you’re interested, give it a go. One respondent said, “Everything I needed to know in UX design I learned by playing Dungeons and Dragons. You get to learn how to be someone else. If you’re the Dungeon Master you ... try to design encounters that you want your players to go through (workflows, conversion flows).”

## **GETTING STARTED**

No matter your educational background, you can get into user experience, as the previous section shows. How to get started? The top recommendation from our respondents was to pursue a mixture of theory and practice. Respondents recommended reading (books, blogs, articles) and taking courses. But they also advised newcomers to practice design, get an internship, and find a mentor.

Diversity strikes again. No single thing to do, but a range.

Along the same lines, it is best to get a first job where you will be doing a lot of different things rather than a narrowly-defined job. (Assuming you have a choice of jobs, of course.) Our respondents also strongly recommend starting out in a company where usability has some amount of recognition, budget, and management support. Later, when you’re stronger, you can survive better in a place with some adversity, but don’t start in such a company. Look for companies that have workable processes and UX roles in place, so you can be effective from the get-go.

There’s no single job title to aim for: our respondents had 210 different job titles. The most popular title was “user experience designer,” but only 6% of respondents had this title. (A further 3% were “senior user experience designers.”)

It can be hard to get started in a new field, but it’s worth doing. To conclude, let’s hear what three of our survey respondents had to say about their careers in user experience:

- “It’s super fun, and even if you are working on something trivial — like a pizza-ordering app — you are making people’s lives easier.”
- “I feel lucky every day that this is where I ended up. I’ve always been both creative and analytical and I get to practice both.”
- “I love my job and I get paid a lot of money.”

---

## Overview

### THIS REPORT

We produced this report for people interested in User Experience (UX) careers and those who hire people for UX roles. We hope it will be useful as an education, training, and career-strategy tool for students, career-changers, and practitioners, as well as a guide for universities, job interviewers, HR departments, and hiring managers.

The Appendix contains in-depth information and further details about many of the topics in the report.

The report links to many resources that we don't control, so if you encounter a link problem, please report that to [farrell@nngroup.com](mailto:farrell@nngroup.com) so we can address it.

### THE SURVEY

We invited interaction designers, information architects, user researchers, and managers who hire them to take our 26-question survey in 2013. We deliberately tried to exclude from the survey those visual designers who don't also work in one of the 3 core activity areas, because many of them do not have any HCI training or usability-testing experience.

The main survey gathered responses from 963 people, and alpha and beta testers also contributed education data. We asked questions about roles, activities, education, training, mentoring, getting started, job satisfaction, what to look for when hiring and questions to ask job candidates. We also looked at where UX pros work in industry.

Many questions had a write-in component so we could invite unanticipated answers. Originally, we thought we would also conduct case studies, but our respondents told us almost everything we had hoped to find out by doing those. Instead, we combed through thousands of very helpful suggestions by people working in the UX field and made a majority of those available to you in this report.

### TOP FINDINGS

These findings are also among the "top takeaways" in each section of the report, so if you plan to read the report, you can skip this section. On the other hand, if you don't have time to read the whole report, you can get most of the important information just by reading this.

#### Who UX professionals tend to be

- People come to UX work from every area of study, with all kinds of backgrounds.
- UX pros seem to have innate characteristics that draw them to the field and help them excel, such as curiosity, perceptiveness, empathy, and the joy of learning new things.
- Learned skills play a big role too, such as becoming an effective communicator, a careful design critic, and a problem solver.

## What kind of work UX pros do

- Some 94% have worked on websites and web apps, 67% on mobile apps, 60% on enterprise applications, and 54% on desktop applications.
- A pleasant surprise: nearly 40% also improve content and documentation of various kinds.
- Another welcome surprise: 24% reported working on services and processes.
- Most (75%) said they perform at least 16 UX activities. The top 10:
  - Present solutions / concepts
  - Persuade others
  - Analyze tasks or activities
  - Build prototype or wireframes
  - Collaborate with subject matter experts
  - Gather requirements
  - Specify interaction design
  - Conduct in-person usability studies
  - Make storyboards, user journeys, flow diagrams
  - Perform design reviews or heuristic evaluations
- A surprising 20% said they do both UX and software programming (beyond HTML / CSS).
- Most respondents have jobs in the computer, financial, and healthcare industries; education, marketing, and government. Some 16.5% said they work as consultants.

## Job satisfaction

- Most people in UX roles are very satisfied with their careers and compensation, because they enjoy the work and feel well-rewarded and highly valued.
- UX career paths don't go all the way to the top yet in many organizations, so people wanting to be a vice president or chief executive need to branch out professionally into business fundamentals.
- People who said they were unsatisfied usually mentioned reasons related to their current company or role, not about the work itself. In fact many were unhappy because they didn't get to do enough UX or they weren't able to be as effective as they would like to be.

## Skills needed to do a good job

- UX pros need business skills as well as design and interpersonal skills.

- People skills, especially the ability to persuade others to cooperate in fixing problems is called out as a key skill area.
- HTML / CSS skills are essential. Only 17% said they can do without those. Half already know how to make web pages, and the rest want to learn.
- UX pros might want to pick up useful complementary skills to be more competitive in the business world, such as project management and data analysis. Public speaking and group facilitation are on both the most-used and most-wished-for skills lists, so they seem very desirable for those entering the field, also.
- About a third of respondents said they wish they did have programming skills. Another 47% said they don't want or need to code.<sup>2</sup>

## Education

- At least 90% of the UX pros in our survey have college degrees.
- You almost certainly need at least one university degree, but it doesn't have to be in HCI<sup>3</sup> if you have some coursework or training in HCI topics too.
- The degree types are incredibly varied at every education level.
- Some 38% of bachelor's degrees were in the top three traditional UX focus areas: design, psychology, and communication.
- Some 35% of respondents have two degrees and 7% have three.
- The most common educational level was a bachelor's degree. Only 6% of respondents were PhDs, while 52% had at least one master's degree.
- Nearly half of the master's degrees reported by the UX pros surveyed fit under the big tent of user experience topics. Only 40 of the total 357 master's degrees reported were in HCI itself.
- Getting a master's degree makes a lot of sense for prospective UX professionals. Many said they regret not having gotten an HCI education earlier than they did.
- Only a few people completed certificates or coursework more specific to HCI after obtaining their degree(s).
- Beyond the typical backgrounds in design, communication, and psychology, your background of life and work experience can be surprisingly useful in UX.

---

<sup>2</sup> There are good arguments both for and against having coding skills in UX practice. On one hand, web-prototyping skills are required for interaction design; but on the other, UX practitioners must try to maintain a user's point of view in order to help prevent developer-centric concepts and terms creeping into user interfaces. JavaScript and JQuery are the most useful coding skills for interaction designers at present. Everyone in UX needs HTML and CSS basics.

<sup>3</sup> Human-Computer Interaction

- Design, HCI, research methods, and web design top the extremely useful education list.
- Web-design skills are very important to acquire.

### **Best ways to enter the field**

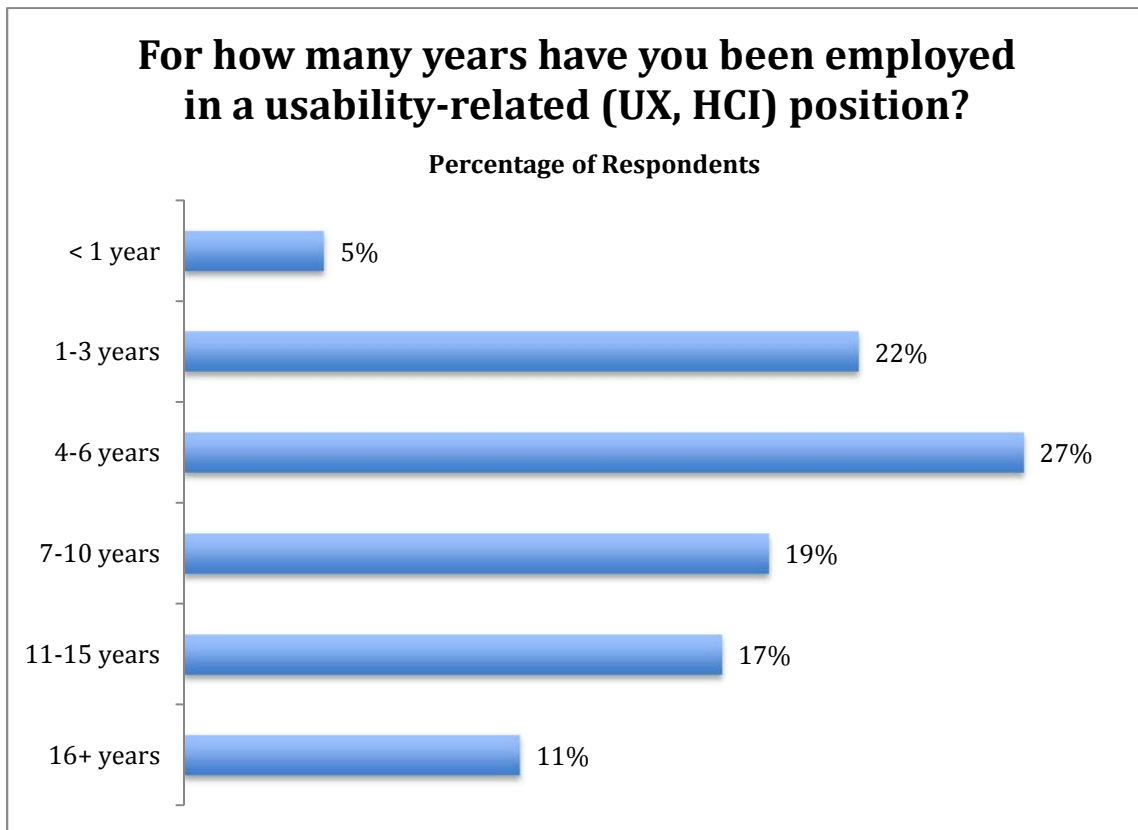
- Get a mentor. Learning from practitioners is a key part of getting ready to do the work. Only 26% of respondents reported having had no mentors so far.
- On-the-job mentoring is still the most common situation, at 51% of cases.
- A surprising number of people reported getting mentored by outside consultants who worked with them on projects.
- Look for internship opportunities inside and outside where you work now; try UX activities to see if UX is the right kind of work for you, and if so, which parts of UX you want to study and develop expertise in.
- Getting started as a UX professional can be helped along by networking in professional communities, actively pursuing opportunities to get experience, and compiling a portfolio.
- It takes a combination of formal and informal education as well as on-the-job experience in order for most people in UX to become well rounded. It's good that so many combinations seem to work well together.
- Quite a few people said that things went really well in their first year. Many said that was because they had a good academic preparation for the work, and others credited having a mentor for that smooth first year or transition.
- Some said they didn't have an identifiable first year because they transitioned gradually into UX while they were in another role in their company. This emerged as one of the top ways people get into UX roles.
- Many said they wish they had listened more, asked more questions, and been more aggressive about pushing for opportunities to do UX activities, when they first started in UX.
- It's important to get a first job where you will be doing a lot of UX activities.
- It's best to be in a place where usability has some amount of recognition, budget, and management support.
- Where you work matters in terms of your opportunity to make a difference. Look for companies that have workable processes and UX roles in place, so you can be effective.

## How to get hired

- Potential new hires are evaluated on lots of nonacademic attributes, such as people skills, curiosity, passion for the work, humble attitude, service-oriented track record, and the ability to be insightful problem-solvers, rather than just workers executing methods.
- Interviewers look for generalists with deep specialized skills, who have a university degree and a portfolio of work samples (hands-on experience).
- Candidates must not only know usability principles and design process basics, they also usually must demonstrate their communication and soft skills and do well on an interview design challenge.
- Finding jobs is a matter of fit with the organization's capacity and focus. Some interviewers look for beginners with the right qualities, while others look for people with deep experience.
- Some managers want psychologists, others want designers, while others lean more toward those with hard-science or broader liberal-arts and humanities educations.

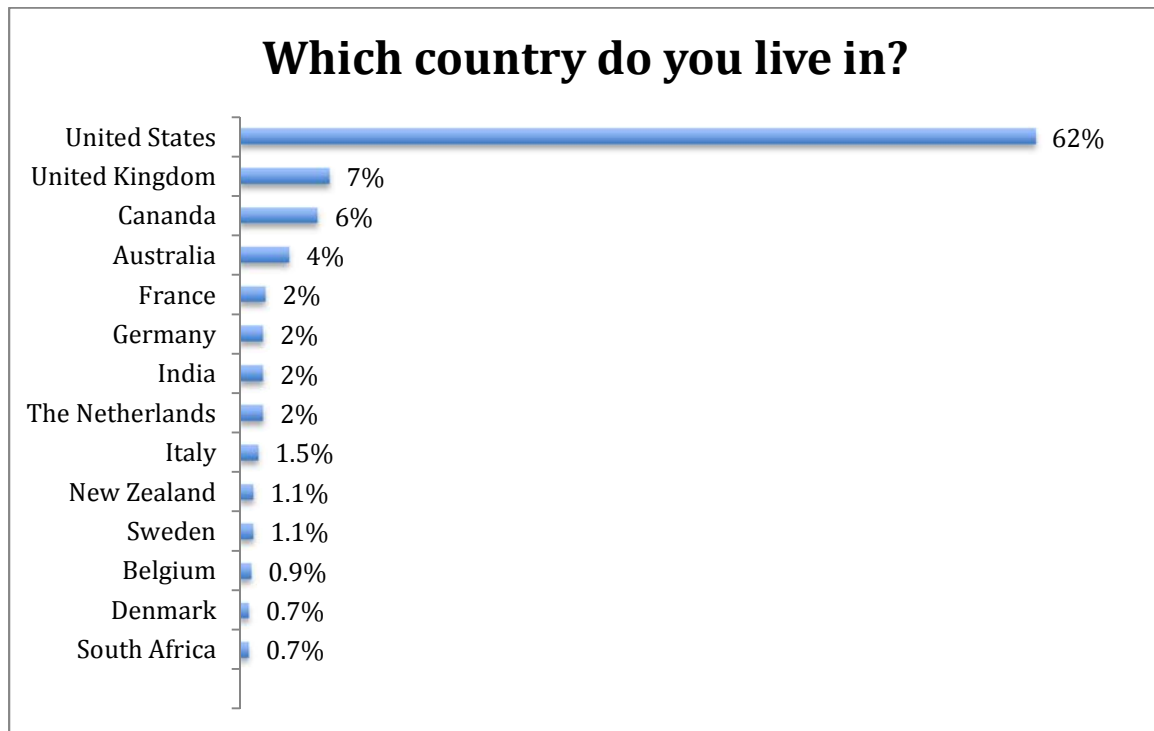
## SURVEY PARTICIPANTS

### Participants' years of experience in user experience (UX)



About half of survey respondents had 7 or more years of experience in the field.

## Respondent locations



People from 38 countries responded. Most were from the USA, which is no surprise. (The survey was advertised in English, on US-based websites and mailing lists, but also, much of the UX work is still in the US.) The top 14 countries shown above represent 93% of all responses.

Countries with 1–3 respondents were:

- Belarus
- Brazil
- China
- Colombia
- Costa Rica
- Czech Republic
- Finland
- Greece
- Israel
- Luxembourg
- Malta
- México
- Norway
- Philippines
- Poland
- Portugal
- Russia
- Singapore
- Spain
- Switzerland
- Thailand
- Turkey
- Ukraine
- United Arab Emirates

This is not a list of nationalities, but of residences. We wanted to find out where people work, because so many people change countries these days — often for work. When you ask UX practitioners where they work, however, the answer may be “everywhere.”

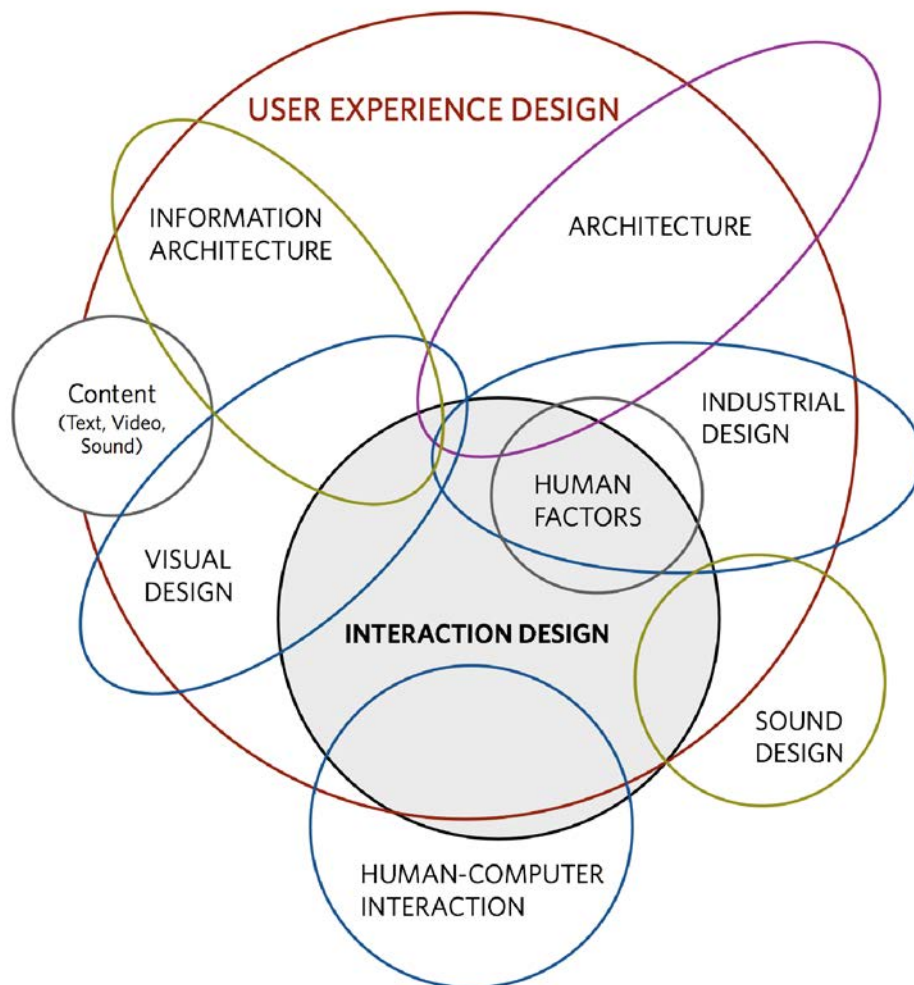
# What is User Experience?

## TOP TAKEAWAYS

- UX practitioners try to make things work better for everyone.
- The UX field overlaps with a lot of other disciplines.
- UX team members have many skill areas.
- UX is a professional career (and it's growing).

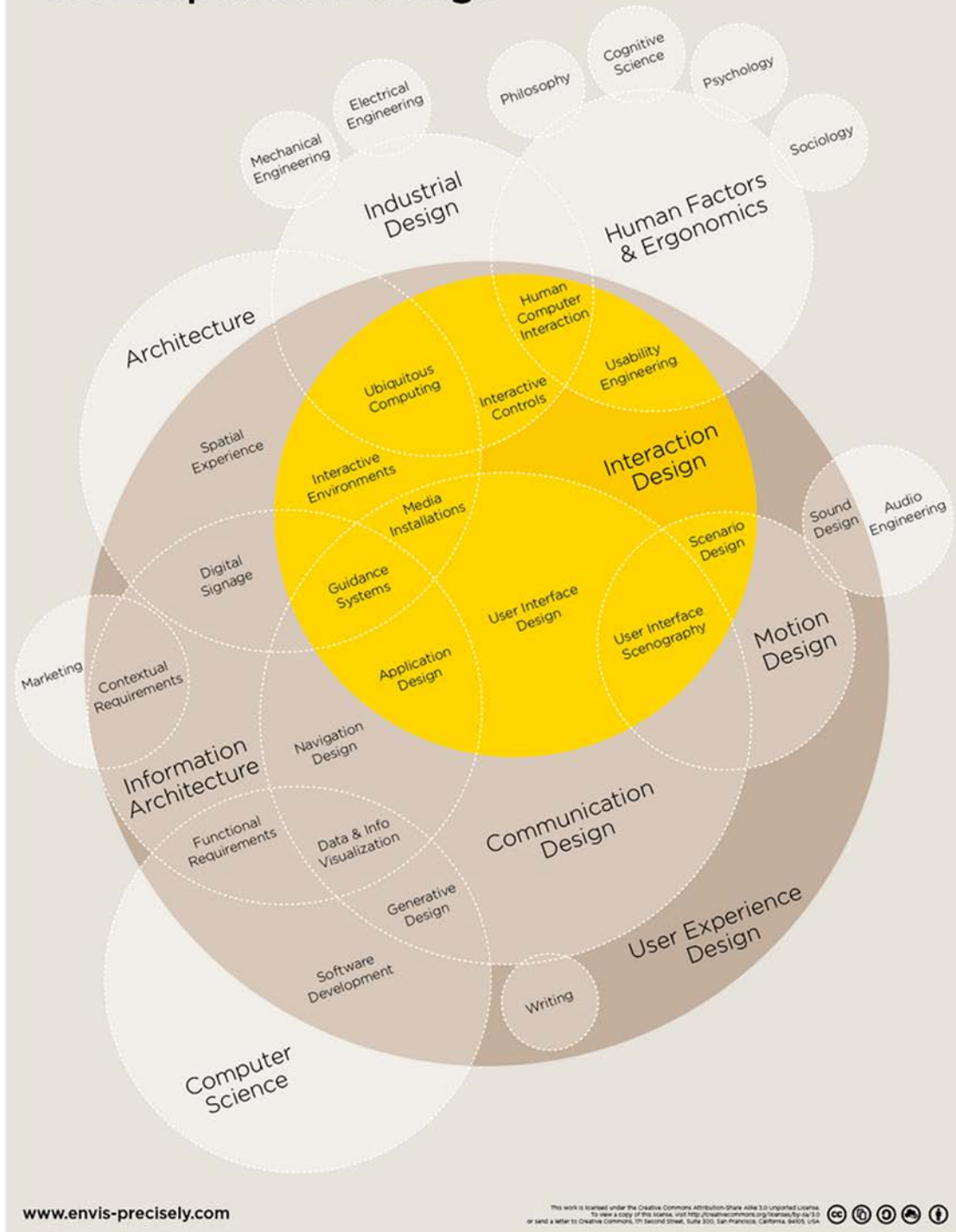
## HOW UX FITS INTO THE BIG PICTURE

Because computer technology and user interfaces are continually co-evolving, mapping out the disciplines of the specialists who work together has been difficult. Here are some visualizations that attempt to make the relationships clearer.



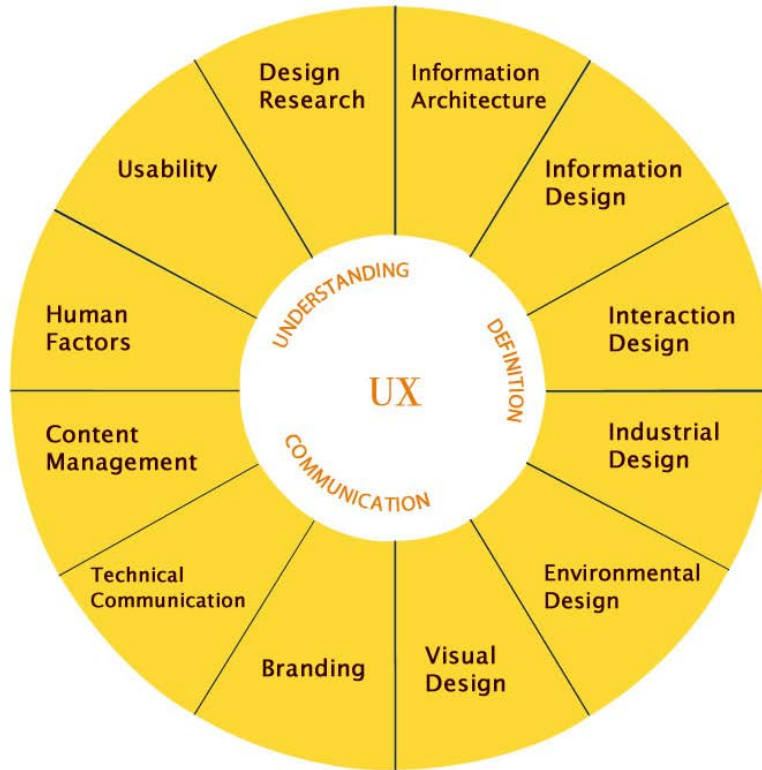
Dan Saffer's 2009 [\*The Disciplines of User Experience\*](#).

# The Disciplines of User Experience Design



[Mapping the Disciplines of User Experience Design](#) by [envis precisely GmbH](#) (Thomas Gläser, Markus Jaritz & Philipp Sackl) in 2013, based on the work of Dan Saffer (previous image).

## Fields of User Experience Design



*Fields of User Experience Design*, by Elizabeth Bacon, founder of DHeath Studio / Find Wellness

## Fields of User Experience Design

### Interaction Design activities



*Fields of User Experience Design: Interaction Design activities*, by Elizabeth Bacon, founder of DHeath Studio / Find Wellness

One of the earlier diagrams is [The Elements of User Experience](#) by Jesse James Garrett in 2000, which looks at the layers of website design activities.

All these models of UX are complementary, and new models arise as the field becomes more complex and more widely applied. They can all help you understand the kinds of skills and activities that UX practitioners bring to research, design, testing, and other aspects of product and service development.

The *envis precisely* team points out that their model could be applied to (and look different for) each person working in UX. Indeed, such interdisciplinary diagrams could even be used as product-team skill maps.

More models: [Visual Definitions of User Experience by Hienadz.Drahn](#).

# Overview of User Experience Disciplines

## TERMS

**User Experience** (UX) covers pretty much everything experienced by the user of a design or service. One of our survey respondents described it well:

"A customer's experience is affected by the whole story: brand, campaigns, literature, websites, store design, package design, out-of-box experience, product visual design, interaction design, support, user community, disposal / replacement. It's absurd to think that one person can design all of this. UX is everyone's job, from the copywriter perfecting his headlines so that the site speaks to the right audience, to the developer honing her code so that the app performs a touch faster. I would rather we push for 'UX' as a value and less as a discipline. I'm perfectly happy being a 'designer'."

**UX** – The term "UX" for user experience is still somewhat controversial, but it's winning the usage wars. Some would call user experience "UE" instead, while others would prefer to talk about specialties inside UX. Some think the specific terms for specialties are more difficult for those outside the profession to understand, so they like "UX" or "user experience" as a brand umbrella for the profession, and others take the opposite view. The terminology situation reveals itself to be even messier when you look at which job titles hide the UX jobs, in "Job Titles of People Who Have UX Responsibilities," beginning on page 96.

UX activities and skills can be applied to almost any area of design, but in practice, computer technology, product design, and process improvement are where most UX jobs are found today. Later in this report we'll take a deeper look at industries in which our respondents work and the types of things they have worked on.

The division of labor (who does what) in UX teams is as diverse as the teams that do the work. Most UX professionals have several main skills and many knowledge areas. In general, UX pros tend to:

- Find and solve new problems in the evolving relationships between people and machines
- Advocate for the humans in human-computer interaction
- Plan customer experiences throughout the product and service lifecycle
- Conduct research, design, and fix products and services to make them easier to use

"Even when you have a clear concept for a technology, you still need to design it so that it's consistent with the way people think about their activities ... you have to watch them doing what they do." – Xerox PARC ethnographer Ellen Isaacs

"People don't necessarily use technology the way you thought. You get out there and watch it to ask and answer 'why do they do that?' and expose flaws in your thinking so that you can address those

situations.” – Xerox’s Chief Innovation Officer, Ken Mihalyov<sup>4</sup>

## TERMS IN THIS REPORT

For simplicity, in this report we’ll be using “UX” and “usability” more for variety than for specificity. The survey on which the report is based, however, has to do with what we think of as the core usability specialties: user research, interaction design, and information architecture.<sup>5</sup>

## DISCIPLINES

### User Experience Design (UX Design)

UX design and strategy form the big tent in which all the UX specialists work. User experience designers (UXDs)<sup>6</sup> orchestrate, map, smooth, and decorate the entire user journey.

“Engineers make things. We make people love them.” Karl Fast – 2009 IA Summit

“I invented the term [User Experience Design] because I thought human interface and usability were too narrow. I wanted to cover all aspects of the person’s experience with the system including industrial design, graphics, the interface, the physical interaction, and the manual. Since then the term has spread widely, so much so that it is starting to lose its meaning ... user experience, human centered design, usability; all those things, even affordances. They just sort of entered the vocabulary and no longer have any special meaning. People use them often without having any idea why, what the word means, its origin, history, or what it’s about.” – Don Norman quoted in [UX Design Defined](#)

From [The Definition of User Experience by Jakob Nielsen and Don Norman](#):

“User experience” encompasses all aspects of the end-user’s interaction with the company, its services, and its products.

The first requirement for an exemplary user experience is to meet the exact needs of the customer, without fuss or bother. Next comes simplicity and elegance that produce products that are a joy to own, a joy to use. True user experience goes far beyond giving customers what they say they want, or providing checklist features. In order to achieve high-quality user experience in a company’s offerings there must be a seamless merging of the services of

---

<sup>4</sup> Both quotes are from [How Xerox uses analytics – big data and ethnography to help government solve big problems](#) 2012-Oct *Forbes*.

<sup>5</sup> A large visual-designer population exists in the UX design camp, and some of those designers also have great usability and interaction-design skills. Many more unfortunately do not.

<sup>6</sup> Job recruiters and hiring companies seem confused about UX design roles at present, as they often use the title, “UX Designer,” to mean visual designer or interaction designer. UX design is completely different in scope, because it is strategic and overarching.

multiple disciplines, including engineering, marketing, graphical and industrial design, and interface design.

It's important to distinguish the total user experience from the user interface (UI), even though the UI is obviously an extremely important part of the design. As an example, consider a website with movie reviews. Even if the UI for finding a film is perfect, the UX will be poor for a user who wants information about a small independent release if the underlying database only contains movies from the major studios.

We should also distinguish UX and usability: According to the definition of usability, it is a quality attribute of the UI, covering whether the system is easy to learn, efficient to use, pleasant, and so forth. Again, this is very important, and again total UX is an even broader concept.

Learn More:

[About UX — User Experience Professionals Association](#) – Terms, discussion, and links about the profession

[More Than Usability: The Four Elements of User Experience](#) – UX Matters

[User experience is strategy, not design](#) – Peter Merholz says UX is a “holistic endeavor.”

[Unicorn, Shmunicorn: Be a Pegasus – UX Magazine](#) – It's good for UX pros not to be programmers too.

[UX Designers vs. Web Designers \[Infographic\]](#) – Designbeep

[UX Design Defined](#) – UX Design Network (Michael Cummings)

## User-Centered Design

User Centered Design (UCD) is a method for designing good user experiences. As [User Focus](#) explains, calling the following ISO standard a “manifesto” for UX:

“ISO 9241-210 standard describes 6 key principles that will ensure your design is user centered:

- The design is based upon an explicit understanding of users, tasks and environments.
- Users are involved throughout design and development.
- The design is driven and refined by user-centered evaluation.
- The process is iterative.
- The design addresses the whole user experience.
- The design team includes multidisciplinary skills and perspectives.”

The ISO standard defines user experience as: “a person's perceptions and responses that result from the use or anticipated use of a product, system or service.”<sup>7</sup>

Learn More:

[What is User-Centered Design? — UXPA](#)

---

<sup>7</sup> [https://en.wikipedia.org/wiki/User\\_experience](https://en.wikipedia.org/wiki/User_experience)

## Usability

“Usability is not a single, one-dimensional property of a user interface. Usability has multiple components and is traditionally associated with these five usability attributes: learnability, efficiency, memorability, errors, satisfaction.” – Jakob Nielsen, *Usability Engineering*, 1993

Learn More:

[Usability 101: Introduction to Usability](#)

Jakob Nielsen on what, why, how, when, where

[What is usability? – from the Usability Body of Knowledge](#)

“Usability is the degree to which something — software, hardware or anything else — is easy to use and a good fit for the people who use it.”

[A Brief History of Usability, by Jeff Sauro](#)

[Usability: Wikipedia](#)

## Interaction Design

Interaction Design (IXD) – Interaction designers (IXDs) make the controls easy to use. They are in charge of the behavior and the components of user interfaces. They often deal with layout, flow, and with specifying the best types of controls for the job at hand. They determine how those UI controls will act when you click, touch, tilt, type, and so on. They attempt to prevent errors, and they often write and edit error messages.

Interaction designers create task flows, handle conversations between the systems and the users, and make prototypes (mockups) for communication and testing purposes.

“Interaction design is the design of behavior, positioned as dialogue between a person and an artifact.” Jon Kolko, founder of the Austin Center for Design, in *Behavioral Change* (2009).

Interaction designers work in *user interface (UI) design*. Windows, folders, buttons, web applications, online shopping, gestures for touch screens, and so much more fall under the responsibilities of interaction design.

Learn More:

[Tog on Interaction Design – Bruce Tognazzini](#)

[Interaction Design Association \(IXDA\)](#)

[Interaction Design Foundation](#)

## Information Architecture

Information Architecture (IA) – Information architects (IAs) are in charge of the navigation, naming, and organizing schemes. They make information structures, patterns, and vocabularies for websites and other information systems. They also make sure that people can find things and that people don’t become lost as they move through information spaces.

IA is concerned with helping people find what they need. Information architects make diagrams and models of information systems and focus on the meaning and

usage of terms. They often work on website navigation, metadata, naming, categorization, and search-engine optimization.

[Dorian Taylor](#), board member of the [Information Architecture Institute](#) explains:

“It’s about structuring information in a way that helps people understand their surroundings and find what they’re looking for. ... Information architecture doesn’t have a lot of content peculiar to it. The theory lies in the intersection of so many disciplines that the word ‘interdisciplinary’ seems hopelessly inadequate. In practice, it is extremely difficult to avoid becoming something of a domain expert as a byproduct of doing the job.”

## UX Research (User Research)

UX Research (UXR) – UX researchers (UXRs) investigate users and contexts, and test prototypes, features, information, products, and services. UX researchers conduct many types of non-opinion-based research activities in order to make things work well for those who need them. Often, they observe people working with user interfaces to find opportunities to improve the designs.

UX researchers discover what users need, expect, and want from products, services, and designs, and they test designs during each stage of the process to help keep designs on track.

Learn More:

[Technical Communication Body of Knowledge – Information Architect](#)

[Information Architecture’s Two Schools of Thought](#)

by Nathaniel Davis of [DSIA Portal of Information Architecture](#) in UXmatters

## SOME TENETS OF UX

In many ways UX is a vocation, not just a job, because it aims to do good in the world by making tools and technologies usable by everyone. UX has philosophies and important principles to live by. It has ethical rules and legal and moral constraints.

There are way too many UX tenets to list, but here are some of the practitioner guidelines we often refer to:

- It depends. (Context matters.)
- You are not your user. (Empathize with others. You know too much.)
- The purpose of UX work is to improve the system and the interface. (You can’t really improve the humans.)
- Designs should be tested with the people who will use them to make sure they are usable (and whenever possible, delightful).
- The use of [affordances](#), design patterns, and best practices (derived from testing) reduce the amount of effort required for people to understand how to use things.
- Be inclusive and helpful, respect standards, and document your work.
- Bring data and be persuasive with it. (Practice evidence-based design.)
- Watch out for unintended consequences and perverse incentives.

## **THE USER EXPERIENCE PROFESSIONALS ASSOCIATION (UXPA) ETHICAL PRINCIPLES**

- Act in the best interest of everyone
- Be honest with everyone
- Do no harm and if possible provide benefits
- Act with integrity
- Avoid conflicts of interest
- Respect privacy, confidentiality, and anonymity
- Provide all resultant data

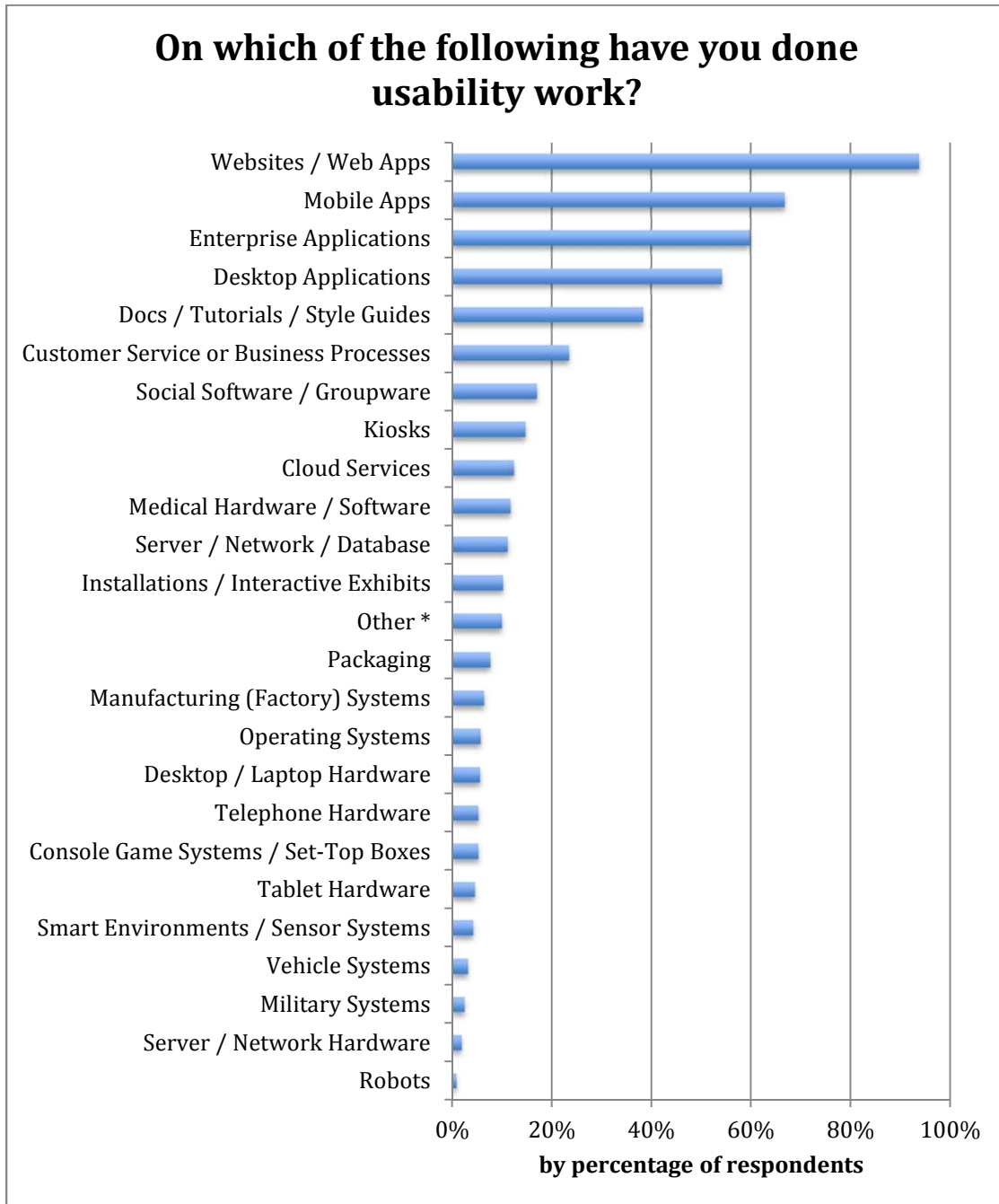
Examples of the Practice of these Principles: [UXPA Code of Professional Conduct](#)

Learn More:

[Usability Heuristics and Evaluation – Nielsen Norman Group articles](#)

[The Humane Interface](#) – Jef Raskin

## What do Usability Professionals Work On?



Usability activities are applicable to anything, so many people work in several industries and knowledge domains over their lifetimes. Some 94% of respondents have worked on websites and web apps, 67% on mobile apps, 60% on enterprise applications, and 54% on desktop applications.

\* Other things UX pros said they work on:

- academic lab hardware / software
- advertising
- agricultural systems (weigh stations, dairy interfaces)
- airplane seats
- artificial intelligence
- assistive-technology devices
- ATMs (automated teller machines for banks)
- banking software
- CLIs (command-line interfaces), terminal applications
- CMSs (content-management systems)
- consumer hardware / software
- credit-card reader
- custom hardware user interfaces
- dashboards
- direct-mail marketing materials
- email — purchase confirmations and marketing
- engineering equipment
- financial applications
- furniture
- gaming software
- handheld-calculator hardware and software
- home entertainment systems
- home-theater accessories
- in-flight entertainment interfaces
- insurance applications
- IVR (interactive voice response) applications
- learning and course-management systems
- legal software
- mainframe software
- marine systems (SONAR)
- music hardware
- online help systems
- paper documents
- portals
- power-grid systems
- printers and installer software
- product development (industrial design)
- programming languages
- remote controls (TV, etc.)
- service design
- services, procedures, work practice
- social-accounting applications
- soft goods (textiles)

- software for electronic health records (EHR)
- software for scientific use
- speech-recognition systems
- survey-design, panel-management, and reporting software
- telephone-billing layouts
- toys
- television apps
- video games
- videos
- voting machines

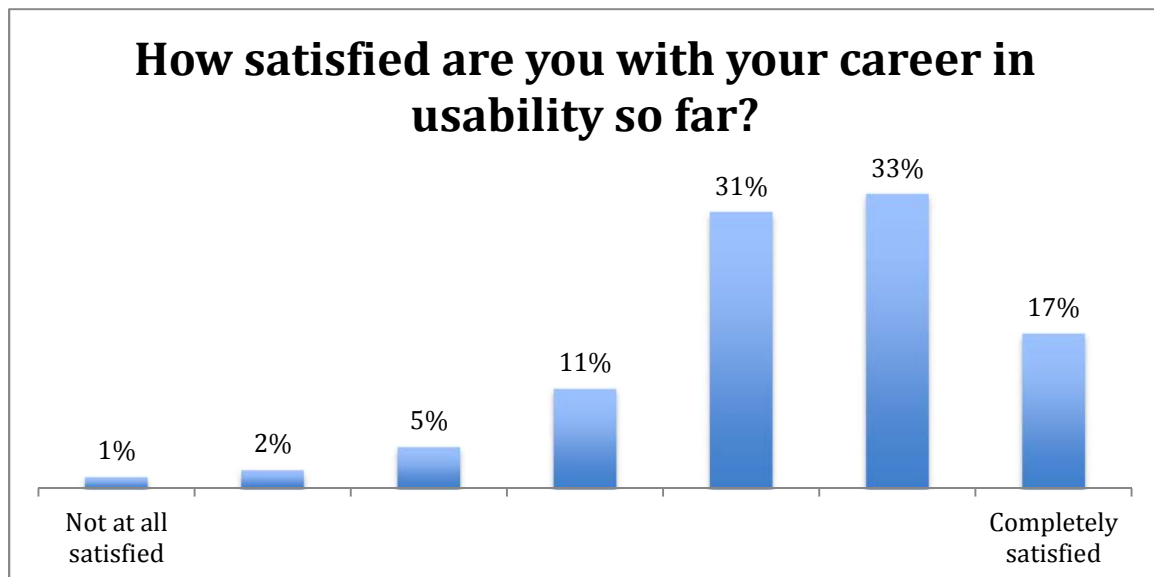
## **TOP TAKEAWAYS**

- UX activities can be applied to almost anything that people make.
- Almost all UX pros surveyed have worked on websites and web apps. Mobile, enterprise, and desktop apps also showed strongly.
- Nearly 40% improve text, content, and documentation, and 24% reported working on services and processes.
- We weren't sure that we'd hear from any people who have worked on robot user experience, but 6 people said they have already begun to work in this nascent field.

## Job Satisfaction

### TOP TAKEAWAYS

- Most people in UX roles are very satisfied with their careers and compensation, because they enjoy the work and feel well rewarded and highly valued.
- UX career paths don't go all the way to the top yet in many organizations, so people wanting to be a vice president or chief executive need to branch out professionally into business fundamentals.
- People who said they were unsatisfied usually mentioned reasons related to their current company or role, not about the work itself. In fact many were unhappy because they don't get to do enough UX or they aren't able to be as effective as they would like to be.
- Quite a few people rated themselves when we asked about career satisfaction (how they could probably improve their performance, rather than rating their situation or their satisfaction with their choice of career). Typically, they chose 5 or 6 (out of 7) and said they like the work a lot, but they could always learn more or do better. That's an interesting commentary on the way UX professionals look at their work world.



