User Experience (UX): 
In Search of Market Data

The purpose of this paper is to describe the current compensation survey sources that are used in collecting market data on User Experience roles. This will allow compensation professionals to understand what is available and identify the survey vendors best addressing these high growth and high demand jobs. In addition, this paper contains information on the roles, skills and growth trends for these jobs.

This information was obtained from members of the New England Compensation Consortium in May 2012, LinkedIn responses from compensation groups, client and recruiter experiences and knowledge and the Usability Professionals Association.

Overview

User Experience (UX) jobs are one of the fastest growing careers. It is an outgrowth of traditional industrial design, human factors and usability engineering jobs created from the onset of the digital and interactive industries. The career path can originate from technology jobs - such as coding, research, graphic design or creative design. Many of the high demand UX jobs are tied to organizations using the web as a marketing tool, client retention tool and sales funnel for products and services. On the other hand user experience can be valuable in broader product design. Technical skill alone does not qualify someone for a UX role, but other skills like analysis, cognitive/thinking, problem-solving and collaboration/teamwork are at the heart of these job requirements. The category or name "user experience" may also have connections to the organization's business strategy for many organizations - that customers have an outstanding experience with a company, its products and services. This is found in such disciplines/strategies as customer experience, patient experience, member experience and employee experience.

Job Titles

There is significant variation in the titles used for jobs falling under these user experience roles. This is because of the variety of work.

The Usability Professionals Association (UPA)\(^1\) conducts a survey of its members every other year. They record each respondent's job title, pay level, demographics and related information. In the 2011 survey, the titles were (most common listed first):

1. UX Practitioner
2. Usability Professional
3. User Research
4. Experience Designer
5. Interaction Designer
6. User Experience Director
7. Information Architect
8. UCD Practitioner
9. Usability Manager
10. Interface Designer
11. UCD Manager
12. Strategist
13. Usability Director
14. User Experience Evangelist
15. UCD Director

There is often confusion that User experience roles are limited to internal web design and development. Many of the compensation survey jobs will only include these types of jobs. These titles include Developer, Web Designer, Designer, Interface Designer, Webmaster, Project Manager, Creative Director, Web Producer, Web Director, Information Architect, Art Director, Usability Expert/Consultant/Lead, Marketer, Content Strategist, Writer, Editor, Educator and Accessibility Expert/Consultant/Lead.

In a much more thorough approach, the technology recruiting firm Onward Search provides titles and descriptions of the differences in the jobs:

- **User Researchers** provide a deep understanding and insight of user behavior, needs and motivations. They offer feedback in all phases of the design process from project conceptualization, to implementation to development.
  - Conduct user and task analyses to identify opportunities to improve user experience.
  - Synthesize research findings into meaningful recommendations and actionable results.
- **Usability Analysts** apply user research and usability principles to identify usability problems. They help ensure usability goals are met by indentifying project objectives, evaluating the success of studies, and measuring outcomes.
  - Investigate and resolve user experience issues through evaluation and testing.
  - Effectively improve upon and communicate actionable insights that materially improve the customer experience.
- **Information Architects** focus on scoping, building and optimizing how information is organized and presented to users. They develop thorough, realistic plans that support organizational user experience objectives.
  - Create wireframes, process maps, functional specifications, prototypes and other artifacts to describe the intended user experience.
  - Apply user personas and scenarios to develop relevant process and user flow models.
- **Visual Designers** turn wireframes/prototypes into visual designs that are both user friendly and adhere to brand guidelines. They rely on keen understanding of graphical elements, style guides, brand standards and design systems.
  - Create engaging, usable and effective visual design solutions to achieve user centered goals.
  - Validate the effectiveness of designs through research and usability studies.
- **Interaction Designers** draw upon user data, research and team input to generate interaction concepts that enable seamless, fluid, relevant and engaging experiences for users.
  - Participate in the creation of rapid prototypes to illustrate a service or application.
- Cooperate with visual designers to solve problems and create full design solutions on projects.
  - **UX Designers** are often jacks of all trades within the user content design process. Their role centers on creating successful user experiences through research, feedback, analysis, testing and best practices.
- Drive the development and communication of the user design process for a given project.
- Participate in research, analysis, development, and testing phases of the design process.

In addition, Onward Search describes the skill set included in one or more UX jobs as:
- Markup, e.g., HTML, XHTML, XML
- CSS Coding
- Page layout, interface design
- Image editing and production
- Front end programming, e.g., javascript
- Information architecture, wireframing, sitemapping
- Graphic design
- Back-end development, e.g., PHP, Ruby on Rails, ASP
- Project management
- Writing, editing
- Fundability/search engine optimization/search engine marketing
- Accessibility testing/knowledge

Proficiency in research (e.g., morae), design (e.g., axure) and prototyping (e.g., hotgloo) tools are important in meeting the qualifications of user experience jobs. The sophistication and experience in using these tools is likely a differentiator in compensation levels. Currently though, the traditional compensation salary survey sources do not collect information by skills or describe the tools or skill levels in survey descriptions.

