

Should eXperience drive design? Design researchers' viewpoints

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Contents

- X-driven design: Why and what?
- Teaching engineering students X-driven design
- Design researchers' viewpoints: Should experience drive design?
 - Examples



Why X-driven design?

- User-centered product design
 - Successful, delighting products to the market
- Design research perspective
 - Increasing the understanding of phenomena of human experience with technology



What is experience-driven design

- Takes (user) experience as a **starting point**
 - Valuing the whole person behind the "user" (Wright & McCarthy, 2011)
- Uses the **targeted experience**, and stories around them, as a central concept of the **design vision** (Hassenzahl, 2011)
- Key elements: context, interpretation, participation (Wright & McCarthy, 2011)



PLEX Cards • Playful Experiences Cards



Human needs as a starting point for UX design

Studies have shown that...

- Need fulfillment is related to positive emotions
- **Experiences are marked by a clear need**, for example autonomy experiences, competence experiences, etc.
- **Relatedness, stimulation, competence and popularity** are especially salient in positive experiences with *technology*



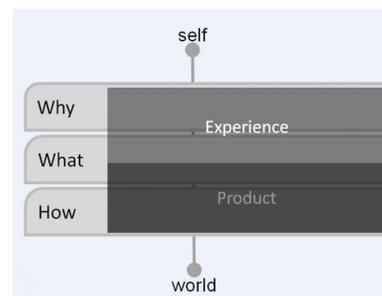
Hassenzahl, M., Diefenbach, S., and Göritz, A. (2010). Needs, affect, and interactive products – facets of user experience. *Interacting with Computers*, 2:353-362.



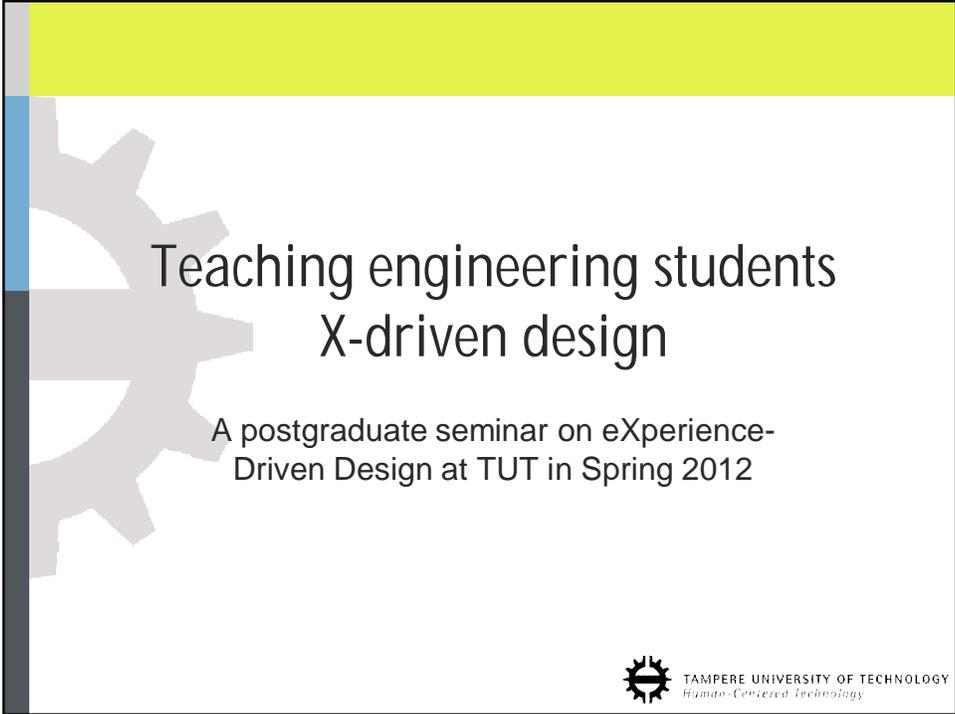
Experience Design by Hassenzahl

Experience-Driven Design? Experience-Sensitive Design? Needs-Based Design?

