Observing the User Experience

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Reference

• Mike Kuniavsky, Observing the User Experience, Morgan Kauffmann, 2003.
Outline

- The user experience
- When observing users
- Why observing users
- Recruiting
- Interviewing
- Survey
- Profiling
- Wrap-up

User Experience - 1

- One definition: *The perception of the effects of an actual interaction.*

- Perception:
  - What users perceive, think / believe to perceive
  - Varies from person to person

- Effects:
  - Consequences with visible impact

- Actual Interaction
  - Not plausible or possible, but actual usage
User Experience - 2

• Development focuses on:
  – What it does?
    – Content? Services? Features? Behavior?....

• User Experience focuses on:
  – How it works?
    – ON THE OUTSIDE: towards the person coming in contact with it.

User Experience - 3

• A web application is a “self-service” product
  – No instruction manual
  – No training seminar
  – No customer service representative

• ..THERE IS ONLY THE USER facing the site alone with her experience to guide her.
• In spite of this situation
  – A quality user experience is an essential competitive advantage
    • It forms customer’s impression
    • It forms market perception
    • It determines whether your customer will ever back come

• A good user experience
  – Is KEY to the product’s success
  – DOES NOT guarantee the success

• A bad one
  – is a quick route to failure

• How to observe, elicit, understand, interpret the user experience?
When observing users?

- To observe user behavior is important in any project creating new solutions:
  - Before starting the project
  - While the project is in progress
  - After the project is completed

Why observing? 1

- Before starting the project:
  observing users using “traditional” solutions
  - Market analysis
  - User expectations
  - Goals and Requirements
  - ……
Why observing? 2

- During the project:
  - observing users using “your” incomplete solution
    - Requirement Validation
    - Design Validation
    - Preliminary testing
    - Acceptance testing
    - ……

Why observing? 3

- After the development:
  - observing users using “your” solution
    - Usability testing
    - Product tuning
    - Planning product evolution and enhancement
    - ……
Techniques

- Recruiting
- Interviewing
- Contextual Inquiry
- Task Analysis, Card Sorting
- Focus Groups, Usability Tests
- Surveys
- Log Files and Customer Support
- Competitive Research
- ……
- User profiling

Planning an Observation

Similar to any other project:
- Defining goals
- Defining schedules (final and intermediate)
- Allocating people (who does what)
- Allocating budget (how much and where)
- Managing the project
- ……. 
Recruiting 1

Finding a good sample of users
• Different if you are looking for
  – “today” users
  – “would-be” users
• Select a an initial basis
• Define a screening (filter)
• Apply the screening in order to get the right sample

Recruiting 2

Finding “today” users
• Use your customer basis
• Use marketing data
• Get screening from your information basis
  (possibly originated from CRM: Customer Relationship Management)
Recruiting 3

Finding “would-be” users
• You have to make a guess
• Screening based on MKTG profile may be wrong
  – A feature (e.g. yearly income) may be relevant for MKTG but not relevant for user behavior, and the other way around
• You must understand the product and your future customer basis

Recruiting 4

Initial basis
• Commercial service (difficult in Europe and for small budget)
• Your personal Data Base (it takes time)
• Your environments: friends, colleagues, relatives, neighbors….
• Electronic communities: Email lists or bulletin boards
• Your users or similar users
• New employee (who do not know the product)
Recruiting 5

Screening 1
• A set of questions allowing you to determine whether the candidate corresponds to your user profile (or one of the profiles)
• You must know the user profile that you want (see section on user profiling)
• At most 20 questions!

