UX goals and The Think-Aloud Method

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Overview of this lecture

- User E(X)perience - UX
- User Experience Goals
- The Think-aloud method
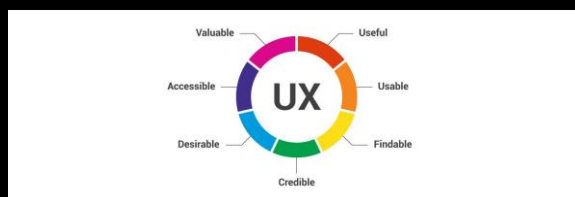
- Reading
    – ID 1.4, 1.7, 15.2

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USER EXPERIENCE

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Sometimes the user's goal is to have fun

- Then user experience is important

- Like in games
  - You are not really solving tasks
  - You do not really want to be fast

- Other qualities like engagement are important

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The User Experience

- Definition in the ISO-9241 -210 standard (2019)
  – User's perceptions and responses that result from the use and/or anticipated use of a system, product or service.

  – NOTE 1: User' perceptions and responses include the users' emotions, beliefs, preferences, perceptions, comfort, behaviours and accomplishments that occur before, during and after use.

- Satisfaction

  – Extent to which the user's physical, cognitive and emotional responses that result from the use of a system, product or service meet the user's needs and expectations

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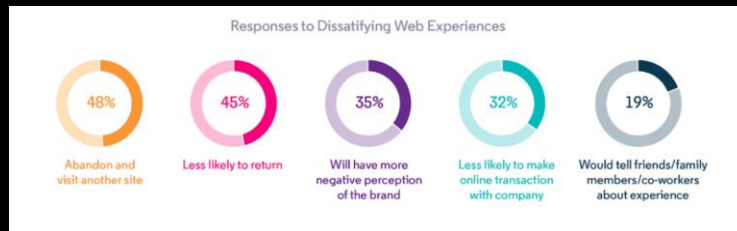# The three „time-zones" of user experience

- Intitial zone – the first impression
  – Stimulation for the user, the learnability
  – What is the feeling that the user gets?
    - In the definition of UX this also covers the expectations
  – Could also include expectations – the before zone
- In-corporation zone – during use
  – Usefulness and usability
  – How easy is it to use?
- Identification zone – after use
  – Users' personal and social experience is dominant
  – What is the users' jugdement?
  – What do they think about when talking about a product?

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Another note – Definition of UX

- NOTE 2: User experience is a consequence of brand image, presentation, functionality, system performance, interactive behaviour and assistive capabilities of a system, product or service. It also results from the user's internal and physical state resulting from prior experiences, attitudes, skills, abilitites and personality; and from the context of use.

Responses to Dissatifying Web Experiences

48%	45%	35%	32%	19%
Abandon and visit another site	Less likely to return	Will have more negative perception of the brand	Less likely to make online transaction with company	Would tell friends/family members/co-workers about experience

Source: https://www.evry.com/fi/ajankohtaista/artikkelit/winning-the-battle-of-great-user-experience/

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User experience factors

Desirable aspects

satisfying	helpful	fun
enjoyable	motivating	provocative
engaging	challenging	surprising
pleasurable	enhancing sociability	rewarding
exciting	supporting creativity	emotionally fulfilling
entertaining	cognitively stimulating	

Undesirable aspects

boring	unpleasant
frustrating	patronizing
making one feel guilty	making one feel stupid
annoying	cutesy
childish	gimmicky

Awful   Not very good   Good   Really good   Brilliant
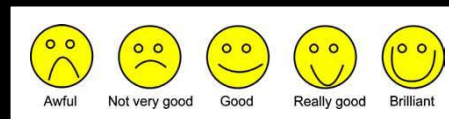
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UX Goals

5 UX Goals

User Experience measured?