- **Experience Design starts from the Why**
 - Clarify the needs and emotions involved in an activity, the meaning, the experience
- Then, determining functionality which can provide the experience
 - The **What** and an appropriate way of putting the functionality to action (the **How**)
- Experience Design aims at the **Why, What and How to be coherent**
 - With the **Why, the needs and emotions, setting the tone** (see Figure)
- This leads to **products** which are **sensitive to the human experience**



Hassenzahl, M. (2010). Experience Design: Technology for All the Right Reasons. Morgan & Claypool.
http://www.interaction-design.org/encyclopedia/user_experience_and_experience_design.html



Teaching engineering students X-driven design

A postgraduate seminar on eXperience-
Driven Design at TUT in Spring 2012

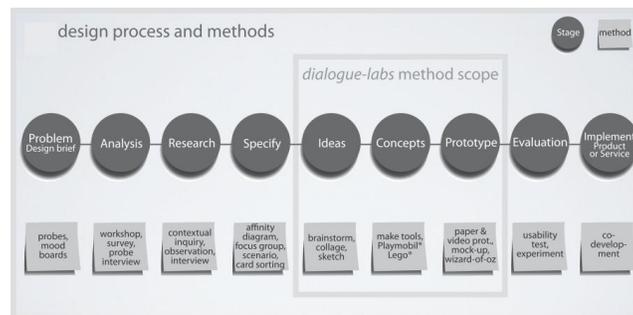


Motivation for the seminar

- We - UX researchers, engineering students - may lack sufficient picture of the *design approaches* in which the (user) experience is put into the focus and used as a primary target of the design
- Hands-on experience of designing experience-driven systems
 - Without a formal or strict user requirements definition
 - Focusing on creative design approaches (with some user input)
 - Ubicomp; novel form factors

Topics for the practical design assignment

1. "How to support healthy and sustainable food consumption?"
 2. "How to support moving and navigating in the Finnish winter?"
- Using, for example, the Dialogue-Labs method:



Lucero, A., Vaajakallio, K. and Dalsgaard, P. 2011. The dialogue-labs method: process, space and materials as structuring elements to spark dialogue in co-design events. *CoDesign*. Taylor & Francis, 1-23.



Target experiences: According to Playful Experience (PLEX) categories

ADVENTURE:

Discovery & Exploration & Captivation

IMAGINATION:

Expression & Fantasy & Simulation

EXCITEMENT:

Thrill & Subversion & Humor

EXCEEDING ONESELF:

Suffering & Challenge & Completion

PHYSICAL:

Sensation & Relaxation & Eroticism

CARETAKING:

Nurture & Sympathy & Control

SOCIAL:

Fellowship & Submission & Competition

The image shows two PLEX cards. The first card is titled 'Technique: PLEX Brainstorming' and describes a process for generating ideas using a deck of cards. The second card is titled 'Technique: PLEX Scenario' and describes a process for creating scenarios using a deck of cards. Below the cards are four photographs illustrating the concepts of 'Captivation' and 'Challenge'. The first photo shows a child looking intently at something off-camera, labeled 'Captivation'. The second photo shows a child looking at a chessboard, labeled 'Challenge'. The third photo shows a child sitting at a table, labeled 'Captivation'. The fourth photo shows a child holding a string attached to a small object, labeled 'Challenge'.

Arrasvuori J., Boberg M., Holopainen J., Korhonen H., Lucero A., Montola M. (2011). *Applying PLEX Framework in Designing for Playfulness*. In Proc. of DPPI'11. ACM.



Design researchers' viewpoints: Should experience drive design?