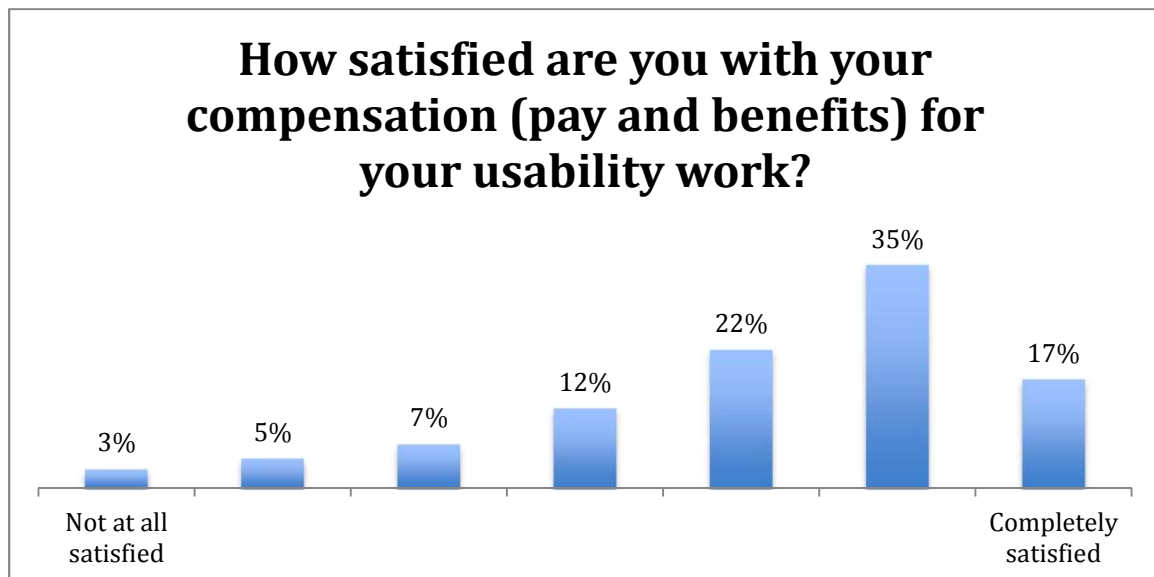
The average career satisfaction rating was 5.4 out of a possible 7.

Survey comments on job satisfaction indicate that a lot of people love their work:

- They feel well-rewarded and highly valued.
- They see their work as being intrinsically good for humanity.
- They enjoy being able to use so many of their skills.
- They find it challenging and engaging to work on HCI problems.

Most of the people who expressed lower satisfaction said things that indicate they have issues with their current situation more than with UX work itself.

- They want to get more education and training so they can feel more confident in their skills and roles.
- They like UX a lot and want to do more usability activities or steer their job responsibilities more firmly into UX.
- Their current position or company doesn't support them or UX enough, so they probably need a new job.
- They seem to spend too much time on persuasion, and their work is often an uphill battle or a compromise, so it's not as satisfying as it could be.
- They want to move from one kind of company to another (agency to enterprise or vice versa), for example to get more variety or to get more creative control.
- They want to go from hands-on to management roles or vice versa.
- Some long-time practitioners are concerned about not having a clear career path that goes all the way to the top of their organizations.



The average rating for compensation satisfaction was 5.2 out of a possible 7. See also "Appendix A: Job-Satisfaction Quotes," beginning on page 100.

Learn More:

[Salary Trends for Usability Professionals – Nielsen Norman Group](#)

[Salary Survey – Information Architecture Institute](#)

[Interaction Designer Salaries – Simply Hired](#)

[Web Design Salary Survey – 2011 – A List Apart](#)

[The Rise of the DEO](#)

## What Kind of People Do Well in UX Positions?



Lighting-control interface modification by the denizens of The Portland Incubator Experiment (an office for business startups). Photo by Nate Angell.

You don't have to be a great designer to work in UX. You just have to want to get rid of bad design, to improve mediocre design, and to help people have a more relaxed, productive, and positive relationship with their technologies and environments.

You might be a UX person if ...

- **You want to design a better solution** for these light-switch problems, or you want to know more about what's going on here.
- **You love good design**, but chafe at poorly designed and broken controls, instructions, menus, elevators, signage, maps, and so on.
- **You like to organize** things. You don't have to have an alphabetical spice rack to qualify as information-architect material, but if you immediately thought, "No, the spices should be organized by type of food!" you might have the right stuff.
- **You figure out how to make your workplace more efficient** by streamlining the workflow. This can be seen as an annoying personality characteristic in some jobs, but that tendency is well rewarded in UX work.
- **You file bugs against software that you use**, in order to make it better for everyone.
- **You're the one who always spots the typo** on the restaurant menu. You probably have the kind of detail orientation that UX managers dream of.

**Qualities that you may share** with UX professionals:

- They know a lot of different things, and they keep **learning**.
- They like solving problems and **puzzles**.
- They care about people and want to **make a difference** in the world.
- They like to **simplify** things.
- They like to **tinker and invent** things.
- They think **thinking is interesting**.
- They love to **learn new things** (and are okay with their own ignorance).
- They **understand people** and can closely observe them.

**UX candidates must have:**

- **Empathy** – feel users’ frustration and understand their points of view
- **Soft skills** – for example, can talk with anyone easily
- **Technical vocabulary** – speak engineers’ language (data and precision)
- Understanding of **how systems work** (basics)
- Understanding of **how people work with systems** (specifics)
- The **ability to convince** people to fix things
- **Tenacity** – don’t give up easily
- The ability to **explain things to anyone**
- **Writing and communication** skills
- **Patience** (“shut up and listen”)
- **Perceptiveness** – observational skills
- **Concern for people with different abilities and education**
- **Love of good design** and its analysis
- **Curiosity**, the drive to learn new things
- A tendency to **want to improve things**, to streamline them

**Traits that can sink you** in UX include:

- **Perfectionism** – be excellent, but ship
- **Procrastination** – must manage time
- **Lack of interest in technical topics**
- **Disinterest in ongoing self-education**
- **Lack of self-awareness** and self-control
- **Attachment to plans** rather than ability to adapt

## ESSENTIAL QUALITIES FOR UX PROS: IN THEIR OWN WORDS

"I grew up in the country. I had to learn how to do anything I was presented with. Because of this, learning the tools and trade of UX has been a fun and exciting journey. I have picked up most of my knowledge from sitting down and doing, making mistakes."

"A desire to continue learning. Continue to take classes, attend conferences, read blogs, etc."

"Work should be something you love, and that you can't turn off. Yes, I assess the usability of the world around me all the time, and I redesign spaces, experiences, and help others make things easier."

"Being introverted helped me develop listening, observing, and thinking skills. Being empathic [...], curious, and inquisitive gave me experience with the processes of questioning, interviewing, polling, testing. Being organized prepared me for the executive functions of the job. Doing volunteer work helped me gain valuable perspective."

"If you are a 'lifelong learner' (in other words, if you are paying attention), you will be able to take previous experiences and apply lessons learned from them to your new situation. That is more important to me than specific skills you might learn in school."

"Problem solving character, always trying to work out the best solution for diverse parties."

"Being a good communicator is absolutely critical to success, in both writing and speaking. You need to be able to read other people, and negotiate with them."

[You need] "a real interest in people from every walk of life, and a wide variety of experiences of different cultures and countries. ... Richness of life experience and empathy are the two qualities that are most valuable for this work."

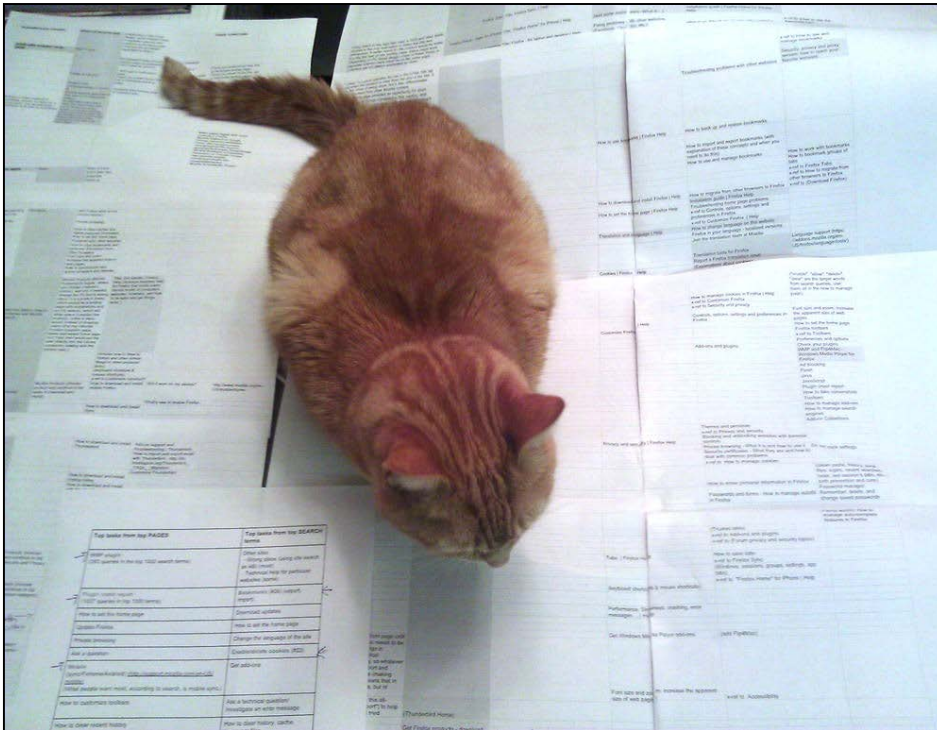
"Empathy, ability to listen, brainstorming, willingness to continue to learn and adapt."

"Knowing how to learn new things as well as how others learn, and being willing to adapt to change is more important over the course of a career than any specific skill set or technical tool."

## TOP TAKEAWAYS

- UX pros have innate characteristics that draw them to the field and help them excel, such as curiosity, perceptiveness, empathy, and the joy of learning new things.
- Learned skills play a big role too, such as becoming an effective communicator, a careful design critic, and a problem solver.

## Roles, Activities, and Skills

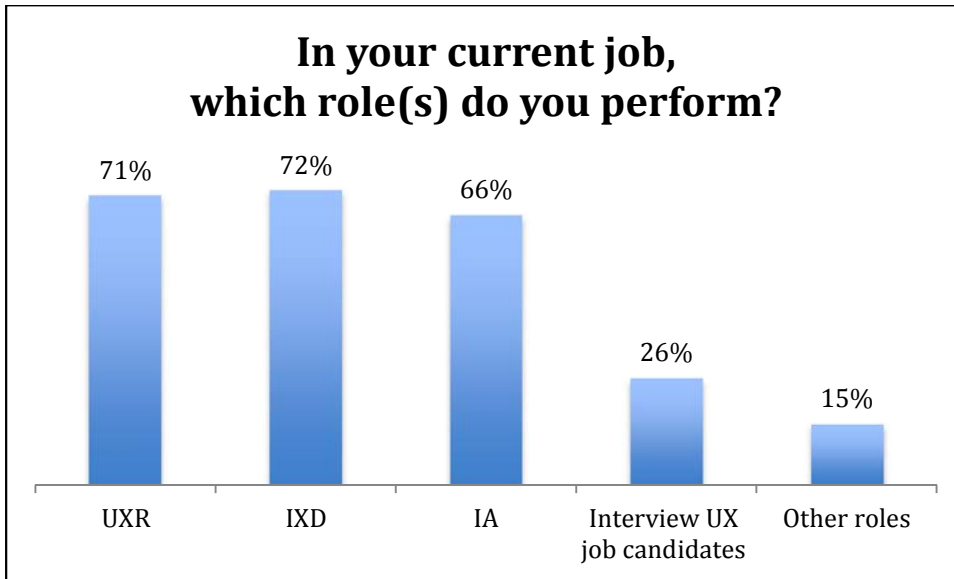


Here, Susan's helper weighs in on a new website IA plan, created with the Swiss Army Knife of computing, a spreadsheet.

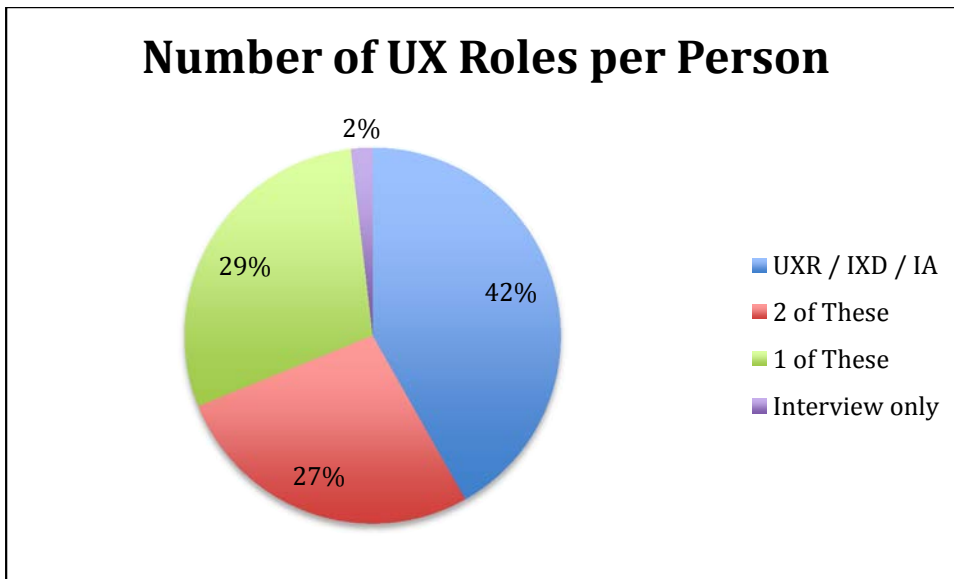
### TOP TAKEAWAYS

- UX professionals wear a lot of hats in the workplace (often performing 2–4 job roles), so they use many skills. More than half of respondents reported doing 25 of the top UX activities.
- Most (75%) said they perform at least 16 UX activities.
- Only 15% of our respondents said they also have various other big responsibilities, such as strategy, management, and content creation.
- UX pros could pick up useful skills that might make them more competitive in the business world, such as project management and data analysis. Public speaking and group facilitation are on both the most-used and most-wished-for lists, so they seem very desirable for those entering the field, also.
- UX is the translation layer of the organization, relaying technical information to users, reporting research data to stakeholders and developers, and facilitating group decisionmaking while advocating for users who speak many human languages.
- People skills, especially the ability to persuade others to cooperate in fixing problems is called out as a key skill area.

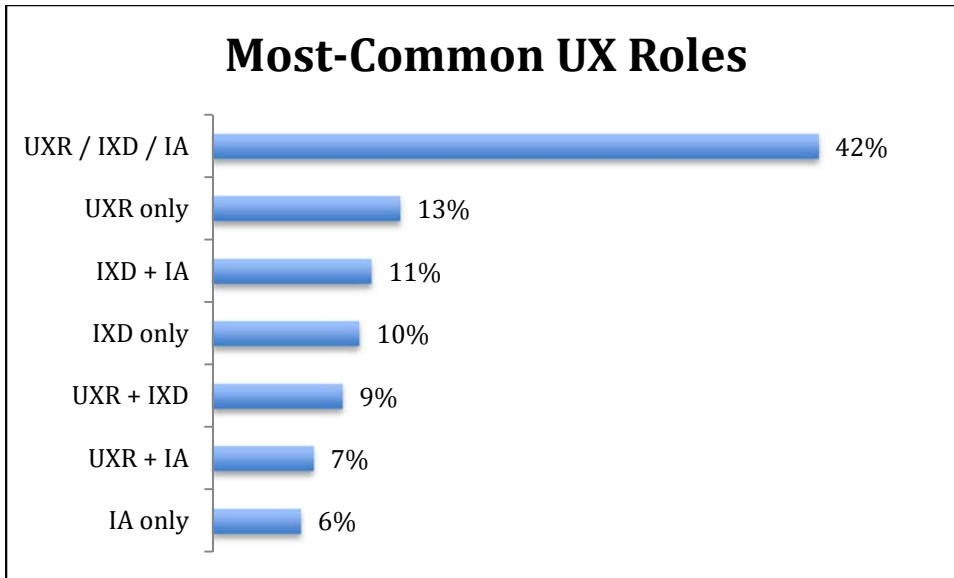
## JOB ROLES



We were surprised to see so many people apparently performing roles in all 3 usability disciplines (UX research, interaction design, and information architecture), so we dug deeper into the data.



Indeed, 42% of respondents perform all 3 roles (as UXRs, IXDs, and IAs). (The 2% are the 18 UX managers in our survey who interview candidates for UX roles but don't perform those roles themselves.)



It's not surprising that *IA only* is at the bottom of the list, because information architecture activities tend to occur at strategic times during product and website design cycles. Unless you are a consultant who specializes in IA, you probably need to take on other roles too.

## JOB ACTIVITIES

- The top 10 activities:
  - Present solutions and concepts
  - Persuade others
  - Analyze tasks or activities
  - Build prototypes or wireframes
  - Collaborate with subject-matter experts
  - Gather requirements
  - Specify interaction design
  - Conduct in-person usability studies
  - Create storyboards, user journeys, flow diagrams
  - Perform design reviews or heuristic evaluations
- Despite many wishful job descriptions for UX Developers, only 20% of respondents said they do both UX and software programming.<sup>8</sup>
- About a third of respondents said they wish they did have programming skills, while 47% said they don't want or need to code.

<sup>8</sup> We believe it's wise to have teams with different people advocating for the user than those who are advocating for the system, so a division of labor there seems helpful. It's great when developers skill up in UX (which is how we get most UX Devs today) and when UX pros learn to code (so they understand software principles), but very few people are equipped to be both great programmers and great UX people.

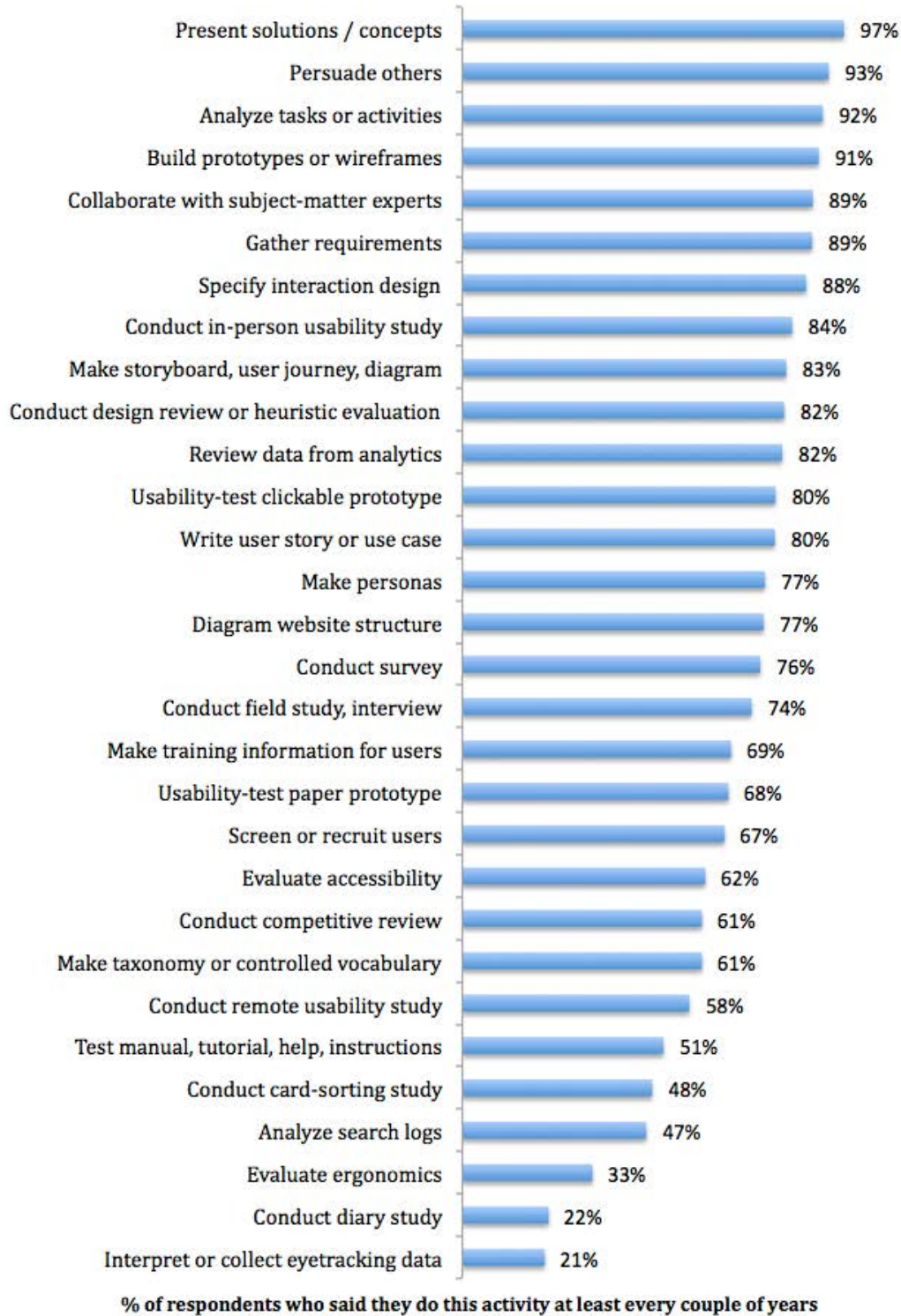
- Only 17% said they don't need or want HTML / CSS skills. About half of respondents have them, and the rest want to learn these vital web design skills.
- Additional skills used by many respondents:
  1. Writing or editing reports, content
  2. Public speaking
  3. Competitive analysis
  4. Group facilitation
  5. Project management
  6. Analytics / data analysis
  7. Content strategy
- The top 7 additional skills respondents wish they had:
  1. Data visualization
  2. Public speaking
  3. Business analysis
  4. Audience analysis
  5. Group facilitation
  6. HTML / CSS
  7. International business and cultural-issues awareness

Other skills many people mentioned as important:

- Listening
- Empathy
- Organization
- Interviewing
- Training or teaching experience
- Patience
- Meeting organization
- Detail orientation
- Sense of humor
- Business knowledge (how businesses work, business analysis)

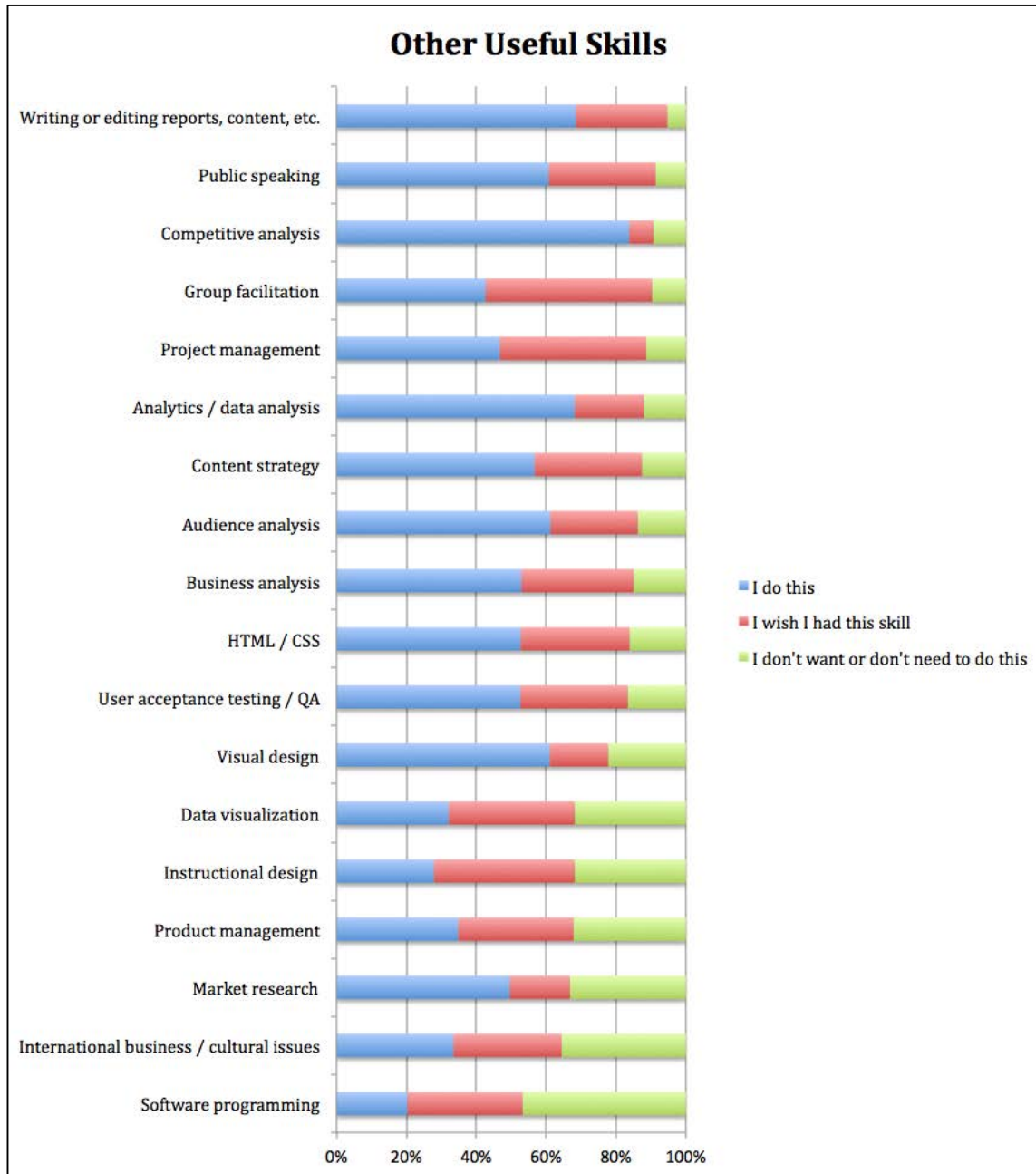
Many people mentioned specific education, methods, and tool skills that are helpful to have. These are discussed in detail in their own sections of this report.

## Most-Common UX Activities



For more details, see "Appendix B: UX Activities by Frequency," on page 122.

## USEFUL JOB SKILLS



Skills with the longest blue bars are those that UX professionals tend to have. The skills with the longest red bars represent likely opportunities to be more competitive and to fill in team gaps.

## Other useful job skills: In their own words

"Soft skills, like being able to make participants feel comfortable so they are more willing to share their feedback."

"Being able to present designs, results, and solutions to your audience and explain either in written or oral form what is important and why it is invaluable."

"Ability to work with people, convince them, not force ideas on them."

"Politics and social skills. Usability folks have respect (if earned) but not power."

"You need to know when to push and when to let go. I've met too many UX ninjas that think their job is to be a total pain and battle to the death for the user. That is somewhat true. You have to make a cogent argument and be persuasive, but these people often times don't see that they're either wrong or other factors may prevent you from doing the right thing. Sometimes you have to compromise. You advise. You persuade. But sometimes you just have to let go. A lot of people go too far one way or another."

"The ability to say no when necessary. Far too often, the 'Yes' to everything ends up in a disaster."

"Digital strategy — for example, understanding how a client's website fits into their overall business strategy, what other channels they work with."

"Knowledge of common interface patterns from constantly using tons of different interfaces."

"A desire to keep learning. Things are always changing. It's helpful to be curious and keep up with the latest technology."

"Immense ability to notice things that are wrong."

"Generating insights (as opposed to just generalizations from the data)."

"Translating between geek speak and business speak."

"You have to be just technical enough to know what is possible and call BS on developers, but you don't necessarily need to be able to program it yourself."

"Being a native Spanish speaker has helped me with my research with Hispanic consumers. I've also found my expertise in qualitative methodology from my anthropology training to be quite handy."

"Bilingualism [is useful to me] for usability at the international level, mostly to understand the need for clear language free of slang and regionalisms."

"Networking skills are especially important for me as an independent consultant, but that is also useful in a corporate environment."

"Ability to adapt UCD techniques to various development methodologies."

## Formal Education

One of the main goals of this research is to help people figure out what kind of education and training to pursue when going for a UX career, based on the wisdom and history of people in the field today. Toward that end we asked questions aimed at uncovering what's useful, what's needed, and the diversity in the working population of UX professionals.

### TOP TAKEAWAYS

- UX pros are polymaths, creative technologists, and expert generalists.
- About 90% of respondents have a university degree.
- You almost certainly need at least one university degree, but it doesn't have to be in HCI if you have some coursework or training in HCI topics too.
- Many undergraduate degrees were interdisciplinary, and some people had unrelated double majors, followed by another degree in two or three other disciplines.
- Some 35% of respondents have two degrees and 7% have three.
- Only 6% of respondents were PhDs, while 52% had at least one master's degree.
- Only 40 of the 357 master's degrees reported were in HCI itself, likely because of their relative scarcity even today.
- Nearly half of the master's degrees reported were in UX-topical areas and most represent very marketable skills aimed at communications, design, technology, business, and understanding people and information.
- Almost all the second master's degrees were in UX-topical areas.
- Getting a master's degree makes a lot of sense for prospective UX professionals. Many said they regret not having gotten an HCI education earlier than they did.
- The degree types are incredibly varied at every education level.
- Only 46 people completed certificates or coursework after their degree(s); half of them took courses specific to HCI work.<sup>9</sup>
- Many people combined disciplines that universities tend not to mix. Some examples:

---

<sup>9</sup> It would have been interesting to find out if the types of degrees shifted more toward HCI-related degrees in recent years (now that they are more available), but most respondents did not provide their degree year.

Post-degree extra classes and certificates varied a lot; for example, communication, anthropology, statistics, writing, social practice, photography, marketing, UCD, HCI, HF, UX, usability, and more.

- English and Computer Science
  - Anthropology and Educational Technology
  - Economics and Cognitive Science
  - Art and Library Science
  - Math, Philosophy, Library Science, Computing with Psychology
  - Psychology and Architecture
  - Biology, Tech Journalism, Mass Communication
  - Computing and Artificial Intelligence, Linguistics, and Cognitive Philosophy
- Design, psychology, and communication were the most common major areas, but together those accounted for 29% of bachelor's degrees.
  - Respondents recommended that students going into UX take a wide variety of classes. It's difficult to know in advance which knowledge may turn out to be useful in your work, because the world of UX work is so broad.
  - UX professionals must learn how to observe, how to think, how to be receptive, and how to weigh their research.
  - They must also know something about both humans and computers, and about both interaction and design.
  - UX pros have to thrive in particular organizations and persuade people to make changes, by speaking and writing about those changes in eloquent, yet accurate, detail.
  - It takes a combination of formal and informal education as well as on-the-job experience in order for most people in UX to become well-rounded professionals.
  - Get a mentor. Learning from practitioners is a key part of getting ready to do the work.
  - A surprising number of people reported getting mentored at work by outside consultants who worked with them on projects.
  - Life background and work experience can be surprisingly useful in UX.

If you want to start as a UX professional:

- Network in professional communities.
- Actively pursue opportunities to practice UX activities.
- Look for internships; try it out to see if UX is right for you; and if so, decide which parts of UX you want to study and develop expertise in.
- Learn business skills as well as design and people skills.
- Gain experience and build a portfolio.

## UNIVERSITY DEGREES

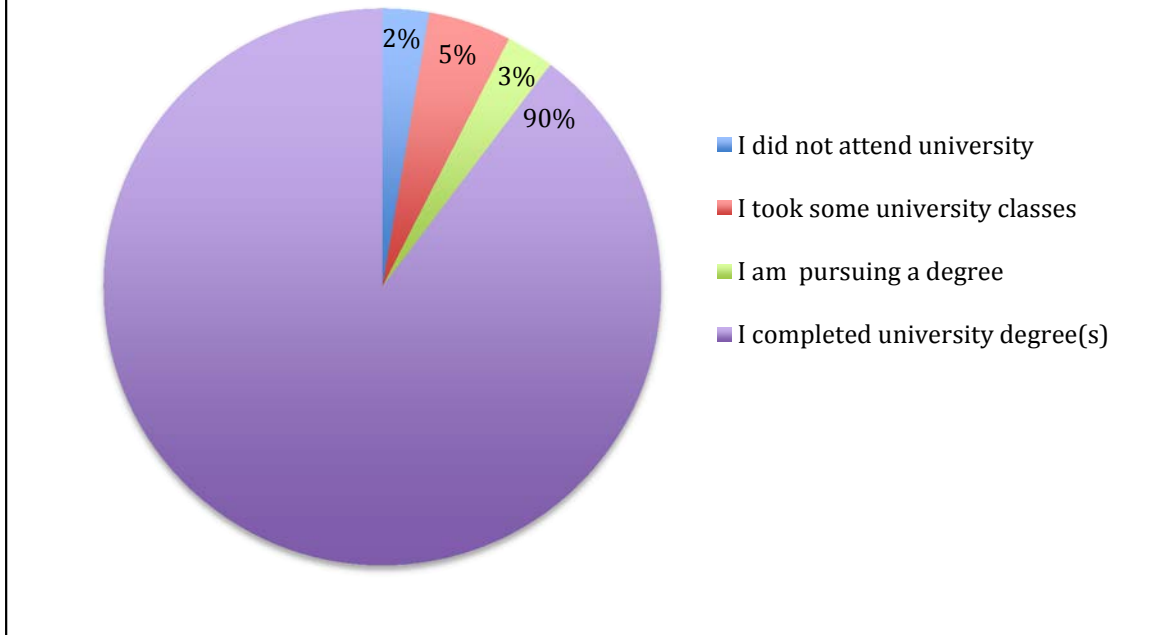
We can see from the data below that many people are generalists (or serial experts) who are also educated in many UX-relevant areas, such as psychology, computer science, information technology, media studies of various kinds, and so on.

Hiring managers and interviewers look for curious, life-long learners, and they expect college degrees. We recommend that you get your education wherever you can, even if you have to teach yourself HCI or cobble together your own interdisciplinary degree from available parts. Don't let the availability of packaged degrees get in the way of you getting the education you need.

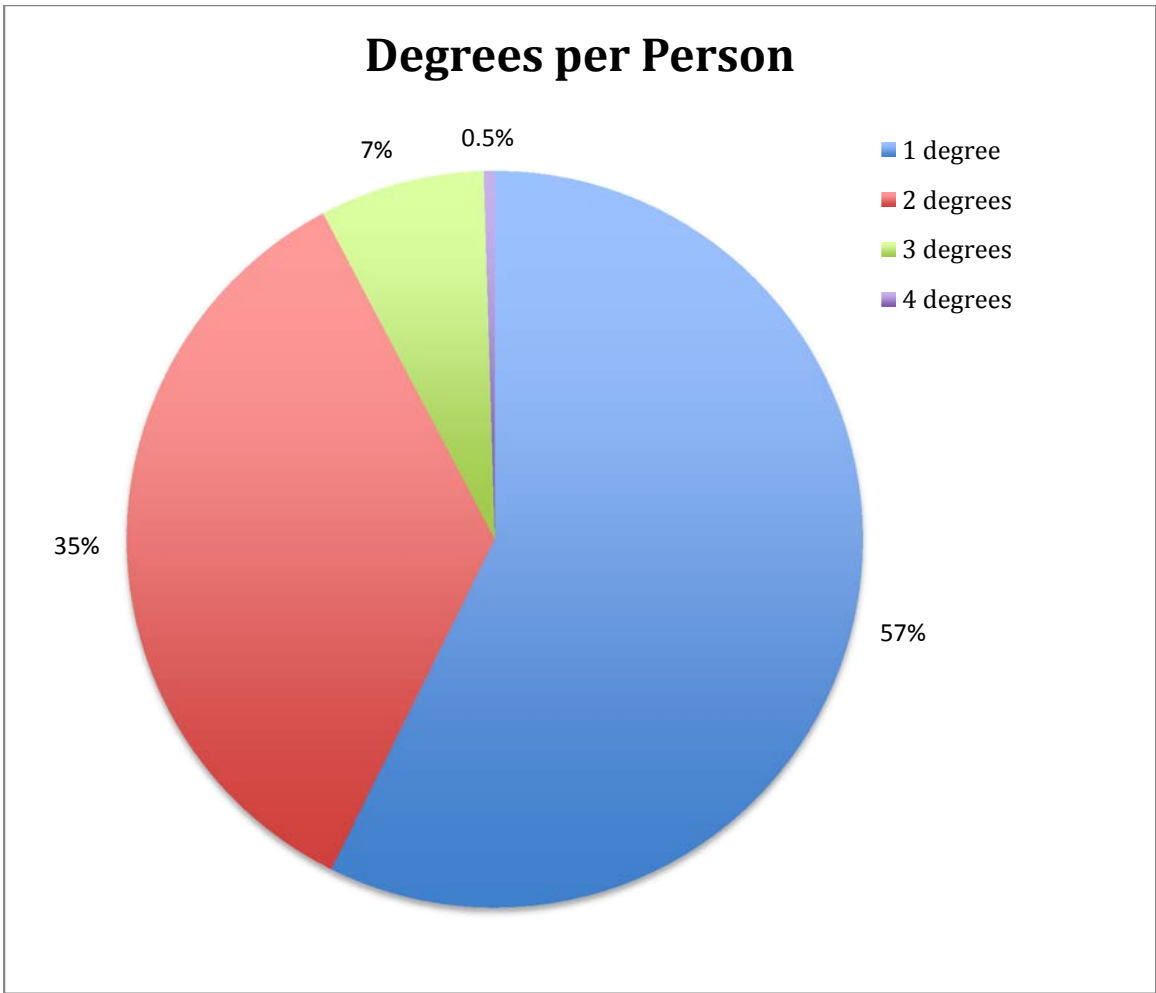
Because this is an international survey, and there is little standardization in what degree programs are called around the world and which classes each degree comprises, the categories were a little fuzzy, but we tried to fit them into some understandable groups. It's complicated to talk about international university education and degrees, because they are not always interchangeable. Most respondents were in the US, so we fit the non-US degrees into the US conventions where they fit best. The degree categories are as follows:

- **Associate's Degree** = 2 years of university coursework.
- **Bachelor's Degree** ("undergraduate") = 4 years of university coursework with one or two main focus areas. These are further divided between science and arts, but the dividing line is somewhat arbitrary in some disciplines, such as in business and media, business technology and data journalism.
- **Master's Degree** = 1-2 years of university coursework after the 4-year degree is complete. Again, these can fall under arts or sciences.
- **PhD** ("doctorate") = 3-7 years of university research and courses, often including teaching responsibilities, typically occurring after or concurrent with a master's degree. Again, these can fall under arts or sciences, and the requirements vary a lot.

## Formal Education

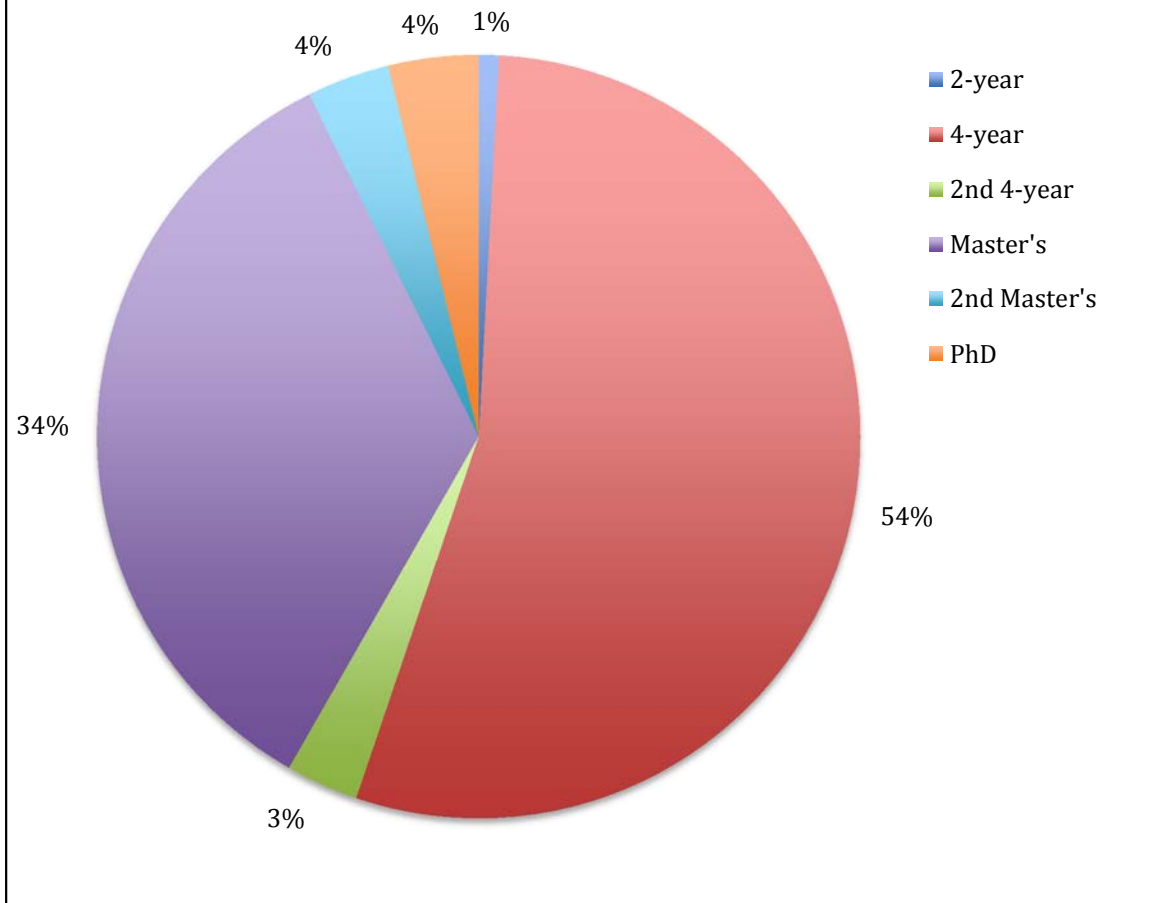


Yes, 90% of the UX pros in our survey have degrees; only 2% did not attend.



We collected education information from both the alpha and beta tests of the survey too. Only 57% of those with university degrees stopped at one degree.

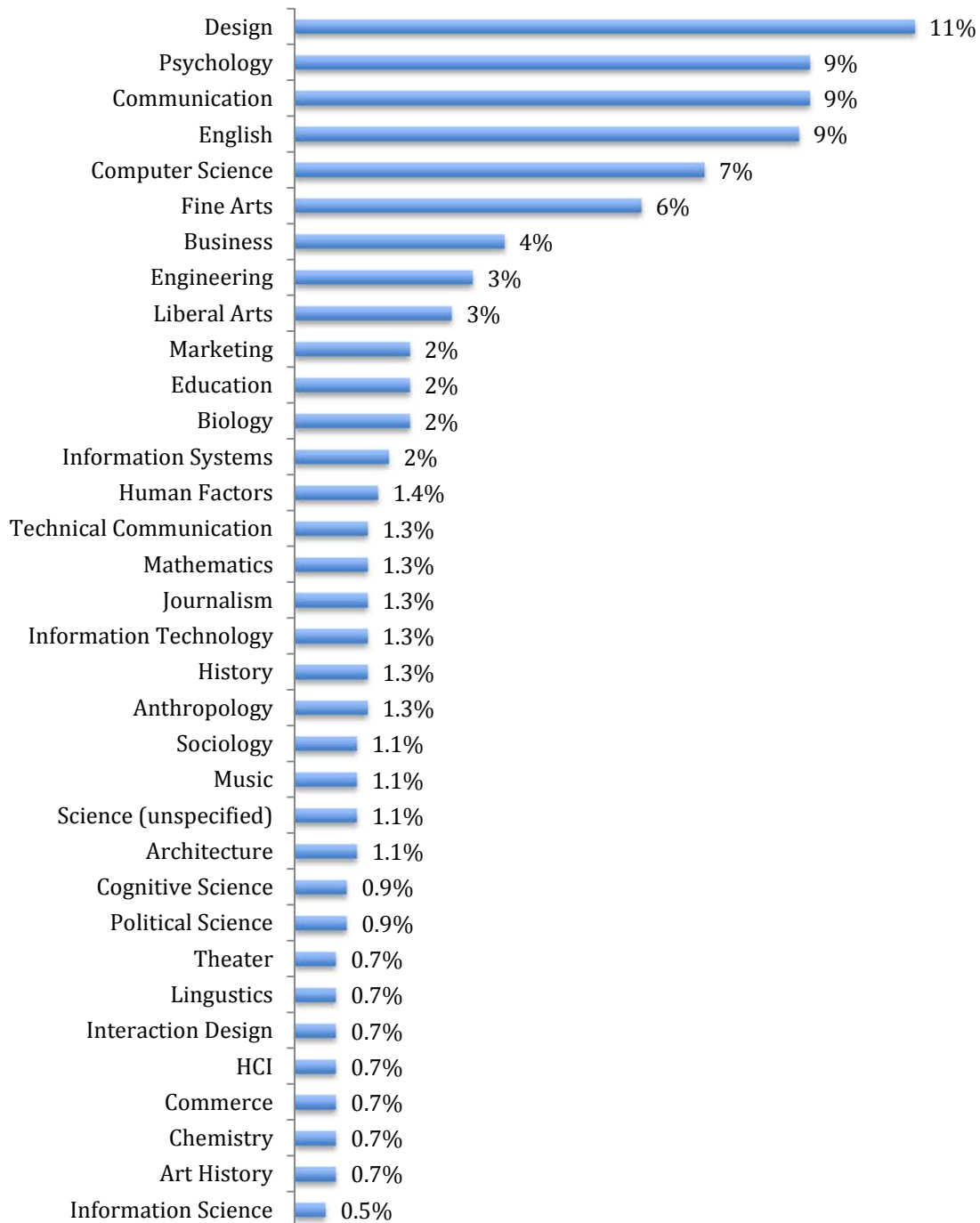
## Degrees by Level of Education



All told, 621 people reported having 942 degrees. Of those degrees, 1% were associate's degrees, 54% were bachelor's degrees, 3% were second bachelor's degrees, 34% were master's degrees, 4% were second master's, and 4% were PhDs. Out of the 621 people, 36 had PhDs (6%) and 324 had one master's degree (52%).<sup>10</sup>

<sup>10</sup> The number of bachelor's degrees may be as many as 101 higher than we counted, because some people said they had a PhD or a Master's degree but did not report a preliminary degree. In any case, user experience people are an educated bunch.

