From Snake-Oil to Science: Measuring UX Maturity

Jeff Sauro, PhD

Founding Principal

MeasuringU

Denver, CO 80206, USA

jeff@measuringu.com

Chelsea Meenan, PhD

Associate Researcher

MeasuringU

Denver, CO 80206, USA

chelsea@measuringu.com

Kristin Johnson, PhD

Associate Researcher

MeasuringU

Denver, CO 80206, USA

kristin@measuringu.com

Abstract

A growing number of organizations want to better understand how to properly grow and implement a User Experience practice. While there is a general sentiment that a more mature UX practice leads to organizational success, there is surprisingly little data about what constitutes UX maturity. This case study describes the first steps into an empirically derived maturity model and describes what we've learned from interviewing seasoned UX professionals and surveying practitioners from dozens of organizations. Preliminary results indicate that our empirically-based approach is understandable and flexible enough to be applied across a broad range of organizations and industries. Ultimately our objective is to move the practice of assessing UX maturity from snake-oil to science. To do so we aim to identify the variables that differentiate immature from mature UX practices and establish a link between UX maturity and company success.

Author Keywords

UX maturity; maturity model; User Experience

ACM Classification Keywords

H.5.2 User Interfaces: Evaluation/methodology

Introduction

As the field of user experience (UX) has evolved and has been embraced by more organizations, inevitable questions have emerged about how to properly support and implement UX (and all that falls under this broad umbrella Hassenzahl & Tractinsky, 2006; Bargas-Avila, J. & Hornbæk, 2011).

A growing number of organizations want to better understand how to properly grow and implement a User Experience practice. There is an implied sentiment that more mature UX leads to organizational success, yet there is surprisingly little data about where the field currently stands, what factors are necessary for "mature" UX, and how UX maturity (or lack thereof) affects an organization. Gathering this data is central to understanding which organizational practices and characteristics lead to a more mature UX organization, as well as linking maturity to product and organizational success metrics in a way that helps organizations to see the value in understanding their user experience.

There are dozens of attempts to identify a linear set of steps necessary to evolve from immature to mature UX. These steps and stages seem to be largely based on the author's own subjective impressions based on experience and expertise within the field. While terminology differs, existing maturity models generally consist of 5-7 levels that progress from "unrecognized" to "institutionalized" (Earthy, 1998). Overall, models tend to follow the pattern described by J. Earthy in 1998:

1. Unrecognized
2. Recognized
3. Considered
4. Implemented
5. Integrated
6. Institutionalized

Within these categories there is some consensus about other global indicators of maturity, including funding/resources (Nielsen, 2006; Feijo, 2010; Plewes, 2015; Schaffer, 2004), methods, when and how user-centered processes are involved, and company culture and attitude toward UX. While many authors agree on broad categories that are relevant to maturity, it is rare that authors explain how a particular model was derived. For example, what are the right methods, the "best" ratio of UX designers to developers and should teams be centralized or distributed—or does any of this matter? Practitioners are left to assume that authors have largely developed these models through their own professional experience rather than more objective measures.

Existing models have been useful in that they have inspired organizations to evolve and provided guidelines for increasing focus on the user, but given their ad-hoc development, it is unclear whether they reflect how UX is actually represented across and within different companies. In particular, the diversity of UX across organizations has brought about a need for strategies and tools to evaluate the current state of UX

as well as the relationship between UX maturity and corporate success. Not surprisingly, some practitioners have become skeptical of the validity of UX maturity models or even worse, see them as simply a thinly-veiled sales gimmick.

In order to truly understand the characteristics of and value derived by UX maturity, it is necessary to take a more objective approach. For example, what types of resources are available within the most mature UX structures and how is funding organized and allocated? What percentage of organizations fall at each level of UX maturity? How does mature UX impact not only product success, but organizational success? What metrics can be used to identify maturity milestones and how well do they represent different organizations? In order to begin answering these questions, it's crucial to get a better understanding of what diversity currently exists.

The goals of the current research are threefold. First, we aim to establish the current state of UX maturity across a diverse group of individuals and organizations through an empirical assessment of organizational characteristics and practices. Second, we seek to identify measures of UX maturity that can be systematically related to measures of organizational success. Finally, we will identify key practices that help move organizations into more advanced stages of UX maturity. This case study describes the first steps in this more ambitious research by describing what we've learned from interviewing seasoned UX professionals and surveying the broader UX field. Ultimately our objective is to move practice of assessing UX maturity from snake-oil to science.

Tool Design

The first phase of tool development consisted of the creation of survey items based on interviews with senior managers and seasoned UX professionals at several companies including IBM, Autodesk, Capital One and United Healthcare, insights from existing literature on UX maturity, and results from previous assessments of individuals in the UX field (Figure 1).

This resulted in an assessment tool consisting of a survey measuring 11 specific domains: Individual Characteristics, Organization Characteristics, UX Staffing, UX Research Methods, Leadership and Culture, UX Integration, UX Training and Skills, Product Success Metrics, Organization Success Metrics, UX Budget/Resources, and UX Challenges and Future Directions.