Recruiting 6

Screening 2
1. Be clear
2. Be short
3. Be specific
4. Never use “your” jargon
5. Ask for precise/factual data (dates, time, ..)
6. Have a specific purpose for each question
Recruiting 7

Screening 3
7. Move from general to specific
   (early detection of wrong people)
   • When was the last time you bought an online ticket?
8. Not biased question
   (NO: “are you bothered with Flash animations in the home pages?”)
   (YES: “what does typically bother you in the home pages?”)
9. Explain what the research is about and its format
10. Leave room for flexibility (open questions)

Recruiting 8

Applying the screening
• Interview
• Email
• Phone
• …
• Define an incentive
  (any kind of incentive is better than nothing)
  e.g. Free research results, gadgets, whitepaper, resources of interest, money
Recruiting 9

Applying the screening 2
- Properly organize the session where the “users” should come
- Do not waste the time of people
- Invite more people than you need (some will eventually not show up)

Recruiting 10

PITFALLS
- Wrong people (do not try to use them)
- Users do not show up (from 25 to 50%)
- Bias (of opinions or tastes, or...; problem with the initial basis or with the recruiting method)
- Users want to please you
- Difficulty with the schedule
- Lack of organization
- ........
EXERCISE

- ACME is exploring the possibility of creating a “secure portal” for kids and their parents

- Write the screening questions (email) for selecting the following type of users
  - Parents
  - Kids

Interviewing 1

Basic technique, simple to describe but difficult to carry on in practice:

- Structure
- Indirectness
- Neutrality
- Creating the interview
- Running the interview
- Problems
Interviewing 2

Structure: prepared in advance:
1. Introduction: define settings and role
2. Warm-up: start introducing the subject
3. General issues: focus on general expectations, assumption and experiences
4. Deep focus: introduce the product (idea) and get attention to some details
5. Retrospective: going back to general issues (any change’)
6. Wrap-up: make it clear that is over

Interviewing 3

Indirectness:
• Never ask direct questions with preconception build in them
  – NO: does the animation bother you on the site homepage?
  – YES: What typically bother you as you enter the site?
• Let the user feelings and “true” opinion emerge
• Do not let the user to please you
Interviewing 4

Neutrality:

• Forget about your opinion in the product (idea) or its relevance for you
• Be “distant” from the product
• Be a neutral observer of the user answers
• Phrase questions in such a way that they do not express your opinions
• Do not react to “wrong” answers

Interviewing 5

Creating the interview:

• Bet on the user direct experience, not on its fantasies, extrapolations, “would be” dreams, ..
• Be matter fact
  NO: “is X useful?”
  YES: “could you explain how X would help you in your work?”
• Keep each question focused on ONE topic
• Keep questions not judgmental
  – The person interviewed should not think you are expecting a specific answer (“the right” one)
    NO: don’t you think this service should be added?
    YES: if this feature were available tomorrow, how would you use it?
Interviewing 6

• Keep questions open-ended
  NO: Which content from this list is most important to you?
  YES: Rate from 1 to 5 each of the following feature
  BETTER: Rank from 1 to n how each of the following feature is important to you

• Avoid binary questions if they force the user
  NO: “is X good or bad?”
  YES: “rate from 1 to 5 (optimum) the quality of X”

Running the interview:
• Listen carefully to what users say
• Define your terms, keep questions simple
• Don’t force opinions
• Restate answers
• Gives examples for general concepts that you want to discuss
• Help users to focus on concrete ideas
• Be aware of your expectations (and do not react)
• Never say that the user is wrong
• Listen carefully to questions from the users
Interviewing 7

Problems 1:
- Close-ended questions instead of open-ended
  (e.g. “you prefer yellow or green?”; the user may dislike both)
- Questions with complex answers made binary
  (e.g. “is feature X important to you”; it misses the point why X is important or not important)
- Use of Jargon or ambiguous terminology
- Asking people “to predict the future”

Interviewing 8

Problems 2:
- Invocation of authority/manipulation
  (e.g. “everyone knows that . . .)
- Assuming that you know the answer and not paying enough attention to what the user says
- Assuming that users can answer all your questions
- Sometimes people do not say what they believe
- Sometimes people answer a different question from the one that you have asked
- Videotaping interviews (with consent) is a good idea
SURVEYS

- A set of questions allowing to understand users in detail
- A way to get precise quantitative (vs. qualitative) information
- Numbers can be “precise” but also inaccurate
- Numbers can be deceiving (they “look” telling the truth, but it is not necessarily so)

GOAL FOR SURVEYS

- Current users profiling
  - Who they are
- Satisfaction measuring
  - Who is satisfied of what
- Expectations assessment
  - What they would like to have
- Value assessment
  - What is important
- .......
RUNNING SURVEYS

• Mail
• Phone
• In-person
• E.mail
• A web-site
• …….