- Often measured with a Questionnaire
  – Most common is Atrackdiff
- See Attrackdiff 2.0 (http://www.attrakdiff.de/en/Home/)

Mesureable Goals for UX

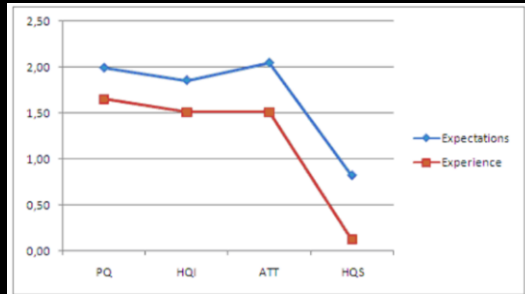- Atrackdiff has four factor - 7 questions for each

Figure 2. Mean scores for each scale of AttrakDiff 2

- Possible UX goal:
  - The PQ factor should be above 1,5 on average

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Virtually Experiencing Mount Everest

- The company Sólfar wanted our advices of how to measure the UX

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User Experience Goals

1. Who are the users?
   – Particular groups or all user groups?
2. What reaction (perception and/or reponse) are we focusing on?
   – The user experience factor?
3. What time-zone are we focusing on?
   – Before, during or after use?
4. What value is our target (#)?
   – What is the limit and do we want it above, below, exactly, .
5. Do we want it on average or precicely?
   – Do we mean on average for all user or all above, below, ...
6. What is the scale?
   – On what scale are we measuring, what does the number mean?

The Format – User Experience Goals

<user group> **rate** < the user experience factor> **<time-zone>** <limit> <on average/precisely> **on a scale** < # - #>

More examples:

- English speaking users **rate** their engagement right after using Mount Everest above 7 on average **on a scale** 1 - 10
- German speaking users **rate** their boredom after using Mount Everest for a month below 4 on average **on a scale** 1 - 10

Some examples

Usability/UX Goal	Factor
More than 90% English speaking students are able to complete finding a recipe	Effectiveness
More than 75% of German speaking students are able to complete finding the cheapest ingredience	Effectiveness
English speaking students are able to find a recipe they want using less or precisely 3 minutes on average	Efficiency
German speaking students are able to find the cheapest ingredience using less than 30 seconds precisely	Efficiency
English speaking students rate their overall satisfaction above 4 on average on a scale of 1 - 5	Satisfaction
German speaking students rate their overall satisfaction above 8 precisely on a scale of 1 – 10	Satisfaction
English speaking users **rate** how attractive our product is above 7 on average **on a scale** 1 - 10	User experience
German speaking users **rate** their boredom **after using** *our product* **for a month** below 4 on average **on a scale** 1 - 10	User experience

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The Usability and UX Goals are Requirements

- Should be stated in the Requirement list

Number	Name	User group	Priority	Additonal info
1	Send in an order for each week for the ingreediences of meals	Vegan, paleo, keto, classic	A	Use case description #5
2	Check what was ordered for a particular week both past in time and in the future	Vegan, paleo, keto, classic	B	
3	Rate a particular recipe of how tasty it was	Vegan, paleo, keto, classic	B	
4	Check how others rated a particular recipe	Vegan, paleo, keto, classic	B	
5	Make a new ingredience/recipe/group of recipes that the customers are ablty to buy	Employee	A	Use case description #3
6	90% of classic users are able to complete sending in an order for each week for the ingreediences of meals	Classic users		Effectiveness goal
7	Classic users can send in an order for each week for the ingreediences of a meals in less than 1 minute on average	Classic users		Efficiency goal
8	All users rate their overall satisfaction higher than 4 on average on a scale from 1 - 5	Vegan, paleo, keto, classic		Satisfaction measured in the After test questionnaire
9	Classic users rate how pleasant they thought the system would be before using it above 8 on average on a scale 1 to 10	Classic users		UX measured in the Before test questionnaire

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The think aloud method

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The think aloud method

- Evaluation with users
  - Or users representatives
- The user thinks aloud
  - Talks while solving problems, hence the name*
- Data registered
  - Finish not finish (effectiveness)
  - Time to solve the task (efficiency)
  - The grading of the system (satisfaction)
  - Users reactions (user experience)
- The conductor controls
- Incredible results

- * a usability testing can be performed without having user think aloud, then it is just called usability testing. Has all the same steps except the think aloud bit.

