"Ask people only questions that they are likely to know the answers to, ask about things relevant to them, and be clear in what you're asking. The danger is that people will give you answers--whether reliable or not."
Earl Babbie, *Survey Research Methods*
Using Surveys Well

Maria Dahman
Center for Digital Accessibility and User Experience, DoIT
Assumptions
HCI Surveys are not done in isolation

Usability testing

Interviews

Observations

Focus groups

Contextual Inquiries
I. Starting out
II. Writing the questionnaire
III. Testing your questions
IV. Improving response rates
V. Analysis
Starting out

Primary reason

“To understand if our user base has changed since last year, and, if so, how, and understand what features they find most attractive.”

Goals of the survey

“1. Create a demographic, technological and web-use profile of our audience

2. Get a prioritized rating of the utility of our main features

3. Get a list of other sites they use”
Starting out

Lay out the report

Goals and methods

Target audience, estimates about population, sampling method, size of the sample, completion rate

How you analyzed

Your conclusions

Graphs and tables: counting and comparing
## Starting out

Create a table

<table>
<thead>
<tr>
<th>Question</th>
<th>Instructions</th>
<th>Possible Answers</th>
<th>Reason asked</th>
</tr>
</thead>
<tbody>
<tr>
<td>What other sites do you visit to read news?</td>
<td>Check all that apply</td>
<td>NPR.org, Reddit, BBC news, Other (please specify)</td>
<td>Competitive analysis</td>
</tr>
<tr>
<td>How much time do you spend online?</td>
<td>Select one</td>
<td>0-4 hours a week, 5-10 hours a week, 11-20 hours a week, More than 20 hours a week</td>
<td>Cross-tab with most desired features, Compare with last year’s answers</td>
</tr>
</tbody>
</table>
Starting out (summary)

- Primary reason: Why? 1-2 sentences
- Goals: Itemized, based on primary reason
- Lay out the report: What will I count and compare?
- Create a table: Are your goals reflected in the reasons for questions?
Writing the questionnaire

Questions should be comfortably answerable

- Low cognitive load
- Specific, exhaustive, and mutually exclusive
- Everyone can answer each question (opt out)
- Non-native English speakers
- Text size
Writing the questionnaire

Avoid:

“Do you agree that no action is needed? Y/N” (negative phrasing)

Instead:

“Do you believe that action is needed?”
Writing the questionnaire

Avoid:

“Do you find yourself frustrated at the Internet’s performance because of bandwidth problems?” (overloaded question)

Instead:

“Are you frustrated by the Internet’s performance?”

“If so, which of the following aspects of internet performance frustrate you? Check all that apply.”
Writing the questionnaire

Avoid:

“How often do you go to the gym?” (social desirability bias; non-specific time frame)

Instead:

“Have you gone to the gym in the last seven days?”

“How many times did you go to the gym in the last seven days?”
Writing the questionnaire

Avoid:

“Is sustainable food production important to you?” (leading/inciting)

Instead:

“Which of the following interest you? Check all that apply.”
Writing the questionnaire

Avoid:

“Will you use an online scheduling system?” (predicting behavior)

Instead:

“Have you ever used or ever wanted to use an online calendar?”
Writing the questionnaire

Avoid:

“What do you love most about MyUW?” (give people an option that applies)

Instead:

“Which of the following features are important to you in MyUW? Check all that apply.”
Writing the questionnaire

Avoid:

“Do you check news every time you are online?” (avoid extremes)

Instead:

“Do you check online news?”

“How often do you check online news?”
Writing the questionnaire

Consider including:

“Is there anything else you’d like to tell us about our site?”

“Would you be willing to participate in future research?”
Writing the questionnaire (summary)

Errors to avoid

Negative phrasing          Predicting behavior
Overloading questions      Shutting people out
Social desirability bias   Extremes

Additional questions:

“Is there anything else you’d like to tell us about our site?”

“Would you be willing to participate in future research?”
Testing your questions
Improving response rates

Keep it short

Low cognitive load in questionnaire

Sample relevant groups

Put boring questions at the end (demographics)
Analysis

Tabulating (Counting) and Cross-tabulating (Comparing)