SCHEDULE FOR SURVEYS

• Determine goal and audience
• Write questions (a few times) and think about the final report (!)
• Run pilot test, and rewrite questions
• Prepare SW for data analysis
• Run the survey and collect data
• Analyze data and write the report
WRITING THE QUESTIONS 1

• Looking for Descriptions
  – Facts and information

• Looking for Explanations
  – Correlations and cause-effects

WRITING THE QUESTIONS 2

Characterization
• Demographic, Technological

Behavior
• Web Use, Usage, Competitive

Attitude
• Satisfaction, Preference, Desire
CHARACTERIZATION

Demographic
Age, income, family, education

Technological
What they use, experience, equipment, accessories, …

BEHAVIOR

• Usage
What do they use, why, what do they do, …

• Web Use
How do they use the Web, why, how often, ..

• Competition
Do they use your competitor? Why? What do they use?
ATTITUDE

• **Satisfaction**  
  Are they satisfied? Why yes and why not?

• **Preference**  
  What do they prefer and consider relevant?

• **Desire**  
  What they would like to have

TYPES OF QUESTIONS

**CLOSE-ENDED necessary for analysis**  
(different from interviews or focus groups)

• Yes/Not

• Multiple answer: just select one (mutual exclusion)

• Checklist: check all those you like

• Give a rating: (e.g. from 1 to 10)

• Give a priority: within a list (first, second, ..)

• **Likert scale:** (very positive, positive, neutral, negative, very negative)

• …..
GOOD QUESTIONS

• Specific: 1 issue at the time
• Clear: no ambiguous words or measures
  NO: often, rarely
  YES: >3 hours a day, <1 hour a day
• Related to actual experience, no based on predictions
• …..

GOOD QUESTIONS 2

• Consistency: of style and words
• Relevance: for the user culture and taste
• Avoidance of extreme situations (unlikely to occur)
  NO: did you find your-self in a car accident where 3 people died?
• Use follow-up questions to detail a previous question
ORGANIZE QUESTIONS

• Use an order that makes sense for the user (not for you)
• Consider the time required
  Max : 20 min                 Optimal : 10 min
• A good organization, good wording, good formatting make a more effective survey

INSTRUCTIONS

• General Instructions:
  Very short with the following:
  – State importance of the survey
  – Goals and who is behind
  – Safety and reward (if any) for interviewee
  – Contact information and schedule
• Question instructions: concise and clear and only when necessary
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WEB BASED SURVEYS 1

• Accessible via WEB
• Easy to organize and data already in a proper format
• Write your own SW or use a package
  – [www.sparklit.com](http://www.sparklit.com)
  – [www.zoomerang.com](http://www.zoomerang.com)
  – [www.surveymonkey.com](http://www.surveymonkey.com)
• It must be treated as any application: test, usability, etc.
SAMPLING

- **Target Audience**: all the people that you would like to know
  
  E.g. all the students 15 years old in Switzerland

- **Sampling Frame**: all the people that you could reach, given your method
  
  E.g. students from Ticino, Ur and Grisons

- **Sample**: the actual people that you get
  
  A random selection within the Sampling Frame

SAMPLING ERRORS

- **Target Audience**: ill defined

- **Sampling Frame**: biased and not representative of the full audience

- **Sample**: biased, not really random
SAMPLING ERRORS 2

- **Sample Size**: the larger is the size and more likely is that you get a good random choice
  - Small sample: inexpensive and likely to be biased
  - Large sample: expensive and less biased
- **Sample Bias**: several possible causes
  - Bias in the sampling frame
  - Timing and duration
  - “style” and method of the invitation
  - Survey “disappointing” interviewee (who don’t complete)

ANALYSIS

- A complete job requires an expert in statistics
- A few simple concepts and few calculations can perform a satisfactory job
- Most of situations provide a “normal distribution” (bell shape)
- A large sample makes more likely a normal distribution
BASIC CONCEPTS