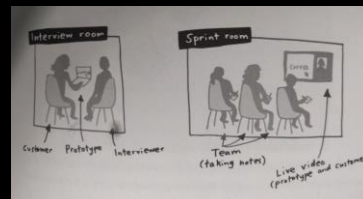www.hr.is

The Think Aloud Method

1. One on one interview
2. Tasks that users solve
   – What to do – NOT HOW
3. Observing HOW the usage is
4. The experience is the focus
5. Interview afterwards

   – understanding the experience

Advantages of the Think-aloud method

- Extends our understanding
  - How to support users
  - Good to observe in another room
- Many problems found
  - Do not understand, do not find, ...
  - Are not able to complete tasks
  - Many AHA moments
- The best method for involving users
  - Research studies have shown that
 - Google uses it a lot in their Google Design Sprint processes

The Five Steps in Think-aloud tests

1. **A friendly welcome** to start the interview
2. A series of general, open-ended **context questions** about the user
3. **Introduction to the prototype(s)**
4. Detailed **tasks** to get the users reacting to the protype
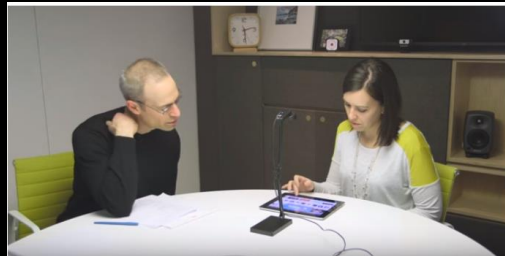5. A **quick debrief** to capture the user experience

A snapshot of the App Being Evaluated
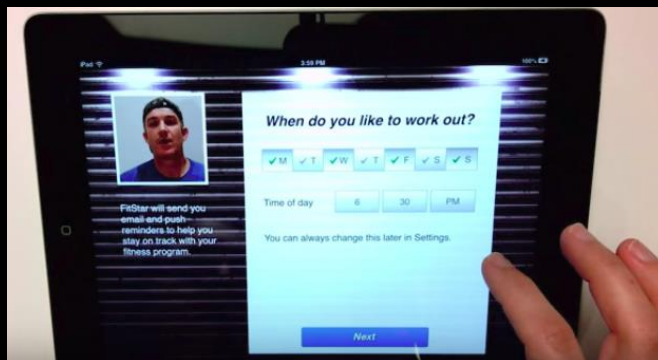
An example: From Google Design Sprints

https://www.youtube.com/watch?v=U9ZG19XTbd4

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Step 1: A friendly Welcome

- An introduction for the participants
  - So all will get the same introduction
    - In writing or speach
  - The introduction will contain
    - Thank the participant for coming
    - The goal of the evaluation
      - The system is being evaluated, NOT the participant
    - The process
      - How much time you estimate for the evaluation
      - The participant can quit whenever he needs to
      - Ask him to say, when he has finished the task
      - Tell him what you want for him
    - What will be done with the data
  - Agreement with the participant

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Step 2: The Context Questions

- Before the task session – Gather data on the background
    1. The knowledge of the domain
    2. Computer knowledge
    3. Worked on similar systems

- A fitness app:
    1. „What kind of work do you do?"
    2. „What do yo do when you're not working?"
    3. „What do you do to take care of yourself? To stay in shape? To stay active?"
    4. „Have you used any apps or websites or other things to help with fitness? Which ones?"
    5. „What did you want them to do for you? What do you like or dislike about them? Did you pay for them? Why? Why not?"
- Open ended questions

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Step 3: Introduce the prototype

- Michael begins by saying:
    - „Would you be willing tot look at some prototypes?"
    - The customer is doing him a favor

- Also important:
    - „some thing may not work quite right yet – if you run into somthing that's not working, I'll let you know."

- Remind the user – your are testing the prototype:
    - „There are no right or worng answers. Since I ddn't design this, you won't hurt my feeling or latter me. In fact frank, candid feedback is the most helpful."

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Step 3: Remind the User to think-aloud

- You could say something like this:
  - „As we go, please think aloud. Tell me what you're trying to do and how you think you can do it. If you get confused or don't understand something, please tell me. If you see things you lik, tell me that too"
  - You could also take an example for them, so they understand what you are asking of them

- Hearing they users thought is invaluable
  - What they struggle with and why and what they like

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Step 4: The tasks

- Ask the participant to solve the tasks <u>one by one</u>
  - Preferably in random order
- An example of a task (use plain words):
  - You need the telephone number for Reykjavik University. Use their website to find that.
- The tasks should be realistic
- The tasks should state WHAT should be done
  - Not HOW these should be solved
- Have tasks ready beforehand
- First task should preferably be easy
- The total time of the evaluations
  - Not more than 1,5 hours

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Step 4: When the user is solving tasks

- You can ask:
  - What is this? What is it for?
  - What do you think of that?
  - What do you expct that will do?
  - So, what goes through your mind as you look at this?
 - What ar you looking for?
  - What would you do next? Why?