This survey was then administered to a non-probability sample of UX Professionals using social media and snow-ball sampling.

Respondents

Individual Characteristics

The data set included 70 complete responses as well as partial data from 40 additional individuals. The majority of respondents classified themselves as Researchers (41%) or UX Generalists (25%), with smaller numbers of Manager/Directors (16%) and Interaction Designers (6%), as well as a few Visual Designers, Marketers, Developers, Information architects, and Executives (all < 5%). Respondents tended to be fairly experienced in UX (Figure 2), and represented a range of employment levels, from entry-level to executive.

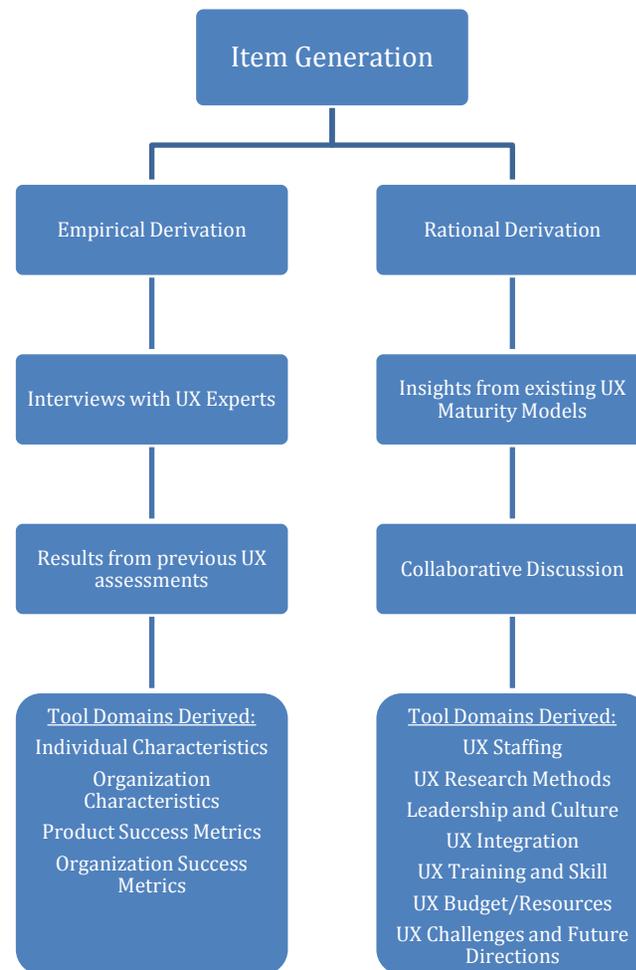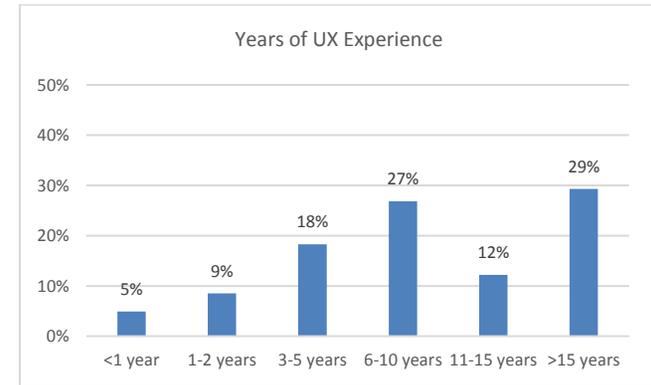Figure 1. Maturity Assessment Tool Research Development Process

Figure 2. Respondent UX Experience

Organizational Characteristics

The vast majority (85%) of organizations represented were for-profit corporations across a range of industries, including Software (28%), Financial Services (14%), and Retail (12%) among others.

The size of the organizations represented was extraordinarily varied, ranging from a handful of employees to 50,000+, and the majority of respondents classified their organizations as Mature (44%) or Growing (31%).

Item Responses and Relations to UX Maturity

Estimated Maturity

While most respondents classified their organizations as Mature, the same cannot be said for their ratings of their organization's maturity in UX; 53% of respondents estimated that their organization was in the

"Considered" phase of UX maturity, a phase defined by the recent hiring of dedicated UX staff and inconsistent application of UX across projects. This modal representation of Considered organizations does match with previous assessments of UX professionals (User Experience Professionals Association, 2015)

Figure 3. Respondent Estimations of Organizational UX Maturity
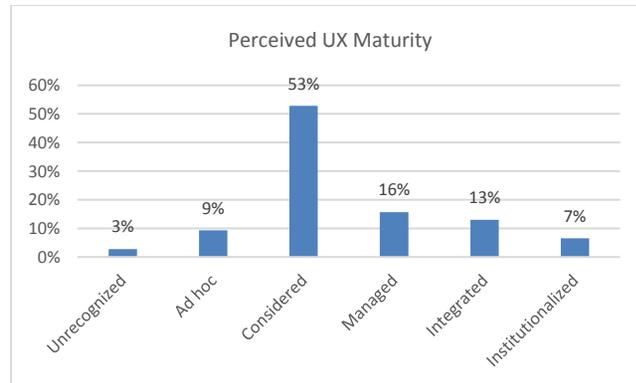
Staffing

There was a fairly bell-shaped distribution for how long a full-time UX role had existed across companies, with the majority of respondents indicating 2-5 years. This is a somewhat shorter time period than Nielsen's (2006) model suggested, which estimated that companies spend 2-3 years at each stage of maturity with a median length of 4 years.