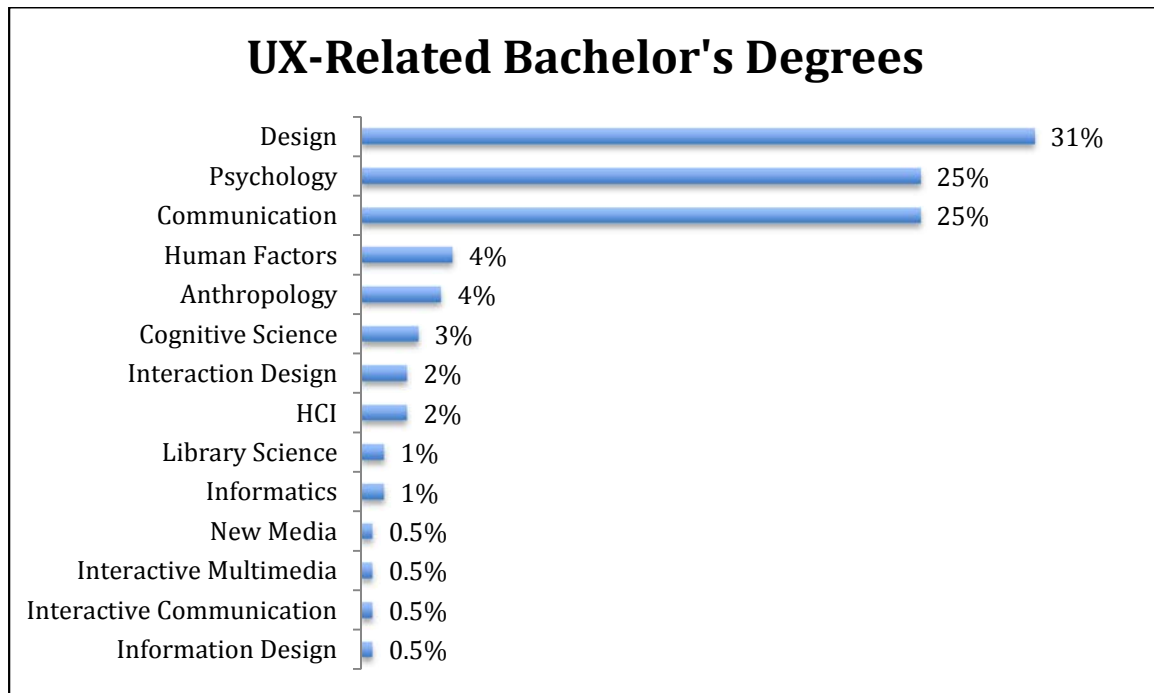
## Bachelor's Degrees by Topic Area



The top 95% of 4-year degrees categorized by topic. Top: Design, Psychology, Communication, English, Computer Science, Fine Arts, Business. Not shown: 68 degree types below these. Of those, 27 degree types were unique. (See "Other types of bachelor's degrees mentioned," beginning on page 125.)

The chart above shows how diverse education is at the undergraduate level for UX pros, as you might expect for a group of die-hard generalists. Several things are particularly interesting about the top bachelor's degrees:

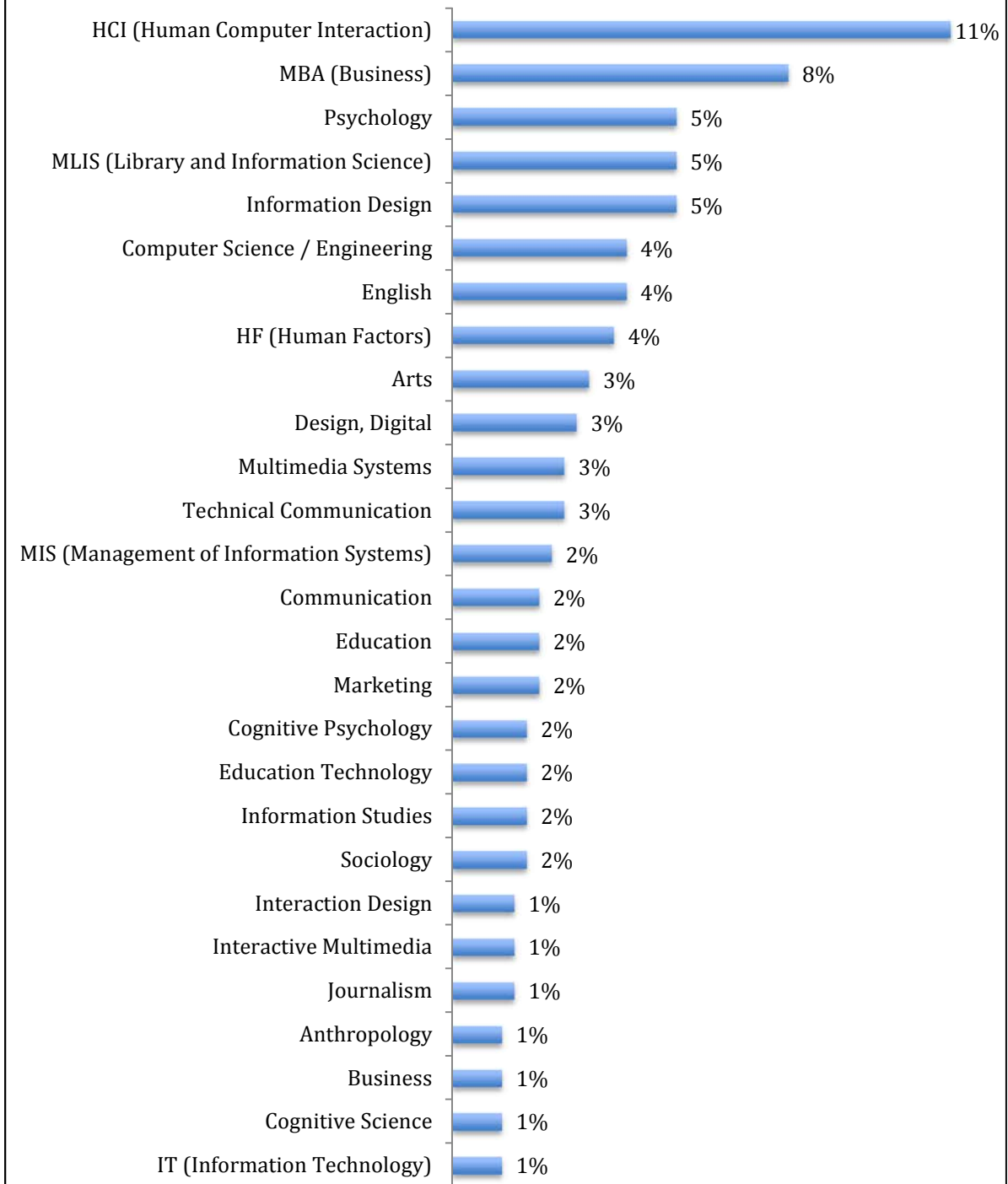
- Design topics represent only 11% of the total degrees.
- Psychology, Communication, and English commanded only 9% each.
- The specialty degrees for Interaction Design and HCI barely made it onto the list (most likely because they are relatively recent programs available at only a few universities so far).



A look at only the UX-related bachelor's degrees — There were 193 UX-related degrees in the 513 degrees reported, if we count the broad categories of design, psychology, and communication that tend to be the foundation on which many build their UX educations. The rarer and more specialized degrees shown are less widespread in universities, and some are fairly new degree programs created to respond to the growing demand for UX professionals. Graphic design and some of the other design degrees were not included in the UX-related chart above, even though they are quite common backgrounds for UX professionals (as is technical communication).

Some 38% of bachelor's degrees were in the top three traditional UX focus areas: design, psychology, and communication. To show the variety of degrees that respondents' earned within those three topics, we've listed them in "Bachelor's degrees in design, psychology, and communication," beginning on page 123.

## Master's Degrees by Topic Area



Of 357 total master's degrees, the top 285 (80%) are represented by topic areas in this chart. Only 3 people reported getting a master's degree in information architecture, which would put IA right below IT here. (See "All master's degrees by topic area," beginning on page 127.)

HCI had the most degrees (4) of the 33 second master's degrees reported. The second master's degrees were in these topic areas:

- Computer Science
- Creative Writing
- English Education
- Experimental Psychology
- HCI
- History
- Industrial Design
- Informatics
- Information Architecture and Knowledge Management
- Information Design
- Information Science
- Library Information Science (MLIS)
- Master of Science (unspecified)
- MBA (Business)
- Media Studies
- Science and Technology
- Second Language Acquisition
- Sociology
- Technical Communication
- Visual Communication

It seems easy to imagine how most of these might enhance a UX career.

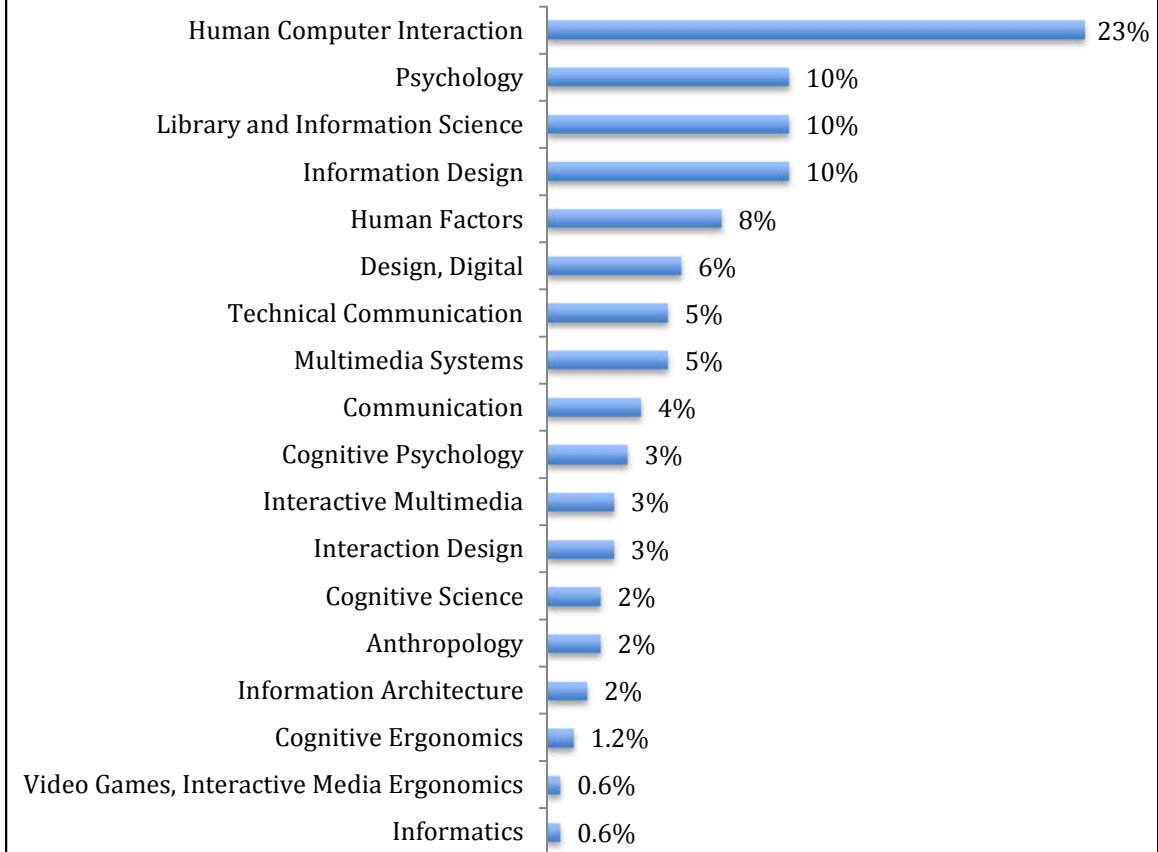
We see more specialization at the master's level, as expected; but half of the master's degrees were apparently unrelated to HCI and UX directly. Even so, most represent very marketable skills aimed at communications, design, technology, business, and understanding people and information.

Only 40 of 357 master's degrees were in HCI itself. One obvious reason for this is that HCI master's degrees are not offered everywhere, and in fact, they were very hard to get anywhere until the web really took off near the end of the 1990s, and some countries do not offer them even today.

Even where HCI master's programs are offered, they tend to be difficult to enroll in, because of small class sizes at the graduate level. We hope that the advent of MOOCs (massive open online courses), specialized training such as the teaching conferences that NN/g and other consulting firms offer, and the rise of professional [certification programs](#) will all help close this gap between what people and businesses need and want and what the education marketplace offers.

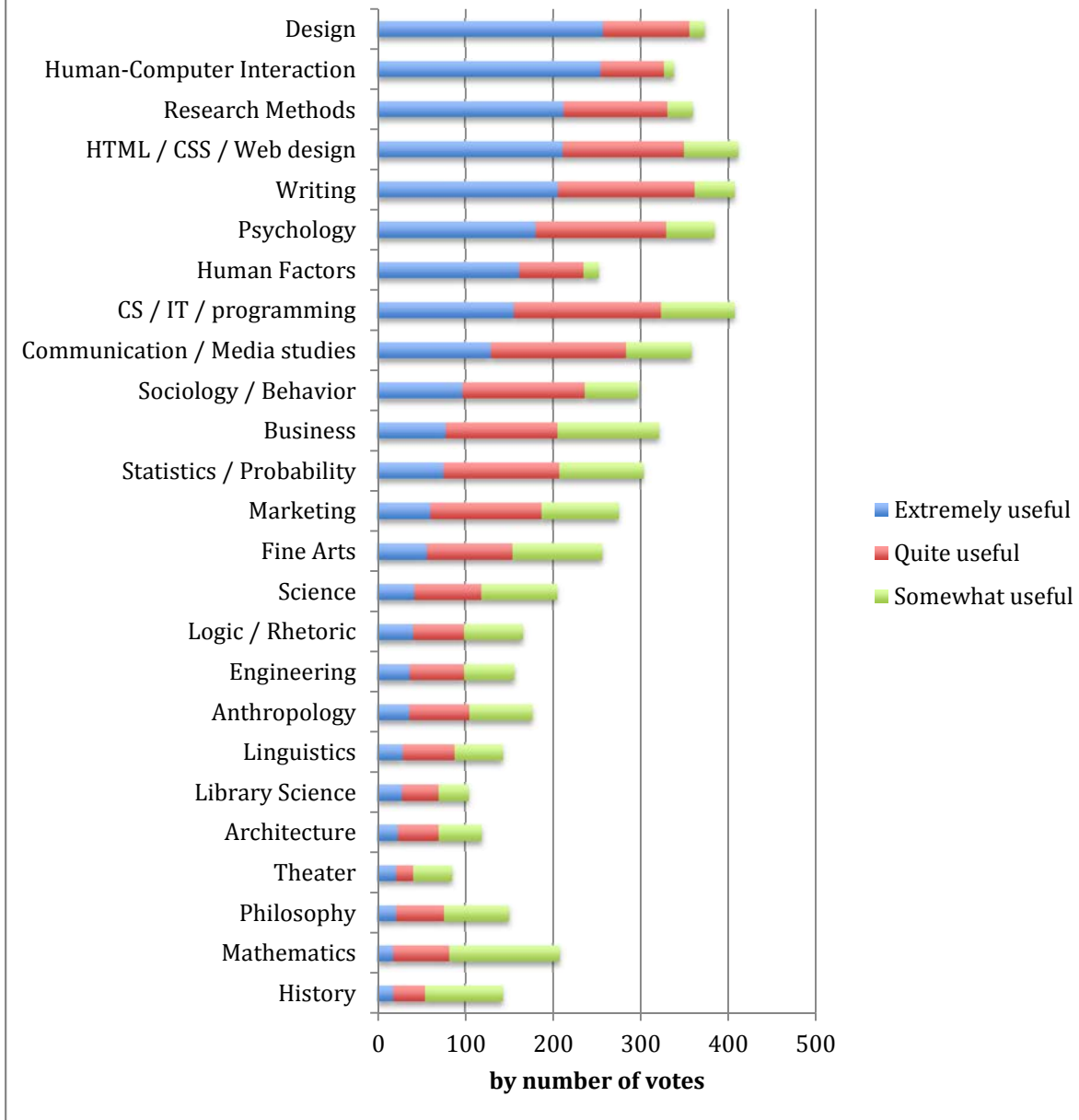
**The good news is that you can design your own HCI self-education program from available courses and patch the gaps with the many books available. Universities, take note.**

## Master's Degrees Related to UX

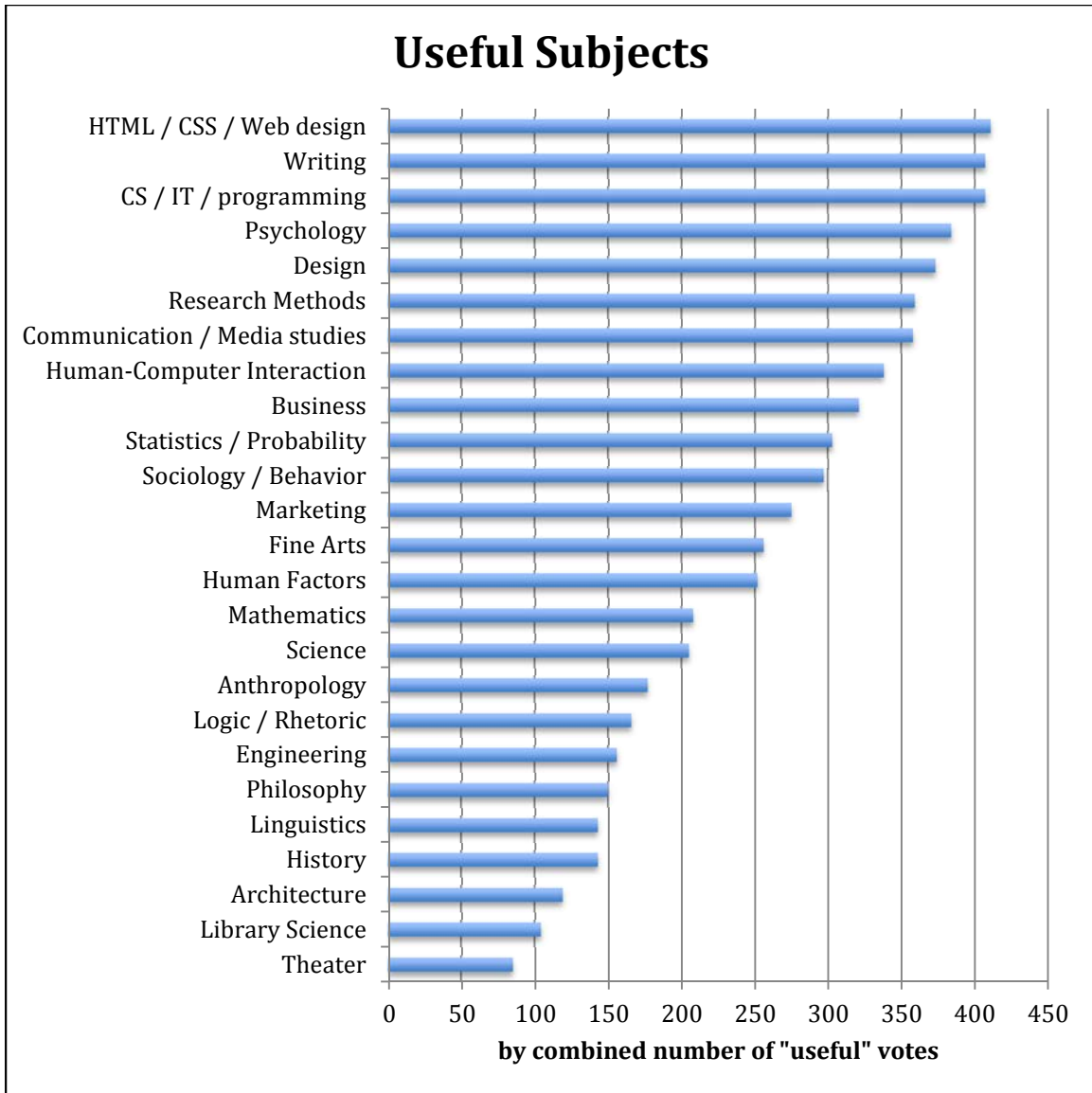


Master's degrees related to user experience — 173 of 357 (nearly half) of the master's degrees reported by the UX pros surveyed fit under the big tent of user experience topics. Of those UX-related degrees, 23% were in HCI.

## How useful were these subjects?



**Q: How useful were the subjects you studied (either on your own or at school) to your usability career?** We provided a list of subject areas to be rated and allowed write-in nominations for others. This table is sorted by “extremely useful” votes. Design, HCI, research methods, and web design top the extremely useful list. English is not on this list, but we know it is extremely useful. It was left out of the subject ratings deliberately because of the international nature of the survey. “Writing” is its proxy here.



Here the same subjects in the previous graph have been sorted by the longest combined bars. Web design tops the useful subjects list. Computer science (CS) / information technology (IT) / software programming is almost tied with writing, in second place. Many respondents suggested taking some CS courses if only to better understand software engineers; 155 people marked it "extremely useful."

When deciding what to study, please keep in mind that all of these subjects were rated as extremely useful by some UX pros, and that depending on your professional focus, some of them may be essential to you, regardless of the ratings of others.

#### Classes recommended as being most useful

- Presentation skills / public speaking
- Project management
- Graphic design, composition and layout

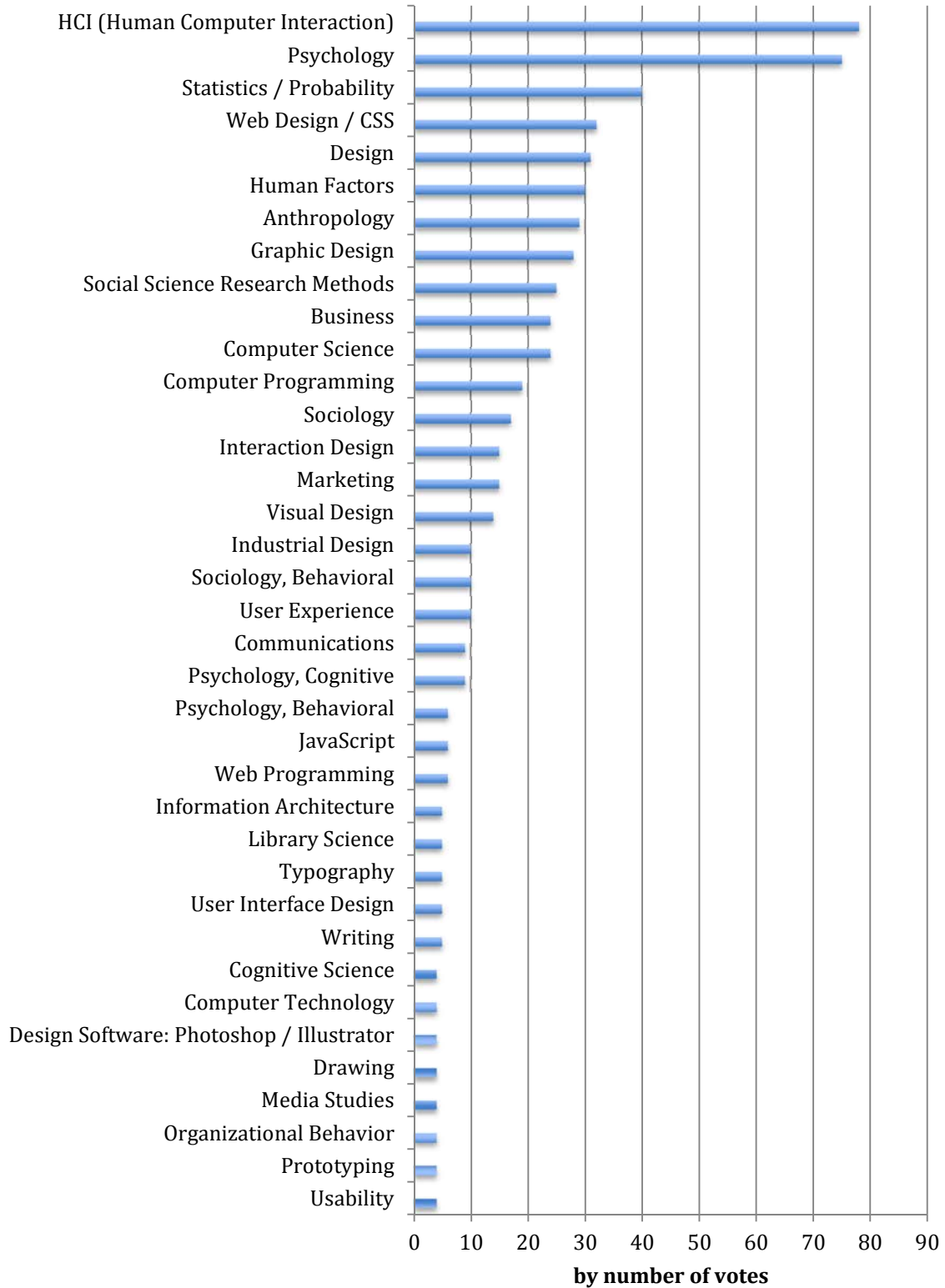
- Technical writing
- Typography
- Persuasion and persuasive writing

Other good suggestions from respondents (slightly paraphrased):

- “The top items for success are to be technically aware, business focused, and an expert in design and usability.”
- Organizational theory — Researchers can be “boundary crossers” as they seek information.
- Organizational behavior, instructional design, journalism
- Persuasive communication — How to sell your ideas to executives to make them understand why they are important for the business. “Become a strong writer and everything else will fall into place.”
- “Take something that can prepare you to work with engineers and developers.”
- Foreign languages can be very helpful, “in part for the cultural differences, and in part for appreciation of different ways of organizing meaning.” Greek and Latin courses can help with choosing words that translate well in Romance languages.
- Design thinking and UX sketching techniques for non-artists
- HTML / CSS / Web design is great for prototyping and for understanding wireframe and system constraints. It’s also in high demand in the workplace.
- Channel marketing — “Understanding different audiences in the distribution channel. Sales training can also be helpful in this regard.”
- “Sciences are very useful in that they carry an innate sense of organization — a lot of usability has to do with making order out of chaos, just as a lot of sciences seek to achieve the same thing.” Learn about data analysis.
- City planning — It deals with organization, architecture, statistics, and design.
- Social media usage — “Observing how people learn, access information, and communicate online changes how you approach usability when taking these factors into account.”
- “Get hands-on with projects as soon as you can.”

See “Recommended courses,” beginning on page 129.

## Courses UX Pros Wish They Had Taken



(Refer to the chart on the previous page.) **Q: Which courses do you wish you had taken, now that you've been working in user experience for a while?** Many said their education had served them well (and no wonder, considering how much they had), but many also indicated there were subjects in which they wished for more education. All of these courses represent topics useful to UX (HCI, social sciences, design) and / or very competitive job skills (CS, marketing, JavaScript, drawing).

- Some respondents said that many of the wished-for courses they mentioned had been unavailable at the time, unavailable at the university, unavailable in their country, or unavailable in the degree programs they pursued.
- Others said they had taken some courses in the topic, but now they want to take more-advanced courses.
- **Many people mentioned that business, organizational behavior, and persuasive techniques courses were not included in their design training,** and in retrospect it would be a huge practical advantage to have those in the workplace.
- Several people said the courses they want to take would help them be more competitive in the job market now or would help them be much more effective in their current roles.
- Some people were happy with the education they had chosen and said they got more out of hands-on training on the job after university than they did from the programs they had studied.

Although it's true that some things can be learned only on the job —  
"Where observation is concerned, chance favors only the prepared mind." – Louis Pasteur.

See "Courses that respondents wished they had taken," beginning on page 132.  
**That list, along with the complete list of most-useful classes directly above it, could be used to shape university and UX-training offerings in the future.**

### **What to study and why: In their own words**

"Though I majored in English in college, I took a little of everything: differential equations, physics, French literature, political science, symbolic logic, biology, Japanese, Pascal programming. It has all been useful. There's no telling up front which industry you'll be in and what ideas from other fields will trigger useful innovations, so the broader the better."

"Business degrees help sell designs to the business."

"A lot of what I learned about survey design is very applicable to usability — how to word questions, what questions to ask, ordering of questions, etc."

"I use what I learned getting my MA [master of arts] in cultural studies more than my HCI program. The groundwork in writing, critical thinking, and questioning assumptions has been invaluable."

"My degree in education taught me how to break complex concepts down into bite-sized chunks. I learned how to teach others new ideas

and how to explain things on multiple levels. I find this has helped me tremendously when presenting to clients and making sure they understand what I'm saying without talking down to them. I also learned a good bit about how people learn, which is helpful in designing interactions and user flows that make sense and move people down a path in a logical way."

"I studied photography because I was passionate about communicating an experience. Ending up in UX, then, isn't really that surprising when you think about it that way. You must combine creative and analytical thinking. Taking accounting courses during my photography studies is just one example of an analytical course that has definitely helped me along the way. (It helps that I now work on an accounting software product.)"

"My science and math background has helped me formulate a logical and consistent approach to problem solving. Minors in art (print making) have helped me to always look at objects and tools in new ways and find creative uses for things when I don't have the budget to buy what I want. Math, math, math. I can understand and contribute to KPI [key performance indicators] creation/evaluation, hold my own in data-analysis discussions with analysts, and be respected by business colleagues for an 'evidence-based' approach."

"I think art education has proved useful as it combines psychology and design (my major)."

"Liberal-arts degree: I graduated with strong oral and written communication skills, strong analytical skills, a broad background that helped me quickly understand the needs and challenges of a variety of businesses, and an interest in psychology and political science that is useful in successfully managing stakeholder relations, user interactions, and staff."

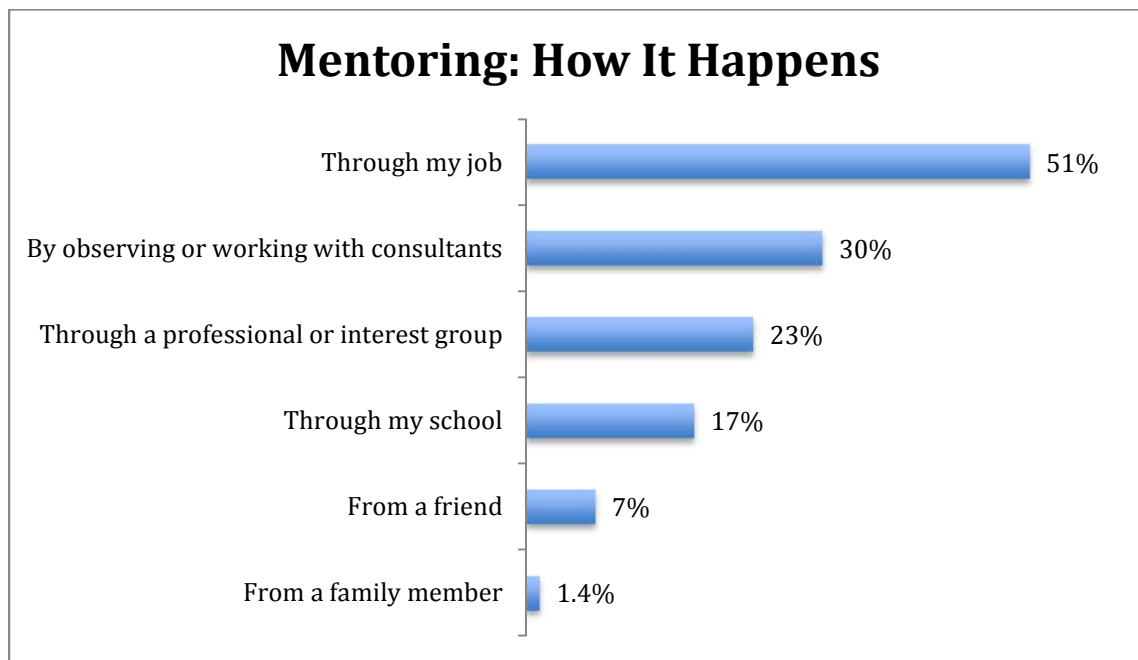
## Informal Education

Informal education is learning that takes place outside of school. It may be self-directed or part of continuing education programs of various kinds. In many situations, it's possible or even necessary to learn through the tutelage or mentoring of a more experienced practitioner.

It takes a combination of formal and informal education as well as on-the-job experience in order for most people in UX to become well-rounded practitioners. It's good news that so many combinations seem to work well together.

Getting into a position to learn while doing the work is very desirable. There are so many moving parts in UX activities, that there's no end to the learning. You just can't get everything you need from courses and books. Even very well-prepared novices need someone to check their performance and help them make good choices.

### MENTORING



Q: Have you had a professional mentor, advisor, or guide of some kind? (Include internships and apprenticeships.) If so, how did that occur? Choose all that apply.

- On-the-job mentoring is still the most common situation, at 51% of cases.
- A surprising 30% said they were mentored by consultants at some point.
- Only 26% of respondents said they had no mentors so far.
- Only 8% said mentoring (including internship or apprenticeship) was required for them.

### General mentoring advice:

- Get a mentor. Many respondents gave this advice or said mentoring was an important part of their success.
- Mentoring need not be an official activity. Many successful people in all professions cultivate a series of mentors throughout their lives.
- Find people whose work you admire and ask them for mentoring and internship opportunities.
- Join a professional group. Go to their conferences and local meetings. Find communities of practice and join those.
- You'll need many different kinds of expertise to call on, so expand your network in the directions in which you want to move.
- Follow your leaders on Twitter.
- If you see a chance to jump in and learn while doing, take it. Don't ask to just watch, though. Ask how you can help in exchange for learning.
- If you hire UX professionals, encourage mentoring and teamwork that helps everyone hone their skills while being productive.
- If you bring in consultants to lead projects, make it easy for your staff to spend time working with them. Many UX consultants also teach short courses and lead workshops.
- Be a mentor yourself, whenever you can.

### [Information Architecture Institute's mentoring program](#)

## LEARNING BY READING

Because HCI programs are still so thin on the ground and so much must be learned from books, it's very practical to make your own UX curriculum and populate it with books from the leaders in your specialties of interest. Education doesn't have to be expensive, but it does take time. Reading time. Look for the used-textbook stores online. You can start with "Learn More," beginning on page 90.

### Our advice:

- Start with a broad overview of HCI — a university-level textbook.
- Look at the list of useful topics and topics that the practitioners said they wish they had studied. Read those textbooks too.
- Identify the things that excite you about the field, and read deeply in those areas. Find the UX leaders in those fields and read what they write.
- Don't just read HCI and UX books; read some academic and industry research publications.

## USING WHAT YOU ALREADY KNOW

### Practical talents and soft skills

Because the field of UX is so broad and the activities so diverse, all kinds of experience and backgrounds can be useful. We asked survey respondents about their useful experiences in order to illustrate this point.

Some themes that kept cropping up in survey responses:

- Need for empathy
- Learning to talk to and to understand people who are very different from you
- Learning to see the big picture
- Using persuasive communication and storytelling
- Being creative, analytical, observant, and good at listening

### Useful work experiences and backgrounds

You might be surprised how you're able to apply what you already know to UX. If you have experience in some of the areas below, as some of our respondents do, you may, like them, be able to put your background to good use in UX:

- Advertising and audience theory (learning persuasive techniques)
- Answering feedback mail from users (empathy and understanding common problem types)
- Anthropology
- Architecture and history of architectural design
- Art installations (creating experiences)
- Audio engineering (voice user interfaces)
- Building construction (commonalities with information architecture)
- Counseling (facilitation skills)
- Crisis hotline (good experience for interviewing and facilitation)
- Customer service (how to listen and ask good followup questions)
- Engineering (problem solving)
- Film editing and production (practical skill, storytelling practice)
- Game design or development
- Graphic design (design, composition, color theory, layout)
- Illustration (for fast conceptual sketching)
- Interior design (good knobs, hinges, latches, and furniture have a lot in common with good control interfaces)
- Journalism (interviewing experience)
- Landscape design (systems thinking, planning for scaling up, detailed mapping)

- Photography (understanding visual communication and colors)
- Politics (understanding driving motivations)
- Presentation specialist (speak to your audience, visual design)
- Print media (some things changed, others are very similar)
- Project management
- QA (quality-assurance experience helps in problem prevention)
- Research science (systematic thinking)
- Root-cause analysis and research skills (problem identification)
- Running a medical office (service flows and process improvement)
- Sales (learning to understand and talk with different kinds of people)
- SEO (search-engine optimization)
- Software programming (practical skills, plus learning to communicate with management and marketing, learning the technical vocabulary)
- Student design, technology, and business competitions (teamwork, research, portfolio)
- Teaching (instructional design, how people learn, empathy with people with disabilities and seeing the need for assistive and accessible technology)
- Technical support and IT (fixing things, building empathy with users, understanding technical systems)
- Technical writing (how to make clear, concise, precise, structured documents)
- Theater (creating experiences, working in teams, role playing, public speaking)
- Training people in using software (insight into interaction-design problems)
- Translator (cross-cultural and language issues)
- Traveling and experiencing other cultures
- Web development
- Working at small businesses (understanding how business processes all work together to make the company go)
- Working with youth (learning empathy and compassion)
- Writing business requirements
- Writing experience (strong practical skills, storytelling, persuasion)
- Writing for the web (learning to be concise and to focus on the essential)

## Backgrounds that turned out to be useful: In their own words

(We made some phrases bold in some of the larger quotation sections of this report to help readers scan the material.)

“**UX is everything! It draws upon everything that I have ever studied or done in my different careers (linguistic ethnographer, cross-cultural analyst, sign-language interpreter for the deaf, adult educator, web writer, low-literacy issues educator, and receptionist at a retirement home).** I can pinpoint how each of these experiences has formed and impacted my UX practice.”

“Good **persuasive writing skills** (from college) and good persuasive speaking skills (from a stint in **Toastmasters**) have helped me communicate to clients those messages they don’t always want to hear.”

“My mother was an educational psychologist as well as a special-education teacher. Growing up with **students who had special needs** in my life made me far more aware of the implications of my design choices.”

“Answering the same questions over and over again made me think that training would solve the problem, so I went into **training users on our software**. The problems persisted, and I finally realized it was more productive to ask our developers to change the software. ... I would encourage folks to spend some quality time in customer-support centers and mining call-center data.”

“**Music training** has helped me a lot — I look at projects like conducting an orchestra — and the experience I have had learning and creating music has helped me in this approach.”

“My psychology background has been invaluable in teaching me things about humans and human cognition. My work as a **hobbyist photographer** has helped me develop my artistic eye and be less hesitant about showing my work. **Working in startups was essential training in being a jack-of-all-trades** and not valuing my skills too narrowly.”

“My degrees were in English. I never studied information technology nor business, but I have been working as an information developer, editor, and user advocate in the corporate world for almost 30 years. I did study to become a **classroom teacher** and taught at the university level. I know how to communicate and how to train.”

“**Theater — learning how to perform** in front of a usability participant and being the face of the company I work for, [being] articulate, gracious, and knowing how to pace a dialog. **Visual design** has also given me an edge in my career. I can explain why I chose colors for a UI, not because they’re pretty but because of the way the brain receives and interprets them.”

“Strong **communication skills** have been a big asset. ... I always have to fight for and justify my changes. This involves presenting

observations, including summarizing the facts so that they can be quickly understood, being prepared to present enough detail to back up those summaries, and understanding the needs of your audience.”

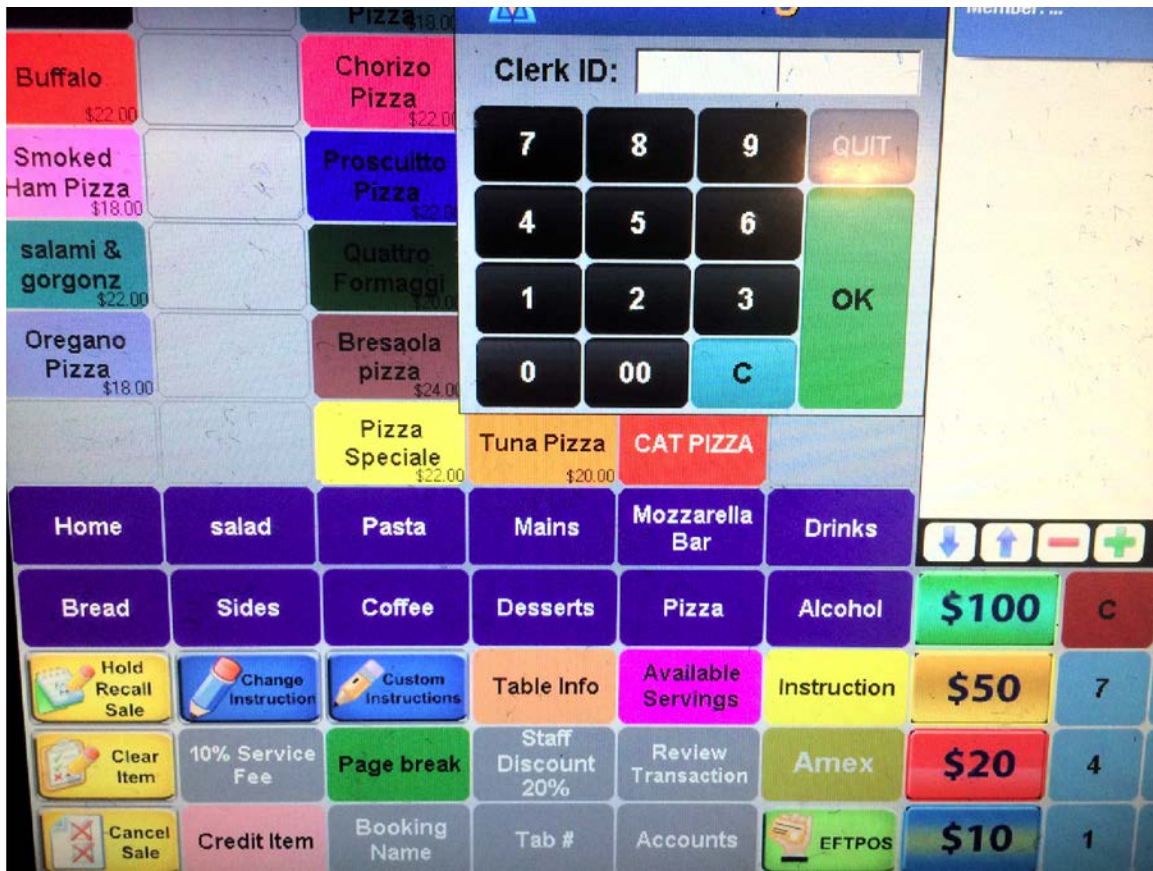
“Years of production and preproduction **work in television and films** have been extremely useful in foreseeing behaviors, staying agile throughout a project’s lifespan, and knowing that no plan survives contact with reality.”

“**Everything I needed to know in UX design I learned by playing Dungeons and Dragons.** You get to learn how to be someone else. If you’re the Dungeon Master you ... try to design encounters that you want your players to go through (workflows, conversion flows). [...] Also working as a **concierge. Event planning.** My (many and varied) **retail jobs** and **service-industry experience** gave me an eye-opening experience into what it’s like to serve customers and what their expectations are. Also a background in **theatre has proven very useful both in business presentations and persona development.**”

“International **travel, study, and work abroad** has made me more aware of the need to be careful of making assumptions based on ... what is ‘common knowledge’, regionalisms and slang, inappropriate or confusing metaphors, examples, graphics.”

“A broad background — **business and narrative writing, design and visual arts, computer programming and logic.** They all combined to enable me to think about people, imagine their stories, problems, needs, conceive of a solution, and then structure a solution and work with developers to produce it. Understanding people and how they think and learn is CRITICAL to this work.”

“**Gardening:** plant choice and location constrained by climate, shade or sun, flowering time; **kitchen-workspace arrangement, cooking:** finding simple recipes; **home renovation; teaching; fascination with how things fail; physics culture:** any question is OK; travel.”



Some people discover a love for process improvement and a need for making their work tools more efficient thanks to interfaces like this restaurant point-of-sale terminal. (We have no idea what “cat pizza” is.) Photo thanks to Marla Mitelman @millymae – Freelance UX Consultant in Sydney Australia.

“I was a journalist for several years, and every day, I was under great pressure to absorb a large body of material, ask sources a lot of questions and integrate it into a polished, organized piece of writing. Doing this makes you good at seeing important themes and commonalities in a large body of information.”

“Auto shop: technical documentation, procedures, interpreting mechanical presentations.”

“**Nursing – working with users who have disabilities and impairments**, either permanent or temporary, has greatly guided my approach to usability and accessibility. The practical experience of working with patients who require assistance in their everyday activities has broadened my view of user-centric design.”