**Growth Trends**

There has been significant growth in the number of job postings for roles falling under user experience design. The needs for these roles are expected to continue to increase. The Bureau of Labor Statistics defines occupations, tracks their expected growth and compensation opportunity in 341 occupational profiles covering 85 percent of the jobs in the economy. These jobs are not included in this information so there is no statistically valid way to understand the growth and impact of these jobs.
Compensation Survey Sources

We contacted 145 organizations in the Boston metropolitan area and a global group of compensation professionals via Linkedin to ask what surveys they use for user experience jobs. The following is a list of responses received:

- Croner Digital Content and Technology Survey
- Pearl Meyer/ CHiPS Professional & Managerial Total Compensation Survey
- Kenexa Companalyst
- Kenexa IPAS
- Mercer/Gartner Information Technology Survey
- McLagan Surveys
- Radford Global Technology Survey
- Towers Watson Specialized Professional Survey
- Western Management Group Marketing and Sales Survey

Compensation Survey Titles and Descriptions

The following are a list of survey titles and descriptions that the compensation professionals we polled are using. The descriptions were obtained from survey vendor websites, by request, surveys we purchase and by other compensation professionals surveyed as part of this study. They are divided into three types of jobs: Developer (coding/technical), Interaction Designer and Visual Designer. When comparing to the UX jobs described by Onward Search, many of these matches miss the mark. Traditional survey organizations are not able to provide data on the fast moving, high demand and low supply jobs.

DEVELOPER:

CHiPS: Internet/ E-commerce Applications Engineering (These positions develop applications for external customers.) Performs design, development, testing, documentation, and analysis of web enabled applications. Assignments include development of new programs and subprograms, as well as enhancements, modifications, and corrections to existing software. Duties include designing application, writing code, completing programming, developing and executing testing and debugging routines, and documenting work and results. May be responsible for developing or executing project plans, and schedules. May use Java, C++, ASP and/or JSP.

IPAS: Web Development Responsible for design, development and delivery of web-based technical solutions to meet business requirements. Participates in design projects from timeline development through delivery. Contributes to the design, development and enhancement of company's web infrastructure. Provides technical assistance to web administrators, designers and business partners. Example projects include: back-end database development, SQL queries via CGI scripting, etc. Incumbents use one or more of the following languages/tools in their everyday work: C++, JavaScript, HTML, PERL, Active Server Pages, SQL, and CGI.

Mercer/ Gartner Technology Survey: Web Applications Developer Under general direction, develops, tests, maintains, and supports high-performance, innovative web-based applications. Responsible for
analyzing and troubleshooting complex software problems and providing solutions to overcome those problems using the latest technologies. Provides recommendations for application and system improvements. Has a strong knowledge of developing web sites and applications using a variety of technologies. Typically requires a Bachelor's degree in Computer Science or a related field and at least two to four years of experience.

**Mercer/Gartner Technology Survey: Web Software Developer** Designs, develops, troubleshoots, debugs, and implements software code (such as HTML, CGI, and JavaScript) for a component of the website. Works with graphic designers and other members of a project team to develop the site concept, interface design, and architecture of the website. Responsible for interface implementation. Integrates web applications with backend databases. Deploys large web-based transaction systems using application servers. Researches, tests, builds, and coordinates the integration of new products per production and client requirements. Requires strong navigation and site-design instincts. Typically requires a Bachelor's degree in computer science or related field, and development experience in web-based languages.

**Radford: Web Developer** Considered part of the IT function and generally focused on the system and not the content of company material, uses experience with a variety of network technologies to lead internal and external clients with Internet-, intranet-, or extranet-based applications, including but not limited to C++, Java, XML, HTML, CGI, ASP, multimedia applications, database interactions and data modeling tools. Researches, tracks and understands new web technologies to provide technical leadership in developing service applications and analyzing business requirements as they pertain to intranet and external Internet-related systems. Builds applications using Internet and Windows Development tools. Provides written design documents, test plans and test results. Manages, develops, integrates and implements related applications components, including front-end development, server-side development and database integration. Plays a direct role in programming, maintenance, technical support, documentation and administration of the applications. Establishes and communicates standards to manage cost and ensure continuity of applications. May work with outside vendors in developing tests to ensure feature functionality.