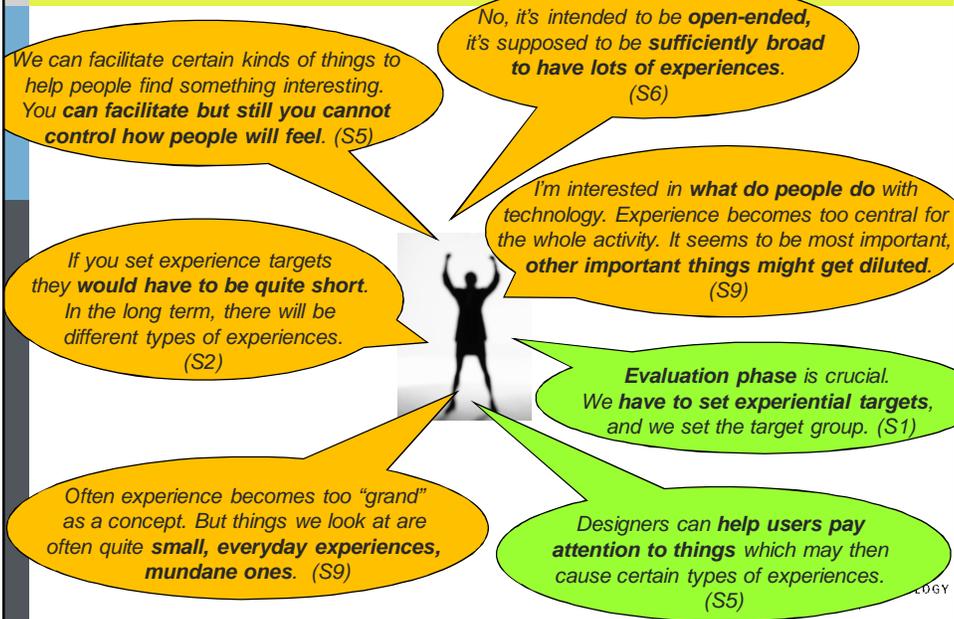
- Nine interviews of design researchers in Mobile Life Centre, Stockholm, in 2011
 - Research topics on mobile services/apps and embodied interaction
- Focus on design researchers' viewpoints of UX and how design supports research



MobileJIT



Design researchers' viewpoints



Affective Health

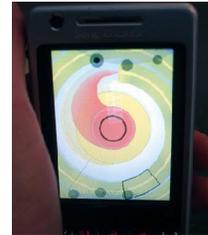
by Kia Höök et al. @ Mobile Life Centre

Affective Health system is a mobile lifestyle application that aims to **empower people to reflect on their lives** and lifestyles.

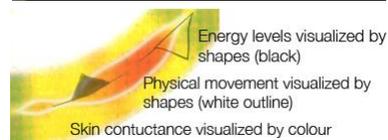
The system logs a mixture of biosensor-data and other contextually oriented data and transforms these to **animated expressions** on their mobiles.

Affective Health is intended to **create a “mirror”** and thereby empower users to see activity patterns and relate these to their **experiences, e.g. stress.**

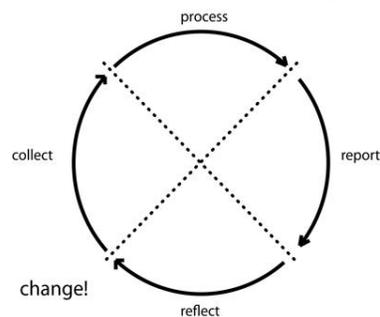
<http://affectivehealth.blogspot.com/>



Affective Health by Höök et al (cont.)



<http://affectivehealth.blogspot.com/>



Putting **bodily and mindful practices next to one-another**, into a whole – stepping away from a dualistic perspective on body and mind

Ecofriends @Mobile Life Centre



A mobile grocery shopping application where the users, through interacting with each other, get the opportunity to reflect on their everyday actions and choices and their effects on the environment

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Conclusions

- Positive (user) eXperiences are based on underlying human needs
- We can target at designing certain types of experiences, but cannot count on their specific nature
- Experience is a subjective outcome of interaction, and it may be surprising – this may lead to insights and successes
- Open-ended nature of interactive systems may support reflection and reveal a new, diverse set of experiences



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