“**Designing, collecting, and analyzing data, lab studies** with socially housed monkeys provided an excellent background to run applied behavioral studies and user research with humans.”

“**I’m a musician. I think of users as an audience**; and just as I try to provide an affective experience to the audience at a concert, I want

users of my websites to experience a good emotional state after using my software.”

“My **management experience** has helped in that as a usability specialist you need to sell the value of the services. As a product owner and people manager, I have a better understanding of the client’s perspective and what is required to “sell” the service.”

“Teaching. I am up in front of people all the time, so presentation skills are huge. I’m not sure if taking public speaking classes would’ve done as much for me as being a teacher did. It broke my fear of being in front of a group, and also helped me figure out how to take complex subject matter and communicate it (teach it) to people. Moreover, it helped me think creatively about how to package the concepts so I wasn’t always lecturing. Training in **classical rhetoric** has also been helpful. So much of being a usability professional is about persuading stakeholders that something is a problem, and that you have viable ideas for how to address it. Rhetorical instruction taught me how to structure arguments and how to appeal to people on different levels (emotion, ethics, logic, etc.). I’m obviously biased, but I think **the more “well rounded” someone is, the better served they are in this profession**. It’s not just about being able to statistically (or even qualitatively) analyze data; it’s also about working with people effectively and having the breadth of knowledge when it comes to design and behavioral principles.”

“I worked for a variety of years in **ministry**, leading small groups and having a lot of conversations about faith. This has been extremely useful in terms of user research, moderating, etc. I also spent time as an event and concert organizer and I have found that the thought processes and logic behind why things were organized to optimize the attendees’ experiences were very similar and applicable to UX design principles.”

“**Adult education** and **service-industry** experience. I was in AmeriCorps working with an ESL [English as a Second Language] program, and the experience of tutoring and coordinating a very diverse set of adults is invaluable. I learned how to structure and estimate activity time, make people feel comfortable and be willing to talk to you, respond to individual differences, etc.”

“**Being bilingual** has helped me expand my ability to conduct cultural research.”

## How to Get Ready to Do the Work

More than 400 people offered advice on how to get started. These are the voices of designers, researchers, information architects, and hiring managers, so each of the four groups brings a slightly different focus.

### TOP TAKEAWAYS

Frequent answers to questions about how people got started:

- Tutorials, workshops, training
- Participating in conferences, professional networks and discussions
- Internships, on-the-job training, taking on new responsibilities at work
- Making personal websites; making apps and testing them
- Doing projects and getting feedback
- Finding mentors, following them, and asking questions

“Internship was huge in helping me get started by preparing me to present myself for my first job.”

“Summer jobs with government and industry provided tremendous opportunities to learn about and observe business processes and stakeholder relations.”

“Pursue any and every subject that interests you, as you are in the business of understanding humans — it all helps — often, in unexpected ways.”

“Reading articles, books, learning from failure, joining conferences, talking to professionals, observing, observing, observing.”

Top suggested activities from survey respondents on how others should get started in UX (most mentioned first):

- Read: books, blogs, articles
- Study and practice design
- Intern / apprentice / volunteer
- Get a degree
- Take HCI / UX courses
- Find a mentor
- Study psychology
- Make a portfolio
- Network with UX professionals locally and on Twitter
- Write a blog
- Observe: UIs, tests, people, designs, user research
- Attend local professional meetings
- Learn about business
- Get work experience (both general and in UX activities)
- Study and practice communication skills

- Take a course in programming
- Take a course in statistics

“I would definitely recommend some formal training like a degree in Human Factors or HCI. The coursework in those programs closely matches the type of work ... interaction designers or user-experience professionals do on a day-to-day basis. If you don't like the coursework, then this probably isn't the field for you. You can also get internships to observe or be a note taker during usability tests, expert reviews, etc. Again, seeing the job first-hand is a great way to get a sense of whether you have an innate ability to hear / see / interpret user feedback and turn it into a solution.”

“Get involved in the process of product design ... and pay attention to what gets done and how decisions are made. If it inspires you, study it — formally or informally. Then increase your presence in the process.”

“Read Donald Norman, Nielsen, and Tufte. Figure out if you have problems or notice problems with user interfaces, and if not, pick another field.”

“– Research academic and certificate programs — even if you don't want to pursue them. Program course descriptions, requirements, recommended readings, etc. will outline major topics in the field.

– Many people transitioning into UX bring with them a wide set of skills that could be transferable in ways they don't realize up front. I would recommend setting up informational interviews to at least understand the different options and responsibilities out there and how you may actually have more to offer.

– The UXPA, AIGA, IxDA, and other organization websites probably have essential readings and Listservs and websites / newsletters to sign up for and specific authors to read. ... Joining local (and even international) chapters of these organizations would be another good, low cost / effort strategy to see if it's what you really want to do and find out who might be hiring, etc. (possibly for internships).”

“Get a solid liberal arts education augmented with analytical courses such as philosophy, economics, comparative literature, etc.”

“– Get inspired. Identify products or services you love, and understand why you love them. Find out who designed them (not just the company, but the people). Find out who inspired those designers. Read, read, read. Look, look, look.

– Develop your skills. Do not specialize — be a generalist. Learn graphic design (the elements and principles, not just the software). Learn to code. Learn to empathize with other people.

– Imitate your heroes. Get your hands dirty.

– Innovate. Really innovate.”

**“Determine what you want to do: design or research. They require different sets of skills and different levels of education. Try both and then make a choice.”**

**“You should love this subject. UX is not a job title, it is a way of life.**

- Observe and analyze [your] environment [...] things that people can interact with in your daily life — in the supermarket, bank, etc.
- Explore and read the results of research and reports, books.
- Follow and listen to webinars, video conferences, etc.
- Participate in NN/g Usability Week training.
- Perfect [your] communication and persuasion skills to persuade managers or developers that the UI is not good for usability.
- Follow new technologies and testing tools.
- [Join] UX organizations to develop skills, network, and participate.”

“If you are young and deciding on a career, securing a solid education from a comprehensive university program is the first, essential step. If you can find a program with a co-op or internship dimension, all the better. Include participation in at least one practice-focused professional organization like UXPA, IXDA, etc.

“If you are considering evolving an existing career into user experience, keep a hand in at least two, preferably three, practice-focused professional organizations like UXPA, IXDA, etc. Seek out local chapters and participate in whatever events they offer. There are online starter courses in usability and user experience, but take them with the knowledge moving into UE will take time. Plan a two- to three-year transition.”

“– Write a daily journal regarding UX annoyances (I started with the iPhone app usability issues).

- Get yourself a mentor!
- In the tech arena, start something as a side project, and collaborate with like-minded people.
- Attend at least one interaction-design course by Bruce Tognazzini.”

“Think about *pro bono* [volunteer] work that you can contribute to. Not only will you be helping a good cause, but you will also be building a portfolio. Many nonprofit organizations need help with the interaction design, information architecture, and usability testing of their websites. ... Also think about educational opportunities. Look at programs at Bentley University, Carnegie Mellon, and so on. ... Finally, gain any work experience you can. If you are not working in the UX field right now, maybe there are UX projects in your company you can help with.”

“Start going to professional-society events. There’s so much demand and so few people that hiring folks are always looking for potential. There are often free barcamps that attract folks in UX as well as development. See if you can get an internship (if you’re a student). Or volunteer for a related event (we have events to build sites for nonprofits locally) or organization (like a coder dojo or Technovation

Challenge). Read books / blogs and then start trying things. Do some evaluations of sites you use. Set up a usability study, even if it's with your family and friends, to try it out and feel a little more comfortable."

"Find a place that perceives UX as essential. If you are in a place that does not value UX or sees it as an impediment for development, move on. You will only incur frustration and will not broaden your scope of experience. **Find a design-driven domain. If no usability testing is occurring, then it is not UX.**"

"Practice drawing, sketching, and modeling. Do it so much that it becomes second nature. Learn about art and illustration. Many of the concepts of illustration and drawing are directly transferable to UX. For example, learn how to use color and contrast. Also, just as a great writer needs to be a great reader, to design usable software you must USE usable software. Install and tinker with all kinds of applications to expose yourself to successful (and unsuccessful) designs."

"I live and work in NZ, and have found most people stumble into this sort of work, as did I. I would recommend:

- Take charge of your own learning if you are interested. Get some training — online or at a course, read, talk to people doing UX jobs to help see what parts appeal most, and if it is 'you'.

- Give it a go, and if you can, get a mentor. [For] my first IA project our organization couldn't afford to hire a firm to do the work (which was great for me), but they did fork out for a mentor who guided me on the steps I needed to take, reviewed my work, assisted with user testing (which helped train me to do the next round).

- Be confident in yourself. Lots of the work is logic, common sense, looking at things with new eyes and listening to people. Not too hard at all! You can do it."

"Choose a specialization or an area of expertise to start instead of trying to do everything. All too often, I see junior level (and even senior level) trying to be everything to everyone. They spread their skills thin by taking on everything from visual design to front-end development and mobile to enterprise apps without developing depth of knowledge in a certain area. Once someone has mastered an area or skill, they can move on to another."

"Make sure to fully understand not only the design (to make sure all pieces are included and make sense, without being overwhelming), but also the intended goal for the user (how they typically use the application/software and how much time it should take). Knowing how to create a beautiful design is wonderful, but if it is only fully supported in the newest browser, or it requires too much new learning, it will not have the intended effect. So, more than knowing good design standards and best practices (layout, coding, visual appeal, typography, functionality) a good web designer designs with the end user in mind — asking all the questions, trying to break it, streamlining the process as much as possible. Stay on top of usability

and web standards, as well as upcoming technologies, as they keep changing and refining.”

“Develop compassion for other people, and pay attention to every instance of someone complaining about a program and figure out what exactly annoys them.”

“Look for problems that need to be solved and solve them. Look at how to change the world around you. Become conversant in the field and find a company that values the user experience and work there. Find groups that meet and discuss the industry to build up your network and find opportunities to present and other job options.”

– Get a basic understanding of human psychology (attention, perception and memory particularly). Learn about design (sketching, stages of design, design processes, how design collaborations happen).

– Learn about teamwork (meeting facilitation, note taking, active listening, moderation). Observe actual teams at work — e.g., surgical teams or construction teams.

– Understand coding, including at least one programming language and one markup language. Familiarize yourself with the general concepts of data storage (e.g., databases, cloud, and network storage) and transmission (http obviously, but also understanding cellular transmission and local wireless helps).

– Learn how to ask good questions, including face-to-face interviewing, guided observations, and survey design.

– Find a way to get hands-on experience with the areas of user experience that interest you, whether it’s a design internship or conducting user tests.

– Try to participate in or observe a design critique or feedback session whether it’s a team meeting room, an architecture studio, a photo portfolio presentation, or whatever. Try to understand what is going on both from the presenters’ and critics’ points of view.

– Learn how to ‘sell’ a project: make short, effective presentations; how to ask for money (and know what your work is worth); how to keep clients informed about how their money is spent, how to make accurate estimates; how to be clear about scope and measurable deliverables.”

“Make sure you love it. Network with professionals. Attend (local) professional meetings. Try an internship.”

“Experience, Experience, Experience — do whatever you can to build your level of experience — read, take classes, participate in email lists / groups, ask questions, shadow someone already in the field.”

“As a software developer, I just let my managers know that I wanted to make the move into the UX space. The desire to move into UX started before I even knew what UX was — I just knew it was important to me to work on products that provided the right experience for their target users. Let people like your managers or

influencers know that you are interested in getting into UX, and then take every tiny opportunity to get in the door. Find conferences you can attend and find online groups you can become part of to become part of the community. You can even study HCI online via Coursera for free to find out if you're really interested or not."

"Start observing everyday-objects' usability around you — not necessarily the online stuff. Anything you touch and interact with, you should develop passion about its usability. Certifications and credentials are good on paper but you should have the usability thing within you."

"Obviously go to school and earn a degree. Then look for internships, there are tons out there, nothing compares to learning on the job. Also, there is PLENTY of information on the field online, and it's all available to you. Find a mentor! This is crucial to help you along your journey, immerse yourself in learning from folks that do what you want to do."

"Learn how to learn. People who are interested in learning about new fields ... are often most capable at jumping into UX roles on new projects — becoming 'fast experts'. ... You have to understand all the details — get into the weeds of complicated requirements — in order to design something that feels simple."

Many more valuable pieces of advice are in "Appendix D: Advice on Getting Started in UX," beginning on page 136.



Holograms are a relatively recent kind of digital interface. This greeter at Boston Logan International Airport in the USA explains to travelers the carry-on luggage rules and security-screening process. Notice the barrier that was apparently added to try to limit the types of interaction visitors wanted but the airport did not. People make fun of holograms like this one online, so it's not clear yet whether that's a positive result of the interactivity (because people notice this life-size, animated, talking signage) or an indicator of a failed experiment. UX professionals love to think about issues like this. (Photo by Janelle Estes.)

---

## Digital Tools for UX Activities

### TOP TAKEAWAYS

- UX has a lot of great tools now, but you won't need all of them.
- Everyone can benefit from reviewing popular tools from time to time.
- Respondents listed 272 useful tools.

Making software, websites, apps, and digital designs means using a lot of different tools. We wanted to find out which tools UX pros find most useful, so we can recommend the most useful ones for people to learn. Our 60+ alpha and beta testers generated the list of tools we asked people to rate. We discovered that there is a wide range of tools people use, and it's pretty difficult to divide them cleanly into categories.

In the end, we divided tools into "design" and "analysis" and let people write in as many tools in each category as they wished. Respondents also wanted to talk about tools for communication and meetings, which isn't surprising, since they do a lot of those activities as well, and those same tools are also used for interviews and remote testing.

About 25 tools made it onto both the design and analysis write-in lists, likely because of their versatility, and because it's so difficult to pin down tool categories and design activities.

Many people mentioned pencils, pens, paper, whiteboards, markers and other analog tools. This next section of the report is about available digital tools, however.

One thing to keep in mind as you look at these tools lists is that **you don't have to learn them all**, not by a long shot. You may want to learn one tool for each essential task after trying a few that others like. Also, some people never do statistical analysis and others never do visual design, so **your toolset will vary**. Over time, tools change, and it's good to remember that **tool learning often transfers across tools**.

Some commonly used tools for wireframing, analytics, and content management are too expensive for you to buy and learn. You just have to learn those on the job. Fortunately some free software exists to fill some of these gaps.

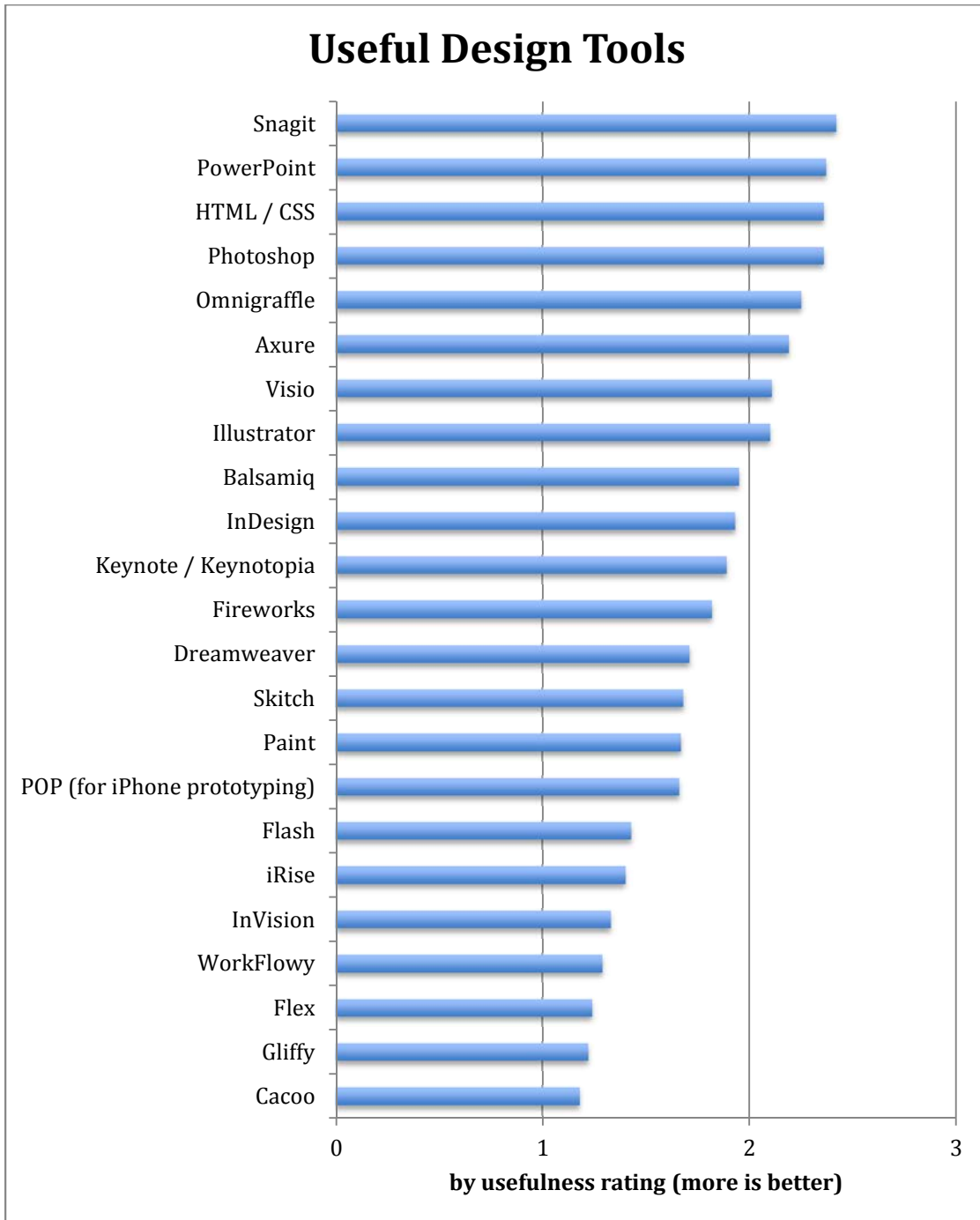
Many of these tools we have not used, and some we've not even heard of before, despite many decades of UX tool use. **These lists are not endorsements of particular products' goodness**. In fact, some people said they wanted to make a list of tools they never want to use again. In some cases, difficult and annoying tools are probably essential to the job someone does. We'll leave that list as an exercise for the reader.

These lists could be categorized, linked, and annotated into a more handy reference. Please feel free to do that. We included just enough information so you could easily find each of them again, in cases where the name is just too common.

Survey respondents wrote in 221 more tools, for a total of 272. That's a lot of variety.

We hope that in most cases this list reflects the most-useful tools (and more important, the *kinds* of tools) to learn. For practitioners, we hope this list also helps you discover new tools that you might like better than those you use today.

## TOOLS FOR DESIGN



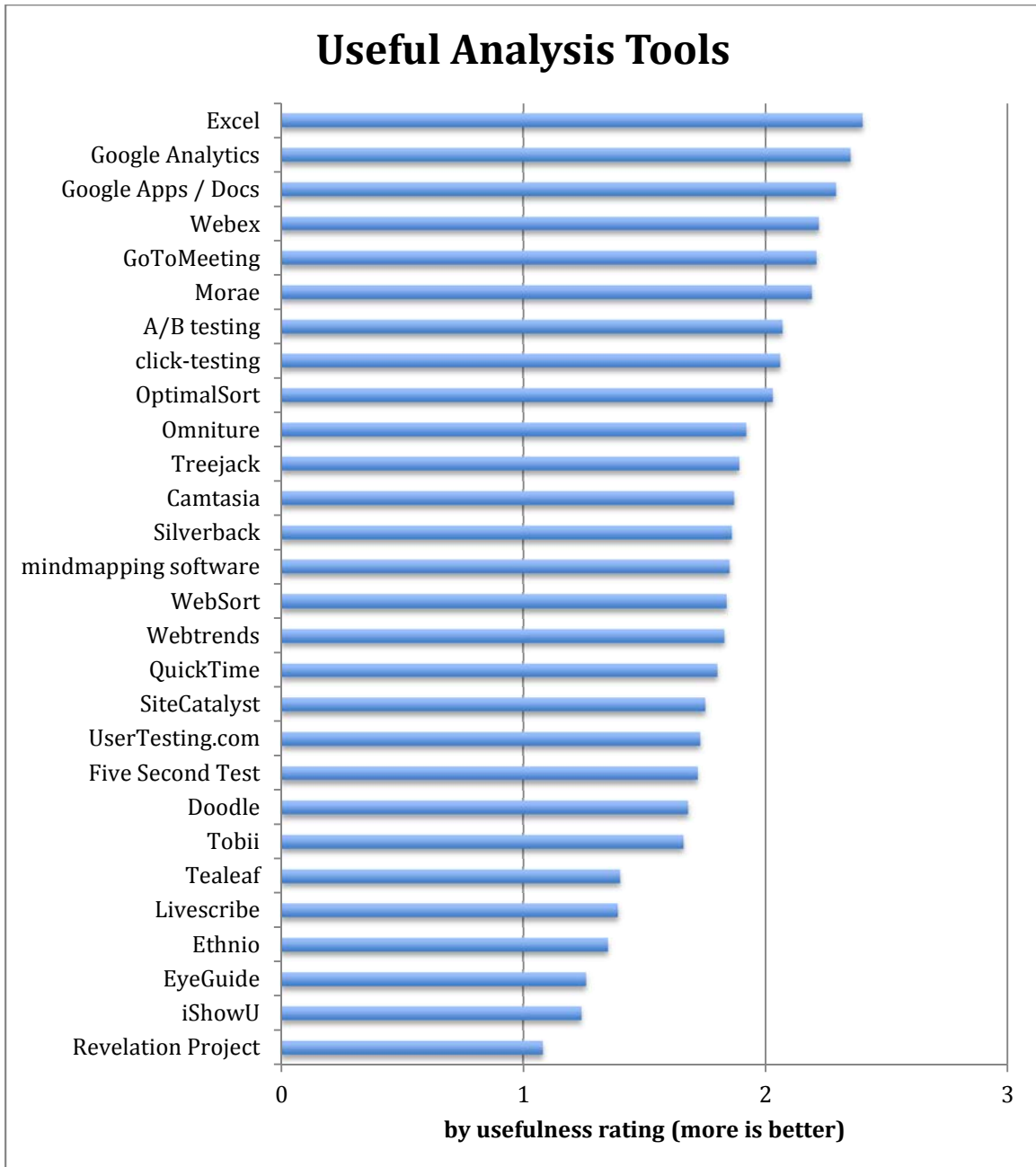
Design tools that we asked people to rate for usefulness. See "Appendix E: Design Tools," beginning on page 146, for the whole list.

<b>DESIGN TOOL</b> (shown in the chart above)	<b>TYPICAL UX PURPOSES</b>
Snagit	Screen capture, recording
PowerPoint	Presentations, prototyping
Photoshop	Image creation, photo editing, hi-fi mockups
HTML / CSS	Web editing, prototyping
Omnigraffle	Flowcharting, diagrams
Axure	Wireframing, prototyping
Visio	Flowcharting, diagrams
Illustrator	Scalable image creation, wireframes
Balsamiq	Wireframes, prototyping
InDesign	Web design, page layout
Keynote / Keynotopia	Presentations, prototyping
Fireworks	Scalable image creation, mockups, web design
Dreamweaver	Web design, layout
Skitch	Screen capture, sharing, annotation
Paint	Image creation
POP	iPhone prototyping
Flash	Animation, application prototyping, video/app platform
iRise	Wireframing, prototyping
InVision	Prototyping
WorkFlowy	Notetaking, organizing tasks
Flex	Webapp platform, prototyping
Gliffy	Flowcharting, diagrams
Cacoo	Flowcharting, diagrams, mindmaps

Other useful design tools from the write-ins, most-mentioned first:

- Excel or Numbers
- Word or Pages
- Visual Studio
- browsers and web-developer plugins
- GIMP
- Evernote
- MindManager
- Sublime Text 2
- Acrobat XI Pro
- Coda 2
- Inkscape
- Justinmind Prototyper
- Notepad++

## TOOLS FOR ANALYSIS



These are the analysis tools that we asked respondents to rate.

Other useful analysis tools from the write-ins, most-mentioned first:

- SurveyMonkey
- Join.me
- Skype
- UserZoom

<b>ANALYSIS TOOL</b> (shown in the chart above)	<b>TYPICAL UX PURPOSES</b>
Excel	Spreadsheet, used for everything
Google Analytics	Web analytics
Google Apps / Docs	Office suite, forms, file storage
Webex	Screencasting, conferencing, recording usability sessions
GoToMeeting	Screencasting, conferencing, recording usability sessions
Morae	Screencasting, recording desktop usability sessions
A/B testing	A number of online tools allow quick comparison tests (Optimizely was mentioned by several people)
click-testing	A number of online tools measure clicking behavior (CrazyEgg, Chalkmark, ClickTale got many mentions)
OptimalSort	Card sorting, for category building
Omniture	Web analytics
Treejack	Tests information architecture labels against user tasks
Camtasia	Record desktop usability sessions
Silverback	Record desktop usability sessions
mindmapping software	Visual thinking, data capture and analysis, decision support, project planning
WebSort	Cardsorting, for category building and testing
Webtrends	Web analytics
QuickTime	Record and share desktop usability sessions
SiteCatalyst	Web analytics
UserTesting.com	Online testing with users
Five Second Test	Online first-impression testing
Doodle	Scheduling
Tobii	Eyetracking
Tealeaf	Web analytics and website session tracking
Livescribe	Smart-pen system that records audio and timestamps written notes
Ethnio	User-recruitment service for website intercept
EyeGuide	Eyetracking system recently revamped for use in 3D environments
iShowU	Recording usability sessions
Revelation Project	Mobile user-research system for online qualitative research (by Revelation Global)

See "Appendix F: Analysis Tools," beginning on page 151, for the whole list.

## Where the Jobs Are and How to Get One

### TOP TAKEAWAYS

- Most respondents have jobs in the computer, financial, and healthcare industries; education, marketing, and government. Some 16.5% work as consultants.
- Potential new hires are evaluated on lots of nonacademic attributes: intrinsic qualities such as practical intelligence, problems, solving, empathy, versatile communication skills, passion, collaboration, analytical and critical thinking, creativity, curiosity, resourcefulness, listening skills, willingness to ask questions, personality, ability to take criticism and justify decisions, practicality, self-motivation, detail orientation, honesty and open-mindedness. Adaptability, being able to think on your feet, and being able to comfortably talk with anyone are all called out as crucial job skills.
- In addition to soft skills, interviewers look for generalists with deep specialized skills, who have a university degree and a portfolio of work samples (hands-on UX experience).
- Candidates must not only know usability principles and design-process basics, they also usually must demonstrate their communication and soft skills and do well on an interview design challenge.
- Typically, interviewers also want to see an eye for detail, visual sensibilities, a focus on excellence and quality, a “passion for what can be achieved with technology,” an easy-going, friendly personality, and a genuine desire to help people. They want team players who can organize their own work and handle critical design feedback.
- Finding jobs is a matter of fit with the organization’s capacity and focus. Some interviewers look for beginners with the right qualities, while others look for people with deep experience. Some hiring managers prefer people with some or all the basic skills and a focus in one or more roles. Requirements for UXRs tend to be quite different from those for IxDs and IAs (in organizations that can afford to hire more than one UX professional). Some managers want psychologists, others want designers, while others lean more toward those with hard-science or broader liberal-arts and humanities educations.

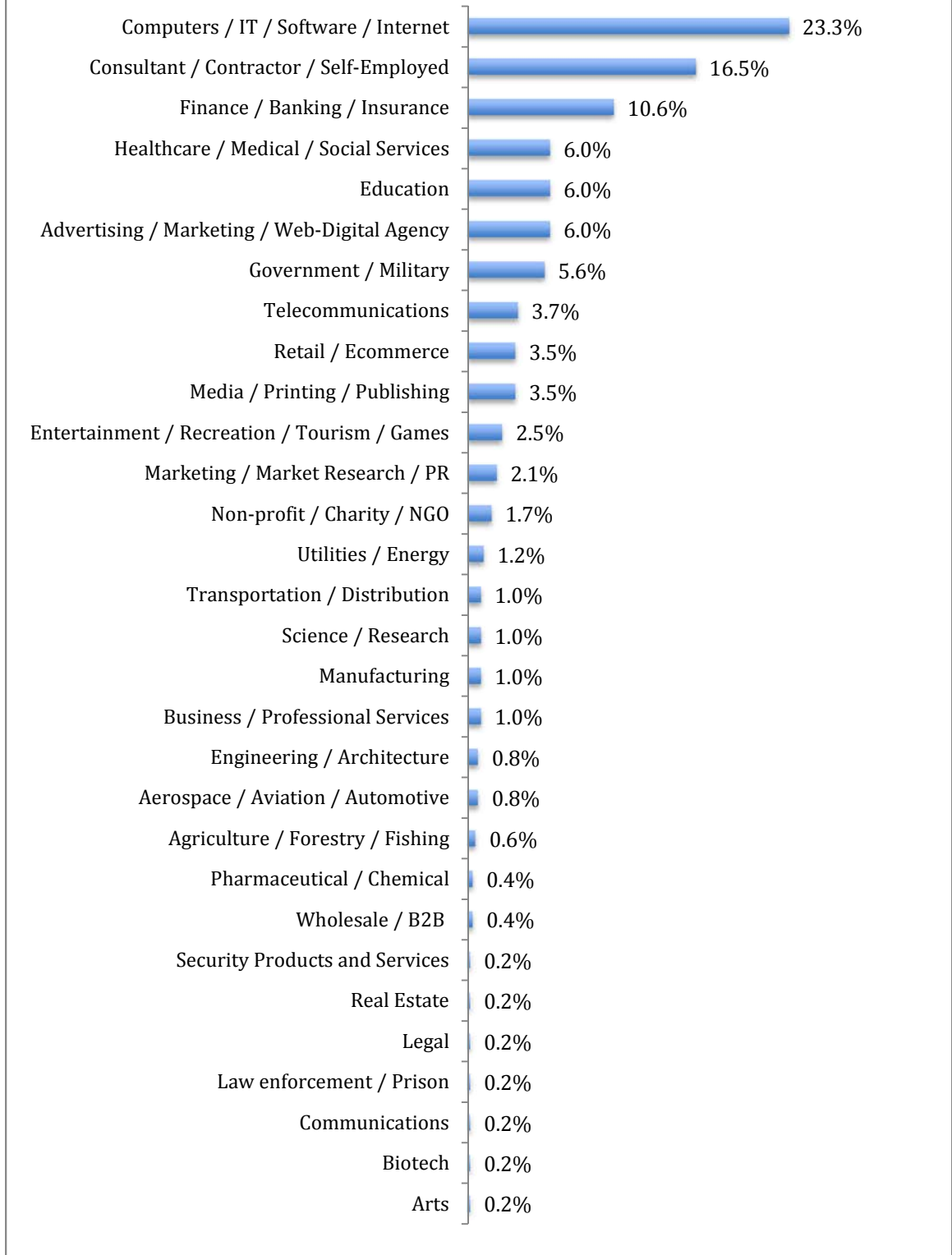
Frequently mentioned qualities:

- Strong user advocate; demonstrates empathy
- Has communication skills of all kinds
- Passionate and enthusiastic for improving UX and one’s own skills
- Team player; good collaborator
- Analytical thinker
- Has work and research experience
- Creative, imaginative
- Has a portfolio or work examples

- Wants to learn new things; keeps up-to-date
- Curious; wants to know why
- Creative problem solver, resourceful
- Good listener
- Not a know-it-all
- Able to ask questions when you need to know something
- Skilled at asking users nonleading questions
- Has public-speaking and presentation experience; persuasive
- Can take criticism and justify decisions
- Has observation skills
- Has a degree
- Has people skills: low-key personality, likable, personable, able to talk with different kinds of people, diplomatic
- Has common sense and practicality
- Understands that design is not aesthetics only
- Well-rounded person with several areas of expertise
- Self-motivated; doesn't wait for permission or direction
- Organized
- Versatile and willing to do the hands-on work
- Detail-oriented
- User focused; has design-process knowledge
- Honest
- Open-minded

## WHICH INDUSTRIES HAVE UX JOBS

### Which industry is your employer in?



(Refer to the chart above.) UX jobs are found primarily in the computer industries (23.3%) and in industries processing lots of transactions or offering key content online, such as:

- Financial companies (10.6%)
- Health services (6%)
- Education (6%)
- Marketing (6%)
- Government (5.6%)

Consultants (who usually work in many industries) are the second-largest category among our respondents (16.5%).

Industry categories that got no responses:

- Accounting
- Animal Care / Conservation
- Construction / Home Improvement
- Food Service / Hospitality / Hotel
- Mining

## **WHAT HIRING MANAGERS AND INTERVIEWERS LOOK FOR**

### **Q: If you hire people to do usability research, information architecture, or interaction design, which qualities do you look for in candidates?**

“Problem solvers. ... People who are good at thinking on their feet, creative thinkers or puzzle solvers tend to be good at design. The biggest detriment is usually a strong ego or unwillingness to change or compromise.”

“Anyone who is conducting research has to be a thoughtful, engaging personality. It’s a skill to slowly draw information out of testers without influencing the thoughts and information they share. To make someone comfortable enough that they will share their thoughts as they work through a task takes equal parts charm and skill. It’s important that the candidate is able to observe and analyze the behavior of many people, over lengthy periods of time and then present succinct trends and major points of friction.”

“I try to work with people who are thoughtful and inquisitive.”

“Being articulate. ... I wish more people could focus on that one skill alone.”

“Beyond knowing their stuff — they need to be personable and diplomatic. Be able to say no to big egos and have it stick.”

“People skills are essential. No matter how experienced or innovative the UX consultant is, if they can’t manage stakeholders it just causes me problems. I also expect them to be able to reel off a UX framework including all the basics, which surprisingly doesn’t always happen. I’m also only really interested in hiring people who can do the end-to-end process — I don’t want to hire a separate researcher, then someone else to do the IA and another to do interaction design, etc.”

"A penchant for thorough system analysis and gathering user requirements ... they must love to do this ... not something they do only because they 'have' to."

"I look for candidates who, first and foremost, show empathy for the people they are designing for. Next I want to know that they can pull apart a complex problem and articulate a path for how to solve that problem. I also think it's important to understand that not all problems need to be solved in the same way. I've never had the luxury to be able to hire someone to just do research or information architecture or visual design, so I generally look for individuals who have strengths in one of those areas and can complement a growing team. Passion to learn something also goes a long way. Finally it's important that they can work well with others. Design is often the lynchpin between different departments, and getting along well with the sales team is just as important as having a great working relationship with engineering and QA."

"Creative thinkers, good translators bridging technical and marketing teams, nonacademic candidates (since the trends change so fast), street smart vs. book smart, showcasing of work or case studies, good communicators, but extremely excellent listeners."

"An understanding of the difference between observed and self-reported behavior and the skills to elicit both with minimal bias; not just the ability to ideate well, but a demonstrated willingness to drop ideas that aren't working quickly; the ability to tell a story."

"If for design role: not being precious about designs, receptive to feedback, research-led, curious, likeable, professional and able to manage clients/stakeholders. If for research: familiarity with methodologies, likeable, curious and insightful, able to work independently, professional, able to manage clients/stakeholders."

"People skills. Hiring testers (at least in my field) is very hard, so a person needs to be assertive, professional, polite and convincing."

"Individuals with strong 'common sense'. A lot of candidates are overly analytical and overcomplicate exercises I give them. Also, attention to detail is huge — if I am looking at your wireframes and a page jumps even the smallest amount when there isn't any reason for it, I almost exclude the candidate immediately."

"I look for people with a passion for user experience, people who do it for work and donate their time to nonprofits as well."

"I never focus on whether someone knows how to use a particular tool, because it is my experience that if you know one, you can learn any. I am amazed at the job descriptions that list this as a prerequisite."

"I love listening to people presenting their portfolio. This tells me more about the way they think and work than the actual work. I am looking for passion, empathy, understanding, love for the details."

"Communication skills, open minds, willingness to question assumptions. Continuing to follow the developing field, not resting on

degrees or comfort zones. Comfort with software and technologies being used. Initiative.”

“Curiosity, compassion, organizational skills, communication skills, design knowledge (based in experience and research), interest and willingness to keep learning, team player, self-motivated, smart.”

“Knowledge of basic UX practices, and an affinity for learning about our business. asking good questions is key.”

“Strong communication and presentation skills, experience working directly with end users to elicit information for requirements and design, knowledge of cognitive science, human-factors principles, and usability heuristics and standards, doing well on a design challenge on the whiteboard during an interview.”

“The need to know ‘why,’ empathy with end users, understanding that sometimes business comes first, insisting on elegant solutions, being able to present your work, asking questions about other people’s work, understanding or being curious about design processes.”

“Aptitude, genuine curiosity, obsessed with understanding ‘why’ before tackling any design project, linear thinker. By nature, does whatever is necessary to put themselves in the shoes and heads of the user.”

“Before I even interview: background in the field, degree. Track record of results: visual evidence (that the candidate can talk through). Finally: personality fit — nice people win.”

“Superior attention to detail, from spelling and punctuation to granular appreciation of a service or product’s wayfinding and navigational hierarchy, and all content and functional elements.”

“The biggest thing I ask for is some evidence of an idea that you either created or fleshed out for someone else. I want to see proof (sitemaps, wireframes, documents) that you can do the work. Even if the proof wasn’t paid (volunteering is a great way to start) some experience is better than none.”

“Education and real experience in usability, not design.”

“Interested, flexible, trend conscious but not trend driven, shows an ability to learn a new system or domain quickly.”

“Strong skills coupled with curiosity to learn, team player (there’s no room for people who think there is only one way to design or test something), strong portfolio where the candidate can speak to the work — how they did it, what the shortcomings were, and what they learned.”

“Folks that think holistically, people who can put themselves into the web-user shoes and who are not afraid in expressing new ideas.”

“Curiosity and initiative are critical, hard skills like usability methods or portfolios for interaction designers are obvious; but how they talk about their work and why they tell you it was important is critical. Ability to evaluate someone, can do critical thinking and not just tactical execution.”

"I look for some formal training, since that tends to indicate that the person's approach is more systematic. I look for experience with a variety of UX techniques and applications, since that suggests the person will learn and adapt to our work environment more quickly. I look for soft skills that indicate a person will get along in our agile team environment."

"Avoid trend surfers. Look for empathy, humility. Do they understand that any user's failure to do a task or find a piece of info is actually our failure in design?"

"Multitasking mentality, synthesis capabilities, good design experience."

"I look for people who can quickly understand the user context and needs and apply it to an interface. That interface needs to also serve the needs of the client, and it has to be creatable within the budget for tech and graphic design. The candidate has to be able to understand the needs of those constituencies and integrate them into a successful design."

"I look for positive and open-minded people who actually care about how people perceive a company and its products / services. I look for someone who is willing to break the rules and doesn't use data and best practices as an excuse not to do something difficult. As I grow my team, I look to add diversity to it. This includes people who are science oriented at one end of the spectrum, and others who are creative and intuitive at the other end."

"Knowledge of the area, confidence, strong analysis skills, and a clear focus on the end customer (not the internal one)."

"That they always have the user in mind and this shows not only through their work but how they talk and approach situations."

"Focused on the entire context of users, technology, and business."

"Need to be smart, be able to talk articulately about how to do a usability test and describe some tradeoffs. Should have experience with multiple techniques."

"Recognition of the practical realities of working with imperfect people, products, and organizations. Passion for making things more than just good. Curiosity. Significant experience with two or more very different industries. Honesty."

"Creative problem solving. Design is all about finding the right problems to solve (that's the hard part), and then solving them elegantly. Persuasion, that's invaluable too."

"I like to see a commitment to this field, which can be reflected in many different ways, such as having gone to grad school to get an advanced degree in the area, presenting at conferences or publishing in the field, an obvious interest and desire to keep up on new tools and techniques, and, of course, experience. And I look for good communication skills, both 1-on-1 and in front of a group. I commonly

ask candidates to make a presentation to my team (e.g., a case study of some user research they've done)."

"– Clearly demonstrable problem-solving process. All design is about problem solving, and if you can't demonstrate a logical, repeatable process of thinking, you could be unpredictable or inconsistent.

– The ability to understand and use data. For researchers, you have to know how to analyze, not just aggregate. For IxDs, you need to know how to use data to make design decisions.

– Someone who is a mediator / facilitator by nature. Negotiation, discussion, and communication are 90% of what we do. You have to be good at this."

"I look for breadth and depth of experience. I'm not interested in people who want to be specialists in one thing; for example, only doing usability testing, only doing wireframes, etc."

"Exposure to and opportunities to apply the basics, awareness of the broader field and what other roles contribute, an appreciation for and some grasp of theoretical foundations in cognition, perception, and memory."

"User-centered mindset, self-confidence, flexibility, presentation skills, analytical thinking, team players, at least some knowledge about UX, eagerness to learn, self-management."

"Education: at least a master's in a related discipline, ideally a PhD for deep expertise. Work experience: usually at least 5 years of doing user research for a software company. Demonstrated ability to be practical and nonacademic in their approach to doing usability and user research. Software cycles move very rapidly and the ability to be agile is key. Good ability to work cross disciplinary, i.e., understand and work with engineering, product / program management, design, and marketing."

"Curiosity and drive to solve problems in their everyday life. I look for someone who is compulsively driven to solve UX problems that surround them. Someone who is never satisfied with a broken user experience. Someone who can draw, who can quickly, fluidly and clearly express ideas. Someone who listens and asks a lot of questions."

"Experience working on similar project to ours, able to articulate how and why they arrived at a particular design solution, ability to stand up for good design without being pushy or arrogant. Do-it-yourself mentality — doesn't wait for permission. Interested in improving all kinds of user experiences, not just on our software."

"Jack-of-all-trade type people."

"Strong control of some meaningful set of tools, a portfolio that explains the individual's role in creating what's shown (and willingness to attribute accomplishment to others); may include publications or selections from websites and applications. Ability to describe own gaps in knowledge or skills, ability to transfer experience in one work

domain to another. A sense of humor, critical thinking, university-level education or equivalent life/work experience.”

“I look for people with a logical, liberal-arts orientation or background who have some technical knowledge, so they understand the framework but are driven by human needs, not machine needs.”

“For research, I look for someone who is conversant in a wide range of methods, and not an orthodox adherent to a given way of doing things. For IA / UX / IxD, I look for someone who can think rigorously but who also has ideas that surprise me.”

“A strong web-design portfolio is a must, since we’re primarily dealing with web. This is a portfolio of UX / usability work, not visual design. Up on latest trends in web design and UX. Hands-on knowledge, demonstrable skill, ability to talk about project specifics where UX / usability skills have been applied successfully.”

“Aside from relevant hands-on experience conducting research and delivering artifacts such as research findings and wireframes, I look for people who can adapt to changing situations and who can separate themselves from their work. It is very easy for business owners and others to be critical about wireframes or other UX deliverables, and we have to be able to collect the feedback without taking it personally.”

“I look for people who enjoy the exploration of possible solutions as much as the development and documentation of the ‘right’ solution.”

“Those who say they don’t know everything but are prepared to do the research. Those who show initiative, who are willing to learn about the subject matter they are working with, who say they’ve still got things to learn.”

“Absolute passion for the customer perspective; someone who’ll champion the customer point of view at every turn.”

“Plain-spoken, straight speaking.”

Many more good clues about good UX candidates are in the rest of the quotes from interviewers and hiring managers are in “Appendix G: What Interviewers Look For,” beginning on page 155.

## **QUESTIONS THAT INTERVIEWERS ASK**

Most frequently mentioned topics for interviews:

- Critique something
- Design something
- Explain methods and processes
- Tools and experience levels
- HCI / UCD / cognitive science, usability questions
- Why you went into UX
- Why you want to work for this company
- Books that you value

- Your heroes in design and UX
- How you keep current
- Teamwork and collaborative work questions
- How you measure things and what you measure
- Telling stories about your experiences and what you learned:
  - Failures and triumphs
  - People problems, especially people who don't want to cooperate, strategies
  - Usability-testing challenges
  - How you speak truth to power and deliver bad news
  - How you deal with conflicting demands and constraints
  - Research and design problems

Other topics and questions interviewers like:

"Tell me about the last thing you learned while running a usability session."

"I always ask them to tell me about something that represents a good design in their eyes, and why. It could be a website, a software program, TV, toaster oven, or lawnmower. It doesn't matter, as long as the explanation makes sense. I also ask them to tell me about the opposite: Tell me about a design that frustrates you and why that is? I ask them what they've learned about our company; can they generally explain what we do, what our target market is, who our customers are. I also like to ask about a work experience they are proud of, and what part they played in the project."

"Ask about previous projects and what was learned, 'What would you ...' scenarios. [I am] also curious about what questions they ask!"

"What's the best product / app you worked on and why? How would you improve it?"

"The methods they are used to using. Their experience in working with users (and which types of users). Their experience in quantitative and qualitative data analysis and their experience in writing experiment / test results."

"I show candidates the stovetop example from Norman's *Design of Everyday Things* and ask them to improve on the design. It's important to evaluate someone's ability to do basic usability evaluation."