**Towers Watson: Internet/Web Application Development** Designs and develops primarily Internet/web pages and applications such as e-commerce and content-driven websites. Codes, tests, debugs, documents and implements web applications using a variety of languages and platforms such as HTML, Java, PHP, JSP, Python, AJAX, JavaScript, ASP, CGI, Perl, XML. Develops proof-of-concepts and prototypes of easy to navigate user interfaces (UI) that consist of web pages with graphics, icons and color schemes that are visually appealing. Ensures that applications are compatible across multiple computing platforms and browsers. May require familiarity with streaming media concepts and techniques, including digital video and audio compression standards such as MP3, WAV and MPEG.

**Western Mgmt Marketing and Sales Survey: Web Technical Developer** Provides technical support, and administration of the software infrastructure for the implementation and maintenance of company’s web sites. Requires basic knowledge of web activities, internet techniques, tools, HTML code, JAVA,GIF, animation, browsers and basic GUI design related applications. Designs and builds web pages using a variety of software applications, techniques and development tools. Develops user interface features, site animation and special effects. Coordinates with web content developers and graphics designers to ensure that needs are technically feasible. Provides technical site maintenance and advice on issues related to animation, search engine techniques, link integrity, navigation, browsers,
graphics, and other technical web developments. Develops code using HTML, Visual Basic or other web-based programming languages. Performs functionality and navigation testing. Prepares technical documentation.

INTERACTION DESIGNER:

CHiPS: Human Factors Software Design Engineering Responsible for collecting, prioritizing, and documenting user requirements and for creating, evaluating, and modifying prototypes to support software application development. May conduct focus groups, lab usability tests, or remote usability tests to get requirements and feedback. May develop user profiles, with emphasis on human error control, display issues, visual interaction, physical manipulation, and task and objective analyses. Involved in the development of design concept and implementation, with input regarding user interface design considerations and user requirements. Develops and applies software design/usability processes in the investigation of technical problems. May produce specifications describing user interfaces and internal structures for products.

CHiPS: Web Site Design (These positions develop the organization's internal or external web site.) Designs and develops user experience, user interface features, animation, and special effect elements of the web site application. Works with internal and/or external customers to develop and improve the look and feel of the organization's on-line systems. Works with the development team to ensure consistency and system integration and to deploy the application. May develop and assess web site usage and security. May be responsible for ongoing programming maintenance. May also be responsible for hardware and software purchasing recommendations.


Companalyst: Interface Designer, Sr. - Web Designs html prototypes, visual interfaces and interaction of web-based applications. Designs and evaluates visual human interfaces utilizing user-centered design principles. Implements the user interface design. Works with the product development team to design online user experiences. Ensures user experience is formulated to achieve the goals of the online entity. May require a bachelor's degree with at least 3 years of experience in the field or in a related area. Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works
Mercer/Gartner Technology Survey: Senior Web Designer Responsible for the design, development and creation of user-centered designs for the company's Web sites. Responsibilities include human factors engineering, heuristic evaluations and usability testing for Web-based applications as well as metrics setting and monitoring for assessing the usability of the Web application. Uses a variety of graphics software applications, techniques, and tools. Designs and develops user interface features, site animation, and special-effects elements. Works to improve the usability, usefulness, and desirability of Web sites in collaboration with graphic designers, product managers, engineering staff and other Web designers. Conduct user studies, design and perform usability tests, create prototypes, and provide ad hoc user interface consulting. Contributes to the design group's efforts to enhance the appeal of the organization's online offerings. Typically requires more than four years of experience in the area of web design, user research and user experience design. Requires understanding of web-based technologies and thorough knowledge of HTML code, browsers, ASP pages, object-oriented technology, and/or other design-related or graphics applications.

Radford: UI/Human Factors Engineer Creates evaluates and modifies prototypes to support evolving hardware and software application development. May develop user profiles, with emphasis on human error control, display issues, visual interaction, physical manipulation and task and objective analyses. Develops and applies software design/usability processes in the investigation of technical problems. Provides product usability, evaluation and support to product development teams, including the analysis and investigation of applications/systems including tactile methods, visual graphics, web, multimedia, voice response and conversational user interaction. May assist in developing design concept and implementation, providing input on user design considerations. May produce specifications describing user requirements and internal structures for product in development.