Coding and affinity diagramming
<table>
<thead>
<tr>
<th>USABILITY</th>
<th>OUTSIDE APPS</th>
<th>TECH PROBLEMS</th>
<th>DEFAULT LAYOUT</th>
<th>MARKETING</th>
<th>SURPRISE AND DELIGHT</th>
<th>CANVAS</th>
<th>FEATURES</th>
<th>CONFUSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usability-positive (general)</td>
<td>Outside apps—negative</td>
<td>Tech problems—MyUW apps stop working</td>
<td>Default layout—negative</td>
<td>Marketing—negative (accessibility and reach)</td>
<td>Surprise and delight—bucky</td>
<td>Accessing Canvas—negative</td>
<td>Features—positive (customize)</td>
<td>Confusion about options for registering</td>
</tr>
<tr>
<td>Usability-positive (Wishlist widget)</td>
<td>Outside apps—positive</td>
<td>Tech problems—layout changes</td>
<td></td>
<td>Marketing—negative (lack of awareness of phone app)</td>
<td></td>
<td></td>
<td>Features—negative (Interfacing)</td>
<td>Confusion about options for paying</td>
</tr>
<tr>
<td>Usability—negative (general)</td>
<td>Outside apps—positive (HR systems, PCards)</td>
<td>Tech problems—delay</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Features—positive (customize)</td>
<td>Confusion about what I need and what is available</td>
</tr>
<tr>
<td>Usability—negative (requesting apps)</td>
<td>Outside apps—positive (Duo)</td>
<td>Tech problems—MyUW app stops working</td>
<td></td>
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<td></td>
<td></td>
<td>Features—positive (customize)</td>
<td></td>
</tr>
<tr>
<td>Usability—negative (default layout)</td>
<td>Outside apps—positive (Enroll)</td>
<td>Tech problems—layout changes</td>
<td></td>
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<td></td>
<td></td>
<td>Features—negative (Search)</td>
<td></td>
</tr>
<tr>
<td>Usability—negative (search)</td>
<td>Outside apps—negative (Student Center)</td>
<td>Tech problems—logging out</td>
<td></td>
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<td>Features—negative (mobile)</td>
<td></td>
</tr>
<tr>
<td>Usability—negative (adding apps)</td>
<td>Outside apps—negative (clicks)</td>
<td>Tech problems—slow</td>
<td></td>
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<td></td>
<td></td>
<td>Features—negative (mobile)</td>
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<tr>
<td>Usability—negative (deleted apps)</td>
<td>Outside apps—negative (Wisconsin App)</td>
<td>Tech problems—integration with Google's Drive</td>
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<td>Features—negative (mobile)</td>
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<tr>
<td>Usability—negative (duplicated)</td>
<td>Outside apps—negative (Canvas)</td>
<td>Tech problems—integration with Outlook</td>
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<td>Features—negative (mobile)</td>
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<tr>
<td>Usability—negative (financial)</td>
<td>Outside apps—negative (Facade Center)</td>
<td>Tech problems—loading errors</td>
<td></td>
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<td></td>
<td>Features—negative (mobile)</td>
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</tr>
<tr>
<td>Usability—negative (unable to make widgets small)</td>
<td>Outside apps—negative (HR, Leave/Absence, Payroll)</td>
<td>Tech problems—freezes</td>
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<td>Features—negative (mobile)</td>
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<td>Usability—negative (directory)</td>
<td>Outside apps—negative (clicks)</td>
<td>Tech problems—freezes</td>
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<td>Features—negative (mobile)</td>
<td></td>
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<tr>
<td>Code</td>
<td>Request / Idea</td>
<td>Handover</td>
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<td>It's a great tool to have at our fingertips! The Duo app for second level security is easy to use. Sometimes, several apps (especially Time and Absence) will stop working, so I cannot use them until the next morning. There are some apps that are very helpful and other apps that are not helpful at all. The search function is not really helpful. I wish some of my professors had more training to use it to its full capacity and make it more easy for fellow students to use. Overall I think it works just fine. It's a little tricky to find apps that aren't already on your dashboard because the search function can be a little touchy. But on the other hand the new course guide was super easy to use and much better than the old one. I think if some of these small things get ironed out it will be quite good. My UW is great! The systems it connects us to are not great - HR systems, PCards, etc. Sometimes tiles appear or disappear on their own. That is frustrating. In the beginning, I had troubles with it but now it's pretty easy. Some of the Apps lack information on how to use it.</td>
<td>Usability--positive (general) Outside apps--positive (Duo) tech problems--MyUW apps stop working Outside apps--positive and negative Usability--negative (default layout) Usability--negative (search) Feature--negative (search) [Maybe the user is talking about Canvas?] Default layout--negative Marketing--negative (accessibility and reach) Usability--positive (general) Usability--negative (search) Feature--negative (search) Default layout--negative Outside app--positive (Enroll)</td>
<td>Outreach to instructors &quot;The new course guide was super easy to use and much better than the old one.&quot; (Course Search and Enroll) Updates to the HR systems &quot;The systems it connects us to are not great - HR systems, PCards, etc.&quot; (HR Feedback)</td>
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<tr>
<td>Feature (positive/neutral)</td>
<td>Feature (negative)</td>
<td>Customizations, Negative</td>
<td>Usability, Positive</td>
<td>Outside, App, Negative</td>
<td>Technical, Problems</td>
<td>WHAT DO WE NEED TO KNOW WHAT IS AVAILABLE</td>
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<td>Inside app, negative</td>
<td>Accessibility (dark mode)</td>
<td>Usability (general)</td>
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**Technical Problems:**
- Tech problem: Mobile App loading issues
- Tech problem: User story: Mobile App loading issues

**What Do We Need to Know What Is Available:**
- User story: Mobile App loading issues
- User story: Mobile App loading issues
- User story: Mobile App loading issues
- User story: Mobile App loading issues
- User story: Mobile App loading issues
Resources
Usability.gov

Observing the User Experience by Mike Kuniavsky

Center for Digital Accessibility and User Experience, Academic Technology

Evaluation Design and Analysis, Academic Technology
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