"What drew you to the field of UX? Tell me the story of a project you've worked on, from start to finish. ... Describe a positive and a challenging experience of working on a team, and what you learned from each. Describe a time you received feedback that was not what you were hoping it would be. How did you react, and what did you learn from the experience?"

“I ask about usability itself, what it means, who invented it, value judgments about how it affects adoption, emotion etc.”

“Ask broadly how they approach it. Look for indicators that they aren’t just throwing around buzzwords and actually understand how to execute the approaches and why they’re beneficial.”

“I talk about their past work and ask them to describe who their users were and if they ever did any user testing. **If they can’t explain to me who their user base was and who used their product, I don’t think of them as UX people.** I ask their specific roles in projects and if they have any coding skills, if they have any visual design skills. I ask how they want to grow. I ask them to define ‘interaction design’ and explain what it is to their mailman.”

“Why are you interested in this usability-analyst position? Has a client ever asked you to do / design something that you know is contrary to best practices in usability / user experience, and if so, what did you do? How do you learn about current practices / research in the user experience / usability field?”

“What project do you think went the smoothest, in your experience? Why do you think it was so successful? What project was the hardest? What made it so? How do you keep yourself in the loop with web technologies?”

“What comes first in terms of usability? (If they don’t say “user experience” or something near it, chances are they won’t get the job.)”

“I think the only question I ask consistently is one in which I ask the candidate to sketch out an interface given limited information. There is no right or wrong answer. I’m more interested in the questions and the exchange between myself and a candidate. Sometimes at the end of an interview I’ll ask candidates to either critique the interview they just had or suggest a question they think I should have covered.”

“Describe a scenario where you have taken a project from concept to completion — including the user feedback loop. Also, my all time favorite question is, ‘What was your biggest failure?’ I learn more about the person’s ability to adjust, and learn.”

“What are your favorite and least-favorite websites in terms of usability? Gives an opportunity to bond over shared feelings or recognize quickly a lack of understanding or taste.”

“What are the last books read about usability, and [do you know about] Design Thinking?”

“[I ask] if they are familiar with Jakob Nielsen.”

“How would you solve [this] problem? Sometimes I create a card-sort project. **It’s been easiest to hire people who have sample projects — including their own website.**”

“I like asking about their challenging projects and what stressed them the most, and how they dealt with that problem / stress. I like asking about how they work with people inside and outside their development

teams when it comes to getting information (say, from SMEs, or how they'll work on a project and ask for help)."

**"What does usability mean to you? How does usability inform design? Which design principles do you use to inform your decisions?"**

"I ask them what they think about the website and what they would recommend to improve and why."

"Describe your favorite usability study and why. Describe a situation where you learned the most. **Describe a situation where your research led to a completely different goal than the initial purpose** (business or user)."

"Describe a recent project. Why did you choose the method you used? What alternatives did you discard? What would you change if you had the chance? (**I want to know if they have just learned a single technique or if they really understand the whole research toolbox.**) Describe a situation where a client did not accept an important recommendation. How did you deal with that? (I'm looking for diplomacy, political savvy, communication, sense of priorities, learning from failure.)"

"How would you test design A? What questions would you ask? Qualitative vs. quantitative. etc."

"What was your favorite work environment? How do you manage shifting priorities and requests? Tell me about a time when you had to be persuasive about a solution you were proposing."

"I ask them to describe some user research they did that they're particularly proud of. I ask them what kind of user research they find that they enjoy the most. And **I ask them to present a case study to my team** (with advance notice, of course)."



Interfaces are all around us. You can practice your skills and create portfolio material by examining and critiquing controls and instructions, testing things in use, explaining why they create problems and how redesigning in particular ways can help address those issues. Photo thanks to Kara Pernice at NN/g.

Read more in "Appendix H: Questions That Interviewers Ask," beginning on page 162.

---

## Lessons Learned from Your First Year in UX

### TOP TAKEAWAYS

#### What's the best type of company and assignments for people getting started in usability roles?

- It's important to get a first job where you will be doing a lot of UX activities.
- It's best to be in a place where usability has some amount of recognition, budget, and management support.
- Where you work matters in terms of your opportunity to make a difference. Look for companies that have workable processes and UX roles in place, so you can be effective.

#### What helped you the most in your first year?

- Doing many different projects and activities
- Being mentored, watching others do the work, asking questions
- Being in a supportive group, in a company that values UX
- Formal training in UX disciplines
- Reading
- Testing — talking with users and arguing from data
- Documenting work for a portfolio

Quite a few people said that things went really well in their first year and they would not change anything. Many said that was because they had good academic preparation for the work, and others credited having a mentor for that smooth first year or transition.

Some said they didn't have an identifiable first year because they transitioned gradually into UX while they were in another role in their company. Gradual transition in place emerged as one of the top ways people get into UX roles.

Many said they wish they had listened more, asked more questions, and been more aggressive about pushing for opportunities to do UX activities.

#### What do you wish you had done differently in your first year?

- Been more assertive about and focused on learning UX activities, tools, and HCI principles
- Tested earlier
- Iterated more
- Networked more
- Learned more about web development
- Learned more about negotiation and how to work in contentious political environments
- Focused on getting data rather than pushing opinions

## WHAT HELPED IN THE BEGINNING: IN THEIR OWN WORDS

**“Working at a large company and getting exposure to a large spectrum of methods and products was very beneficial. It was also a great way to meet and learn from many different researchers and designers. With the emphasis and amount of work shifting to mobile, it would have been nice to be involved in that aspect earlier on.”**

**“Understanding design principles and communication design helped the most.** I wasn’t just creating beautiful interfaces based on patterns from a style guide — I was solving problems. Looking back, **I wish I had demanded more time with the client / customer and I wish I didn’t constrain my work so much to what could be built in time.”**

“What I did that was so good and I wish everyone did is **just go out and watch users use apps.** In 2001 when I started doing testing I had no idea there was a discipline around user research so I just asked people questions, watched the work and made notes about their mistakes. I see people today who think to get started they have to have a lab and a budget and fancy equipment. I think that’s nice but not anywhere near necessary. **Had I to do it over again I’d be more methodical in making notes, especially looking for objective, quantifiable trends.** But not having these didn’t prevent me from getting great results from my research.”

**“I wish I would have worked for a team and not a consultancy.** I got to work with many different clients but never got to know if they implemented the recommendations or not. **I should have also insisted on doing some design/prototyping work.”**

**“I would have spent more time investing in lifelong relationships. Those relationships will see you through industry changes, life events, and all the unpredictability of a profession that is still evolving.** My relationships with former bosses were well worth the effort to maintain.”

**“What helped the most was actually running studies and learning on the job.** I read so many books that I couldn’t really wrap my mind around because I didn’t have the experience. Experience in the field is critical.”

**“What helped me the most: being willing to learn new things.** There were others in the organization I was at that had the same opportunities but they were unwilling to read the books, take the training on their own time. I was willing to do it so I took over that part of the business.”

**“I wish I had never stopped programming full time. User experience is everybody’s job. And it is most appreciated when attached to roles at the front line, namely coders and designers. You can’t just be an academic. You have to be a maker. As soon as I started introducing my visual and coding skills into my more strategic UX work, everybody started**

**paying attention. Everybody saw the value in my complete skill set. There's more value in code and design than in PowerPoint."**

"I made a good choice to enter the field by joining a well-respected consulting firm where I was paid less than the other job offer and had 'less responsibility,' but instead **I received extremely useful mentoring from senior practitioners and was able to work on a variety of different types of platforms and challenges within different types of domains. This approach served me well as I gained a solid design-process foundation and realized the kind of design problems that interested me most.**"

"I was fortunate to be able to try to **facilitate several different types of UX projects** (card sorting, focus groups, task-based usability) in my first year. **My manager did not just put me on the easier, or more standard, projects.** The one thing that is hard to learn and realize is that when you are running a user-experience project, that you are the expert and that the team is looking to you for leadership and guidance. When you're young and / or new to the field, sometimes it's hard to remember that even if people have been around the institution for a long time, **you are expected to lead people through an unfamiliar process and its results.**"

**"I did not understand what people really wanted because I fell in love with my solutions. I learned to put people first."**

**"I wish I'd understood that UX is less about creativity and more about evidence.** When I started to promote it within my organization as a science rather than a subjective art, I got less contradiction and more buy in."

I wish I had been "more proactive at building a contact network. ... **The best way to secure good, meaningful work is by having an extensive network."**

"What helped was being on a UX team that valued mentoring."

**"Organizations like UXPA and IXDA helped me the most, along with taking the [Usability Camp](#) put on by Jakob Nielsen."**

**"Tested earlier. Tested more people. Tested more often."**

"I wish I had started in the UX field sooner!"

"Spend less time trying to educate the unwilling. More focus on coding."

"Never stop learning. Do personal projects."

"When I started UX, it was just a baby step. There was no hurry and the process of learning was smooth. I still enjoy every step of learning UX."

"I wish I had learned that first year the importance of and the differences between studying behaviors and preferences of users and of stakeholders."

I just recently started using Axure. I wish I had access and learned this tool six years ago! The hours I could have saved in Visio, Word

and PowerPoint! [I wish I'd] been more patient with those around me that didn't have the educational background in HCI. ... Being able to work with managers who have no design background is key to success."

**"Take chances early, and try things you don't think you'll like. Always doing the few things you already like will ensure you only ever do those things, and eventually, will mean you can't do the other things."**

"Attending UX events helped me in networking, and I ended up working as a UX Architect in less than one year."

**"I should not have spent as much time working for a Manhattan agency where brand and visual impact were valued over interaction design and user experience.** If you care about user experience, you should work at a place that values it. On the other hand, you can't get a job like that without a portfolio, so build one and then move when you can."

"I've just completed my first year working in user experience, and it was very hard ... trying to get what you need in a design-unfriendly environment. Culture is very important. ... I did not get support to do user testing or interviewing.

I wish I had:

- Worked with users
- Been more aggressive in insisting on user testing and prototyping
- Trusted my skills and knowledge more
- Learned front-end development in my spare time (was just laid off because I don't have these skills)
- Done user testing in my spare time to see if my designs worked.
- Found a way to meet with stakeholders in my spare time.
- Basically I wish I had done all the activities that I consider essential for design by going around my employer as opposed to just trying to work within my constraints."

"I wish I had listened more and pushed my own ideas less."

"Gotten a mentor; listened to my mentor more."

"Bruce Tognazzini's Interaction Design course changed my mind. [He said] **'Try to be a cook, instead of learning the recipes only'**."

[I wish I had] "trusted my knowledge and instincts. I was intimidated by people who could throw around big words and terms from cognitive psychology and the like and/or had PhDs etc. I hadn't studied cognitive psychology, industrial design, human factors etc. so I kept quiet. In reality **a lot of user experience tasks aren't rocket science but the ability to observe, ask non-leading questions and put your own opinions and feelings aside to hear and see what other people do and say about whatever you are working on.** Some design tasks take more education. But some research and

usability tasks can be easily learned by someone who is open minded and willing to learn.”

“Don’t spread yourself too thin. Ask for help. What helped the most: getting a degree in Human Factors.”

**“I wished I had been less of a perfectionist and failed more.** I wish I had been more savvy on business strategies, product and project management and how they impact the work I can do.”

**“I wish I had realized that I didn’t know anything.”**

“I’m pretty happy with the experience. **What helped me the most was joining an established UX department with a great leader and experienced team members.** There were good training materials and mentoring opportunities, and I was able to learn from others while immediately applying the skills I had to project work.”

**“Ask as many questions of your guide, mentor, or senior UX practitioners, as possible. The more questions you ask the more you’ll learn.** Practice running testing sessions with colleagues. You’ll learn how to conduct testing sessions, and your colleagues will find themselves thinking like users, instead of forcing users to think like analysts or developers.”

“I wish I had started interviewing participants, conducting field studies, and rapidly developing prototypes with colleagues and participants ... earlier on, as opposed to focusing on theory, or finessing wireframes and flow diagrams in solitude at my desk.”

“I had an amazingly scaffolded experience in an industrial research lab with multi-disciplinary colleagues. We built an interactive system using our own homegrown software, so I learned both something about rapid interaction with the two software developers while also creating and testing an application to run on the system.”

“I wish I had been more assertive. I didn’t actually start imposing and not budging as much until after I was certified as a UX analyst, even though I’ve worked in software development for 20 years.”

**“I wish I’d spent more time demonstrating data-driven decisions and less time trying to convince everyone I was right.”**

“I wish I had started with usability engineering. Helped the most: Observing the first usability test.”

“Two things that helped most: Professional development (including courses with NNG); being in a company that had a fledgling UX team and allowed me to experiment with methodologies I’d learned about — so I could immediately put into practice anything I’d learned.”

**“I wish I would have stuck with coding HTML a little longer. Things are getting very complex with HTML5 / CSS3 and responsive design, so that a better understanding of these underpinnings would improve my ability to design. I also wish I would’ve learned more about design tools such as Photoshop**

**and the like for the same reasons. It would've freed me up to be more of a freelance designer."**

"I wouldn't do anything differently, it was an ideal way to enter the UX field. I read books/blogs, talked to consultants, attended conferences, and most important, tried out the techniques myself with real users. Talking to users helped the most, the rest was a matter of feeling out the best methods and tools that worked in that company at that time. The tools have since changed to better fit my current users, but the talking-to-users part never changes."

Other important advice respondents have for those starting out is in "Appendix I: What Helped Most in Your First Year?," beginning on page 171.

## Job Titles of People Who Have UX Responsibilities

Below are the job titles held by our survey respondents. A few titles have been made a bit more generic to protect identities. Similarly, many came with "Senior" in front of them, and we removed that word too, to keep duplication to a minimum. Many of these titles contained "UX" or "User Experience," so we changed the longer term to "UX" in order to help remove duplicates and to make this list manageable. "Vice President" was standardized to "VP." When searching for jobs, you should search for both the spelled out and abbreviated terms.

The purpose of this list is to:

- Show how UX jobs often hide under non-UX names
- Provide example titles that will help you search for UX positions
- Help you justify adding UX activities to your current position

3D Artist	Information Architect	UX / Project Manager
Analyst / Programmer	Information Architect and Front End Developer	UX / UI Architect
Analytics Product Manager	Information Architect and Interaction Designer	UX / UI Designer
Application Usability Designer	Information Architect, Ontology Engineer	UX / UI Designer, Information Architect
Architect: UX / UI	Information Developer	UX / UI Developer
Art Director – Print and Interactive	Information Resource Manager	UX / Usability Consultant
Assistant Webmaster	Information Systems Associate	UX / Usability Specialist
Associate Director – Digital Marketing	Insight And Planning Director	UX / Visual Designer
Business Analyst	Instructional Designer	UX Analyst
Business Leader	Interaction Architect	UX Architect
Business Systems Analyst	Interaction Design Director	UX Architect and Strategist
Business Unit Director	Interaction Designer	UI / UX Designer
Chief Design Officer	Interactive Designer	UI / UX Specialist
Chief of Product	Interactive Designer and UX	UI Consultant
Chief Research Officer	Interactive Marketing and Usability Consultant	UI Designer
Client Website Platform Supervisor	Interactive Marketing Manager	UI Designer and UX Specialist
Communications Consultant	International Manager for Training Development	UI Designer Engineer
Communications Manager	Internet Marketing Manager	UI Engineer
Consultant	Intranet Employee Communications Manager	UI Specialist
Content Manager	Intranet Project Manager	Usability Analyst
Content Strategist	IT Usability Consultant	Usability Consultant
Content Strategy Manager	Knowledge Manager	Usability Consultant / IT Teams Coach
Conversion Consultant	Lead Experience Strategist	Usability Coordinator
Coordinator Digital Media	Lead Interaction Design	Usability Designer
Creative Director	Lead UX / Creative Designer	Usability Engineer
Creative Usability Lead	Lead UX / UI Designer	Usability Engineer, Information Systems
Customer Engagement Manager	Lead UX Analyst	Usability Expert
Customer Experience Design Team Lead	Lead UX Designer	Usability Manager
Customer Experience Manager	Manager, Applications – Web	Usability Specialist
Design Director		User Analyst
Design Manager		User Centered Design Practice Lead

· Designer	· Development Team	· User Centred Designer
· Digital Experience Architect	· Manager, Creative Direction	· User Interface Architect
· Digital Experience Manager	· Manager, Interaction Design, Digital Creative	· User Operations Analyst
· Digital Expert / Digital Project Director	· Manager, IT and Web Dev.	· User Research Lead
· Digital Strategist	· Manager, Product Dev.	· User Research Manager
· Director	· Manager, Program and System Readiness	· User Researcher
· Director of Analytics and Information Design	· Manager, UI and Web Application Group	· UX / Content Strategy Lead
· Director of Brand Marketing and Design	· Manager, UX	· UX / HCI Researcher – Usability
· Director of Consumer Experience	· Manager, UX and Research	· UX / Information Architect
· Director of Digital Customer Experience	· Manager, UX Design	· UX Consultant
· Director of Direct Consumer Interaction	· Manager, UX Research	· UX Consultant / Designer
· Director of Global Product & Experience	· Manager, Web Services and Usability	· UX Consultant / Interaction Designer
· Director of Interactive Development	· Managing Director	· UX Design Lead
· Director of Online Operations	· Marketing Specialist Advisor	· UX Design Manager
· Director of Product Management and UX	· Masters Teacher	· UX Designer
· Director of Product Strategy	· Mobile UX Designer	· UX Designer / Consultant
· Director of Quality Assurance	· Online Designer	· UX Designer / Engineer
· Director of Usability	· Open Source Strategist	· UX Designer / Ergonomist
· Director of UX	· Principal Analyst	· UX Designer / Interaction Designer
· Director of UX Design	· Principal Consultant	· UX Designer / UI Developer
· Director of UX Research	· Principal Designer	· UX Developer
· Director of UX Services	· Principal Software Engineer – Usability and UX	· UX Developer / Analyst
· Director of Visual Communications and Brand Management	· Principal User Researcher	· UX Director
· Director of Web Content Services	· Principal UX Architect	· UX Engineer
· Director of Web Management & Design	· Principal UX Designer	· UX Expert – Partner
· Documentation Coordinator	· Principal UX Developer	· UX Information Architect
· E-Learning Consultant	· Principal, Consulting Firm	· UX Interaction Designer
· Ecommerce Analyst	· Principal, UX	· UX Lead
· Editor / Copywriter	· Producer	· UX Manager
· Engineer, Usability and User Research	· Product Designer	· UX Professional
· Ergonomist	· Product Director	· UX Program Manager
· Executive Director	· Product Manager	· UX Research Consultant
· Experience Architect	· Product Owner and UX Evangelist	· UX Research Manager
· Experience Design Manager	· Productor Digital (Español)	· UX Researcher
· Expert Strategist, UX Consulting	· Professor	· UX Researcher / Designer
· Expert Usability Engineer	· Project Manager	· UX Sketching and Ideation Instructor
· Front End Developer and UX Specialist	· Public Information Representative / Managing Editor	· UX Software Engineer
· Front-End Developer	· R&D Engineer / UX Engineer	· UX Solution Architect
· HCI Designer	· R&D Manager	· UX Specialist
· Head of Digital	· Research and Customer Experience Manager	· UX Strategist
	· Research Assistant	· UX Web Application Designer
	· Research Scientist	· UX, Usability and Product Management Consultant
	· Research Specialist	· Visual Designer
	· Researcher	· VP / Director of UX
		· VP / Interactive Marketing
		· VP / UX
		· VP / UX Design
		· VP / UX Lead

- Head of Digital Strategy
- Head of Information Architecture Studies
- Head of Mobility UX
- Head of Teaching and Learning Systems Development
- Head of UX
- Head of UX and Graphics Department
- Head UX Department
- Human Centered Design Lead
- Human Factors Engineer
- Human Interface Research and Design
- ICT Officer, Web / Interface Design
- IHM (Human-Machine Interface) Designer
- Information and Communication Manager
- Researcher, Human Factors Engineering
- SEO / Search Expert
- Service Design Manager
- Software Developer
- Software Engineer
- Software Engineer (Look and Feel)
- Software Engineer (UX Design)
- Software Engineer in Usability
- Software Ergonomist
- Strategist, Digital Experience
- Systems Engineer
- Team Lead, Design and UX
- Team Leader, Publications
- Tech Writer / Interaction Designer
- Technical Architect
- Technical Author
- Technical Writer
- VP / UX Research
- Web Business Analyst
- Web Content Editor
- Web Content Manager
- Web Content Specialist
- Web Coordination Officer
- Web Designer
- Web Designer / Developer
- Web Development Engineer
- Web Development Specialist
- Web Editor
- Web Editor / Usability Analyst
- Web Experience Architect
- Web Usability Analyst / Web Customer Experience
- Webadvisor
- Webmaster
- Webmaster / Media Specialist
- Webmaster / Usability Consultant
- Website Manager
- Website Migration Manager

## Learn More

Reading books on your own is essential. There's an endless amount of material available to read on HCI and UX, and much of it is authoritative, fascinating, and excellent. Start with books, so you can cast a critical eye on blog posts and magazine articles, which may be more opinion based.

### BOOKS AND READING MATERIAL

[NN/g books](#)

[NN/g-recommended visual-design books](#)

[NN/g-recommended user-interface books](#)

[Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability](#) – Steve Krug

[Designing the User Interface: Strategies for Effective Human-Computer Interaction](#) – Ben Shneiderman and Catherine Plaisant

[Usability Testing Essentials: Ready, Set ... Test!](#) – Carol M. Barnum

[Observing the User Experience, Second Edition: A Practitioner's Guide to User Research](#) – Elizabeth Goodman, Mike Kuniavsky, Andrea Moed

[Information Architecture for the World Wide Web: Designing Large-Scale Web Sites](#) – Peter Morville and Louis Rosenfeld

[Ambient Findability](#) – Peter Morville

[20 User Experience Books you should own](#) – list by UX by Design

[HCI Bibliography: Human-Computer Interaction Resources](#) – ACM SIGCHI

[Safari Books Online](#) is a cost-effective approach to reading lots of books.

[HCI textbook search on BigWords](#) – a search engine for low-priced textbooks

[Open educational materials from interaction-design.org](#)

### OUR WEBSITES

[NNgroup.com](#) – training and publications, Jakob Nielsen's Alertbox articles

[AskTog.com](#) – Bruce "Tog" Tognazzini

[jnd.org](#) – Don Norman

### PROFESSIONAL ORGANIZATIONS

[ACM SIGCHI](#)

[UXPA](#)

[IXDA](#)

[The Information Architecture Institute](#)

[User Experience \(UX\) conferences and events](#)

## Appendix A: Job-Satisfaction Quotes

Job-satisfaction ratings are discussed in “Job Satisfaction,” beginning on page 28.

Each paragraph below is a different person’s statement in response to our survey question about why they rated their job satisfaction as they did.

We had a 7-point scale in the survey, but have divided these selected responses into 3 categories: those happiest in their jobs, those who see some room for improvement, and finally, a few who are not sure that they are in the right situation for various reasons.

### Why I love my work

I still have a lot to learn, but am grateful for what I know and get to do in my work now.

I am still thrilled to go to work ... users provide me and my team great feedback, ... it lets me know about the people and the world, and because I get to develop things that really matter to other people’s lives.

I love my career, it’s been very rewarding.

There is nothing else I could imagine doing.

I feel there is still much more for me to uncover that could increase my satisfaction rating. I do really love this industry.

I’m not sure how it’s going to turn out, but I’m happy so far.

I want to have a more strategic impact in the user experience.

I am in the public service, so doing interesting things in design which directly improve the lives of Australian citizens can’t be beat!

I love my work.

I enjoy the company I work for.

It’s been the perfect career for me for over 30 years — endlessly fascinating, challenging, and rewarding.

I feel like I have a chance to make people’s day to day lives better, if I can make the technology they use better.

This is an exciting time to be in the field. Things are only getting more specialized and complex.

I feel like I’m improving user’s ability to find information. Oftentimes, I’m taking a terrible website and making it significantly better, so the payout emotionally is high. Each day can be a little different based on the client. I’m always learning something new.

I really love studying people and systems. I like making things work better for people. I do not like the way most businesses are set up and the political power plays.

I am very happy in this career. I am always looking for challenges and more information, and I definitely get that, while still feeling

competent. I did not give it full marks because I am currently looking for more formal learning options to increase my knowledge in the field that either hold the weight of a university qualification, or are accessible in terms of cost.

I have had opportunities to work with some great companies. They value my input. I am well respected by peers and colleagues and have had opportunities to speak.

I feel that my work means something.

I am a freelancer and I have a lot of work. My only regret is that I can't take in every project that comes my way! I wish I had a reliable way of farming work out to subcontractors (this works sometime, but not always).

For the most part, I now do what I love and I'm able to try new things without much resistance. I do wish it was valued by senior management a bit more.

I was born to do usability. It's second nature to me, which makes it very easy to work in this field. Plus, I love to learn new things, and I love that it's always changing.

I enjoy my work, but I would like to do more generative user research.

I am a lone UX person in my company but it is not my actual job. So I don't spend all day doing UX work. I would like a position where I do UX work all day.

I'm excited to finally be working on products that really make a difference for people (health). It took me longer to get here than it should have. I wish I'd known that this was the career I was trying to have. It wasn't until midway through design school that I realized the program wasn't offering the kind of classes I wanted — as a consequence I spent a few more years designing environmental graphics, email and banner ads than I would have liked.

I've loved the variety of opportunities.

I have a great job and have just moved to a new company that has a significant need for someone with my skills. I am appreciated and in demand in this position, which is a strong contrast to my previous experience.

I have found something I am extremely passionate about.

I brought the whole usability thinking a huge step forward in my company.

I know my work helps people.

I have had an interest in usability for many years ... but have professionally been more associated with implementation (writing code) than pre-implementation activities such as interaction design and wireframing. I now get to do all this myself and love being able to take the time to do things correctly.

Broad range of responsibilities from visual to UX design and research, good location and office, great company culture, good compensation, large product responsibility with lots of exposure, company cares about the customer.

I like my job, it gives me satisfaction, and I work with great people doing interesting things.

I've gotten a lot of experience, I have a good understanding of how to get good results from user research whenever I need it, and my colleagues and friends are eager to turn to me for advice and help.

**I love what I do and how challenging it is. I like that every project is completely different than the last one. I like that it combines analysis with creativity.**

It's super fun, and even if you are working on something trivial — like a pizza-ordering app — you are making people's lives easier.

I feel lucky every day that this is where I ended up. I've always been both creative and analytical and I get to practice both.

**I changed careers three times from being a high-school English teacher to a technical communicator to a UX professional. I think in all those changes I was really just preparing to be a UXer. I didn't know UX existed until I went to graduate school and read the 'polar bear book' [*Information Architecture for the World Wide Web*]. As soon as I read that, I knew that's what I wanted to do. I'm like a fish in water and couldn't be happier. It's also one of those fields where you can help people with a task that seems crazy overwhelming to them (like building a website or mobile app), and that feels really great.**

I love my job and I get paid a lot of money.

I like what I do and I'm good at it, and always have room to learn more.

Changing my career from architecture to usability was the best decision of my life. I look forward to waking up every day to get paid to do something that I simply cannot call "work."

I have an awesome job. I regularly get to touch a variety of projects in many different ways, and I also get to "fix" things for our users.

I have learned a lot and had success in a short time, but still know I want to accomplish more.

My job changed a couple years ago from tech support with a low-priority responsibility to maintaining our organization's website, to webmaster with the website being my top priority, and social media and communications filling up the rest of my responsibilities. It is a great fit for me. I am competent in my job while still learning new aspects every day.

**I'm in a wonderful niche that uses all my skills. I help companies (primarily engineering but also others) to communicate whatever they have to communicate, in the most**

**effective way. It's extremely satisfying to take raw material (website, help system, or whatever) that is just not usable and re-engineer it so it's an effective part of the company's operations.**

I like what I do and I think people value my work.

I love what I do, just wish I knew even more.

I love my job. I think it is very rewarding to make things easier for people to use, especially with my current employer, whose mission I believe in.

The role is rewarding and fits me.

I love that I made the transition to interaction design. I love my job, the way it combines creativity with user needs and technical solutions. I love my team and all of my coworkers.

Usability has been a good career to indulge my creativity and curiosity in learning about the way people work. It is satisfying to know you are helping to make people's lives better through matching software to their needs. Consulting has also allowed me a good work-life balance through setting my own hours. The only reason I'm not completely satisfied is the politics and cost and time pressures.

I like the mix of work and the fact that things are always evolving. It can make it difficult to keep up sometimes, but it's rarely boring.

Good colleagues, good projects.

It is a fulfilling career.

No job is perfect. Especially at an agency you don't always get the projects that you like the best or the time and budget that you feel you need. But I think most people who aren't working for, say, the Pentagon have that feeling at one time or another. But I like the feeling that I'm making life better for the people who use the products I work on.

It's interesting work. It's engaging. I like understanding how people use a tool and the puzzle factor of figuring out what changes need to be made for it to be more usable. It's rewarding to watch someone go from "I'm not sure what to do here" to "I can do X and Y with this."

I've been successful in a relatively new field. It is fulfilling to organize information and help the end user find what they need as easily as possible.

Enjoy teaching others usability — and showing others in the company how important and cost saving it is to put usability first, especially in paper prototypes.

It's a fun, fulfilling job that uses a lot of different parts of the brain. It's never boring. However, it's hard work and can be difficult to persuade stakeholders who don't always buy into our suggestions — but research can help convince.

I've worked on some diverse projects, I've been given a lot of responsibility, and I thoroughly enjoy what I do. You can always be better though!

I love change and challenge. There is a lot of room for it. I love connecting people and technology.

It's fun.

I have a lot of flexibility and authority.

UX is going from strength to strength. Compared to when I started out (about 10 years ago) there are numerous resources and tools available, and it is gaining more and more traction with clients as an important process.

I get to do the kind of work I want and think is valuable in creating great products. I just wish I earned more. :)

I love the work I do, and now that I am no longer in a large corporation, I especially love the lack of politics.

It's great for me now as a part-time worker with young kids. I can take a project at a time and work flexibly.

I'm a consultant, so I have a lot of control over my work life. I'm pretty good at what I do, and I help companies by doing good design work for them, \*and\* by teaching them how to do it.

I am highly but not completely satisfied with my career; however it can be difficult working in a stressful, deadline-driven environment.

I have made a lot of progress and have a lot of autonomy.

Only half of my work is usability — I find it more fulfilling that I can also do other work in addition to usability (online marketing, landing page optimization, email marketing, etc.).

I get to make people's lives better by using less frustrating products, it's an intellectual challenge, and it's a niche that continues to have more demand than supply.

I'm very satisfied with what I've accomplished. I'm particularly pleased that I've been able to mentor and develop new people in the field.

I love this field. No place else could I angle my previous experience and get into such interesting, diverse, world-changing work.

I can effect change and have enough buy-in from above. Work is rewarding and benefits the public good.

I have really, really enjoyed my career, learning about what the people I design software for are like.

Love running my own company and choosing my work. Love learning new stuff with every project.

I have been in the same organization for 17 years and there is a high understanding of usability.

I like what I do, I have a lot of variety in my job. I like the company I work for. There are adequate resources to do research. The UX research and design steps are valued in our product development process. The demand for research is growing.

I've only been working in usability for a little over a year, and I've already worked on important projects for huge clients and presented at a professional conference. I'm doing okay. I would rather be helping create new things or work on products where the clients \*want\* to improve their designs and make changes.

I love the work. But I've never worked for a company that was as committed to UX as I am.

Best thing I ever did.

My job is interesting. I get to do strategic research, as well as comment on and test actual applications. It's fun to stay on the cutting edge of web/mobile design.

I love creative problem solving. I get to work with interesting people, create cool stuff, and challenge myself in various ways.

I really like what I do. I'm at a very complex organization. Sometimes I wish it were simpler but the complexity has its own allure. But it's a good organization and I rarely work overtime.

I love what I do, I use my education as the platform for creating new projects. I get paid really well.

Changing careers to work in user experience design is the best thing I ever did. It's a great fit for me.

I'm very satisfied with what I do, it's challenging and ever-changing.

I have been fortunate enough to work on some of the most high-profile and challenging software products in the world and have had the opportunity to work with some seriously talented co-workers, from whom I have learned a ton.

I was smart to make the choice to add UX to my technical skills. This made me stand out against other candidates when I was graduating from college (especially in 2000 when few people cared about UX). I'm OK with it all. The career has afforded me some interesting projects and a comfortable lifestyle. However, I'm disappointed by the divide between problem seekers and problem solvers. I wish more of my UX peers were makers, and I wish more of my design/engineering peers could see the forest for the trees.

I believe that my career in usability enables me to engage all of my talents to their greatest effect. It combines my geeky side — knowing the code, knowing the backend, designing the frontend — with my desire to root for the underdog. I get to advocate for users, every day. That gives me a great sense of achievement.

I love what I do.

I almost always enjoy my work. It's great being a consultant and always having new projects. At the same time, once in a while it's difficult always being "new," starting with new people on a project.

Still, after more than 10 years on the job, I am learning every day about tools, methods, process, and about the user.

I learn new things every week, but I don't have the constant feeling of not knowing enough.

A lot of responsibility; I feel that I am important in my organization.

I love my job and I love speaking with users. I work at a company that has interesting non-profit clients, so I feel I'm using my usability skills to help a cause.

I get to help people, and it's a great metaphor for life. You give it your best, but accept that you're not perfect, and you keep trying when something doesn't work like you want it to. It's a discipline that people often don't get at first, but when they do it's like a light bulb has gone off. There's a lot of variety and it's easy to move from company to company if need be — my job isn't tied to a specific industry so there's more opportunity than, say, a financial specialist in treasury management.

I am working in an industry and for a company that embraces user experience and has given me the chance to showcase my skills and build out a user experience team.

I love my job. I love my profession. I was a senior software developer and moved into UX because I felt not enough attention was being paid to the user experience. I make less money and have to justify my existence when budget cuts come around. I like being the bridge between science and art, humans and computers.

It's taken a while for me to find out that this field existed, and that it is something that I really enjoy. There are still a lot of steps to go before I am in the ideal environment doing this, but it's close.

I love my job and the company that I work at. I'm in a good place in my company.

I really enjoy my job. It's very satisfying to make things work better and even look better.

I have been doing this for about 13 years now and am really grateful that I found a profession that fits me. It's also a very dynamic role that changes with technology, so I feel it will never get stale.

It is fun and it allows me to follow my curiosity. I love the mix of research, information design, and testing.

I truly love this field and see myself in UX for a long time.

I've worked on great projects with a lot of great people. I've been able to apply my skills in many industries and on many technologies. I've also moved into a role where I can train and mentor new resources which is very gratifying, and I've seen my team members achieve career growth and a greater influence on the features and products we

deliver. But working in this industry means working in an office a lot, and working with some difficult personalities. That's probably true for many other jobs, but it can wear on you sometimes.

Definitely have more to learn and can expand the usability methodology beyond what I'm doing so far. But for now, I really love doing it. It's so eye-opening to see users validate your thoughts or your plans or give you a completely new direction to go in that you wouldn't have ever guessed.

I create greater efficiency from existing processes. Doesn't matter the medium, I just like to solve problems and make everything easier and more efficient.

I do work that I like, I help people achieving their professional goals.

Because it's an awesome way to earn a living!

I love what I do as a profession. And I love the fact that it is not limited to usability testing, but design research (ethnography) and conception.

I love what I do.

I really love what I am doing and only want to do more of it.

It's high paying and lots of fun. It gives me a sense of purpose in the world.

It is constantly changing, interesting and stimulating work.

I do UX, front-end development and product management at a startup. There is nothing better I could be doing in the world. I'm perfectly suited for this job and this job is perfectly suited for me.

One reason that I love this career is that we're always learning, always striving to improve ourselves, our methods and techniques, and life through the products and experiences we create.

Best job ever. A combination of continuous learning and applied design to improve the world.

Sometimes I feel like taffy in that I'm pulled in many different directions for many different projects. It seems people throughout my company seek me out and want me to participate in their projects, even though our company is highly siloed. And I want to get involved in these projects, because I feel like if I don't, they'll turn out bad (as evidenced by past projects).

It's a great job and I feel like I'm helping humanity, even in a small way.

I like what I do and I have made a difference in our company. They now ask for usability and UI Design for all projects.

I'm very happy with the companies I contract with. Because they've accepted the value of UX it's a harmonious relationship. Plus the money is great :)

I love what I do. Every day and every project is different and challenging to me.

I love designing away problems without creating new ones.

We were early in the field so have many good clients who value what we do, and we work on lots of interesting projects. It's also satisfying to do this work and produce lots of measurable value for clients.

I feel like I have done what I've wanted to do and foresee that I'll continue to do it. The challenge is ensuring a satisfactory business outcome based on the results of our usability feedback.

I love what I do and can't imagine doing anything else. I have moved through the ranks from hands-on practitioner into management, and am now moving into a customer-experience management role, which I see as taking user experience to a higher level — looking at the customer situation across channels and across the full journey. I have some great opportunities to improve our customer experience, and I'm excited to have chance to do so.

My job is interesting and challenging. I enjoy the broad spectrum of things that I do on a regular basis.

I have a wonderful job now where I get to be creative, think all the time, but I'm not stressed out. To be completely satisfied, I would like to at some point be in a position where I'm working more closely with interaction designers, so that maybe I can learn more about that side of the house and be less pigeon-holed into the research side.

It's enjoyable and rewarding if appreciated by your employer. In my case now, it is, so I love it.

I've been in this field for over 20 years and consider that I've pretty much done and seen it all. It's a rewarding career if you are an analytical extrovert who likes technology and people!

I'd love to be more present in conferences, be able to have more time to study new trends. Else, I'm very satisfied. It's a very creative field that fits my needs.

Exciting work. Important projects. New developments and innovative solutions being created on a regular basis.

I have the opportunity in my organization to define exactly what I want to work on, I have a direct impact on the product that is being developed, and I have an opportunity to change the attitude of my organization and drive user-centered design.

I love digging into a problem and learning about our users.

I love what I do. I get to do all sorts of UX stuff with high visibility in my company and also have a team of 10 folks that I manage to do the work with me. They are a great team and eager to learn.

I love what I do.

Interesting work. Love working on mobile projects.

I didn't anticipate this career, but look forward to work every day — the environment (academia), the coworkers, getting paid to think.

I greatly enjoy working with website development projects, and I know how to work with people to manage their expectations and guide them in their needs and requirements.

Best job in my working life.

It really suits my personality, and I love being part of building something people find really useful.

Low stress level. Feeling I help others. Good paycheck.

Thanks to my position I can leverage my experience as a usability expert and work on innovative or research projects

I'm happy. I love doing what I do and I'm extremely well paid. If you include interacting with team members who are unaware of usability and UX, then I would give it a lower rating. I don't see it that way, I do the usability and UX stuff for free, and see my salary as compensation for interacting with the unusables. :p

Freedom, money, working with people: love it.

It's a great challenge and great opportunity. Also, plenty frustrating.

I've been working in this field for around five years. I love that I'm constantly learning, as there are always new challenges as technology develops. At the same time I feel really confident in my skills and I very much enjoy my role. The only reason I didn't rate myself as completely satisfied is that I've only ever worked for one company, and eventually I would like to spend at least some of my time working on a freelance basis.

Love the range of projects and industries and feel confident in my role.

I love being a hybrid of freelance and business owner, I really enjoy user research, and I enjoy all the "UX adventure" that I'm doing. (Google "UX Adventure" and you'll see what that means!)

### **I like the work, but...**

I am satisfied with my career, but want more opportunities to take on new skills, develop my career and work more in actual user research instead of a hybridized designer/researcher role. I'd also like to consider teaching and consulting in the future.

My employer is not using all of my skills to their full potential.

There are some things that people don't realize are important to prioritize to make things more usable and those types of roadblocks are frustrating.

I'd like to do more.

I was very lucky to be given on-the-job training in order to do the UX work that I've done, but my career has hit a plateau. In order to move to management in my organization, I needed to move into product management and not strictly UX because there is no movement there.

Without the HCI-type degree, I cannot move up to management in other organizations, either.

I can learn A LOT more, and apply research and testing techniques more often.

I love what I do, but I do not love the travel that is associated with it.

Formal training would have been nice.

I enjoy the field but look forward to expanding my knowledge base and participating in an environment that better supports and advocates for user-centered design.

I recently transitioned from an environment where I was one of many folks with a formal education in HCI or design background (camera company) to an organization where most folks don't even know what HCI means and information architecture is something that only IT folks know how to do.

Not enough projects, as we're working on the same site with the same audience.

I hate going to job interviews where developers ask me questions about developing code and don't understand or appreciate the user-centered design process, and then they rate me on being a developer when I want to focus on being a UX engineer.

I am very good at what I do, but I work for an organization that does not value my contribution in a meaningful or tangible way, and I am too close to retiring to look for a new opportunity. Additionally, this firm provides no technical career path, so unless you want to advance on a management track (which I have done previously and do not wish to revisit), you just take on more work and more responsibility with no reward.

I'm happy to be able to work as an information architect, but with time I would like to be able to be part of bigger projects.

Sometimes I would love to go one step further, give an even more specific solution to the client, work out a design.

I still need to learn so much more.

Usability testing is still something I do "under the radar" of management, without a budget or a clear mandate. When I look to move on to other UX jobs in institutions where these roles are more defined, I find that my lack of grounding in design is an issue.

I love the science and research aspect and being able to answer questions and come to conclusions about potential solutions. It's fun and gratifying to be able to help design new products and have an impact on what users do. I hate the bureaucracy and business aspects that inevitably accompany it. Always having to justify the importance of user research is tiring.

Sometimes buy-in from stakeholders is a problem.

I'm fairly new, so I'm still learning the ropes. Once I feel more comfortable with my experience level I will probably rate my satisfaction as "Completely satisfied."

I'm happy with my knowledge of content and navigation usability, but not satisfied with my ability to solve coding issues — HTML/CSS, etc. — within content management systems.

Experience design is always called to do wonders, but when trying to fulfill our promises, our standing is always behind business and technological requirements.

The resulting compromises are not as fulfilling as one would love to have it.

One of the things I've found odd is that as I've worked with larger clients and become more senior, the extent to which I feel I'm doing anything decreases.

Many companies still do not support UX; some organizations pay lip service to UX/research but don't follow through with resources, funding, time for it.

Would like to pursue user research more formally as a role. I've tended to be a generalist and have done research, requirements, and design.

I enjoy it, but would like to be doing more experience design.

Been pretty happy, well rewarded. There is a ceiling that is hit that is just now starting to rise related to user experience, outside of the consultant role.

Would like UX and related work to compose a larger portion of my total work, with more control over end-to-end UX design on major projects.

I feel that I have a lot more to learn. ... I am not as visually creative as I wanted to be in my career.

There just aren't a lot of opportunities in the city I live in.

I know I have a lot of skill that can grow and my current job isn't built to allow for some of the user testing I would like to do.

Things are going well but the journey has been a little rough. I'm also not quite sure where to go career-wise after being a director and discovering that managing people is not my strong suit. A professional track vs. management only exists in few places.

I wish I could implement things faster, but some processes inside a big corporation are hard to get through. I also wish I had more time to study.

I think I could do a better job, and then I would be completely satisfied.

I am in charge of our website; however we have a nonexistent to tiny budget for usability; I hope to do more in the coming year(s).

Mostly interesting work but some mundane stuff — also, in many cases, I'm developing training for poorly designed or implemented systems, so I have to explain things that don't make logical sense.

Current position is very isolated. Would love to be working with other designers since I am very new in the field and would love a collaborative learning experience. ... Efforts or enthusiasm for creating an experience across the products and across the end-to-end experience (tutorials, service, support, etc.) are squashed in the discussion phase.

I think I have room for growth.

There is always more that you want to do, but a lack of time or resources. There is still a lack of understanding about how important usability is and how it is achieved.

I enjoy the work, but I haven't practiced the full range yet. Also, my organization is struggling to find its identity, and basic best practices in this area aren't settled, so a lot of time is lost on trial and error and not having a clear focus.

There's still a lot to learn.

My satisfaction varies somewhat with the projects I work on, and the number of projects I have. Working for a consulting company whose focus is \*not\* UX, I often feel somewhat marginalized. However, when I am able to work on projects to which I can make genuinely good contributions, my job satisfaction is very high.

I love my job, but sometimes the politics of it makes me enjoy it less.

I love what I do. I just have to overcome resistance to it. Some project teams do want to invest the time to do it, or they come to us and just want us to say the application is usable.

Recently switched from software development into full-time UX. Finally able to really dig in and learn. Focusing on being a better designer.

Would like to rate it higher but am tired of continually justifying my field when dealing with developers who think they can do usability. I am continually trying to get usability baked into our processes.

I love doing what I do but I can do better.

I'm happy with how things are developing, but I need to do put more testing into our processes and I need to get the team to act on the results.

Could do more if given the opportunity.

I'd like to be able to do more with A/B testing.

Want to do better, stifled by bureaucracy.

My work involves some usability testing but not as much as I would like.

I am a web designer and developer with many hats, so UX work is only part of my day. I wish I had more time to devote to it. I also wish I had more opportunity to work with and learn from other professionals.

Not as much room for creativity as I would like for there to be.

After 15 years of experience, it's hard to find an interesting position where you are not supposed to do business, or just manage people ... but still do usability work by yourself.

