On the development of Quantified UX Metric

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Agenda

- Motivation

- Design & Dev Process
  - Stage 1: Paper Wireframe
  - Stage 2: Development
  - Stage 3: Working System
  - Demonstration

- Design Principles
  - Ant Design
  - ElementJS v.s. iViewJS

- Summary
Motivations

- Intro Tools Existed
- UX Evaluations tools
- Existing tools

UEQ-Online
User Experience Questionnaire

Welcome to the User Experience Questionnaire (UEQ)
A Questionnaire to Measure the UX

User Experience Questionnaire (UEQ)
Measure the User Experience of your product fast, easy and flexible
# Understanding The Theory

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimension</th>
<th>Scales</th>
<th>ID</th>
<th>Related Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Look</td>
<td>Appealing Design</td>
<td>How balanced and harmonic do you find the product?</td>
<td></td>
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<td></td>
<td></td>
<td>Do you like the design, colors, fonts used in this product?</td>
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<td></td>
<td></td>
<td>Do you find the text:image ratio appropriate?</td>
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<td></td>
<td>Communicated Information</td>
<td>Does the product provide clear navigation and orientation?</td>
<td>d1</td>
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<td></td>
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<td>How consistently is the content and information organized?</td>
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<tr>
<td></td>
<td></td>
<td>Do you find the provided information understandable?</td>
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<tr>
<td></td>
<td>Visual Branding</td>
<td>Do you trust this brand?</td>
<td>d2</td>
<td>[11, 20, 37, 61]</td>
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<tr>
<td></td>
<td></td>
<td>Do you think this is an honest brand?</td>
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<td></td>
<td></td>
<td>Do you feel the brand is safe?</td>
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<td>Feel</td>
<td>Mastery</td>
<td>Do you find this product easy to use?</td>
<td>d3</td>
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<td></td>
<td></td>
<td>Do you find it easy to learn (and to remember) how to use the product?</td>
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<td>Do you feel you have full control over the product?</td>
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<td></td>
<td>Outcome Satisfaction</td>
<td>How satisfied are you with the outcome?</td>
<td>d4</td>
<td></td>
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<tr>
<td></td>
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<td>To what extent are you feeling successful with the outcome?</td>
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<tr>
<td></td>
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<td>How happy are you with the outcome?</td>
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<td>Emotional Attachment</td>
<td>How pleasurable do you find using the product?</td>
<td>d5</td>
<td>[29, 36, 35, 50]</td>
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<td></td>
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<td>Does the process of using the product provide you with gratification?</td>
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<td>Do you feel excited when you are using the product?</td>
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<td>Task Effectiveness</td>
<td>Do you think the product does what it is supposed to do?</td>
<td>d6</td>
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<td>Do you find the product effective?</td>
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<td>Does the product help you fulfill your task?</td>
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<td>Task Efficiency</td>
<td>Is the product the fastest way to achieve your goal?</td>
<td>d7</td>
<td>[26, 29, 49, 57]</td>
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<td>Is the product the most convenient way to achieve your goal?</td>
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<td>Does the product fit with your schedule?</td>
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<td>Stability and Performance</td>
<td>Does the system run smoothly?</td>
<td>d8</td>
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<td>Are errors handled well?</td>
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<td>Does the product work fast and responsively?</td>
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</tbody>
</table>

Table 4. Interdisciplinary UX dimensions with corresponding questionnaire items and related work for in-depth, follow-up analyses.

[ Lachner et al. Quantified UX: Towards a Common Organizational Understanding of User Experience, NordiCHI’16 ]
General Goal

- Developing a website serve the theory
Design & Dev Process

13.11
Initial

05.12
Conceptual wireframes

20.12
Prototype

05.02
Solving challenges

26.02
Backend stuffs

14.03
Working Backends

06.04
Full Functioning

24.05
Final Present.
Stage I: Paper wireframe v1

- Requirement Engineering: Misunderstanding of requirements

1. Theme color?
2. Desktop version?
3. Backend support?
Stage I: Paper wireframe v2

- Overall wireframe, requirements verification
Framework Selection: Fullstack JavaScript

Others: lodash, swiper, vue-router, vuex, babel, eslint, mockjs, vue-loader, webpack… More than 70+ state-of-the-art technologies
Stage II: Frontend

- Main Challenges
  - Design
  - Capabilities between frameworks
  - New technologies
Stage II: Working Backend

- Testing APIs...
Stage III: Full Functioning System

- Main features:
  - Register/Login
  - Questionnaire Authorization
  - UX Project Management
  - Data Visualization
  - Report Download
  - .... 20+
Project Description

Calendar Chart

The UX Radar Chart

Participants Statistics
Demonstration

Online Testing
at

www.ouchangkun.com

Available until the end of May 2018
Submit Bugs: hi@changkun.us
Design Principles
Should *Luke Wroblewski* responsible for the “Death” of Material Design?

[https://www.zhihu.com/question/66894704](https://www.zhihu.com/question/66894704)

TL;DR: Material design hasn’t died yet, but its reputation and influence have reached a low point; the reason for the status quo is largely due to Google’s own destruction of the norm, which has begun with Luke.
Design Language: Ant Design (Pro)

- Proposed by Alibaba Inc.
- Integrated in every Alibaba Inc. Products
- 1,000,000,000+ users, large-scale applications
- Only for ReactJS

TL; DR: Ant Design is a UI design language, which is abstracted and applied to enterprise-level back-office products.

https://ant.design/
https://pro.ant.design/
Framework Adaption: ElementJS v.s. iView

- Other implementations of Ant Design
- Capable with VueJS

https://element.eleme.io/
https://www.iviewui.com/
Summary

- Lessens learned
  - Ant Design
  - Massive frontend technologies combination
  - The first time write both everything in JS

- Challenge
  - D3JS in VueJS

- Outlooks
  - Future features: Administrator UI
  - Machine learning analysis: outlier detection, etc.
  - ....