Making a Task Based on User Cases

- If a user case description is:
  - As a user younger than 40 I want to be able to find information an athletic lesson quickly because I am always in a hurry

- A task could be:
  - You would like to find a hot yoga lesson that you know is given at FitStar. Please use the app to do that.

- Task are like one example of a user case
  - The tasks need to fit the users that you think will participate in the evaluation
  - Select tasks that you think are realistic for them

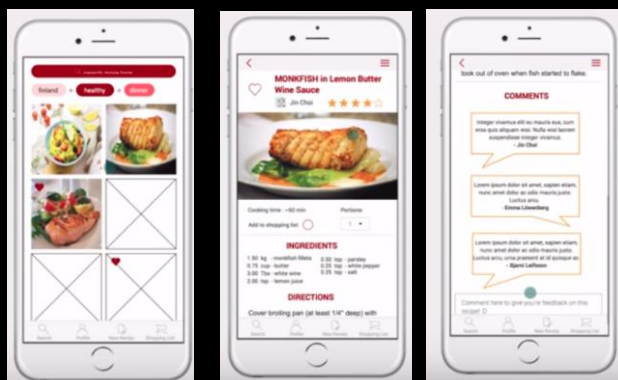## More than 90% **of** English speaking students **are able to** find a recipe
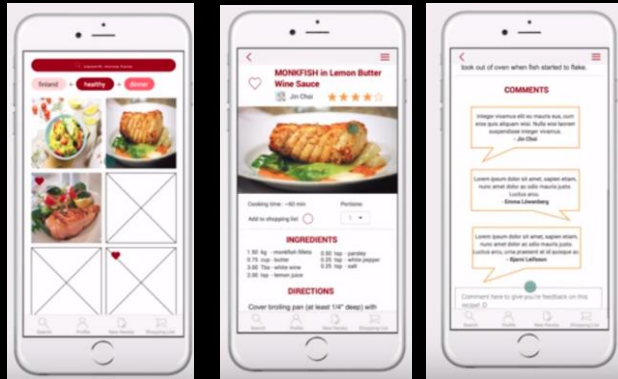
- Task for users: Find the recipe for MonkFish in the app
- Ask at least 5 users to solve it
- Register how many users complete

English speaking students **are able to** find a recipe they want **using** less or precisely 3 minutes on average

- Task for user: Find the recipe for MonkFish in the app
- Ask at least 5 users to solve it
- Measure the time

Step 5: The debriefing: Ask about the UX

- Some of Michael's debriefing questions in the video:
  1. „How does this product compare to what you do now?"
  2. „What did you like about this product? What did you dislike?"
  3. „How would you describe this product to a friend?"
  4. „If you had three magic wishes to improve this product, what would they be?"

- Could also be:
  - What were the main advantages?
  - What were the main disadvantages?
  - Is there something else you want to add?
  - Could also be more precise questions

- You should think about your user experience goals and ask questions to be able to measure the goals

After User Testing

- We ask:
  - Rate your freedom from discomfort on a a scale from 1 – 5: _____

- If these were the results:

Users	Rating
English speaking user 1	3
English speaking user 2	4
English speaking user 3	4
English speaking user 4	5
English speaking user 5	3

- Is this goal fullfilled?
  - English speaking students **rate** their freedom from discomfort towards **using** *Recipe Inspiration* above 4 **on a scale** of 1 - 5

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- Good questionnaire to measure the satisfaction

Participant ID: _____   Site: _____   Date: ___/___/___

System Usability Scale

Instructions: For each of the following statements, mark <u>one</u> box that best describes your reactions to the website *today*.