The work is awesome, the resistance from stakeholders is frustrating. CEO was a "designer" and trumped logical usability standards I worked hard at.

I have been in the web design field for 13 years for a large company and feel that usability has played a bigger and bigger part in the design process. While this is good, as a designer I am often either left out of the loop or ignored which I feel is nonsense.

Satisfied but am struggling to make a career progression in my company as it's not institutionalized.

I am enjoying my current role but would like a wider range of projects, including more mobile and web apps.

Wish the market for usability services was more developed and we had bigger projects.

I have no complete freedom when it comes to design for usability; business needs and stakeholders block that.

Others in my organization don't rate usability as importantly as I do.

Coming from a design/coding background, I find I actually miss the more "coal-facing" aspects of working on live code and putting changes live. Also, for me, the conversion optimization aspects of my work focus too much on raw numbers and manipulation than actually making things a joy to use.

Not enough testing.

I wish I had more experience in Web but I like what I do.

I feel I have the skills to do my job well on a day-to-day basis. I would like to have the formal skills and training to underpin it and to bring it all together, i.e., Masters in HCI or similar.

I gave this rating because I am holding myself to a high standard. I feel like I haven't accomplished what I want to accomplish.

I work with technical writing. Too often, usability is forgotten when it should be stressed.

I wish the user experience team had more influence and impact.

I wish I was doing projects that made a real difference to people's lives and didn't just mindlessly produce crap.

I'm at a point where I would like to do less project work and more synthesizing in aggregate across projects.

Pretty happy, but not where I want to be (director level or running my own shop).

I wish the business gave more importance and credibility to usability.

My company has been extremely supportive of me transitioning from development to project management to user experience. However, I've mostly gotten thrown into projects without any real mentorship at work. I don't mind being humble and accepting feedback from other team members, and from clients, and improving designs that way. However, I don't get the kind of critique from other user experience professionals that would tell me if I'm approaching projects the right way and coming up with solutions that are pushing boundaries the way they should be. In the absence of this feedback, or usability testing to confirm that thing actually works for users (I work in an agency, and the projects are "too small" for clients to include testing), I find myself questioning whether I'm growing as a professional.

I enjoy usability work, but it's extremely underappreciated by others. We talk a lot about how everyone thinks that if they can put words on a PowerPoint presentation, they're done; they aren't even aware that it's impossible to improve on bulleted lists. That's the uphill battle we face every day, on every project, even with our bosses and people we work with regularly.

I wish I had the opportunity to work more in the mobile space.

Still learning, and so far did not have much mentorship in the industry and learning most by myself!

My career has met my needs for compensation, challenges, growth overall. The things that I feel need improvement are stability, leadership coaching, and organizational impact.

I am still working on getting my company to fully support UX. Right now they see the UX team as a small group of designers who make their lives harder. :)

The environment I've been working in has prevented the delivery of truly outstanding products that could significantly improve the way business is done and change many people's lives for the better.

I like research but would like to branch out to use some other tools and learn some new skills.

It is a new field that many people do not understand, especially managers who can't define expectations and goals very well.

I rate it half way because I'm a usability novice from the point of having the right skills with the right tools. I've got the passion for it. I just need to turn that into a day job rather than a part-time or casual responsibility. Basically I need to go full throttle on the usability career path, otherwise I'll be stuck in developer land as that has some pretty large hooks to keep you in.

I love the work I do and am on the path I want to be on, but I still have skills I want to develop.

I've been in the field for over 12 years now, and I get frustrated with the constant justification of why usability is important. I also manage a team where a chargeback model is in place so that presents administrative (and "selling") challenges. I probably would've rated it higher a few years ago when I was an individual contributor doing the work vs. managing a usability team.

I really like the variety, solving problems, trying to improve the world, and the balance between technology, creativity, and working with people. However, I get tired of UX taking a back seat to product management and development. I also get tired of having to explain / sell / persuade others to let us use all our skills. Sometimes we are underestimated as just people who draw pretty pictures instead of being in a strategic role. Also would like to see more skilled UX folks moving into senior management — often my managers don't understand what I do.

After many years of working in the field, I still love the theory and philosophy — the practice ... not nearly as much.

I found my calling when I entered this field. However, it hasn't always been a bed of roses, mainly in terms of sometimes lacking the organizational authority commensurate with the overall responsibility of my role and contributions to business success.

I'm currently doing more human factors and ergonomics related things, and I miss doing only research. I think I'm going to back to doing user experience research exclusively.

I do not do it 100% of the time.

I wish I had an MS and PhD in HCI. I wish I had a CUA. I wish to attend international UX training programs.

There are so many things I want to do and want to learn — I don't have time and resources to do all that I'm interested in.

I wish I had more control.

It can be very frustrating as you often have little control over what gets implemented vs. what is designed. I don't enjoy the persuasion and negotiation aspects as much as the research and design, and persuasion and negotiation are maybe more important skills than research and design.

I enjoy the work, but don't like the constant justifications.

It's sometimes a struggle to get buy-in from engineers — UX can be seen as an afterthought rather than an integral practice. It can be tiresome having to justify the value, to help some people see the forest (all the end users) through the trees (the technical features), and to get the organizational investment and commitment we need.

I really like doing what I do, but it's a daily struggle working with:

- People who don't entirely understand what you do or its value
- Having to convince people of the value of your work

– Having to convince managers that you really DO need to be in touch with users

– Software development processes that don't have a clear location for UX activities

I love the field, but may have plateaued as a senior individual contributor. I don't see UX as a path for career advancement like marketing or technology. I am concerned the field is being dumbed down with focus on web design (without research and evaluation) and what that will mean for future prospects.

I don't think I'll be completely satisfied until I am a UX rock star or at least have a book under my belt. I also fear I am not keeping up with new developments in the field well enough but continue to fail to find time for much continuing education. Objectively, I think I'm in a pretty good place.

Since I've become a leader and manager, I miss hands-on design work.

I'm having a hard time getting UX prioritized. Company wants to just build something without doing the foundational work and we build the wrong thing — frustrating.

I still have lots to learn, and room for growth, but I love what I do and can't imagine doing anything else.

We deal with lots of government clients, which limits some of our creativity. ... Lifecycles on these projects can last over a year, and it is easy to get burned out on a particular project or client.

I finally realize that I'm not good at being the lone ranger, that I need other professionals to thrive.

I would rather be doing this for a more altruistic cause rather than chasing money and early retirement.

Love the creativity that goes into my job but looking for more opportunities to grow career in a technical way.

It's difficult to get buy-in from upper management to conduct usability tests.

I have enjoyed the work that I've done, but inevitably company politics or budget get in the way of accomplishing much of what I'd like to do.

I spend a lot of time having to proselytize and justify design and usability ... I'd rather be able to just do it.

I wish there was more support for usability testing in the current shop I work at on the agency side.

I've been pigeon-holed into interaction design and I'd rather be a hybrid interaction designer and visual designer. ... Also, I'd love to work only on iPad, iPhone native apps. Sick of responsive crap.

Love doing the work, and have found it difficult at times to find continuous employment (or consulting work), despite apparently increasing demand.

At times it is a frustrating field because you need to argue your points. Negotiation skills are a very important. There are still a lot of organizations that have a very low level of UX and user research education, and it's hard to find peers to work with. Having an initiative is really important, since you are the only one pushing for anything to happen on the UX front.

I'm a consultant — the travel gets exhausting.

I love the work, but it's difficult to gain trust and acceptance in large development organizations.

I wish there were better continuing education opportunities available to me.

It's been interesting and fairly rewarding, but I haven't liked any of the products I've worked on. I want to help build products I can really be proud of, maybe ones that I'd actually use myself.

I love my job. I love the work. There are still struggles to make sure we are included, which is why I didn't mark completely satisfied.

I wanted to do usability testing on a daily basis but it never happened in my 15 years. Companies don't know about usability testing that much or they don't buy in. I ended up doing prototypes and then see them into full-fledged applications without proper usability testing. So, I'm satisfied but not enough in usability.

I'm finding myself a bit stuck at my level. There are so few executive opportunities requiring a UX/CX background that it's difficult to move beyond director level without returning to an agency environment.

I think there is a more diverse range of things I could be doing, but our business generally dictates that I do the same activities frequently.

I work at a consulting firm delivering solutions for US federal government clients. Usability is not really built into how we deliver solutions to these clients, although the clients tend to expect it. It's challenging to find opportunities to build usability practices into the software development life cycle when they aren't stated needs in the contract or RFP response.

I think that I would have given it a higher rating if I were working in the United States, where the field seems to be growing exponentially. My rating is also affected by the .dot com implosion where I was told that my skills were not popular.

I've been doing this for almost 10 years, and other than becoming a manager of other UX people, or just a more senior UX person who does the same work, it feels like growth potential is limited. Also, sometimes I feel like "we get no respect," but then I often have a hard time rationalizing the need for certain UCD practices when reality intervenes.

Trouble finding a satisfying job.

I often find the work frustrating — UX leads at my agency are expected to know and do a lot, but are not given much support or training.

I love my work, but I have been involved lately with organizations that force me to compromise on principles I find important or essential.

I wish I had more freedom to do more and take more control of the projects — this will come with time and experience.

UX design isn't valued as overtly as I'd like at my company (although everyone loves a good design). We don't have a dedicated UX team.

I wish I could dedicate more time for usability specifically. I feel I do much more than that, because my company needs me to intervene in different domains and projects. My position is not entitled "usability specialist," and there is a certain confusion on what this job really is. However, I feel we can improve the quality of our products through user centered design and more specialized work.

As I specialize in usability, am concerned about availability of future jobs and career progression as user experience, specializing in front-end design etc., seems more prevalent and has more opportunities.

UX is one of the things I do — I'd like to spend more time with it, learn more, maybe go into it full time so have rated it in the middle.

I enjoy it, but it can be frustrating and the career advancement opportunities feel somewhat limiting towards the top.

There is still so much to learn and it's hard to keep on top of all the new design trends and the speed at which mobile user interfaces are developing.

I'm in a bit of a rut. Without formal training, I won't get "pure UX" work. Without design skills, I won't get what most companies THINK is "UX work."

### **Not thrilled with my situation**

I can't get enough usability at my company.

I work for an agency. Some projects can be stressful.

We still have so far to go in making our company aware of usability (especially in terms of on screen readability).

Not happy at current job. Want to get into mobile but having difficulty. Not many options for training and need prior experience to get a job in it. Jobs today either require experience or don't do mobile.

It remains a tough sell to SMEs [subject-matter experts] and executives who are so very convinced that they know what's best, that they know what the users want or should want.

I'm getting bored. And it's hard to continually prove the value of user experience design and not be overridden by product managers and competing business interests.

I should be contributing at a higher level by now, after more than two decades. But it's easy to get stuck in a big organization and to get boxed in by the current expectations of how I should contribute.

Sometimes I don't feel challenged enough. Some days I feel too reined-in by my coding/design/development skill set (not to myself, but by others).

I haven't made the time or taken the effort to go back for more formal training and/or truly latch on to a mentor who can help me. So there are times I still feel a little like I'm in over my head.

I find it has me sitting too much, working alone. Clients are nutty — inconsistent, and I find myself having to take them by the hand a lot. Also, they have a problem appreciating how much work we do — they think this is all a big hat trick and don't often respect advice.

After 15 years I'm pretty bored. I keep having the same arguments with people regardless of the company, and I'm tired of seeing UX concerns saved for last, in case there's any budget left over (which there usually isn't).

My role is generally not valued and respected. I constantly need to explain my skills and fight for involvement in projects.

Product management often gets a leap and can control product marketing and UX. UX people should have more business context and seen as equal. PM have potential to grow to VP/CEO. UX not so much.

Location and work/life balance had negative effect on career goals.

Too much self-training.

I gave it the poor rating because I feel like a homeless prostitute. All the potential gigs come thorough "recruiters" who do nothing more than make an introduction and then a big cut in my fee.

Low ceiling for career prospects within the enterprise (there is no CUO) [Chief Usability Officer].

Company does not support me in IA after the first year. Poor professional development planning.

I think I was hired because of my graphic design skills, and I'm a beginner in UX, so they could pay me a lower salary. But really I believe if you're alone and in a culture that isn't design friendly, only a senior designer who has had experience evangelizing design, dealing with people and bringing them together and getting them excited about improving products can be effective. Sitting at your desk all day trying to wireframe something when you don't fully understand everything users do with the application is worthless.

It's been a compromise, a struggle between what I'd like to persuade my clients to let me do and what they're willing to do. I get very frustrated that I could be doing a lot more but don't get the opportunities to do it. I'd like to be doing more client work and less writing / teaching, but it seems that writing and teaching opportunities are what come my way.

It can be a thankless job and a much berated one with others thinking they can do just as good or better job. Lack of respect for the discipline can cause frustration, especially when it is often due to people's previous interactions with poor UX consultants.

Still fighting some of the same battles I faced 10 years ago, so it seems like too many things don't improve. It's getting difficult to keep up with all the changes and new technologies.

As a designer I'm confined by the requirements given to me, I want to own the decision before it's made. I want a more strategic role, and I think there is a place for designers to own more product strategy, rather than carrying out requirements.

I don't get to do as much as I would like. Educating others about the value and benefit is tiresome. Humans can be frustrating.

I don't feel like it's very valued in general.

I like my job but my compensation is still too low.

Timelines crush the ability to do any tangibly effective research or user testing. UX is seen as a production step rather than a holistic way of thinking and doing. Once wireframes are finished, little time is given to iterate, react and readdress.

Lack of tech background and experience in mobile apps is an issue in advancing my career as web product manager.

It gets frustrating having to justify what you know from talking to, observing and working with users to people who just want things their way.

I think it's a hard area to get recognition in.

I would like to change enterprises.

It's a very limited niche / specialty without a forward moving career path.

In my particular organization it has been challenging to get usability testing into the culture so it's part of the development process. Often, I am brought in to conduct testing after a product has been launched and complaints have been received. Then, when I make recommendations, many are not implemented because there isn't a budget left to rework the software. The changes tend to be those that can be easily and cheaply done; often, those are not the changes that will make the biggest difference for users. It can be frustrating.

I only come in after it is too late to do much of anything about the issues I uncover.

Still feels like a team of one, I did start a social group for UX so you can talk to the same kind of people, but still too little time, money, acceptance for the work.

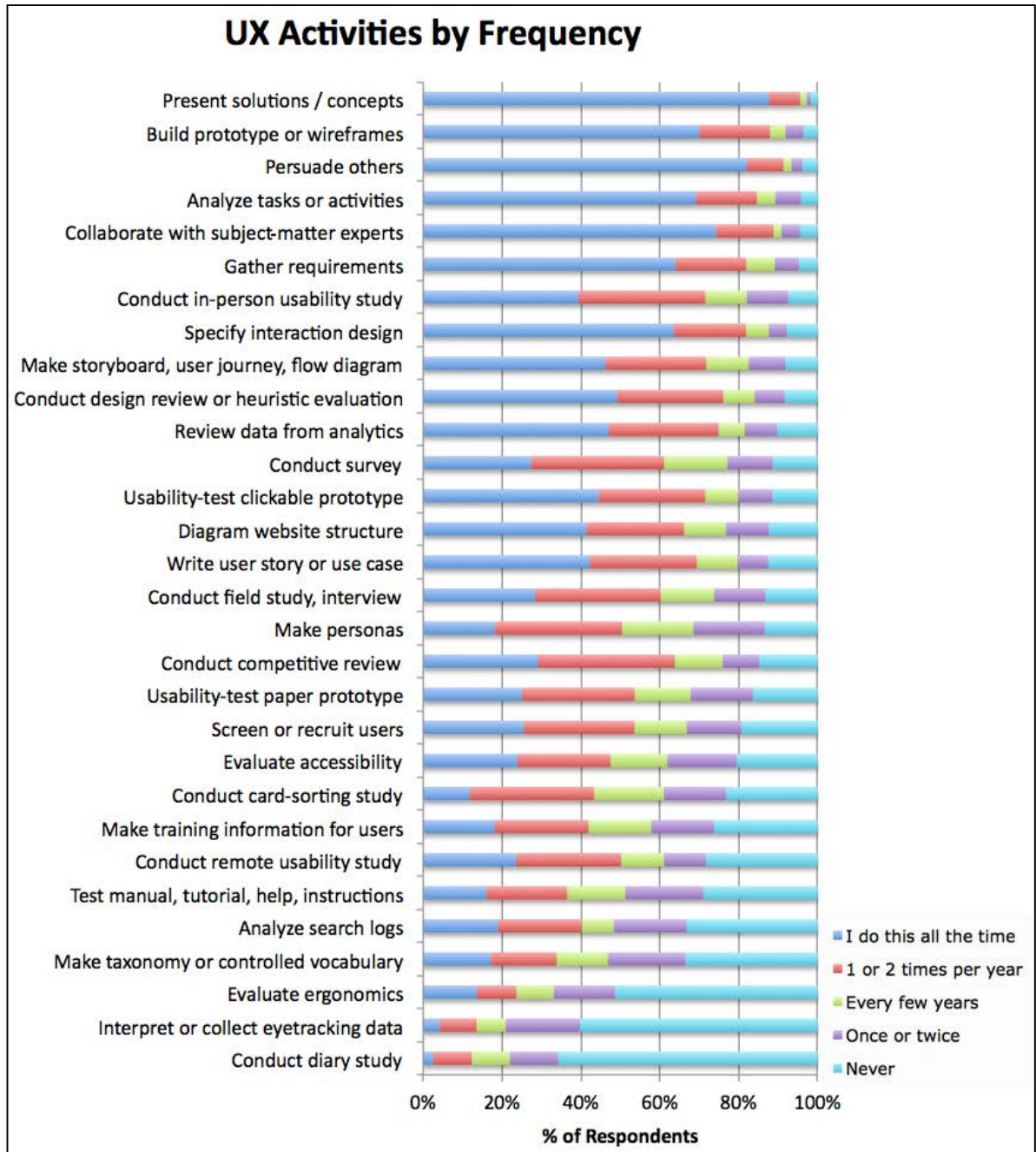
It's still an uphill battle to convince organizations of the value of good UX, and of its status as a process, not a product.

Still too large of a gap between what I do and what actually gets done.

Growth is very limited. There aren't many manager positions. The vast majority of UX jobs are for senior [practitioners].

We don't even have an interface designer in my organization. Therefore I act as business owner, analyst, interface designer, tester, etc. Unfortunately our IT department only has developers and a project manager.

## Appendix B: UX Activities by Frequency



UX activities are discussed in "Job Activities," beginning on page 35.

---

## Appendix C: Education

Degree types are discussed in “University Degrees,” beginning on page 40.

### **Bachelor’s degrees in design, psychology, and communication**

The lists below are meant to help the reader understand the variety of design, psychology, and communication undergraduate degrees reported.

An interesting thing about the design and communication degrees is that a lot of the degrees could reasonably belong in either category, such as Communication Design and Communication and Multimedia Design. There were a lot of degrees with the word “media” in them, but if they didn’t also use the words “design” or “communication” they were not included in the list below, even though many are probably concerned with design and communication.

### **Design degrees by type**

The top seven had more than one person reporting a degree in that area.

- Graphic Design
- Industrial Design
- Design
- Communication Design
- Interaction Design
- Visual Communication
- Visual Design
- 3-D Design
- Art-Design
- Art, Graphic Design
- B-Tech Entertainment Technology, Costume Design and Creation
- Commercial Art
- Design Innovation and Cultural Anthropology
- Design-Advertising
- Engineering Product Design
- Graphic Information Technology
- Information Design
- Information Environment Design
- Interior Design
- Media Arts and Design
- Media Arts, Design, CIS
- Multimedia Design
- Multimedia and Web Design
- Multimedia Technology and Design
- Product and Graphic Design
- Product and Systems Design Engineering
- Product Design
- Textile Design, Graphic Design

- User Experience Design
- Visual Arts, Graphic design emphasis
- Visual Design, Photography
- Web Design
- Web Design and Visual Communications
- Web Design, Multimedia

### **Psychology degrees by type**

Psychology degrees at the undergraduate level are generally called “Psychology,” so there is less diversity in the name of the degree, typically. Students may have major and minor concentrations in a number of specialty areas, such as experimental, abnormal, engineering, cognitive, developmental, and so on.

General Psychology was the most common psychology degree in our survey, followed by Engineering Psychology.

- Psychology (unspecified or general)
- Engineering Psychology
- Applied Computing: Computer Science and Psychology majors
- Biology, Psychology major
- Cognitive Psychology
- Computing with Psychology
- Economics, Cognitive Psychology major
- English, Psychology
- Experimental Psychology
- Neuroscience and Behavior
- Psychological Sciences
- Psychology and Spanish Literature
- Psychology, Human Factors major
- Psychology, Math, Philosophy
- Secondary Education, English, Psychology
- Social Psychology

### **Communication degrees by type**

As with the design and psychology degrees, the communication degrees also show some interdisciplinary combinations as well as specialized focus (majors and emphases). The general or unspecified Communication degree had the most graduates in our study (13), and runner-up Scientific and Technical Communication had only 4. Technical Communication is a common background for UX pros, but it often hides inside other programs as a subspecialty or as elective courses, for example in English, general science, engineering, and communication programs.

- Communication
- Scientific and Technical Communication
- Visual Communication
- Communication and Multimedia Design
- Communication Studies
- Art, Communication, Film

- Broadcast Communication
- Communication and Marketing
- Communication and Media
- Communication Disorders
- Communication Technology
- Communication, Advertising emphasis
- Communication, Knowledge and Information Management emphasis
- Communication, Marketing emphasis
- Communication, Media, Technology
- Communication, Technical Writing emphasis
- Graphic Communication, Mass Communication
- Human Ecology, Mass Comm. & Machine-Mediated Human Interaction
- Interactive Communication
- International Communication
- Journalism, Mass Communication
- Management, Communication and IT
- Marketing Communication
- Marketing, Economics, Web Development
- Mass Communication and Sociology
- Media and Communication Technology
- Social Communication
- Symbolic Systems, HCI, Anthropology
- Technical Communication, Engineering Marketing
- Technical Communication
- Technology & Digital Media, Digital Communication & Media/Multimedia

### **Other types of bachelor's degrees mentioned**

Each degree type below was earned by 1–3 successful UX professionals. The degree types most people mentioned are discussed in "University Degrees," beginning on page 40.

- Advertising
- Animal Science
- Botany Zoology
- Cognitive Psychology
- Computer Animation
- Computer Engineering
- Computing with Psychology
- Cybernetics
- Disability Issues
- East Asian Studies
- Economics
- Engineering Science
- Environmental Science
- Finance, Marketing

- French
- Geography
- Geology
- German Sociolinguistics
- Government
- Graphic IT
- Health and Sports
- Horticulture
- Human Relations
- Humanities
- Information Design
- Informatics
- Interactive Communication
- Interactive Multimedia
- Interior Design
- International Studies
- Internet Engineering
- Library Science
- New Media
- Nutrition
- Philosophy
- Photography
- Physical Therapy
- Physics
- Recreation
- Screen Studies
- Spanish
- Statistics
- Translation
- Writing

## All master's degrees by topic area

Highlighted are degree areas we consider as more central to UX, but almost all could be useful. Master's degree topic areas are discussed in "University Degrees," beginning on page 48.

MASTER'S DEGREE TOPIC AREAS	COUNT
HCI (Human Computer Interaction)	40
MBA (Business)	27
Information Design	18
MLIS (Library and Information Science)	18
Psychology	18
Computer Science / Engineering	14
English	14
HF (Human Factors)	13
Arts	11
Design, Digital	10
Multimedia Systems	9
Technical Communication	9
MIS (Management of Information Systems)	8
Communication	7
Education	7
Marketing	7
Cognitive Psychology	6
Education Technology	6
Information Studies	6
Sociology	6
Interaction Design	5
Interactive Multimedia	5
Journalism	5
Anthropology	4
Business	4
Cognitive Science	4
IT (Information Technology)	4
(IA) Information Architecture	3
Computer Arts	3
Linguistics	3
Music	3
Physics	3
Science	3
Archaeology	2
Architecture	2
Cognitive Ergonomics	2

<b>MASTER'S DEGREE TOPIC AREAS</b>	<b>COUNT</b>
Design, Graphic	2
Etech for Business	2
Information Management	2
JD (Law)	2
Neuroscience	2
Nutrition Education	2
Political Science	2
Product Design	2
Bioinformatics	1
City Planning	1
Creative Writing	1
Design, Industrial	1
E-publishing	1
Film	1
German Literature	1
History	1
<b>Informatics</b>	1
Internet Studies	1
Landscape Architecture	1
Literary Studies	1
Management Arts	1
Media	1
Molecular Biology	1
Paleobiology	1
Photography	1
Physical Therapy	1
Religion and Culture	1
Second Language Acquisition	1
Technology	1
Technology Management	1
Theater	1
Theology	1
Translation	1
<b>Video Games, Interactive Media Ergonomics</b>	1
Warfare	1
Web Development	1
Writing	1

## Recommended courses

These classes were recommended by respondents as being very useful. We made some of the best bets bold, based on what respondents said about useful knowledge throughout the survey.

<b>COURSE RECOMMENDATIONS</b>	
Accounting	<b>Intercultural Differences</b>
Aesthetics	<b>International study</b>
Anatomy and Physiology	<b>Interpersonal Skills</b>
Behavioral Economics, Gamification	<b>Journalism</b>
<b>Behavioral Science</b>	<b>Knowledge Management</b>
Biology	<b>Leadership Training</b>
Biomechanics	<b>Learning Theory</b>
Business	<b>Library Science</b>
Business – History of Companies	Life Drawing
Business – Startup Business	<b>Literature / Writing</b>
<b>Business Analysis</b>	<b>Logic and Reasoning</b>
Business Laws	<b>Management and Organizational Change</b>
Business Organization	<b>Management Consulting</b>
<b>Business Requirements</b>	<b>Media Studies</b>
<b>Change Management</b>	<b>Mentoring</b>
<b>Channel Marketing</b>	<b>Methods and skills (Agile, research and design methods)</b>
City Planning	<b>Mobile Design</b>
<b>Classes that help develop your listening skills</b>	Music and Art
Coaching	<b>Negotiation</b>
Cognitive Ergonomics	Network Analysis
Cognitive Neuroscience	Neurology
<b>Cognitive Psychology</b>	Neuroscience, Foundations of
Cognitive Science	Neurosciences / Neuro Design / Neuro Marketing
Color Theory	<b>Nonverbal Communication</b>
<b>Communication</b>	<b>Occupational Therapy</b>
<b>Communication in Teams</b>	<b>Organizational Behavior</b>
<b>Communication Skills</b>	<b>Organizational Communication</b>
Computer-Based Training	<b>Organizational Dynamics</b>
<b>Conflict Management</b>	<b>Organizational Informatics</b>
<b>Consulting / Soft Skills</b>	<b>Organizational Management</b>
<b>Corporate Communications</b>	<b>Organizational Psychology</b>

<b>COURSE RECOMMENDATIONS</b>	
<b>Corporate Culture and Change</b>	<b>Organizational Theory</b>
Counseling	<b>Perceptual Psychology</b>
<b>Creative and Lateral Thinking</b>	<b>Persuasion and Persuasive Writing</b>
Creative Collaboration	<b>Pervasive Interaction Design (multiple device design)</b>
<b>Critical Thinking</b>	<b>Photography</b>
<b>Cross-cultural exchange</b>	Policy Making
<b>Customer Service Training</b>	Political Science
Database Theory	Popular Culture
<b>Debate</b>	<b>Presentation skills / public speaking course</b>
<b>Decision Architecture</b>	Printmaking
<b>Decision Making</b>	<b>Problem Solving</b>
<b>Design</b>	Process and Production History
<b>Design Ethics</b>	<b>Product Design</b>
Design Studios	Product Engineering
Design History	<b>Product Management</b>
<b>Development Methodologies</b>	<b>Programming project</b>
<b>Digital Marketing</b>	<b>Project Management</b>
<b>Disability Studies / Accessible computing</b>	<b>Proposal Writing</b>
<b>Drawing</b>	Psychological Counseling
Drawing, 3-D	<b>Psychology</b>
<b>E-Commerce</b>	Psychomotor and Cognitive Skill Learning and Performance
Eastern Religions: Buddhism, Hinduism and Taoism	<b>Qualitative Methods</b>
<b>Editing</b>	Rebranding projects
Education	Relational Database Design
<b>Education – Adult Education</b>	<b>Requirements Engineering</b>
<b>Education and Instructional Design</b>	<b>Sciences</b>
<b>Educational Psychology</b>	<b>Screen Studies</b>
<b>Educational Technology</b>	Sculpture
<b>Emotional Intelligence</b>	<b>Search Engine Optimization</b>
<b>Emotions, Creativity, Motivation</b>	<b>Semiotics</b>
<b>Experimental Design</b>	<b>Social Cognitive Psychology</b>
<b>Facilitation / Moderation Techniques</b>	<b>Social Media Usage</b>
<b>Field Studies – Observe, Capture, Analyze</b>	Sociology of Gender

<b>COURSE RECOMMENDATIONS</b>	
Flash Action Scripting	<b>Sociology of Organizations</b>
<b>Foreign languages</b>	Sociology of the Family
Game Theory	Software Engineering
<b>Graphic design, composition and layout</b>	<b>Software Planning</b>
<b>HCI Online Courses</b>	<b>Speech or Improvisation</b>
<b>How to Analyze Case Studies</b>	<b>Statistical Analysis</b>
<b>How to use various design tools</b>	<b>Storyboarding</b>
<b>Human Behavior</b>	<b>Storytelling</b>
<b>Human Factors</b>	Student Affairs
Human Resources	Studio-based design project
<b>Human Subjects Rules and Best Practices</b>	<b>Systems Theory (e.g., Hierarchical Organization, <a href="#">Herbert Simon</a>)</b>
<b>Illustration</b>	<b>Technical writing</b>
Income Tax	<b>Theater</b>
<b>Industrial Design</b>	<b>Thesis</b>
Industrial Engineering	<b>Time Management</b>
<b>Industry-specific course to get some domain knowledge</b>	<b>Time-Based Media Design</b>
<b>Information Design</b>	<b>Training theory and practice</b>
<b>Information Gathering</b>	<b>Typography</b>
<b>Information Graphics</b>	<b>Usability Testing</b>
Information Systems	<b>User Experience</b>
<b>Instructional Design</b>	<b>UX projects</b>
Instructional Systems Design	<b>Video Production</b>
Intellectual Property / Publishing Rights	Visual Neuroscience
<b>Interactive Design</b>	<b>Visual Perception</b>
<b>Interactive Exhibits</b>	<b>Web Analytics</b>
<b>Intercultural Communication</b>	<b>Website Psychology</b>

## Courses that respondents wished they had taken

WISHED-FOR COURSES	COUNT
Accessibility	2
Accounting	1
Advertising	1
Agile Methods, Scrum	1
American Sign Language	1
Anthropology	29
Architecture	2
Art	2
Behavioral Design	1
Behavioral Economics	2
Behavioral Research Technique	1
Behavioral Science	1
Biology	1
Business	24
Business Analysis	2
Business Management	2
Business Process	1
Business Writing	1
Cognition	1
Cognitive Engineering	1
Cognitive Science	4
Color Theory	2
Communications	9
Compassion	1
Computer Graphics	1
Computer Programming	19
Computer Science	24
Computer Technology	4
Cultural Differences	1
Customer Development	1
Customer Research	1
Data Analysis Methods	3
Data Mining	1
Database	1
Database Engineering	1
Design	31
Design Basics	1
Design History	1
Design Methods	2
Design Principles	1
Design Software: Photoshop / Illustrator	4

<b>WISHED-FOR COURSES</b>	<b>COUNT</b>
Design Strategy	1
Digital Art, How To	1
Drawing	4
Economics	3
Editing	1
Educational Psychology	1
English Literature	1
Ergonomics	3
Ethnography	2
Ethnology	1
Executive Presence	1
Facilitation	1
Fine Arts – visual arts	3
Fireworks	1
Foreign Languages	2
Game Design	1
Game Theory	1
Graphic Design	28
HCI (Human-Computer Interaction)	78
How People Learn, Life Stages	2
Human Behavior	2
Human Factors	30
Human Factors International CUA (Certified Usability Analyst)	2
Human Resources	1
Illustration	3
Industrial Design	10
Informatics	1
Information Architecture	5
Information Technology	3
Information Visualization	2
Interaction Design	15
JavaScript	6
Law	1
Library Science	5
Linguistics	1
Logic	1
Machine Translation	1
Management of Information Systems	1
Market Research	2
Marketing	15
Master of Design	1
Master’s degree	1

<b>WISHED-FOR COURSES</b>	<b>COUNT</b>
Master's in Design Strategies	1
Master's in HCI / UCD	3
Math	3
Mechatronics -- Robot Design	1
Media Studies	4
Methods, Interviewing	1
Methods, Product Research And Design	1
Methods, Usability Testing	1
Microsoft Office	1
Mobile Design, Research	2
Multimedia	1
Negotiation	1
Network Systems	1
Operations Management	1
Organizational Behavior	4
Organizational Change	1
Organizational Courses	1
Persuasive Techniques	1
Predictive Modeling	1
Presentation Skills	1
Presentation, Design / Organization	2
Problem Solving	1
Process Improvement	1
Product Design	3
Product Development	1
Project Management	3
Prototyping	4
Psychiatry	1
Psychology	75
Psychology, Behavioral	9
Psychology, Cognitive	9
Psychology, Experimental Human Protocols	1
Psychology, Research Methods	1
Psychology, Social	1
Public Speaking	3
Qualitative Research	1
Quantitative Research	2
Remote User Testing	1
Research Metrics	1
Research-Based Courses	1
Service Design	1
Sketching	2

<b>WISHED-FOR COURSES</b>	<b>COUNT</b>
Social Anthropology	1
Social-Science Research Methods	25
Sociology	17
Sociology, Behavioral	10
Software Design	1
Software Development	2
Software Engineering	1
Sports Management	1
Statistical Modeling	1
Statistics / Probability	43
Storytelling	1
Task Analysis / Workflow Design	1
Team Management	1
Technical Writing	1
Technical Writing, Software	1
Theater	1
Typography	5
Usability	5
User Centered Design	3
User Experience	10
User Experience ROI (return on investment)	1
User-Interface Design	5
Visual Design	14
Web Analytics	2
Web Design / CSS	32
Web Programming	6
Wisdom of Crowds	1
Workshop Facilitation	1
Writing	5
Writing for the Web	1
Writing in Plain English	1

## Appendix D: Advice on Getting Started in UX

Continued from “How to Get Ready to Do the Work,” beginning on page 65.

“Someone who wants to enter the UX field should learn how to ask questions and, more important, how to listen to the responses. Much of what we do involves gathering information and paying attention to other people. A UX professional also needs to understand the value of forming a hypothesis for testing before forming an opinion or judgment.”

“Only do it if you are personally motivated to improve user experience. Aim for other positions, because positions with ‘UX’ in the title are rare.”

“Observe and participate in as many usability studies as you can. Volunteer, if necessary.”

“Look for college degree programs with good internship opportunities. Know the technology, read a lot, but most importantly — do. All the tools are out there.”

“Learn how to be an excellent business writer — concise, focused, to the point. Ask questions about UX and business in general. Be humble. Assume you know nothing, and be ready to learn what you don’t know.”

“Subscribe to newsletters from NN/g, UIE and others; join UXPA or other professional organizations, read ... books on usability testing, Information Architecture, designing for the web; if possible take courses from a university or HFI or attend professional conferences; find a mentor; volunteer to help design and test at work or for a non-profit.”

“Develop a passion for the end user. In everything you do, consider the end user. Make suggestions and improvements. Do research and utilize tools and methodologies that will help improve the user experience.”

“Read ... [Elements of User Experience](#). Learn about service design, learn about human behavior, work as a consultant for at least a couple of years to be involved in different types of projects, learn how to facilitate a workshop, learn how to get user insight.”

“My degree in industrial design has proved to be incredibly useful for a variety of jobs. While industrial design focuses on products, the principles can be applied across a diverse set of jobs. Getting a degree that focuses on the process of design, understanding users and solving problems through design is really what you want.”

“Find a mentor who will allow you to watch and learn and will forgive your stupid questions. There are a lot of brilliant people in the field with big brains and advanced degrees, and it can be intimidating, especially if you didn’t formally train in UX as an undergrad. A benevolent mentor will increase both your skills and your confidence.

“Network! Go to local events. Do a temp assignment to build your portfolio. Sign up with various staffing agencies to receive announcements. Also consider a low-paid or unpaid internship.”

“Find a mentor. Be persistent in this. A quality mentor will initially say they have too much on their plate, but look for someone who is geographically close and ask them questions, see how they work and what they can pass on to you.”

“Design school in this profession is important unless you’ve been in the industry for many years already. There are some fundamentals that are taught there that will help during your first jobs. Work both in-house and in an agency. Learning how to bring a product to life from within a company is not only thrilling, but teaches you valuable skills about how to design realistic solutions. Working in an agency I think is important for learning how to sell design... . It also opens up the possibilities for creative exploration.”

“Gain hands-on experience as soon as possible (internship during college, etc.) because no curriculum prepares you for the ‘real world’ job.”

“Focus on the conceptual skills, not the specific tools. You can learn any tool, but your value is in your understanding of the process and application of your skills.”

“Get as much training and practice as you can.”

For a research job, “learn about and try out as many different research methods as possible. Technology will always change, so don’t worry about knowing everything about a particular type of product or technology, but instead focus on having a solid knowledge of how to use methods that are appropriate for the business questions that need to be answered.”

“Education, education, education!”

– Do not think that because you understand an user interface, others will too.

– You should learn to put your opinion aside.

– Also learn to test the right way. Asking a user about his opinion is very often not getting the best results, rather ask them to do a task and then watch for the little details, hesitations, ask why they do it a certain way, preferences, but never opinions.

– Learn to gather data, how to evaluate data, and very important how to present your findings.

– It is essential that you understand the underlying technology when designing an interface, otherwise you can only make guesses and best bets.”

“Get a job doing ANYTHING in the industry you want to work in. I started as a Project Manager. If you have a talent for Usability and UX, offer to do those things for people (or just do them and present) and most companies will quickly start having you do more!”

- Get a grounding in classic graphical design, especially layout and forms design, to gain an understanding of fundamental principles.
- Depending on your background, you are likely to be stronger at designing processes (e.g., multi-screen workflows) or layouts (single-screen designs). Work on developing your weak side.
- Document whatever examples of UX-related work you have done, even if they only cover part of the ideal UX skill set.
- Build your own demos, either pure exercises, pro-bono work, or ‘extras’ for paying clients.
- Stay engaged, keep learning.”

“Don’t mistake what works for YOU with ‘what works.’ Cultural differences cannot be overestimated, and culture is NOT synonymous with ‘what country you’re from’ or ‘what language you speak.’ At the same time, making judgments based on a person’s age group? Don’t go there... . Be ready to constantly learn new technologies and be willing to cross train.”

– Connect with your local community professionals. Read as much as you can about the work you want to do. If you can, get some formal education — including seminars and conferences. In your current job (if you’re already working), figure out which skills are used in a UX role and play that up on your resume/in interviews.

– Get some practical expertise with as many different tools as you can. Intern with more than one company or organization. Network with others doing the same work. Going to school will give you certification but the skills will be learned on the job.”

“If someone at your workplace does it, volunteer to help on a project. Then, ask them about the job. If it sounds up your alley, take courses. ... If you’re learning and doing at the same time, it’s going to stick a lot more.”

“Get a certification of some sort.”

“The best thing for me was to work for a consulting firm that exposed me to many clients, industries, and projects quickly, but did so with strong emphasis on process, reporting, business communications, etc. Boutiques are great for flexibility and creativity, but be sure to get the MBA skills you need. Big firms may not have as many exciting projects — e.g., big installations or internal business projects — but they will teach you the basics of business, which will be the foundation of all business work you do later. At some point, there are VERY VERY few senior-level design or usability jobs. But business people with design and / or usability skills are quite marketable. If you plan to continue to progress, without necessarily opening your own firm, be sure to get the boring old business skills you need (marketing, budgeting, sales, writing performance reviews, mentoring, etc.).”

“Don’t box yourself into a corner and just do design or just do research. Learn as many strategic and business skills as possible.”

“Practical experience and portfolio of projects is better in my opinion than lots of qualifications.”

“Make time to take training wherever you can find it, whether it’s a usability newsletter, an NN/g (or other) conference, webinar. It’s important to keep current. Focusing on mobile, for now, seems to be the way to go.”

“Internships — critical for gaining experience in the field. Whatever role you’re in, push the user experience.”

“– Training: University degree or industry specialist training like Nielsen Norman Group, HFI (CUA), or Cooper U.

– Join the UX community: LinkedIn groups, UX Book Club, conferences (UXPA, HFE, ACM-SIGCHI).

– Experience applying UX in a variety of settings using a variety of tools, ideally with a mentor’s assistance.”

“Gain hands-on experience as soon as possible. If you work in a company with UxD [User Experience Design] professionals, ask them if you can job shadow, help them with their work, act as a guinea pig for interview scripts ... . Get a wide range of experience, from research to design if possible. Then apply for a degree program in Interaction Design, UxD, HCI, whatever discipline you are most interested in.”

“– Get a diverse education encompassing many different fields. Take courses in psychology, media literacy, group dynamics, research methods, etc.

– Continue your education by getting the terminal degree in your field.

– For your first position or internship out of college, try to get a job at a startup company where employees wear many hats. Ask the UX department if you can help them out in any way. Learn from what they do.

– Subscribe to UX trade feeds on Twitter, read UX books, and peruse UX blogs daily to gain more knowledge of the field.

– Once you’ve discovered what usability is all about, try taking on more independent responsibility at your current job. Ask if you can take a stab at writing a survey or conducting a focus group.

– Keep all your reports from every project you produced in a portfolio. Once you’ve gained experience in the field, show your superiors the work you’ve done and the value you give to the organization.”

“If you can’t get directly into the role, get into a company or agency that has those roles and seek a lateral move. There are a million everyday examples where usability can be improved. Note them and blog about them. Be positive and constructive. Don’t neglect the offline world.”

“Study something you love — library and information science, computer programming, human factors, psychology. Read some Jakob Nielsen, some Donald Norman, some Jared Spool. Buy a smartphone. Find a mentor if you can. Then dive in and learn by doing.”

“Learn to observe. Plot your observations. Make your ideas as visual as possible.”

“Start doing usability tests; do them for your friends or find something in your current organization to test; work on understanding the difference in how people use a tool versus how designers and developers create a tool. Build skills in requirements gathering, facilitation, and information architecture.”

“Take a course in human factors; get technical experience in tools / programming; write online reviews of UIs.”

“– Have a proper IT education, preferably in websites, web-applications and mobile apps.

– Do some reading. (Nielsen, Norman)

– Know what [is possible / impossible to do] with HTML, CSS and JavaScript.

– Look at your environment, even household items. What can be improved?”

“Read and listen to the experts — Gerry McGovern, Steve Krug, Jakob Nielsen, Lou Rosenfeld, Jared Spool, etc.”

“Transform your current role by focusing on the user.”

“Read a lot, attend conferences and meetup groups. Get a mentor or become an intern. Never stop learning and experimenting.”

“Master the basics. take a formal design course at university.”

“Start reading about evaluation methodologies.”

“You might not be able to step immediately into a UX job — be prepared to work towards your goal in ‘gateway’ roles.”

“– Get an education in it. These days there are good graduate programs.

– Read a lot and read around the course work. There’s a big literature now, and a lot of it is helpful and worth thinking about.

– Find volunteer projects and see them through to completion so that you’ve got things to talk about on your blog and portfolio.

– Just start doing it. Even if your job description says something else, you can take a user-centered, iterative, evidence-driven approach to practically anything: e.g., delivering a report to your boss. It’s a habit of mind, a philosophy as much as anything.”

“Get a Master’s. That was the one thing that opened up doors for me. Also, get involved with professional associations. That has also helped me, though more indirectly.”

“Get some formal training in the field, preferably in the form of a Master’s program. As a hiring manager, I certainly value experience, but when I see that someone has an advanced degree in a directly relevant area that demonstrates to me that this person has made a serious commitment to the field.”

“– Get a design related degree or training (HCI, Industrial Design, Graphic Design, etc.).

- Learn basic HTML, coding languages.
- Build your own website, mobile app portfolio.
- Learn wireframing tools, Axure, OmniGraffle or Visio.”

“Go back to school. I found my MS program to be essential to breaking into and succeeding the UX field.

“– Be a well-rounded student (with classes in business and math and technology).

- Focus on building your network, and not just with academics (go to meetups, conferences, local technology or marketing events).
- Find a mentor who is not your boss. Even someone outside of UX who can help you sell yourself and who can give advice on the intangibles of surviving in a business world.
- Practice regularly. Your work is not your practice. Volunteer, do workshops, or make up projects, but practice, practice, practice.”

“Practice your UX skills by creating deliverables you can use in a portfolio. Join professional associations. Attend conferences. Take classes or workshops. Get a mentor.”

“Take a research methods class. Get practical (real world) experience. Learn interview skills.”

“Get a masters degree in HCI, HFID, etc.”

“Read widely and deeply. Look for a mentor in the field. Build your portfolio by taking on UX projects — make them up if you need to — and demonstrate how you would solve problems.”