Croner: Senior Interface Designer Develops and executes interface design solutions related to information layout and the user's experience with content. User interface typically includes: site layouts, site maps, navigation design, content inventories, information organization models, error handling and icons. Works on high profile or complex projects. Assesses product's positioning and role within the online organization's sites, products and services. Develops and writes interaction and functional specifications. Reviews competing products and recommends design solutions that differentiate the organization's products from those of competitors. Develops tests and refines prototypes. Develops new research and tests theories that lead to alternative, leading edge design solutions. Works with major portions of large scale databases and is accountable for moderate size information databases. Applies latest technological advances and user interface practices to evaluate applications and functionality, and designs needed solutions. Applies knowledge of human cognitive development or response (such as psychology, education, library or information science), and a strong understanding of the limits and opportunities in new media technology. SCOPE: Implements activities that generally impact important components / processes of the work of own unit / team / projects. Typically assigned to important / complicated undertakings. KNOWLEDGE/ PROBLEM SOLVING: Demonstrates proficiency in most areas of the professional function and in-depth specialization in some. Anticipates and prevents problems and roadblocks before they occur. NEGOTIATIONS/ INTERACTIONS: Interacts with internal and external peers and managers to exchange complex information related to areas of specialization. Works with producers, technology personnel and designers on specific projects to create final interface features. ASSIGNMENT OF
WORK: Receives work in the form of short- and mid-term assignments that regularly require the application of independent judgment. Mentors less experienced members of the team. OVERSIGHT RECEIVED: Work is subject to regular supervisory review at defined milestones. Operates within the context of approved methods. EXPERIENCE: Typically has 5 or more years of progressively complex related experience.

VISUAL DESIGNER:

Radford: Web Design Often considered part of the Marketing function. Generally focused on the look, feel, operation, and functionality of a commercial website. Creates internal/external company web pages including graphics, animation and functionality. Designs web page layout and online content, user interface graphics, icons, color schemes, content and infrastructure for new product release and new web-hosted product offering. Performs development and maintenance programming for web pages and web applications. Performs web usability testing. Partners with Web Administrator to implement pages or applications into production. Assures web server and site technical performance. Develops, assesses and communicates website usage and security policies and standards. Provides technical assistance to Site Administrators. May assist in the planning of overall company strategy involving internet usage. May make hardware and/or software purchasing recommendations or decisions regarding web development. May perform overall administration of sites at a company-wide level. Requires knowledge of commercial internet/web tools and protocols.

Towers Watson: Product Development – Creative Design/Industrial Design Creates and develops the look of products, e.g., including shape, color and size, with a focus on product external appearance rather than the internal functionality. Evaluates the feasibility of design ideas, based on factors such as appearance, safety, function, serviceability, budget, production costs/methods and market characteristics.

Western Mgmt Marketing and Sales Survey: Web Graphics Designer Familiar with common Web Site/Page layout and graphics design/presentation tools and applications, such as Photoshop, Quark, Illustrator, Freehand, Flash, Shockwave, Director, PowerPoint and Streamline. Produces design and layout of standard Web Sites to meet defined marketing requirements. Implements web graphics design requirements as assigned to meet the defined visual “look, feel and appeal”.

Summary

User Experience is defined as the way a person feels about using a product, system or service. User-centered design (UCD) is a design philosophy and a process in which the needs, wants, and limitations of end users of a product are given extensive attention at each stage of the design process. Jobs in this fast growing field originated in usability and human factors engineering. UX roles are quickly changing and evolving to respond to the applicability of user-centered design. There is a high demand for people who can analyze, think, problem-solve and be collaborative, have specific technical and visual skills and experience with research, design and prototyping tools.

The job titles vary significantly but recruiters are finding that the jobs in most demand are Information Architects, Interaction Designers, Visual Designers, Usability Analysts and UX Designers. The classic, company completed salary surveys have not kept up with the demand for compensation on the jobs. Poorly compiled and reported, self-reported surveys and recruiter survey data are being provided on the
web. Compensation professionals will be utilizing traditional survey positions under web design, human factor engineering or interface design to try to provide meaningful data to UX management.

This paper has described the current compensation survey sources and descriptions that are used in collecting market data on User Experience roles. Of the survey vendors that we researched as part of this project, not one adequately addresses these high demand jobs. There are three alternatives for improvement - some of the membership associations, such as UPA, should expand membership to include corporations. This would allow for an association survey by which companies can provide quality data. A second is for compensation professionals to suggest changes to the survey jobs in the traditional surveys. Third would be for a steering committee of companies to sponsor a regular survey of these jobs.

This will then provide companies that employ UX professionals to have accurate information to attract and retain this talent. This is an exciting industry with an opportunity for growth by individuals and companies. We hope this paper will contribute to this development.

Footnotes and Sources for this Article

1UPA International 2011 Salary Survey August 15, 2011
22010 Survey for People Who Make Websites
4http://www.bls.gov/ooh/about/ooh-faqs.htm
5www.OnwardSearch.com/user-experience-design-jobs/career-resources
6Via survey web site, request or provided by those responding to our request for survey matches:
   https://www.twdataservices.com/globallogin/logon.jsp
   http://radford.com/home/surveys/gts/
   http://compensationsurveys.pearlmeyer.com/Our-Services/Compensation-Surveys/CHiPS-Surveys/CHiPS-One-World
   http://www.kenexa.com/Solutions/Compensation/CompensationMarketData