Ratio of researchers to designers, designers to developers

Figure 4. Ratio of Researchers to Developers to Designers
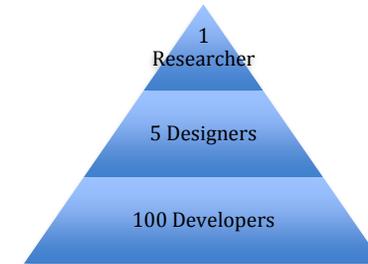
Developers were better represented than either designers or researchers across companies (Figure 4). 21% of respondents indicated a ratio of approximately 1 designer to 11-20 developers. There was even more consensus when comparing designers to researchers, with 41% of respondents indicating a ratio of 1 researcher to every 5 or fewer designers.

Budgets

Respondents were nearly evenly split on whether their UX budget was dedicated and where funding came from. Approximately 44% indicated having an available but not dedicated budget, and 45% reporting having a dedicated budget. Fewer participants reported having no UX budget, at 7%. The majority of funding comes from individual business units (48%), but a large percentage also comes from a single organization (42%). Surprisingly, this suggests that having a dedicated budget might not be an important differentiator of perceived maturity.

UX Integration and Maturity

One of the key indicators of an organization's level of UX maturity is the level of integration UX has within the organization. In the current study, respondents who reported their estimation of UX maturity higher, also reported a higher perceived value of UX by other individuals in the organization ($r = .64$, $p < .01$), demonstrating that buy-in throughout the organization is strongly linked to maturity.

Beyond attitudes, the level of UX maturity also has implications on the UX practices within the organization. Respondents who rated their organizations as more mature also reported that they evaluate UX at more stages: concept generation ($r = .54$); initial design and development; ($r = .60$); prototyping and advanced design ($r = .56$). End-users are also involved at each of these stages at higher rates when organizations are more mature (all p's $<.01$)

Implications and Future Directions

The overarching goal of the current study is to develop an assessment tool that allows for the objective assessment of organizational UX maturity using empirically derived data. Beyond that, we aim to develop a tool that is flexible, able to be applied across a range of industries and implemented by diverse groups of UX professionals.

Thus far, we have used existing maturity models and qualitative input from seasoned UX professionals to design a measure consisting of key components of maturity. Preliminary impressions support the face validity of the factors included in the assessment tool, and suggest that respondents are willing and able to provide thoughtful answers to complex constructs.

We have also taken the first steps toward assessing how important variables are manifested across a wide range of organizations. For example, by examining the relationships between perceived maturity and the length of time a full-time UX position has existed, the roles that are performed by different operators, the methods that are used and the facilities that are available.

Our next step is to use the results of the current survey to further refine our assessment tool. We plan to incorporate qualitative feedback with quantitative metrics obtained across a larger sample to identify the categories that differentiate the most mature models from those that are less mature, and use them to further discriminate across maturity levels.

To our knowledge, this is the first empirical assessment of UX maturity across a diverse group of individuals and organizations. By going beyond generalizations offered by other models, we hope ultimately to provide evidence for how UX maturity may contribute to the growth and success of a company.

References

1. Javier A. Bargas-Avila and Kasper Hornbæk, 2011, May. Old wine in new bottles or novel challenges: a critical analysis of empirical studies of user experience. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 2689-2698). ACM.

2. Jonathan Earthy. 1998. Usability maturity model: Human centredness scale. *INUSE Project deliverable D*, *5*, pp.1-34.

3. Renato Feijo. 2010. Planning your UX Strategy. Retrieved January 11, 2017 from http://johnnyholland.org/2010/04/planning-your-ux-strategy/

4. Jennifer Fraser and Scott Plewes. 2015. 6 Indicators of an Organizations UX Maturity Level – Lessons In UX Maturity: Part 1 Retrieved January 11, 2017 from http://www.macadamian.com/2015/08/20/indicators-of-user-experience-maturity/

5. Marc Hassenzahl and Noam Tractinsky, 2006. User experience-a research agenda. *Behaviour & information technology*, *25*(2), pp.91-97.

6. Jakob Nielsen. 2006. Corporate usability maturity: Stages 1-4. *Nielsen Norman Group*

7. Eric Schaffer, 2004. Institutionalization of Usability: A Step-by-Step Guide. Addison-Wesley Professional, New York.

8. User Experience Professionals Association. 2015. UXPA Salary Survey. Retrieved January 11, 2017 from https://uxpa.org/system/files/public/UXPASalarySurvey2014_Final.pdf