“Try it first by getting an internship. Design for as many different platforms as possible.”

“Make sure it’s something you have a natural aptitude for. While many skills can be acquired/learned, there is still a bit of ‘art’ to it.”

“Read both classics in the field and the latest books. Find a mentor and practice with that person. Go to conferences and workshops. Take classes that are relevant to the way we practice user experience today and get a certificate or degree.”

“Get a good GENERAL education. Don’t only look at human factors, psychology, and ergonomics, communications, software development. Dive into the fields that interest you. Connect with people.”

“Do a 3–6 month internship while you are still in school.”

“Education in the human behavioral sciences and learn appropriate graphic tools to document wireframes and prototypes.”

“Like everything else, just start doing it with something that matters to you. Read what others are doing, share what you are doing. Wash, rinse, repeat.”

“Think and do. If you’re at all interested in how people interact with machines or software or services then you’re already designing user experiences. Look up jobs that you think you would like and talk to the people who are doing them. Find out what sorts of tasks they are performing daily and practice those. Apply these tasks to things in your every day life. Stay curious. Ask questions. Solve problems and fill needs.”

“Learn how visual design and usability design can work together to create greater conversion. Test, test, test, then test some more.”

“Take the free HCI online courses and print out and read the Microsoft UX guidelines as well as the Apple UX guidelines. Then purchase one of [Nielsen Norman Group’s The Best Applications](#) reports and pore through it.”

“Read the O’Reilly book [Information Architecture for the World Wide Web](#); read articles and blogs to get an overview of the fields and understand if interest lies in IA, usability, UX or a mixture of all; consider an undergraduate or graduate program (depending on life stage). If already employed, consider taking several targeted workshops, participate in UX / IA / Usability community events. Read, talk to others in the industry, and pick up specific skills/methods. There is nothing more important than having many tools in your toolbox to select from as the situation demands.”

“Do internships while you are in school, or fresh out, to get practical experience. I am also biased towards formal training in a degree program, but it isn’t necessary.”

“First, you need to know what’s under the hood and how the engine works. Second, get to know the person that’s driving the car. Third, let ‘em drive around for ~20k km. Optimize!”

“Learn to write code. Not so you can do it yourself, but so you can understand the flavor of what developers are doing. Likewise, get some kind of experience working closely with software developers in a development organization; it’s valuable to understand how software development really works. And get some kind of experience inside a software development organization.”

“There are very few true UX positions out there, and many of the jobs that are looking for a UX or UI expert are often mislabeled or are often looking for a different skill set than a sole usability professional usually has. (Every person who has made a website will claim they are a UX professional even though they may not actually conduct usability sessions. It’s now a marketable buzzword.)

Having a product manager background or experience is probably the easiest way to be able to utilize UX principles on a daily basis and introduce them to a company (and get the company to value UX). Few companies value this career, and many view it as unnecessary still. Having a dual hat will present more career opportunities, as strict usability professionals are often consultants or work at a very large established company.

Courses on psychology and engineering (software or other kinds) in the area you wish to enter are also very helpful.”

“Learn how to focus. If you can’t focus (many people can’t these days), do something else.”

“– Study graphic design, 3d design, process analysis.

- Be a generalist.
- Freelance with a mind to make money, not gain design experience.
- Apply for entry level design work that allows you to work anything interactive and always be an audience advocate.
- Look for a manager who will support design based on usability and have your back.
- Stay away from IT jobs to avoid ‘IT arrogance’ (it doesn’t want designers, just a pair of hands).
- Stay away from design jobs to avoid lip service and a shallow understanding of usability (agencies don’t care about usability, just cool looking stuff).”

“Join a local community and network, learn locally.”

“– Learn all aspects of the design and development process (e.g., designing, coding, content development, etc.).

- Learn about people, how they think, how they make decisions, what motivates them, how circumstance changes their behaviors.
- Learn about business and marketing.
- Learn by doing (e.g., work on pro-bono projects, try out different roles on the project team, etc.).
- Learn from what others are doing (e.g., network with others in the industry, read, attend conferences/webinars, etc.).”

“It is so helpful to get the right degree, but if your college does not have that type of program, I suggest an MIS degree. Go to as many tutorials and conferences as you can. Find a mentor.”

“– Watch the [usability video tutorial from NN/g](#) — great demo as to how things get done during a study like this.

– Remember to watch again the recorded usability testing session. Not only for analysis but for self assessment on things that could be improved from conducting studies like this.”

“Acquire a range of diverse skills that you can leverage in different environments. Learn about tech and coding, so you can talk to developers. Don’t ‘own’ your designs — collaborate! It’s about where the user meets the business.”

“Find a place that does it and respects it, and do whatever you can to get in!”

“– Understand human behavior and emotional motivations.

- Practice manipulating behavior/communication. This helps with both easing the user experience (for users) and working with others who are resistant to UX (you need to sell yourself).
- Have a firm grasp of front-end web technologies.
- Engage public groups and be comfortable with public speaking.
- Spend a significant amount of time sketching and understanding the principles of design.
- Practice many different organizational principles, and be able to break down complex environments into simple, and easy-to-understand chunks.
- Learn how to do deep research, and how to set up environments to track data.
- Develop] complex data analysis and testing skills.”

“What’s most important is to get out there and practice what you learn. You must put it into practice to really learn what works and what doesn’t and to feel confident in your findings and design.”

“Start getting experience as early as possible, in high school is ideal. Read ethnography/anthropology. Get in the habit of observing others. Make sure you have high tolerance for ambiguity. If not, choose another profession.”

“Take your time, don’t be in a hurry. Think from the user perspective. Prototyping plays a major role in UI development.”

“– Have a passion for design and user advocacy.

- Look into higher education options in HCI.
- Intern or apprentice. Observe people using tech whenever possible.
- Start designing/building your own sites as a way to learn. Get your hands dirty.
- Attend conferences, participate in the community.”

“An understanding of human nature provides good context — usability, psychology, copywriting — even theatre — are good training grounds.”

“Get a Master’s Degree in HCI. I’ve seen countless unqualified ‘web designers’ applying for UX positions. Just because you’ve designed a few websites doesn’t mean you know anything about how humans think about and interact with technology. Find a good multi-disciplinary program that will allow you to study cognitive and behavioral psychology, library science, technical communication, computer science, visual design, anthropology, and ergonomics.”

“Have another skill — when budgets get tight UX is perceived as non-essential.”

“Make sure that you take positions that work on client-facing applications and products; it is a tough sell when you are working on applications whose main users are employees.”

“Find a way to make usability and user experience a part of your current job. As a user experience professional you will have to be an advocate for the practice, and there is no better way to gain that experience than trying to do it where you are now.”

Get a master’s degree. Do some really good project work from which you can create a portfolio. Do internships whenever possible.”

“Start designing things and then watch other people use them. Redesign. Also, try to form collaborative partnerships with people who are building things.”

“Be patient if you have to work with engineers. Look around and see how others do it. Use the ‘5 Whys’ iterative question-asking technique. Use personas. Read the OS UX patterns.”

“[Take] UX classes at local university or online [and] [Scott Klemmer’s HCI class through Coursera](#). [Now in Spanish too! Get] involved in local Meetups and networking in the incredibly accessible UX community.”

“Participate in Stanford University’s HCI free program on [coursera.org](#). Read as many scientific studies about UX as possible. Use [LinkedIn](#) to follow diverse groups on UX in your country.”

“A diverse background working in a range of roles and industries is beneficial.”

“– Follow user experience experts on Twitter.

– Sign up for e-newsletters on design, user experience, writing.

– Create your own design pattern library of sites, applications, pages that you really like in a tool such as Evernote, Delicious, etc.

– Attend industry events and network with like-minded people”

“Apprenticeship! — Find a good UX person and shadow them, watching their interviews and taking notes. Then compare your notes with theirs to see what they picked up. Then read. Read widely.”

---

## Appendix E: Design Tools

These are all the design tools that people mentioned as being essential to their work. Top design tools are discussed in “Digital Tools for UX Activities,” beginning on page 73.

Access (database)  
Acorn (image editor)  
Acrobat XI Pro (PDF tools)  
Captivate (interactive multimedia elearning and presentation)  
After Effects (video post-production)  
Antetype (prototyping)  
Articulate Engage (interactive multimedia elearning and presentation)  
Articulate Presenter (presentation)  
Articulate Storyline (e-learning course builder)  
Artisan Studio (UML modeling)  
Audacity (audio tool)  
AutoCAD (2D and 3D computer-aided design)  
Axialis (icon design)  
Axure (wireframing, prototyping)  
Balsamiq (wireframing, prototyping)  
Basecamp (project management, team collaboration)  
BBEdit (text processor, HTML and code editor)  
Beyond Compare (file comparison)  
Bitcasa Infinite Drive (cloud storage)  
Bootstrap (web development framework)  
browsers and web-developer plugins  
Cacoo (flowcharting, diagrams, mindmaps)  
Camtasia (screen recording)  
Chalkmark (first-click testing)  
Clarify (screenshots and image editing)  
content management systems (CMS)  
Coda 2 (web editor)  
Codekit (web development environment)  
ColorPicker  
ColorSchemer Studio (color matching)  
colour palette tools  
Confluence (wiki)  
CorelDRAW (vector graphics editor)  
Dreamweaver (web development environment)  
Dropbox (cloud storage)  
Dropmark (cloud storage)

Easel.io (browser-based rapid prototyping)  
Eclipse (development environment for Java)  
Emacs (text processor)  
email  
Enterprise Architect (UML-Unified Modeling Language)  
Espresso (Macrabbit) (web editor)  
Evernote (notes manager)  
Excel (spreadsheet)  
Fetch (FTP)  
Final Cut Pro (video editor)  
Firebug (Firefox add-on for live web editing)  
Firetask (task manager)  
Fireworks (web design and prototyping)  
FlairBuilder (web design and prototyping)  
Flare (ActionScript library for Flash data visualizations)  
Flash (multimedia and software platform)  
Flex (multimedia and software platform)  
font tools  
Gate (General Architecture for Text Engineering — data mining <http://gate.ac.uk/>)  
GIMP (image editor)  
Git (revision control system for software and documentation, GitHub)  
Gliffy (flowcharting, diagrams)  
Google Consumer Surveys  
Grab (screen capture)  
GTD (task manager)  
Hotgloo (wireframe mockups)  
HTML / CSS (web development)  
HyperSnap (screen capture)  
IA writer (word processor)  
Illustrator (vector image editor)  
ImageCapture (photo and camera/scanning utility)  
iMovie (video editor)  
InDesign (page layout)  
Indigo Studio (prototyping)  
Inkscape (vector graphics editor)  
Safari Web Inspector  
instant messaging tools  
IntelliJ IDEA (Java development environment)  
Interface (iPhone mockup app)  
InVision (prototyping)  
iOS ArtStudio app  
iRise (prototyping)

issue-tracking systems  
JavaScript (web development)  
Jing (screen capture)  
Jira (bug tracking and project management)  
Jive (collaboration tools)  
Join.me (screensharing, usability testing, meetings)  
jQuery (JavaScript library)  
Justinmind Prototyper  
Keynote (presentation, prototyping)  
Keynotopia (prototyping, UI templates)  
KompoZer (HTML editor)  
Kuler (color schemes)  
Lightroom (digital image processing and management)  
FontExplorer (font management)  
LittleSnapper (screen capture)  
LiveView (remote screen viewer and prototyper for iOS)  
Lovely Charts (charts and diagrams)  
LucidChart (charts and diagrams)  
Max/MSP/Jitter ("Max" multimedia programming environment  
<http://cycling74.com/products/max/>)  
MindManager (mindmapping)  
ConceptDraw MINDMAP (mindmapping)  
MindMeister (mindmapping)  
MindNote (mindmapping)  
MockFlow (wireframes, prototyping)  
Moodle (e-learning environment)  
Moqups (wireframes, prototyping)  
MWSnap (screen capture)  
Netbeans (integrated development environment (IDE))  
Notepad++ (text editor)  
Numbers (spreadsheet)  
Office  
OmniDazzle (mouse cursor highlighter)  
OmniGraffle (flowcharting, diagrams)  
OmniOutliner (notes and structured documents)  
OptimalSort (card sorting)  
Paditrack (conversion funnel tracking)  
Pages (word processor)  
Paint (image editor)  
Paint Shop Pro (image editor)  
Paparazzi (screen capture)  
Pencil ([pencil-animation.org](http://pencil-animation.org))

Penultimate (iPad sketch tool)  
pgAdmin (database development)  
Photoshop (image editor)  
Pivotal Tracker (agile project management)  
Pixelmator (graphic editor)  
POP (CMS)  
PowerPoint (presentations, prototyping)  
Premiere (video editor)  
Preview (PDF editor)  
Prezi (presentations)  
ProofHQ (feedback and approval management)  
Protégé (ontology editor <http://protege.stanford.edu/>)  
Proto.io (mobile prototyping)  
ProtoShare (prototyping)  
Publisher (desktop publishing)  
Quick MediaConverter (video and audio converter)  
QuickTime (video editor, player, recorder)  
QuizMaker (questionnaire editor)  
R (statistical analysis)  
Relux (3D building and lighting simulation)  
ScreenFlow (screencasting, screen recording)  
Screengrab (Firefox add-on for screen capture)  
Screensteps (knowledge base (help) content editor)  
Scrivener (structured document editor and project management)  
Seashore (image editor)  
SEOMoz (web analytics)  
SharePoint Designer (HTML/SharePoint web editor)  
Silverback (screen recorder)  
SimpleCap (screen capture)  
Sketch (vector image editor)  
SketchFlow (Microsoft Expression Studio)(prototyping)  
Sketchy (<http://sketchyapp.com/> mockups on iPad — exports to Balsamiq)  
Skitch (screen capture and sharing)  
Skype (VOIP client, voice, chat, video chat, screensharing)  
Snagit (screen capture, recording)  
Snipping tool (built into Windows 7)  
Soap UI (website and web-application testing)  
Solidify by Zurb (<http://www.solidifyapp.com/> prototyping)  
Sony Sound Forge (audio editor)  
SourceTree (Git and Mercurial client)  
website Text 2 (text and code editor)  
SugarSync (synchronization)

surveygizmo (survey and form builder)  
SurveyMonkey (survey builder)  
taxonomy management software  
TextWrangler (text editor)  
TextMate (text processor)  
Things (<http://culturedcode.com/things/> task manager)  
Thinkery (<https://thinkery.me/> notes manager)  
Tobii (eyetracking)  
TopBraid composer (modeling environment for semantic applications)  
Treejack (information-architecture testing)  
Trello (project management)  
Tumult Hype (web-animation editor)  
Twitter (social-media platform — for asking UX questions, discovering UX resources)  
Protosketch (prototyping)  
UserTesting.com (online usability testing)  
VirtualBox (system emulator for cross-platform testing)  
Visio (flowcharting, diagrams)  
Visual Studio (Expression Blend — for prototyping)  
VUE (Visual Understanding Environment — hypertext editor, knowledge manager, concept mapper)  
WebEx (collaboration, videoconferencing, screen sharing, remote testing)  
wikis (group-editable information organizers)  
WireframeSketcher (prototyping)  
Word (word processing)  
WorkFlowy (note and task organizer)  
Xcode (integrated development environment for iOS and OS X)  
XMind (mindmapping)  
XPath (query language for XML documents)  
xScope (measurement and alignment for graphics and layouts)  
Zurbapps (design suite for presenting, making mockups, getting feedback)

## Appendix F: Analysis Tools

These are all the analytical tools that people mentioned as being essential to their work. Top analysis tools are discussed in “Digital Tools for UX Activities,” beginning on page 75.

A/B testing (a method with many tools)  
Adobe Connect (videoconferencing and screensharing)  
AnyMeeting (videoconferencing and screensharing)  
AWStats (log file analyzer)  
Basecamp (project management, team collaboration)  
BB Flashback (screen recorder)  
BBEdit (text processor, HTML and code editor)  
Bean (word processor)  
BrightEdge (web analytics, SEO)  
Bugzilla (bug tracking)  
Camstudio (freeware)  
Camtasia (screen recording)  
CAT (content-analysis tool)  
Chrome (browser, developer tools, apps and extensions)  
click testing (a method with many tools)  
clickstream analysis (a method with many tools)  
ClickTale (web analytics)  
Confluence (wiki)  
Diarysnap (diary studies, repeated surveys)  
Doodle (scheduler)  
EndNote (research manager)  
Ethnio (website intercept recruiting for usability tests)  
Excel (spreadsheet)  
eXTReMe Tracker (extremetracking.com for web analytics)  
EyeGuide (eyetracking)  
Fake (fakeapp.com for testing workflows)  
FastStone Capture (screen recorder)  
Final Cut Pro (video editor)  
Firebug accessibility toolbar validator (Firefox add-on)  
Five Second Test (first-impression testing)  
Foresee ACSI (American Customer Satisfaction Index — survey, analytics, website session recording)  
Fuze Meeting (video conferencing, document sharing)  
GatherContent (content organizing and structuring)  
Google Analytics (web analytics, SEO)  
Google Apps / Docs (office suite and forms, collaboration, chat)  
GoToMeeting (videoconferencing and screensharing)

GroupQuality (surveys, remote testing, interviews)  
iGooMap (XML sitemap creator for SEO)  
iMovie (video editor)  
iShowU (screen recorder)  
Jira (bug tracking and project management)  
Join.me (screensharing, usability testing, meetings)  
Key Survey  
LimeSurvey  
Live Meeting (web conferencing and enterprise meetings, screencasting)  
Livescribe (smart-pen note-taking system)  
LoadRunner (automated performance testing)  
Loop11 (remote usability testing)  
Majestic SEO (search-engine optimization)  
Microsoft Lync (video conferencing and instant messaging)  
mindmapping (method of structured note taking with many tools)  
Moqups (wireframes, prototyping)  
Morae (screen recorder, screencasting)  
Notable (browser-based collaborative note taking and file annotation)  
Omniture (web analytics, SEO)  
OptimalSort (card sorting)  
Ovo Logger (observational logging platform for usability testing)  
PGi GlobalMeet (web conferencing)  
Pingdom (ping, traceroute, uptime monitoring of network and servers)  
Piwik (web analytics)  
Qualtrics (survey)  
QuickTime (video editor, player, recorder)  
R (statistical analysis)  
Rapidusertests.com (remote usability testing with German speakers)  
Redmine (project management, bug tracking, document management, time tracking)  
Reflectorapp.com (iOS mobile-screen mirroring to desktop)  
Revelation Project (mobile user research by Revelation Global)  
Sametime (web conferencing, chat)  
Screaming Frog (web analytics)  
ScreenFlow (screencasting, screen recording)  
Scrivener (structured document editor and project management)  
SharePoint (usage reports)  
Silverback (screen recorder)  
SiteCatalyst (web analytics)  
Skype (VOIP client, voice, chat, video chat, screensharing)  
SPSS (statistical analysis)  
surveygizmo (survey and form builder)  
SurveyMonkey (survey builder)

Syncaps (card sort cluster analysis)  
Tableau (business intelligence analytics, data visualization)  
Tagxedo (word clouds)  
Tealeaf (website visitor behavior analysis)  
TelePresence (videoconferencing environment from Cisco)  
TestFlightapp.com (mobile app beta testing, analytics)  
TestingTime.ch (user recruiting for usability testing)  
TextEdit  
TextPad (text editor)  
Tobii (eyetracking)  
Treejack (information architecture testing)  
Trello (card sorting, project management)  
Usabilla (surveys and website intercepts)  
UserTesting.com (remote usability testing)  
usertribe.com (remote usability testing)  
UserZoom (remote usability testing)  
Venntive (email services and analytics)  
Verify by Zurb (design surveys, click-testing)  
Visual Website Optimizer (A/B testing, heatmaps, remote usability testing)  
VMware (virtual machines for testing cross platform)  
web statistics sites (browser and OS trend statistics)  
WebEx (collaboration, videoconferencing, screen sharing, remote testing)  
WebSort (card sorting)  
Webtrends (web analytics)  
Wirecast (webcasting, analytics, closed captioning by Telestream)  
Word (word processing)  
Wordle (word-cloud generator)  
Wufoo (form builder, for terminology reviews)  
Visual Studio (Expression Blend — for prototyping)

Tools on both design and analysis lists:

- Basecamp (project management, team collaboration)
- BBEdit (text processor, HTML and code editor)
- Camtasia (screen recording)
- Confluence (wiki)
- Excel (spreadsheet)
- Final Cut Pro (video editor)
- iMovie (video editor)
- Jira (bug tracking and project management)
- Join.me (screensharing, usability testing, meetings)
- OptimalSort (card sorting)
- QuickTime (video editor, player, recorder)

- R (statistical analysis)
- ScreenFlow (screencasting, screen recording)
- Scrivener (structured document editor and project management)
- Silverback (screen recorder)
- Skype (VOIP client, voice, chat, video chat, screensharing)
- surveygizmo (survey and form builder)
- SurveyMonkey (survey builder)
- Tobii (eyetracking)
- Treejack (information-architecture testing)
- Trello (card sorting, project management)
- UserTesting.com (online usability testing)
- WebEx (collaboration, videoconferencing, screen sharing, remote testing)
- Word (word processing)
- Visual Studio (Expression Blend)

## Appendix G: What Interviewers Look For

Continued from “What Hiring Managers and Interviewers Look For,” beginning on page 80.

“I look for specialization in skill set and depth of knowledge in domains/skills. I also look for adaptability and soft skills — how easily can someone adapt to changes and unexpected situations, how well does someone get along with people that they’re working with or users that they’re trying to understand.”

“Great analytic skills, exceptional writing and communication. Politeness, respect, friendliness and feeling at ease around our main target group. Structured and logical lines of thought, curiosity, attention to details in people’s behavior. Other interests beyond those strictly related to work, ability to work in a team, persistence, not being afraid of large data sets.”

“Strong communications skills, a focus on users, an ability to ‘sell’ their ideas to clients, knowledge of UX trends, ability to work with developers, detail oriented, ability to work collaboratively, ability to communicate complex ideas in a simple way, commitment to deliver quality products.”

“Someone who asks questions, has opinions and is open minded [and] has a good grasp of user-centered design concepts. Someone who really wants to understand how people approach different tasks and wants to understand how they are thinking, what their mental models for different things are ... rather than someone who wants to design the next great thing or someone who thinks they know it all because of their education. Someone who can effectively communicate with all types of people ... and who knows what information to communicate to each audience and what input to ask for.”

“Experience owning the design of a feature and working with a cross-functional team to deliver working software / web / mobile apps. Someone who can articulate the steps they take in the design process, from start to finish. They have to envision a plan for producing an successful outcome. Someone who is personable and a good conversationalist. You have to build a good rapport with internal and external stakeholders and team members to do well. A passion for doing good work, a feeling that by being involved, he or she can and will improve the final results. ... The ability to identify with user groups and see things both as a design professional but also as a layman / user, or other user persona type. Someone with an eye for good design.”

“Adaptability. We are a small firm, so we look for people who are not only capable of wearing multiple hats, they have to thrive if given the opportunity to function in multiple roles. ... An interest in learning, in getting hands dirty doing a lot of different types of things, is valuable.”

"My ideal candidate has at least 1 strategic skill and 2 maker skills. ... Strategic skills: research (mainly stakeholder/customer interviews, studies), information architecture, project leadership, having a vision and following through. Maker skills: visual design, interaction design, motion design, demos, coding and prototyping."

"Poise, self-awareness, writing skills, openness to feedback/desire to learn, knowledge of the basic principles of human cognition and information design, fit with our team."

"High-level thinkers capable of being objective. Inquisitive people looking to understand, not just own, knowledge."

"For interaction design it's helpful if they know some JavaScript or JQuery."

"Hands-on experience with field research, an understanding of the importance of context and motivation; experience with current interfaces, devices, technologies; sound intuition about where users are likely to experience problems, outside-the-box thinker."

"I look for good meeting facilitation and moderator skills, comfort working in ambiguity, ability to see things from other points of view, openness to new and different situations, curiosity about people and human behavior, a background or experience in behavioral sciences, design, or HCI."

"I look for someone who can think for themselves (without constant direction), someone who can take direction without taking it personally, someone who is able to constantly keep [up] with the latest."

"Ability to see the big picture and not get down in the weeds too quickly."

"Analytical, college educated, articulate, hard working, humane."

"Relevant educational background, certifications, user-centered design thought process, knowledge / experience / capability of working on various UX activities, such as UX review of existing applications, user-tasks-scenarios analysis, creating low- [through] high-fidelity prototypes using sketches, wire-framing tools."

"Agile"

"Is the tester able to understand the technology to be tested? Can an architect put his own bias aside? Is a designer able to think outside the box? Is a graphic artist able to convert a concept into an appealing layout? I prefer designers that have a minimalistic approach toward user interfaces."

"They don't think asking users is the solution to everything."

"Excitement and enjoyment of the boring parts."

"Dynamic, outgoing, a personality. Experience working with people. psychology and human behavior experience."

- Continuing research of technologies, concepts, techniques and methodologies applied to software interfaces
- Definition of architecture interfaces
- Development of critical interfaces — design framework
- Development and maintenance of ‘reference guides’ containing rules, standards and guidelines
- Definition of development tools, ‘templates’
- Approval of standards to be adopted
- Definition of processes and methodologies for the development and maintenance of interfaces
- Inspection and evaluation of interfaces developed by the development teams
- Participation in the selection and relationship with technology providers and services
- Participation in the processes of implementation and institutionalization of technologies and methodologies together with service providers
- Enforcement of ‘mentoring’ to design and ergonomics issues through publications, courses, lectures and information support
- Tests with users — lab
- Design thinking”

“The ideal candidate for a researcher should be focused on research and presenting findings but not necessarily design recommendations. IA / interaction designer: empathy. Should be able to communicate effectively to a diverse group. it doesn’t matter how good your work is if you cannot communicate it effectively to the group of stakeholders. Portfolio representing a user-centered design process. Should be able to give and receive constructive criticism without taking it personally.”

“Critical thinking, strategic view vs. just tactical usability view, brand experience design.”

“Interaction design: a strong blend of creativity, practicality and efficiency. They need to show they understand business is about getting things done, and dealing with real people with real expectations, who all have past experiences they bring to bear on new interactions; but still push the envelope and make proposals that are new and interesting, so it’s not purely regurgitation of existing approaches. Usability and IA: Strong, analytical perspective, insight, empathy for users and their contexts and histories, super strong communication skills — written, oral, graphical, etc.”

“Creativity! An understanding of the interaction design process, and proficiency with getting their ideas out on paper.”

“People who have a good balance of logic and creativity ... effective verbal and visual communicators.”

“Ability to construct a flow, create layouts that are easy to use”

“Understanding the user-centric design process well and tailoring it according to the various projects. Understanding the user and giving a lot of importance to the users!”

“Customer service ethos, technically savvy and has a an ‘innovation’ philosophy.”

“I look for culture fit with our organization first and foremost. We are not a formal workplace with a lot of rules and repeatable processes, so the people I look to hire are great at what they do and can work in a flexible environment. I also look for people with a nice portfolio or lots of different kinds of work.”

“Not only skills and experience, but the ability to explain rationale behind design decisions.”

“Must have actual skills with portfolio samples. Solid communication skills, inquisitiveness, and enthusiasm.”

“Good visual design sensitivity.”

“Research: understanding of the fundamentals of research technique and how different methods get at different aspects of an experience. Ability to deliver research quickly without compromising quality — academia doesn’t work outside the classroom but gives us an important foundation of knowing when we are making good or bad methodology choices.”

“Directly related experience, a portfolio of work (even from school if that’s all there is), drive, analytic thinking, bias for action, cultural fit, team work, confidence, self-control, accuracy and thoroughness.”

“Breadth of experience with usability techniques (not just testing and prototyping).”

“A good brain and good taste. Articulateness, diplomacy, attention to detail. The ability to solve problems once, document them, and move on to new, harder problems. Also handy: an eye for visual design and some coding ability.”

“Curiosity, attention to detail, easy-going personality.”

“Ability to balance usability with business goals.”

“Well-rounded individuals who demonstrate a natural aptitude for this type of work, who relate well to users and co-workers, who show a genuine interest in and concern for the challenges and needs of users, who have strong oral and written communication skills, and who understand all aspects of application design (database, etc.), because screens don’t exist in a vacuum. Experience with specific tools is helpful but less of a concern, because that can be picked up on the job.”

“Psychology background.”

“Willingness to learn about the business or organization involved. Openness to new ideas but respectful of techniques that have been tried before.”

“Thick skin.”

“Passion, collaboration, UX research experience, particularly in a wide range of methodologies: in-person usability testing, remote unmoderated usability testing, card sorting, focus groups, heuristic reviews, competitive analyses.”

“Curiosity and a deep-seated need to provide great customer service.”

“Abstract thinking, analytic thinking, creativity, demonstrated design work that understands that design is more than look and feel.”

“Humility, ability to ask good questions, critical thinking.”

“Intelligence, self awareness, and amazing communication skills (verbal and visual) are key.”

“A tough negotiator, a person who is passionate about the end user and can argue the benefits of good design. Someone well rounded in various aspects of design: research, usability, interaction design.”

“For user researchers: real-world experience with defining test plans, acquiring test participants, and conducting moderated user testing. For IA and IxD positions: real-world experience with conducting exercises such as card sorts, user personas, and mental models, as well as prototyping skills with visual design software or HTML / CSS.”

“People who can see both the big picture and the details.”

“Business analysis, metrics, execution skills, command authority.”

“Creativity, artistry, passion, curiosity, dependability, self-direction.”

“Fundamental understanding of, appreciation for, and ability to design. Desire to help people and improve life. Team player.”

“They must have a degree in visual design, psychology, human-computer interaction, have all the UX language, and have taken UX-specific courses. If they do not have this type of background finished with actual UX theory then you have a pushy, designer-centric designer who cares not for the user — and is hard for UX-educated professionals to collaborate with.”

“Good examples of work they have done in the past, mix of knowledge of my own industry but also experience in others to bring new ideas. Ability to apply and analyze latest techniques such as eye-tracking, AB and multivariate testing.”

“Initiative, preparedness, flexibility, understanding tradeoffs of standards.”

“Strong empirical research background / expertise (across diverse methodologies), strong computer skills, strong communication skills, strong project-management skills. Type-A personality, sequential, and meets deadlines.”

“Researchers don’t need a UX background, I look for candidates that have writing and general research experience. For IA and interaction design I ask that they demonstrate exceptional problem-solving abilities, and a great portfolio is essential”

Someone who has enough curiosity about the field that they are conversant with many basic concepts and techniques. Keeping abreast of current events by reading the New York Times or Financial Times, etc. is good. Very few type a personalities are successful in this field. Must be interested in other people and have a large tolerance for ambiguity over long periods. We don’t really care if candidates have a degree or have studied the field formally. Sometimes it is better if they have not. One of our best people we hired right out of high school.

“A portfolio of work that shows your process [and] deliverables you create, [and must] be articulate and confident.”

“For usability research, I look for examples of the research efforts that show a thoughtful process. ... Empathy and active listening are two most-important qualities in a user researcher. I also look to the experience and breadth of exposure to many different technologies and environments. For interaction design and info architecture ... I am more interested in someone that can show me their thought process with sketches and brainstorming, than showing me beautiful completed deliverables. I want to see how you got to the end state and how you think.”

“Ingenuity, open mind, resourcefulness, analytical, not specialized in only one field.”

“They’re able to solve logic problems efficiently and able to envision all scenarios and user types. If they’re smart enough to think of all the possible cases, mental states and types of users fast, then they can easily learn the rest.”

“Honesty, empathy, visual design experience, research experience, business experience.”

“Good listeners, good taste, passionate with strong opinions but able to be swayed by evidence.”

“I look first to the character. I prefer people who know that projects can’t go exactly as they want, the capability to revise ... during the process.”

“Critical thinking while being objective. Having a strong user emphasis — as UX professionals we are often the only ones in the team speaking and standing up for the user. A can-do attitude.”

“Willingness to try and fail. Commitment to reflection and continuous improvement.”

“Experience in user-centered design or an understanding of user-centered approaches and benefits, analysis skills, ability to write clearly and convincingly, excellent interpersonal and communication skills, able to work independently and in a team.”

“Research background (not necessarily usability), well spoken, good writing skills, low-key personality.”

“A research background and an advanced degree in Psych.”

“Passion. Ability to communicate with diverse people. Patience.”

“Ideally we look at people with a [bachelor of science degree] because they have shown to be more methodological in their approach to work.”

“Abstract thinking, analytic thinking, creativity. Demonstrated design work that understands that design is more than look and feel.”

“Motivation and interest in the field, smart, collaborates well with others, takes initiative, understands constraints of real world, strong understanding of UX aspects. Hands-on experience with field research, an understanding of the importance of context and motivation, experience with current interfaces, devices, technologies, sound intuition about where users are likely to experience problems, outside-the-box thinker.”

“Should have at least a basic set of stats skills.”

“Intelligence, the ability to connect or associate seemingly random bits of information. Curiosity, the need to know why. Experience. The assumption that they are not everyman and everyman does not exist.”

## Appendix H: Questions That Interviewers Ask

Continued from “Questions That Interviewers Ask,” beginning on page 85.

– We always ask for a portfolio, but the most important part of evaluating prior work is not the end product. **We ask people to tell us a story about how one of the designs was created.** What was the background behind one of the major design decisions? (Did they do any research? Did they do any usability testing? How, and with whom? Who were the team members who were involved? What were some of the things they found which were not a surprise? And what were the surprises, and how did they deal with them? Was there an example of an idea that completely failed, and how did they deal with that?)

– We hire UX generalists (that is, who do research, prototype design and also conduct usability testing), so we expect all new hires to have experience with usability testing. A question I always ask, because I’ve always found the answer demonstrates a person’s philosophy of usability testing is **under what circumstances the candidate will intervene in a usability test** — I ask for the last example, and then have a conversation about what happened to the data in that instance. We usability test in a very particular (and slightly unorthodox) way, and I can generally get a feel for whether a person will be comfortable working with us (and of course vice versa) from this conversation.

– Finally, we now always include a practical component to the interview. This is a (we hope) fun thought experiment where we describe a hypothetical idea for a product, and ask the candidate what approaches she or he might take to designing the concept. Where we’re located, there are obvious opportunities to do fast user research for the product. **Any person who begins to sketch a UI without talking about research first won’t be considered for the position, no matter what their portfolio is like.** (But here’s something that’s not surprising: the people with the best designs and ideas always suggest doing the observation.)”

**“I tend to ask questions that discern how the candidate collects data. I feel the sign of a professional is someone who takes detailed notes and can quantify and objectify the results.”**

“How long have you been in your field? What is your interest in user experience design? Why do you do the things that you do? What motivates you? **What other things have you done in your life that influence what you do now? (The best UX designers tend to be ‘Jack / Jill of all trades.’**”

“No single report, write-up, or chart can usually tell the whole story of a test or a design. Tell me about some situations where you’ve had to use different kinds of communications to fully tell the story. How do you decide where to start? **Describe your method of investigation if you are faced with a completely unfamiliar topic or subject.**”

**“I always make sure that candidates are capable of defending their design decisions by referencing existing research supporting their work.** In our field I feel it’s very important to stay up to date on the latest findings. Our designs are often questioned, and it’s important that I can explain to stakeholders why I designed a feature a specific way.”

“My main evaluation process involves a design exercise. I give them a problem in the form of a scenario, then ask them to solve it on paper, while saying what they are thinking out loud. I watch for their problem-solving process, the types and quantity of ideas, how they articulate their ideas. **The point isn’t to see if they get to a particular solution, but to see how they think and work.**”

“I like to understand their history and where their strengths lie, because many people come to user experience by way of something else. Some do not have formal training, but understand the concepts and have been doing the work as part of other roles. I think **it’s more important to find someone with the right attitude and mix of skills than it is to find someone who has only had training.**”

“If I show you a screen of a system you’ve never seen and that you don’t know anything about and I ask you to critique it, what are you looking at and what are you analyzing? When a design of yours is rejected by stakeholders even for reasons that don’t make sense, how do you cope with that? How do you continue? How do you acquire the knowledge you need to design something relevant in a field you don’t know anything about? How do you stay up to date on UX?”

“Difference between marketing and usability research. Why is it okay to use small sample sizes for usability tests? How do you map research questions / goals to methodology choice? When you create a task, what are you looking to observe about a user’s behavior?”

**“Do you prefer working in a waterfall or agile development process? Why?”**

\*\* Describe an instance when you had to create a document describing a complex process for someone.

- How did you deal with organizing the complexity?
- What steps did you take to create the document?

\* Describe a time when you had to admit you were out of your depth and needed help.

- How did you approach the discussion?
- What would you change about the next time you found yourself in such a situation?

\* Describe your design style.

\* Where do you look for inspiration?

\* Are you influenced by any approaches or styles?

\* What specific kind of creative or design work have you not done before you would like to try if you got the chance?"

"I ask them to tell me why they have an interest in this work and what matters to them in terms of accomplishment and professional development. And generally, I try to set them at ease so they will be most themselves and reveal their true personal style. Different workplace environments and cultures require a variety of personalities and personal styles. **A willing and intelligent person who wants to learn can be trained. Someone who is highly skilled but insecure or arrogant can be a liability.**"

"– I will select real application screens and ask them to critique them. Their answers reveal a lot about their methodology, level of sophistication, attention to detail, and aptitude for UI / UX work. This technique is useful because it requires them to think on their feet and is not something they can give a prepared answer to.

– I will give them an example of a new application project request they might be assigned, and ask them to walk me through how they would approach it start to finish. The purpose is to find out their approach to requirements analysis, overall system design methodology, etc."

"I ask them to do a quick impromptu heuristic / expert review of a few screens or workflows from a product. I'm not as interested in what they find 'right and wrong' as I am in **what questions they ask or what information they want about the user, the task**, etc. I ask top candidates to present something short to a cross-functional team of engineers, marketing and execs and to field questions from these people on what they presented. And then I debrief with the candidate privately to see **how they react to the questions they were asked and if they seem like they can work closely with other teams or seem biased.**"

**"Sometimes I ask something like "Write down 25 ways to use a brick," which identifies people who can free themselves from reigning conventions and let their mind explore new, novel ways to do something. If they don't take it seriously, I also learn how they'll react to doing something they don't want to do. If they don't do all 25, I learn a bit about their persistence and determination, which are important in powering through HIPPO decisions and turning around projects so they provide the most value to the user."**

"I ask what their dealbreakers are. We have a very collaborative team (on UX and across disciplines). **If somebody prefers to work alone and doesn't like team work, they likely won't be a good fit.** I also look for good communicators, where people get their UX news / updates (how they stay current), what UX or research work they've done in the past, what work they'd like to do in the future."

**"I want to find out how interested they are in the users, their processes etc. I don't just want a developer or a designer — I want someone that is genuinely interested in how people work and what they do."**

**“I give them design problems and send them to the whiteboard in front of developers. If they can solve them well and make themselves clearly understood to developers, that’s the essential element. Everything else is gravy.”**

**“I want to hear the UX language, I want to hear that they have a user centric approach to design and can tell me detailed stories about how the users inform their work. Are they collaborative or are they know-it-alls who work alone?”**

“How would you define usability in relation to building a website? What unique challenges exist when building responsive design websites?  
**What are the differences between usability and accessibility? How would you measure the usability of a website or application?”**

**“It’s not about the questions. Give them something to design, either as a pre-work assignment coming into the interview or allow time on-site and then have them present it.”**

“We typically ask them what they would do, before designing a website, to learn about a particular business goal. [Then maybe] show them something we have done and listen to the questions that they ask about it, how interested they really are, etc. [We] also want to know **how good they are at interviewing us.**”

“How comfortable are they facilitating requirements sessions?”

“I often ask job candidates about how they make decisions, how they react when requirements change at the last minute, how they react to negative feedback, and how comfortable they are presenting to groups. **I like to understand how a person works under pressure and as part of a multi-disciplinary team.**”

“If you’re entry-level or have 1–2 years’ experience, I’m very interested in understanding **whether you know how to choose the right methodologies and how you take what a stakeholder or client is trying to learn and translate that into a research project.** So I often ask scenario questions where I say, “OK, you have a stakeholder who comes to you and says they want to redo the homepage and will you figure out what it should look like. What are a few questions you might ask right away?”

“I always ask candidates to explain the process they followed to create a particular portfolio piece. **I’m looking to see if they have followed a true UCD process** in their project and whether they are articulate and able to present their ideas in a clear, interesting, and persuasive way.”

“We have them conduct a usability session as part of the interview process. I do this to **assess their scripting abilities, rapport with participants, moderation skills, and their ability to quickly summarize the most important parts** of a session.”

“I don’t really ask questions, I present scenarios and ask the candidate would approach the scenario. Scenarios that highlight basic understanding of the domain at a conceptual level for entry level

positions and proof of application to similar subject domains for more senior level positions. And **I am looking for the ability to step outside of oneself to advocate on behalf of the stakeholders, while maintaining perspective toward the broader picture of the project and tenets of design.**"

**" At what point does UX get involved from an Agile / Scrum point of view? What other services can UX provide to the company other than usability testing and visual design? Is the customer always right?"**

"I ask them what they feel is the most important quality of a usability researcher ... why they do usability research, **I want to understand how driven they are and if they are truly passionate about it.**"

"Past experiences. What they've learned from, and how they prevented or solved problems before. More focused on revising and learning from processes than individual isolated projects. **Showing that they're humble and willing to learn new things from anyone, and able to analyze and implement that learning is key.** The rest is just time in researching patterns, guidelines and experimenting."

**"What steps are involved in usability testing a website? This is fundamental for getting the job."**

"What website or mobile app do they wish they helped to design? This allows me to identify how well they can define pros and cons of something that they use frequently. It also opens the conversation about being part of a team. The best design products and services are created well functioning teams."

"I try to go through some exercises to see what their thought process is and how they arrive at a solution. I also like to talk about their feelings on the current and future states of the field and technology at large."

"Tell me about your process in determining how to design the application for a good user experience."

"Please select one of your best projects where you feel you have done excellent work and walk us through the case study of that project. Based on the project candidate chooses, it helps evaluate his / her confidence level, processes followed in the project, his / her role in the project, evaluate quality of the deliverable, involvement to gain that specific domain knowledge while on that project, communication skills, presentation skills and overall knowledge of the UX activities conducted / managed in that particular project."

"We let them do a review for a website to see if they have some 'feeling'. How would they handle a specific project question; what kind of techniques would they suggest / planning for the UCD process?"

"What do you love most about UX? I ask this to see where their passion lies — information architecture, user research, strategy, etc. I don't want to hire someone who's most passionate about usability testing when what we really need is an interaction designer (at least

not without being up front with them about what the job really is). Why do you want to work here? I ask this to see if they've read anything about the company or have any preconceived notions about the company (so I can validate if needed)."

"I ask them to design a outdoor pool area for a resort hotel. I give them some starting info / constraints, and then look to them to ask me questions and walk through their typical design process."

"I ask them to describe their design process. I'm listening for

- What was the problem?
- What research was done to inform the solution?
- Who were the players (stakeholders, other designers, developers)?
- How much collaboration and input with developers?
- How is / was success measured?"

"Can you talk me through how you've impacted the usability of a particular product or service you were involved in creating?"

"Sites and products they most like and why; Sites and products they don't like and why."

"The biggest question I ask is: What websites or applications do you like to use and why? I had one candidate say, 'I don't really use the web,' so this question really is very valuable. Which site people answer with isn't important, passion for using applications and knowing how they work and are used is."

"The project is launching and you're asked to take a look at the 'usability'. You see problems that could interfere with the project plans. What do you do?"

"How do you keep current in the user experience field? Could you describe a project that you are proud of? Could you describe a difficult project or one where you had to convince your team mates to change direction? Why do you want to work at our company?"

"How do you get buy-in? **How do you measure ROI** [return on investment] for UX?"

"You find a fortune in diamonds in a bag and nobody claims it, it's yours — what would you do?"

"Each person is different, and I ask questions based on their nerves. I want to know who they are when the fire is raging."

[I ask for] "**their perspective on recruiting** (screeners, reaching out to appropriate communities to find individuals, using current customers / users vs. finding equivalent populations outside current users). [Also: **How do they choose research questions and match them to techniques?**]"

"I ask about what they want to learn from a given testing event and how they discovered it, and what questions they used. I try to see how they understand the connection between the stimulus, the interview

questions and the report. And I ask for the after action analysis — what could you have done better here?”

“Share with me a project where you failed and what did you learn? Share with me how you educate others that are uninformed about usability and how you go about creating a user or customer experience? What company or service has the best user experience? Who has the worst?”

“I ask them to talk about products and services they love and hate and the reasons why. I ask them about how they deal with the various kinds of failure. I ask them why they didn’t become a doctor or a lawyer.”

“How have you influenced stakeholders? How have you made quick decisions?”

“Describe what a great design is for you. How would that impact customers and the organization? I want to find out about the mindset and if mindset exists at all.”

“[Explain the] differences in interaction design, information design and interface design, and how they interact.”

“When was the last time you did user testing? What was the process, what were some of the key findings?”

“Tell me about a time when you had qualitative and quantitative data and you needed to distill and communicate the meaning.”