• *Mean*: average value
  \[(x_1+x_2+\ldots)/N\]

• *Mode*: the most common value

• *Median*: the value in the middle
  \[(X_1+X_{last})/2\]

In a perfect normal distribution they are (almost) the same

Look carefully if they are very different

Plot the data and give a look

CORRELATIONS

GOAL: find out if factor X (independent variable) influences factor Y

CROSS TABULATION:

• Find out relevant (groups of) values for X

• For each value of X group the values for Y

• Compare how the different values of Y differ based on the value of X
EX: QUESTIONS AT A UNIVERSITY

• How many hours do you study per week?
  <20h: 32 ; >20h:20 ; >30h: 18
• Rate (1 very bad, 5 excellent) the different educational options
  Average answers:
  Lectures 3.68
  Seminars 2.49
  Laboratories 3.09
  Projects 2.67

SOME RESULTS

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IMPORTANT MEASURES

- **Standard Error**: how wrong can be the measure – e.g. 3%
  It is minimal if all the answer are the same;
  it is maximum for very distributed answers
- **Level of Confidence**: how can be confident of what we have found
  It increases with large samples and repeating the surveys

TRUSTING SURVEYS

- **Systematic Errors**: something is wrong in a systematic way: sample, questions, etc.
- **Random Errors**: small sample can have random fluctuations
- **Correlations vs. Causation**: a correlation does not necessarily implies cause-effect relationship
- **Belief vs. truth**: surveys are about belief!
- **Subpopulations**: failing to acknowledge different groups of answers
USER PROFILING

What: development team turns audience description into fictional characters in order to understand how audience needs relate

Goal: Modeling (actual or possible) users

When: at the beginning of the development process
- Based on intuition, judgment and available data, not on external research
- Avoid the syndrome “everything for everyone”
- All the techniques are based on understanding user profiles
- Profiles provide a model which provides the conceptual framework
  – to organize the user investigation
  – against which to compare the results

ACTORS

THEY KNOW USERS
- Marketing research
- Support
- Sales
- Business Development

THET NEED TO KNOW
- Engineering
- Identity Design
- Interaction Design
- Information architecture
PRELIMINARY

• Start asking people in your organizations
• Remember that customers (those who buy) may be not users: e.g. parents may buy products for their children
• Talk to (interview) tentative users

ATTRIBUTES

• Get all the people with an idea in a room
• Get each one list all the attributes they have in mind
• Get the people to focus on the different categories of attributes:
  Demographic, Technological, Web Use, Environment, Lifestyle, Roles, Goals, Needs, Desire, knowledge, Usage Trends, Tasks
DEMOGRAPHIC

• Age, Gender, Family
• Income and Purchasing Power
• Location (downtown, countryside, small towns, ..)
• Cultural
• Job, Company size, …

TECHNOL. – WEB USE – ENV.

• Equipment
• Software: operating systems
• Connections
• Applications
• Type of tasks
• How much time and since when
• Where (home, office, ..) and when (use time)
• Competing products (e.g. TV, radio, games, ..)
LIFESTYLE - ROLES

• Values and attitude
• Media: where do they get information?
• Activities: what do they do?
• Education
• Groups where they belong, titles
• Power, Relationships, Interactions

REWORK THE MATERIAL

• Cluster attributes
• Give them priorities
• Organize them in coherent groups
• Create a “narrative glue”
• CREATE FICTITIOUS USERS representing your audience
GOALS – NEEDS - DESIRES

• GOALS (about your products): Short Term, Long Term, Motivations, Outcome (if successful), Pain (why goals are not achieved now)
• NEEDS: Functional, Emotional, Cultural …
• DESIRES (what they think they need): stated desires, unstated desires

KNOWLEDGE – USAGE - TASKS

• KNOWLEDGE: Domain Knowledge, Product Knowledge, Awareness of Competition
• USAGE: Frequency, Loyalty, …
• TASKS: Reasons, Duration, order, Criticality, today (what do they do?)