		Strongly Disagree				Strongly Agree
1.	I think that I would like to use this website frequently.	☐	☐	☐	☐	☐
2.	I found this website unnecessarily complex.	☐	☐	☐	☐	☐
3.	I thought this website was easy to use.	☐	☐	☐	☐	☐
4.	I think that I would need assistance to be able to use this website.	☐	☐	☐	☐	☐
5.	I found the various functions in this website were well integrated.	☐	☐	☐	☐	☐
6.	I thought there was too much inconsistency in this website.	☐	☐	☐	☐	☐
7.	I would imagine that most people would learn to use this website very quickly.	☐	☐	☐	☐	☐
8.	I found this website very cumbersome/awkward to use.	☐	☐	☐	☐	☐
9.	I felt very confident using this website.	☐	☐	☐	☐	☐
10.	I needed to learn a lot of things before I could get going with this website.	☐	☐	☐	☐	☐

Please provide any comments about this website:

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Data gathering

- Data gather by
  - Video recording
  - taping
  - Logging in the computer
  - Recording what happens on the screen
  - Note taker

- Could be combined
  - Recording and note taking

- Note taker
  - Writes all usability problems
    - Preferable on paper
  - Measures time

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Should be avoided

1. Preparation isn't finished when the participant arrives
2. First task too hard to solve
3. The tasks are not realistic
4. There is help included in the text for the tasks
5. The conductor helps too much
6. The conductor doesn't help when he realizes a problem
7. The conductor defends the system
8. The conductor helps without knowing it
9. The suggestion from a participant for a change is answered:
   "Yes, we have already thought about this"
10. No discussion after the task solving session

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Pilot testing

- Very good to have a pilot testing session
  - You need one participant
    - Does not need to be "perfect" representative for the user
  - Go through all the process
- The goal of this is
  - Try out all the material
    - that the user gets
  - Practice the process
  - Check the system
    - If has the expected status

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Important

- The system is being evaluated NOT the participants
- If the participants gets in trouble
  - It is a fault of the system
- The goal is not to solve all the tasks in the think-aloud evaluation
  - Ask them to solve those one by one
- Keep a nice atmosphere in the evaluation

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The success

- 3 - 5 think aloud sessions (with 3 – 5 users)
  - Returns all severe problems
  - Better to change the interface and evaluate again
    - Then ask more participants to take part in the first evaluation
- Unexpected problems show up
  - That experts did not imagine
  - Can be shown to the design team
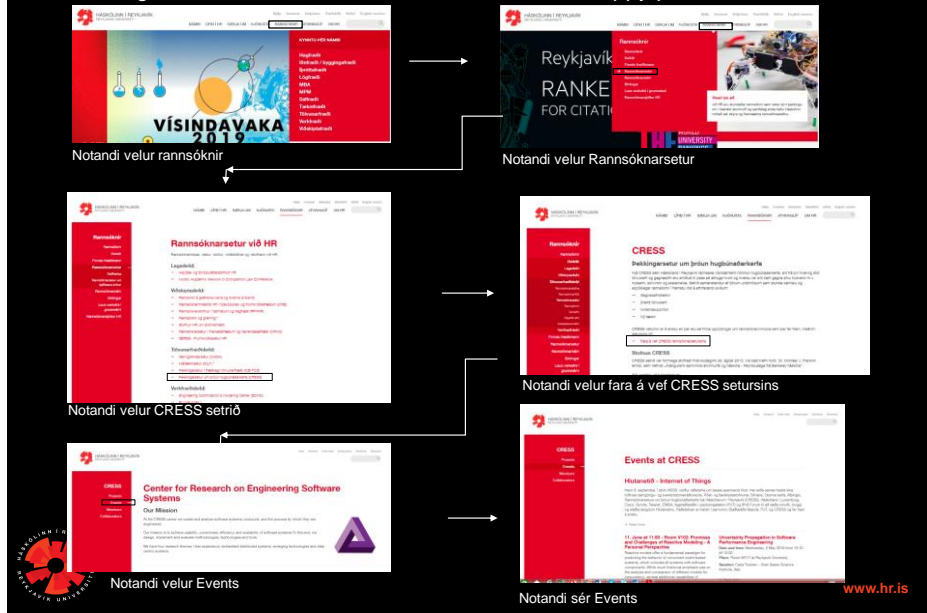

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Assignment 3

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You are asked to show a happy path

- For each of the user task in the user testing
  – And for each use case
- Let's say the use case is:
  – Find information about CRESS events on the ru.is web

- The happy path is
  – The best way to solve the use case/user's task
  – How you designed the path in as few steps as possible

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Finding info for CRESS events on the ru.is web – happy path

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