“What do you think to be the most difficult [aspect of] this job? Which solutions have you found to cope with these difficulties? What are you still able to do after a night spent on the airplane and jetlagged? You are leaving your office at 10PM and you are happy — what have you been doing at your office?”

“[Describe] something from your day-to-day life which you either appreciate or think can be improved for ease of use. It can be a product or service. This question reveals a lot about a candidate — their thought process, observation skills, approach to identifying a problem etc. But most important it reveals how passionate the candidate is about building a better product / service experience. Anything done with full heart and soul effort is bound to create results.”

“Why do you want to work for this company? [This question] shows that they have done research on the company and allows them to express their passion for the company. [We] don’t want people who are just looking for a job or looking to get out of the job they are currently in. What do you like or dislike about the role you are in / applying for?”

– Tell me about a time when you had to go above and beyond the call of duty in order to get a job done.

– Tell me about a time when you had too many things to do and you were required to prioritize your tasks.

- What is one change you would make to our website if you had the opportunity?
  - Tell me how you approach IA work; Do you have a process to help inform design requirements?
  - How do you balance customer and business goals?
  - How do you know when a design is complete?
  - What are the steps you go through to set up and execute a usability study?
  - What's the process you use to analyze usability results? How do you present your findings and recommendations?
  - Are there any usability experts you follow? Who? What do you think are the strengths of their approach?
  - How did you influence your client to make site design changes?
  - What's the most fun research project you've been able to work on?
  - When talking to participants in a usability study, what was the most challenging situation you've encountered? How did you handle that?
  - Have you ever felt uncomfortable working with a study participant? What was that like?
  - When you approach an expert review and competitive analysis, what is the framework or criteria you use?"
- "I ask them to tell me about a project they are especially proud of, and how they applied the full range of their skills to help bring it to a successful conclusion. I also ask them to talk about a project that they feel didn't go so well."
- "- If you were shrunk to the size of pencil and placed in a blender, how would you get out?
- Give me five words to describe yourself. Give me five words your mother would use to describe you. Your last boss. Your best friend. A colleague who didn't like you.
  - I don't ask for a portfolio: I put candidates in a real-life situation to solve a design problem as part of a team.
  - What is linear regression good for?
  - Describe a negotiation situation where you didn't win.
  - What was the last professional activity outside of work you participated in? Whose blogs / Twitter / publications do you follow / read? Who is your UX idol?"
- "We mostly need people who have done it in a real-world setting as opposed to academia, and then of those look for those that excel in the intangibles."
- "I often ask job candidates about how they make decisions, how they react when requirements change at the last minute, how they react to negative feedback, and how comfortable they are presenting to

groups. I like to understand how a person works under pressure and as part of a multi-disciplinary team.”

“How would you classify yourself in using these tools: Morae, Axure, Photoshop, MS Office: ‘Beginner,’ ‘Intermediate,’ or ‘Expert’?”

“I ask them to compare and contrast digital systems that they use in daily life and explain their preferences.”

“What problems do you encounter when communicating your UX documentation to stakeholders and how do you resolve them? [What is your process] to create a persona ... the tools and methods you use to help you craft them? ... This shows me ... whether they use primary or secondary research, how they gather that research, whether they are familiar with analytics tools etc.”

“I work in the (UK) public sector so I always ask them questions about government digital strategy, and how the barriers to good UX are different in the public sector (to make sure they understand the very different world we operate in). I also ask them their methods of selling UX to difficult stakeholders, and what they do when they come up against strong opposition. I need to know that they can compromise, and that they can manage the compromise effectively so I’ll ask for evidence of this in past projects.”

“– Do you have experience designing user interfaces for large scale systems, such as an enterprise-wide data management system? (If not, ‘what do you think some of the challenges might be?’) Goal: Get at whether they have worked with large, complex software products, multiple-view user interfaces (such as view by user type or interfaces that adapt to the type of data being viewed), saving user preferences, specialization and diversity of target user population.

– How closely have you worked with end users in the past? Tell me about a demanding user population you have been involved with in designing a user interface for them to use. Goal: Get at whether they have worked with multiple-views, user preferences, specialization and diversity of target user population.

– Have you worked on any software applications where efficiency and effectiveness of the end-user was paramount? Goal: Learn if they have worked on call-center software, keyboard-centric input, editing, or other demanding environments where knowledge of human performance was needed.

– **How closely have you worked with developers in the past? How have you communicated design intent to developers?**

– How closely have you worked with subject matter experts and business experts in the past?

– Do you have experience creating and maintaining style guides?

– Do you have experience creating and maintaining widget libraries, UI element repositories, or other resource for reuse and consistency?”

## Appendix I: What Helped Most in Your First Year?

Continued from “What Helped in the Beginning: In Their Own Words,” beginning on page 90.

“I wish I had got a mentor, I wish I had done user testing training so that we did it better. I also wish I had known that the work I was doing was user experience so I could have researched best practices and different approaches.”

“Sketch more [and] attend more industry events.”

“More comparison — I didn’t really have any mentoring as such, was just expected to get on with it. So for me, the reading has helped the most. There is no substitute for watching real users.”

“What helped the most was the opportunity to work with UX professionals on a couple of projects; I could see how they did stuff and be involved also as a participant.”

It “helped me the most to have a senior consultant mentor me and be involved in a wide range of projects.”

“**I wish that I had worked faster.** I was very focused on the process, but could have skipped a few steps and been more effective. Working faster means you can show value faster, and not have folks wondering what the mysterious UX activities are.”

“I would have done a **better job of documenting my thought process and decisions** to make assembling a portfolio easier (something that I can reference as I grow). I think I would have also **put myself into more opportunities and projects** to get a better sense of what I was interested in focusing on and understand my strengths and weaknesses.”

“See if you can **find an experienced UX professional to talk to.** It saves you a lot of time figuring out basic stuff yourself.”

“**More focus on prototyping and getting users to test what we were building.**”

“I was self-taught, so the learning curve was steep. **A degree would’ve been useful, as well as better skills with Adobe and sketching. Books and long hours helped a lot.**”

“**Having realistic expectations about “doing usability” in a corporate environment.** I wish I had read Nielsen’s [Corporate Usability Maturity](#) article before starting my job!”

“**I wish I had asked more questions about what the business was hoping to accomplish.** In that first year, **reading *Don’t Make Me Think!* by Steve Krug gave me a valuable framework** for understanding the field.”

“I would have liked to get at least **some formal education in the field.** Most of what I know I know from experience, conference, or reading blogs/articles/books.”

“More access to hands-on opportunities.”

“**Shadowing another professional** was extremely valuable. There are lots of theories and best practice recommendations out there, but each situation and customer group is different, so hands-on, **real-life experience is the best teacher.**”

“It is helpful to have a mentor that shows you the ropes. If you work for a company that doesn’t understand design, your job will be painful, no matter what.”

“**I wish I had started with fieldwork.** It took me a few years to figure out the importance of context to human activity. Everyone around me thought human factors research and usability testing were sufficient. They were not. **I needed to get out there and meet the people our products were alleged to be helping, get to know them, their motivations, environments, predispositions, pain points, etc.** Then I could have a clue how to design something actually useful instead of just ‘usable’ in a disembodied pretend sense of usability.”

“I wish I had asked more questions.”

“My mentor helped the most.”

“**I wish I had tried to facilitate a test earlier than I did.** I was a technical writer, and took a partly self-funded course on ‘Usability Engineering’ taught by Judy Ramey that changed my life. I knew this was what I wanted to do, but I couldn’t figure out how to work it into my job. It wasn’t until more than a year later that I hit on the idea of usability testing the documentation I was working on, with the application it was documenting. Oddly enough, there was a lot of information there about how to improve the application UI, too.”

“Working with smart people helped me most. ... A wide range of projects was key.”

“**Keep educating yourself. Keep practicing. I wish I’d done more usability testing on websites I was working on and I wished I’d done followup testing on updates I made based on those initial studies.**”

“I shadowed a usability consultant and learned how to moderate. I took several HFI courses over a period of several years. **I volunteered to run a usability study** when my company needed this to test prototypes for a new software release. **I recruited a group of colleagues to collaborate with me** in interviewing users and developing personas — this created a corporate acceptance and desire for a new UCD process to be implemented.”

“I think most of my regrets are around general career development, not UX specifically. I’m an introverted perfectionist, so I found it very difficult to step out and get to know management, which made it much more difficult for me to impact projects. ... **I didn’t really stay current in what the rest of the world was doing or other skills.**”

“I was blazing a trail — first person to do usability at my division. ... **Finding a champion really helped. I wish I had reached out to the UX folks in other divisions earlier — they had already been through a lot of the same things I was going through. Also wished I focused more on the battles I could ‘win,’ than getting hung up on ‘shoulds’.**”

“**Listened more to the user** and the problems they were having in the current systems, rather than just assuming the problems were all in the dated visual design. Because usually there is more going on than just a dated design.”

“What helped me the most was **finding reliable sources of reference for usability standards**, such as [[Alertbox](#)], Smashing Magazine, and other modern Interactive Design reference authors. The other thing that helped was **seeing the various usability testing techniques live** — that is essential to understanding what is going on with the user, the person testing the user, and the person to whom the feedback will go.”

“**Keeping an open mind about what types of design I am qualified to do based on my education has been the key to my success. With an open mind and willingness to try new things I have gained a diverse set of practiced skills.**”

“**I wish I had volunteered for more projects that involved user experience.** I did some work with it, but I could have done more if I had talked to more people. I learned a ton because we had policies in place and a style guide and web standards. I was able to take that information to the company I am at now and implement them here.”

“**I wish I would have done more research on the fundamentals of user experience.** Understanding that every time a user clicks on a button they are desiring to do something, or wanting a question answered was the biggest ‘aha’ I’ve ever had in terms of user experience. From there, contextualizing the design of the site to elicit the question or desire became easier.”

“**I was lucky to be at a company that valued usability and had an actual lab. The people around me knew all of the processes and just let me go. I would have asked more questions of my peers [rather] than assume that I knew how to do everything.**”

“I was in the ‘don’t know what I don’t know’ stage — learning as I went, feeling a little silly. **[I wish I had] had a mentor and / or gone back for some more formal training as soon as I figured out I was interested in the field.**”

“I wish I had had a mentor, at a different company if necessary, who did UX. Being a lone wolf at my first job was hard.”

“**If I had it to do all over again I would take classes on organizational change, leadership and Dale Carnegie style classes. ... What has helped me was getting my certification CUA.**”

"I wish I'd joined a company with a stronger mentor to learn from. ... I spent a lot of my first year relying on friends to help guide me through the right steps. While my next job had even less mentorship than the first, they were willing to support me in learning what I didn't know."

"As part of my 'education' I had the fantastic opportunity to shadow with a UX person from our consulting company at a client site. That client had a variety of projects in-flight, so I was able to gain experience with competitive analyses, web analytics, information architecture, wire framing, paper prototyping and comparative usability testing. Unfortunately, my first assignment on my own was at one of the worst body-shop agencies in our area. I wish my consulting company had the wherewithal to decline an opportunity rather than take it and set me up for failure. It was damaging to my psyche to have that be my first solo contract."

**"I wish I had more data to back up my suggestions.** I work in academia where 'common sense' doesn't cut it. If I had solid data, it would be easier for me to defend my ideas."

"The most helpful thing was finding out that there were resources available produced by people who had solved problems similar to mine. In my case it was a couple of CHI papers but the concept applies more generally: **very few problems people face are truly novel and you can learn a lot from finding out how other people solved similar problems.**"

**"Learning the digital tools thoroughly was very helpful.** You need to be able to communicate your vision in wireframe mode initially, but making a functional navigation prototype is essential to give the client a real feel for your intentions."

**"I wish I would have focused more on using graphic tools like Photoshop and being a better graphic artist."**

**"I would have thrown myself into CSS/HTML sooner. Fireworks is a quality program, very intuitive and a good grounding to remove the fear of Photoshop."**

**"I wish I had been more persuasive to try to implement user experience solutions** rather than letting the technical requirements be the limits. What helped me the most was working with professionals with experience and willing to teach and share their knowledge."

"Initial interface / web designs ... were purely based on preferences by top management, clients. I wish I would have been confident, bold enough at least to bring in 'users' in those discussions."

"Since I was thrown in the deep end, **I wish I had read more widely about UX before I began working on improving our websites.** Working with a UX / IA expert helped me realize that my opinions and practices of putting end users needs first was not unusual."

"I wish I had a stronger educational background to pull from. I didn't know about all the different methods available to find out how users view a site."

"I wish I had a basic understanding of the different file types that are used in developing a site and other digital apps."

"In the beginning we designed based on assumptions. After participating in a user test of our designs, **I learned to put my opinion last, the user first.** Getting the first online A/B test results changed again my approach to defining the user experience. It is now key to gather as much data as possible about the user and also the business model to match the expectation of both sides."

**"More interviews and user testing. My career changed from visual designer to UX professional the day I convinced executives to test** marketing funnels via user testing to pinpoint exactly what variables would have the biggest impact on conversion."

"I wish I had more confidence in myself to stick to my recommendations. The thing that helped me most was reading blogs and books and talking with friends who were also working in UX."

"When I first started I wish I had done more research and read more. Having solid references to cite from when making recommendations is very valuable. What helped me the most was thinking like my grandmother. I would often ask myself if she could use it (she was quite smart and tried to keep up with technology) but if I thought it would be too hard for her, then I was doing something wrong."

"What helped me the most was **getting involved in the community.** I was coming from the field of technical writing where I had done usability testing back in 1987, designed online help systems, and was at part of the UX 1.0 wave. **We pushed knowledge into areas that were new, but the knowledge wasn't new.** It helped me to have others who were in the same uncharted waters, and **I bought every book I could get my hands on.**"

"What helped the most was **taking lots of notes, and listening — especially to the user.**"

"I wish I had pushed for more of a strong position at my agency ... to provide [UX] as a separate service."

"What helped the most was starting in a software firm (web-based CRM). That job taught me about heuristic evaluations, usability testing, writing test scripts, analyzing the results and writing a report. It also taught me that interacting with both the business and development sides are incredibly important to have on your side."

"Learning how to communicate with internal and external clients using mock-ups and helping them to conceptualize at that level (pre-art) without getting unnecessarily bogged down in details."

**"I wish I had networked with peers more ... tested out a variety of tools.** What helped me the most was reading books and visiting usability websites and getting my hands dirty by doing the work. Never telling my boss/clients 'I don't know how to do that'."

"Finding [Jakob Nielsen's *Alertbox*] was a HUGE turning point — it crystallized a lot of principles that were floating around unfocused in

my mind, and took my understanding of communications structure to new places.”

“I wish I’d worked for a company that had better guidelines and a better strategy in regards to the website.”

“After I decided to go back to school to change my career (from Graphic Design) I decided to earn my certification in computer programming. My second option was HCI which I do now and a certification there would have been better.”

“The first year **I wish I had done more analytical analysis of data, and standardized the usability testing process.** What helped the most was that I got to work with another company that did professional usability testing. I learned a lot from their methods.”

“**Take a good learning course instead of searching info in the Internet and learning from co-workers.**”

“I was lucky enough to get **internships.** These are invaluable experiences and should be sought out and enthusiastically participated in.”

“It would have been nice to **focus more on usability.**”

“Differently: Would have **spent more time focusing on how to most effectively deliver my results/recommendations to the client.** Helped: Working with a team of professionals with diverse backgrounds and learning from them and their experience.”

“I would have applied for a **masters degree.** That would have been the fastest way to get a well rounded design education.”

“**I would have been more open to trying a variety of techniques to expand my comfort zone.** What helped me the most was working in a consulting environment with talented professionals (UX, development, graphic design, project management, etc.) that I could learn from.”

“**I wish I had stood up for my research a bit more.** I felt a bit bullied by the Product Team to skew my research in a complimentary way. That organization is now defunct. By standing up for my independent findings, I may have been able to steer the product into the right direction. **What helped me most was reading everything I could about Usability and UX, and applying that to my own research.**”

“I would have spent **more time doing prototypes.**”

“Be more assertive as to what I can do and what I cannot do in a UX project. What helped the most: having peers to ask questions, reconfirm about methods and best practices.”

“**Build stronger relationships with senior people in the field, find a mentor and work with them to create a career path.**”

“**What helped most was that I read a lot.** ... It would have helped to work for someone that knew more than me so I could learn faster.”

“In the past working at agencies, budgets prevented us from doing a lot of research and testing. We never really knew what the results were of our products after launch. Working in-house now where UX is a priority, I’m able to take advantage of a lot of UX related tools (many are free) and time to get feedback from users on our solutions. When we launch, we KNOW that the solution has been tested and will not have many hiccups for users.”

**“I wish I had the opportunity to do done less up front design and more iterative building and measuring cycles.** I was lucky enough to be mentored by a 20 year veteran of user experience — this was certainly a great help.”

“I wish I’d joined and interacted with more people online.”

“Empowerment helped me the most — when I was given the space to make decisions, and say no to business requests, the user experience of the first large website I worked on improved dramatically.”

“I moved into it gradually over a number of years. **Listening to podcasts** gave me lots of useful knowledge and got me started thinking in the right direction.”

**“I would learn presentation skills, soft skills and change-management.”**

[I would have] “traveled to more clients / users to experience and see first hand their ways of working.”

“Involving users earlier and more often. Users are the best storytellers and could save a lot of time convincing.”

“Work in-house with a team so you can get some internal mentoring and direction. ”

[Don’t] “be afraid of finding things wrong. Identifying problems helps you find solutions.”

“What helped me the most was the assistance of the designers, developers and project managers who helped educate me.”

“Had formal training. Had better negotiation skills to report on findings. Reading the internet.”

**“I definitely should have volunteered my time within my local [UXPA] chapter.** It was very well established and although I attended monthly meetings, I have noticed that newbies who volunteer to do note taking or publicity get a swifter jump within their UX career than I felt like I did. After all it always helps to give when you hope to get.”

“I would have sought more criticism and been more open to criticism. **Being open to criticism is the best way to learn in a field where opportunities to be taught are few and far between.**”

“My biggest mistake was resisting moving to testing with the observer in the same room as the participant.”

“I would have used data to prove my point and measure success.”

“I wish I had been able to focus my career on more of the mobile user experience than on the desktop user experience. I also wish I had had the opportunity as well as need to learn many of the different design tools such as Visio, OmniGraffle, Photoshop.”

[I wish I had] put together the elements from each project I worked on so that I could easily insert them into a portfolio [and] attended more UX-related workshops so that I wasn’t just experiencing UX on the job.”

“I guess my earliest mistakes were only seeking validation from real users after we’d decided on a product direction. It took a long while for me to understand the power of getting users involved really early in product definition/discovery. The more generative end of user research was a late addition to my skill set.”

“What helped me most in my UX career — working with other really smart people.”

**“I should have volunteered for more responsibility with the development time and prototyped rapidly on paper.** What helped the most was talking to other knowledgeable practitioners again and again.”

[I wish I had] “read more books about it and done more studying by myself.”

[I would have tried to] “produce better results in the organization [and] do more to give UX better visibility and authenticity through results.”

“I read a lot of UX books and practiced writing personas and user stories just to get the hang of it. I made up a lot of my own projects to get comfortable with it. I do wish I had a little more design skills, but I am working on that. My programming background allows me to effectively communicate with the programmers at my company, so that has been extremely valuable.”

“I did an internship with IBM while finishing my Ph.D., which was a great introduction to our field.”

[I would] “tone down the rhetoric and **have conversations instead of prescribing solutions** from high above.”

“I’ve been happily working my way through Bentley’s HFID program. Wish I’d had more of an overview when I started the program — a high-level view of the entire field and the niches available, so I could best plan the course work to use my strengths strategically.”

“Personas may be made fun of, but creating them and using them really helps you prioritize.”

“What helped me the most was having a good manager (who was also a human factors person) and good mentor.”

“I wish I had picked up some online study earlier and been stronger to push some of those principles learned in the study into my actual work. It is hard to do part-time UX work but it is important to do it

right if you actually want to make a permanent switch to UX from something like software development, otherwise you end up filling both roles below par.”

**“I needed to understand the wider politics of usability. Not everyone is on board so a key part of the process is training others.”**

“My first year working in UX I had a mentor at my job which was extremely helpful. **I wish I had started grad school immediately.**”

**“The thing that helped me most was watching many customer sessions in a lab ‘behind the glass’ I wish I had done this earlier, because of the insights the sessions provided.”**

“I’m pretty satisfied with what I did. I learned the most from other UX practitioners, from reading articles on the web, following [practitioners in an online community] and just doing the work.”

[I wish I had known] “how much research was enough and how detailed a report should be. Doing more projects was helpful — learning through doing.”

“I wish that I had had the guts to ask for what I deserved like full-time status and benefits when I was working full-time as a ‘part-time’ employee. My co-workers helped me the most. They taught me everything that I needed to know and weren’t afraid to spend the time to teach me how to do things in the ways that they have found to be the most effective.”

**“I wish I would have done more personal work and developed personal projects to get myself some extra experience.”**

“I wish I’d found a UX mentor from day one, and a job that allowed me to immerse myself in the work (rather than practice it occasionally, as necessary).”

**“Having a mentor helped me the most.** I happened upon UX. I didn’t actively pursue it, but it was a perfect fit for me. I worked A LOT those first few years. I took initiative and learned HTML during the Web’s formative years and took every opportunity offered to me.”

“The best thing about my early years in the career were that I had the opportunity to experiment and try different techniques. I wish I had had more like-minded colleagues I could have bounced ideas off of, but I was a UX team of one.”

“What helped me the most in my career was getting a master’s degree.”

“I wish I had made less assumptions about my users! I also wish that my clients (and sometimes even my organization) could see the long-term value in conducting UX exercises. I was too often swayed by the client’s desires and perhaps not confident enough to defend my solutions. **What helped the most is reading great UX books (which really validated my methods) and engaging with UX professionals around the world.**”

"I wish I had been able to pull together my disparate learning and training into a more formalized, integrated base."

"I had good mentors — that proved to be the most influential aspect of my training."

**"I wish I had understood how to better engage stakeholders** (product, engineering). It's something that's hard to teach in school, but essential to having impact. For instance, if the designer can't take notes, can I get the product manager to do it? **What method are we using to debrief after the study and did I schedule time to do that? If I disagree with my stakeholders' interpretation of a study, how do we arrive at consensus without undermining the importance of their observations, and do it before they confidently announce findings in a larger meeting?** I've made some of my biggest mistakes in these areas."

"I wish I had stayed at my first job longer, I was overwhelmed by the sheer amount of work and learning inputs. It helped that I worked with really talented people who pointed out my weaknesses and helped me work through them."

"I wish I had developed **more experience with design software**. I tend to prefer doing user experience research, so I usually focused on user research tools."

"I wish I had gotten **more exposure to the UX community**. I am continually amazed by how talented and passionate UX professionals can be."

**"I wish I had had more confidence and taken more risks. I knew a lot and I could have learned more if I had been bolder.** What helped me most was the network of colleagues I had established through graduate school and professional organizations, plus the fact that I try to be a team player and responsive, responsible colleague. This meant that I received like treatment."

"I wish I had been more aggressive in pushing for customer surveys and including results of user testing to add/eliminate application features."

"I wish more time was spent doing and less wondering and fretting (overthinking)."

"I wish I had talked to other professionals for advice on how to explain what I was doing and how it would help our stakeholders. I was thrown in the deep end and learnt by watching/doing/reading — it felt very much like faking it until making it. Having a better vocabulary around UX would've been very helpful. What helped me the most? Being genuinely interested in, and willing to listen to, people's stories and experiences along with being curious probably helped the most in the first year. **Better training (ANY training) would've been very welcome.**"

"CSS and HTML"

“I wish I had known what user experience was and had worked on projects with the title and duties in mind. All of the work I did was useful, but not being able to speak to it with the title in mind, and the language of the marketplace on my tongue, held me back. **Learn to speak the language of the folks you wish to influence.**”

“User feedback is great but it is even better to watch what someone does. Sometimes people articulate what they think is an issue, rather than the real problem.”

“At the beginning I was afraid to freelance on projects instead of looking for a permanent position. Freelancing gives you the opportunity to learn a lot from different companies, teams and compare / pick / learn from best practices.”

“Fortunately for me my first ‘simple’ design got ripped completely apart in critique, so I learned from the beginning to be rigorous and to have strong rationale behind my design decisions.”

“I would focus on usability more rather than on my normal responsibilities.”

“What helped me the most was working for a company that embraced UX, so I didn’t have to convince executives we needed it. My advice is, **if your company’s executive team does not embrace or back UX, you are working for the wrong company** and won’t make any in-roads there.”

“It really helped that I liked my coworkers enough to spend time with them outside of work. They were good resources to me about things like what to write on my development plan, my performance appraisal, how the company benefits worked.”

“What helps the most is the community of UX Professionals in the area and working with a good flexible team.”

“I think what helped me the most was being involved in research at a corporate enterprise level — I was put in situations where I had to learn how to prepare and present qualitative and quantitative results for many different levels of management and for general consumption.”

**“Coming out of a strong human factors program made my first year pretty easy from a methodology standpoint.”**

**“What helped me the most was to accepting the fact that failure is a good thing. It helps learning.”**

“I learned on the job, but my background inadvertently prepared me for the field. I had people willing to help me and let me learn from observation and guided experience.”

“I started consulting I don’t think consulting fit my leadership style at the time. What helped me the most was getting out of consulting and working in-house. Building relationships with people gave me confidence to be a leader — if I were to consult now, I would be more comfortable and confident.”

"Wished that I had pushed for more user interviews before we made bigger steps. Made sure we pulled in more people in the office who use the app and are on the front line when dealing with the customers."

"I wish I'd written less code and whiteboarded more. Attending the [UXPA] conference helped inspire and expose me to many new ideas."

I wish I had "nailed down exactly what my job responsibilities were and how much of the time I would spend doing them. I ended up doing a lot more programming and less UX than anticipated."

**"I wish I had spent more time talking to (and listening to) my mentor, and I wish I had asked more questions at work and said 'I don't know' more often."**

"My issues were more about the idiocy of youth and not really understanding business culture. Strangely enough, I'm still pretty proud of the UX work in my earliest projects."

"Mapping all design decisions back to first principles helps the most. It becomes supporting the identified audience, context, goals, content."

"I'd wish had more practical knowledge and less theory. What helped me: work hard in a consulting firm with different customers, projects and situations."

**"What helped me most was a company that offered tuition reimbursement and a boss who encouraged me to take courses."**

"Always start projects with wireframes. Do not go straight into design. Get more feedback. I **wish I shared my work with more people at every stage, especially any people who might fit into the intended audience.** Feedback is important because it makes you think outside yourself."

"I was very lucky to be on a fast-growing team with a very experienced leader, which was ideal. She got me involved in professional societies, which allowed me to network and encouraged me to engage in projects that I was interested in (creating a style guide)."

"I wished I had spent more time experimenting with the tools rather than just having familiarity."

What helped the most was "speaking to more users about their experiences. ... Speak to as many users as possible, don't make assumptions."

"Taken formal education. ... I started taking the free online HCI class offered by Stanford on Coursera [but it didn't offer enough structure] ... what did help me the most was talking to design professionals who I met through my network, and talking to a life coach."

"I wish I had been able to go into consulting earlier. Being inside a development organization is more important in being effective all-around, but I developed better design skills by working closely with other designers."

"I was way behind on the IT side, **I would've done more computer science courses.**"

"I wish I'd picked a vertical [industry]. **Mentorship was the best thing ever. Everyone should have a mentor.**"

"I wish I had training earlier in the first year of my career.

"I wish I had a mentor."

"Local UX book club and meet-ups were very helpful in talking to people and finding information, discussing techniques, gotchas, etc."

**"I should have asked for a budget to pay a recruiting service to locate appropriate volunteers. It helped me the most to observe consultants doing usability testing so I could develop a similar set of skills."**

"Since I started in 1994 on website design, my first year was all self-taught. **Most helpful was being a member of the Society of Technical Communication, who had this usability thing in mind for a long time before I came into the picture. Reading Nielsen, Norman, Tog, and Jeff Johnson was most beneficial.** Insisting on data-driven and usability driven design paid off for me, but occasionally rubbed others the wrong way (I'm looking at you IT)."

"Just focusing on the key research and how-tos NN/g presented really helped me create a good plan for my company and for my team to execute. I then went to a NNG conference, which helped fine-tune skills."

It "would have been nice to work with more like-minded individuals as peers or mentors. **The internet helped me the most.**"

**"Learn more about design principles and theories. Learn more on quantitative research methods (logs analysis, etc.) What helped me the most: watching videos of colleagues' study sessions."**

"Don't believe something is the right way just because that's the way it's always been done. What has helped me the most is putting myself in the customer's shoes rather than going with the company-centric crap that many coworkers are so often trying to foist onto customers."

"Partnered with another consultant, instead of trying it on my own."

**"I wish I could have found more time to collaborate in a deeper way with other members of my team.** I think this would have yielded better, more innovative results for clients. Formalizing the formation of a User Experience team helped the most in recognizing the importance of the skill within our organization. It provided opportunities to integrate UX into the business culture."

"Working harder! Helped me the most: a good mentor/role model."

"The support of my colleagues and superiors was essential."

"Set up better UX processes and procedures."

"Bounced stuff off of experts earlier and more often, involved more people. Helped most: Getting a student employee that I hired, to train me on UI / UX skills I was not sharp on."

"Gained more exposure to the software used in testing."

**"I conducted contextual inquiry sessions with end-users in identifying the user workflow and pain points. This helped me in designing the wireframes that met user goals and objectives."**

**"More practice time with other people. ... More emphasis on the beauty of watching again the recorded usability testing sessions."**

"Be more open, learn how to sell the work."

**"I took a three-month, five-day-a-week local college course in Web Design and Marketing."**

**"My in-person classes helped me the most (UCLA Extension) and networking, hearing panel discussions, meeting the UX thought leaders ... is incredibly educational."**

"I wish I had more real-world experience — not just what I read in books."

I wish I had [dived] "deeper into understanding the audience's needs and patterns for creating an online experience."

I wish I had "made an effort to show off UX in fun ways, for example had a facilitated activity at a Christmas luncheon" to help co-workers understand methods and insights.

"I wish I had gotten better at sketching."

"I wish I had known more about usability research and been able to apply insights from real qualitative and quantitative research vs. designing based upon what I and the team thought the targeted audience wanted."

**"I should have worked client-side and stayed clear of ad agencies."**

"I wish I had a mentor to explain the best practices for UX and why. Working with someone else doing hands-on work. Learning by example is so great. It's the natural way of things for those of us who practice observation of people doing 'stuff'."

"Specific coursework in User Experience Design (UCLA Extension)."

I wish I had taken "more time to educated the key stakeholders to get buy-in. Taken control away from IT and into Marketing sooner."

**"Don't expect people to accept your recommendations at face value .... People put faith in systems, not people, so be ready to sell your system."**

“Focus more on communication of results as much as taking up new projects. Quant research skills and technical skills from Btech in CS along with solid skill in UX research in general helped most.”

“I wish I had been less afraid [about] having the ‘right’ answer and instead focused on ideating and iterating over and over.”

“I wish I had conducted research, user studies and documented more formally.”

What helped me the most was “observing multiple usability experts and testing scenarios. So often, test results indicated well known design principles rather than new principles.”

“Include usability studies for every project. It help to convince stakeholders.”

**“I wish I’d started learning earlier. I felt a bit overwhelmed with all the different resources, books site etc. What helped the most is going out and doing tests. It’s the only way you’ll learn and improve.”**

“Assume less ... and test more.”

“More website testing before building — e.g., card sorts.”

I wish I had “insisted on more training. What helped me the most was finding all the books I could and reading them.”

“Getting my feet wet in my first study helped tremendously. Even though I wasn’t completely ready (nor formally trained), that first test helped me understand more about the end users than anything else I had done previously. (Product Manager, Business Analyst, Trainer, etc.)”

I wish I had “learned more about research / analysis / stats. I had the technology background, and the concept of usability came intuitively, but I didn’t know how to get or analyze valid data. Conducting as many tests as possible has given me the experience and confidence in my profession.”

“My first job was very focused on taxonomies and metadata, so I left with a lot of spreadsheets and not a lot of anything else to show for it. **I would have liked to have a more diversified portfolio of experience** — I ended up adding a screenshot of the final live version of our corporate site to my portfolio and talking about how we’d gotten to the new design, but more wireframes and user flows would have been great to be able to share with interviewers.”

“What helped me the most was having coworkers who were willing to explain things to me.”

“Get the support you need at the top. You need an executive champion if you don’t already have a well established in-house team.”

“I wish I’d had more experience with data analysis. **Reading blogs about how people analyzed data helped me the most.**”

“We had great difficulty convincing clients that user research and usability testing were important, because they ‘had the song in their head’ and assumed that their audiences did also. We should have spent more time figuring out how to demonstrate the value and should have showed executives one or two people trying to use their websites early in the relationship, even if we had to pay for it ourselves.”

**“I liked the design but not the user. I should have shown my designs to a layman who uses the application.”**

“I wish I had done more work to sell critical stakeholders on the value of usability testing. The group I reported to was highly analytical and more comfortable with statistically significant numbers — the best practice of using 7 or 8 participants wasn’t something they were comfortable with at first. **What helped me the most was having an executive sponsor. I found that having a good sounding board and champion made a lot of conversations happen, especially when we made usability part of the project management process.**”

**“Wish I would have done: Read more books. Most helpful: had a wonderful, seasoned mentor.”**

“What really helped was observing and talking to users. I personally usually find it easy to learn a new system, but most others don’t and it is very helpful to get their insights.”

“I had a magical experience where a senior user experience person took me under her wing and told me exactly what to do. She told me which books to read, she showed me how to think about UX questions, how to translate business needs into questions, how to moderate and how to write reports. She was an angel.”

“What helped me the most of [Rubin and Chisnell’s Handbook of Usability Testing](#) and getting opportunities to talk with others doing this work.”

“Rely less on your instinct and more on data. Spend more time watching real human beings use your prototypes.”

“I wish I had worked harder to make UX an integral and required part of the UI design process.”

**“Keep learning new things is the name of the game. Pay attention to the experts in the field, learn new trends but rely on the judgment of the core foundations of the field.”**

**“Read a lot more.** I did a lot of wireframes based on gut feeling only and even if I was able to sell them well, it doesn’t mean they were good at the end.”

“More prototyping / wireframing, and convincing upper management that this is a useful tactic instead of relying on untested ideas.”

“I have been working in an organization where user experience is not yet established or mature. What has helped me the most is to demonstrate that there is a solid framework and processes to follow.”

"I started out as a visual designer on a UX team, I was very fortunate to have a bunch of really smart people around me that I learned from. We were a great team and very collaborative."

**"Because I was working so hard to figure out the best way to create beautiful wireframes in OmniGraffle, I stopped thinking about the flow. It became more about how to fit elements onto the wireframe using the templates I had available. The tools can be 'cool' but they can also get in the way."**

"I wish I had more time to shadow more experienced practitioners. What helped the most was my journalism degree and years spent designing and delivering systems training."

"I wish I had known how much literature there was out there regarding conventions and standards."

"I wish I had taken the time to do lunch-and-learns, hold seminars / workshops, or something similar with employees. There's a lot of people out there saying 'I used to work in UX.' or 'I know what UX is already,' and they have just the slightest inclination of the depth and breadth of the field. Education and teaching others is where I would have helped others understand my role."

"Coming into a pre-existing process was difficult, identifying the gaps that were making it hard to report on information properly; attending [NN/g Usability Week](#) training helped me to understand the processes better and to learn from others what tactics do and do not work for them."

"Design UX first — develop after. Communicate with all the team often (development, testing, even marketing)"

"I wish I had a more technical background."

"What helped me the most? *Don't Make Me Think* by Steve Krug."

"Implement more usability analytics and interface metrics."

"Practical experience of how projects work has been the most beneficial thing — get the processes right and the rest follows."

I wish I'd had "presentation skills training [and] spent more time learning OmniGraffle."

"More hands-on user testing. Talk to users rather than listen to usability professionals. You really do need to see users struggling with designs to understand the impact that a small, seemingly insignificant change can make. Not every usability professional is right either, there's a lot of folklore being passed around, so it's worth seeing users first hand."

**"The compulsion in the early days is to ask for volunteers (biased) testers. Reliance on statistically based conclusions can be dangerous. ... What helped me the most was, 'If you can meet with triumph and disaster and treat those two impostors just the same.' The realization that metrics are relative and virtually unrelated to usability."**

“I already had communication and interface design skills, so I wished [for] more programming skill and user behavior background.”

“I would have opted for a qualification. All the available information out there is invaluable. You just need time to go through it and select the publications / experts you want to follow.”

“Use the ‘5 Whys’ iterative question-asking technique a lot sooner. In the beginning I was not always aware of the fact that you [must] understand the problem or use-case.”

“I had no formal training, so it would have been good to attend courses and conferences sooner.”

I wish I’d been “involved In the UX community earlier. My mentor helped the most.”

“I wish I could have had a more formal training with professionals from the field. **Books, websites, discussion forums, collaborative online sites with templates of questionnaires, reports, helped me a lot.**”

**“I wish I’d done more user testing outside of work hours.** It’s been difficult explaining the use of user testing without having a portfolio of tested and improved applications to show.”

“I was recruited as the sole usability analyst for our company. My background is in cognitive psychology (PhD), so there was some strong overlap with user testing, but usability *per se* was new to me as a formal job. It would have been great to have a mentor or access to a group for advice on certain minor points / questions / discussions along the way. Places like Stack Overflow and the various UX blogs have been invaluable. A lot of the first year was spent reading up on user experience and usability best practices and running usability tests. Once you have a basic grasp though, most of the learning comes from doing. For deliverables: in hindsight, too much time was spent on generating a detailed report which I have now learnt is mostly unnecessary — most (internal company) stakeholders want the bare minimum in text. They just want a suggested fix which requires the least effort from the development team.”

**“I wish I [had taken courses] in positive thinking and in presentation skills ... how to present unpleasant things in a positive, ... constructive manner.** Indeed, at the beginning of my career as a UXer, my reports [findings] were not given that much credit because they were seen as quite ‘offensive’ (issues and recommendations as if I had THE solution). It took me a while to get rid of this image and have UX considered as a key element in any project, thanks to those trainings.”

“I should have attended some UX seminars / conferences, should have obtained HFI’s CUA certification. Now with six years’ experience, I feel it won’t add a lot of value. Practical work experience is better any day.”

**“I should have reached out to my mentors much more, earlier.”**

---

## Acknowledgements

Our utmost thanks to the anonymous UX professionals who gave so generously of their time and advice. Thanks to those who helped with the survey testing: Elizabeth Bacon, Crystal Beasley, Marsha Haverty, Caroline Jarrett, Raluca Budiu, Jen Cardello, Luice Hwang, Hoa Loranger, Marieke Obdeyn, Kara Pernice, and Amy Schade. We're also very grateful for images and information contributed by Nate Angell, Kara Pernice, Marla Mitelman, Elizabeth Bacon, Dan Saffer, Thomas Gläser, Markus Jaritz & Philipp Sackl, Katie Albers, Bill Selman, Chris Nodder, Arun J Martin, Dorian Taylor, and Janelle Estes.

---

## About the Authors

**Susan Farrell** is a Senior User Experience Specialist. Since joining Nielsen Norman Group in 1999, Farrell has consulted with dozens of companies — multinationals, nonprofits, publishers, technology companies, government, open source, early startups and more — regarding website and mobile device usability, interaction design and information architecture. She co-authored the *E-commerce User Experience* research series, conducted accessibility research for the report *Usability Guidelines for Accessible Web Design*, and contributed to many other NN/g research reports. She has been working on web design and usability since 1993, previously at Georgia Tech Research Institute, Silicon Graphics (SGI), and Sun Microsystems.

**Dr. Jakob Nielsen** is a principal of Nielsen Norman Group. He is the founder of the “discount usability engineering” movement, which emphasizes fast and efficient methods for improving the quality of user interfaces. Nielsen, noted as “the world’s leading expert on Web usability” by *U.S. News and World Report* and “the next best thing to a true time machine” by *USA Today*, is the author of the best-selling book *Designing Web Usability: The Practice of Simplicity* (1999), which has sold more than a quarter of a million copies in 22 languages. His other books include *Hypertext and Hypermedia* (1990), *Usability Engineering* (1993), *Usability Inspection Methods* (1994), *International User Interfaces* (1996), *Homepage Usability: 50 Websites Deconstructed* (2001), *Prioritizing Web Usability* (2006), *Eyetracking Web Usability* (2009), and *Mobile Usability* (2012). Nielsen’s Alertbox column on web usability has been published on the Internet since 1995 and currently has about 200,000 readers. From 1994 to 1998, Nielsen was a Sun Microsystems Distinguished Engineer. His previous affiliations include Bell Communications Research, the Technical University of Denmark, and the IBM User Interface Institute. He holds 79 US patents, mainly on ways of making the Internet easier to use.



## Evidence-Based User Experience Research, Training, and Consulting

Since 1998 Nielsen Norman Group has been a leading voice in the user experience field.

- Conducting groundbreaking research
- Evaluating interfaces of all shapes and sizes
- Guiding critical design decisions to improve the bottom line

### We practice what we preach

We don't just talk about the importance of testing with real users, on real tasks, in real life business situations: we do it. Every week, somewhere around the globe, NN/g team members are conducting research that informs the three pillars of our business: training, consulting and research. In that work we have:

- Tested over 2,000 different interfaces
- Observed more than 4,000 users—in person—in 18 countries and on 5 continents
- Analyzed thousands of hours of recorded user observations sessions
- Conducted countless diary studies, focus groups and remote user tests

### Our collective experience will save you time... and money

Making technology easier to use is no longer a nice-to-have. Useful, usable products make money. And our expertise can help your team achieve their design goals quicker and easier than going it alone. Choosing NN/g means you benefit directly from our:

- **Finely tuned methodology:** We have an arsenal of proven tools at our disposal and know how and where to apply each one, taking the guesswork out of how to achieve the optimal design solution to meet your business goals.
- **Comprehensive body of knowledge:** We've taken the results of our decades of research and testing and distilled it down into actionable guidelines, best practices and proven methodologies. Our research library, containing over 50 published reports, X books and an email newsletter archive dating back to 1995 is unrivaled.
- **Practical approach:** Our approach is 100% practical, useful and actionable. Whether you attend one of our Usability Week events or invite us to consult at your place of business, the training you will receive can be put into action immediately so that you can see the results.



Evidence-Based User Experience Research, Training, and Consulting

### **Our people are the best in the business**

At NN/g there is no “B Team”. When we dispatch consultants to work with you and your team, or when you attend a Usability Week course, you are learning directly from some of the best-educated and most experienced minds in the business.

- Our principals are considered pioneers in the fields of user research and interface design.
- Our researchers and consultants tackle the most recent and relevant topics in usability, from evergreen challenges such as information architecture and intranet usability to emerging trends in social media and mobile usability.

### **Stay Informed**

#### **Jakob Nielsen’s Alertbox Newsletter**

Summaries of our latest research and insights published twice per month.

To subscribe: <http://www.nngroup.com/articles/subscribe>



Evidence-Based User Experience Research, Training, and Consulting

## TRAINING

### Usability Week Events

Usability Week training events are offered in the U.S., Canada, the U.K., Europe, Asia and Australia.

Each week-long event features full-day, immersive training courses where attendees learn practical skills directly from experienced practitioners so they can solve complex UI problems and create better interface designs.



**Over 40 courses offered in these categories:**

- Agile
- Applications
- Content Strategy
- Credibility & Persuasion
- Email
- Information Architecture
- Interaction Design
- Intranets
- Mobile & Tablet
- Non-Profit Websites
- Prototyping
- Social UX
- User Testing
- Visual Design
- Web Usability
- Writing for the Web

Available courses and upcoming locations: [www.nngroup.com/training](http://www.nngroup.com/training)

### In-house Training

Many of our courses can be taught at your location and customized to fit your unique offerings, methods and resources.

In-house training is ideal for:

- Large teams that want to spread user experience perspective throughout the group
- Teams working on large projects that need to kick start the creative process and head in the right direction

In-house training information: [www.nngroup.com/consulting](http://www.nngroup.com/consulting)



Evidence-Based User Experience Research, Training, and Consulting

## REPORTS

NN/g has published over 60 reports that detail thousands of evidence-based design guidelines derived from our independent research studies of websites, intranets, application, and mobile interfaces.



### Over 60 reports addressing these topics:

- Agile
- Applications
- Audience Types (e.g., children, college students, seniors, people with disabilities)
- B2B Websites
- Corporate Websites
- Ecommerce
- Email
- Information Architecture
- Intranets
- Mobile & Tablet
- Non-Profit Websites
- User Testing
- Social UX
- Strategy
- Web Usability

Shop for reports here: [www.nngroup.com/reports](http://www.nngroup.com/reports)



Evidence-Based User Experience Research, Training, and Consulting

## CONSULTING

The same experts who conduct our research and teach Usability Week training courses are available for custom consulting including:

- **Evaluating your website, application, intranet or mobile interface** (average cost \$38,000 USD)
- **Usability testing** (average cost \$35,000 USD)
- **Strategic planning** (average cost \$12,000 USD)
- **On-site training with your team** (average cost \$9,000 USD per day)

Consulting details: [www.nngroup.com/consulting](http://www.nngroup.com/consulting)