



UX Laddering

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Introduction

The basis of UX Laddering is the «means end chains model». The model is used to explore correlations between product features, components of benefit and values by using «Laddering».

«Laddering» is a semi-structured in-depth interview technique. «Why-questions» are repeatedly asked in order to reveal reasons of valuation of an attribute until the underlying need is identified. Each question stands for a rung on the ladder.

Design Phases



Introduction – Differentiation

Classic Laddering is time-consuming in regards to data gathering & analysis, its research aim is to better position products within the market and the type of products that are studied are products users already experienced in a real life context

However, in HCI a less time consuming method is needed and the core aim is to develop products with desired attributes rather than to better position existing products within the market.

Therefore UX Laddering was proposed by Abeele and Zaman as an adaptation of Classic Laddering which takes these hindrances into account



Introduction – Goal

1. Understanding the full meaning an artifact holds for a user
2. Identifying attributes of products that are beneficial to individual users' values
3. Exploring correlations between attributes and values

Instructions



01 **Realistic scenarios** or tasks regarding the research product/prototype are prepared beforehand.

02 User is given 10 to 15 minutes to **explore the research product/prototype**. It is very important that the user is grounded in context and really experiences it.

03 The interviewer asks the user to reflect on his/her previous experience of the product/prototype. **The ladder of attributesconsequences- values is climbed up by keeping to ask for the «why»**. The ladder can be climbed downwards again by asking «what caused this?» if the user comes up with consequences rather than attributes.

Instructions



04 The raw interview material is converted into ladders. For the Summary Content Codes the ladders are inspected for core elements. Following the Implication Matrix is generated. It shows the number of times each element leads to every other element. Final result of the analysis is the Hierarchical Value Map which shows the connections between the elements.

04 General advice: UX Laddering interviews should remain short. In order to fit time-wise into a user-centered design approach the interviewer should prompt until reaching psychosocial consequences and continue to prompt once or twice for values but only if they come naturally. In UX Laddering it is less important to make perfect ladders.

Instructions

Interview



Example of a Classic Laddering interview from the Wine Cooler study by Reynolds & Gutman:

Interviewer: You said you prefer a cooler when you come home after work because of the full-bodied taste of the wine. What's so good about a full bodied taste after work?

Respondent: I just like it. I worked hard and it feels good to drink something satisfying

Interviewer: Why is a satisfying drink important to you after work?

Respondent: Because it is. I just enjoy it.

Interviewer: What would you drink if you hadn't a cooler available to you?

Respondent: Probably a light beer.

Interviewer: What's better about a wine cooler opposed to a light beer when you get home from work?

Respondent: Well, if I start drinking a beer I have a hard time stopping. I just continue on into the night.

But with coolers I get filled up and it's easy to stop. Plus I tend to not eat as much dinner.

Interviewer: So why is continuing to drink into the evening something you don't want?

Respondent: Well, if I keep drinking I generally fall asleep early and so I don't get a chance to talk to my wife after the kids go to bed. She works hard with the house and kids all day—and it's really important that I talk to her so we can keep our good relationship, our family life, going.

Instructions

Interview



(TV) Terminal Values

(IV) Instrumental Values

(PSC) Psycho-Social Consequences

(FC) Functional Consequences

(AA) Abstract Attributes

(CA) Concrete Attributes



Instructions

Analysis



The raw interview material is converted into ladders. Ladders are inspected for their core elements and structured into attributes, consequences and values.

The result of this are the Summary Content Codes. Numbers are then assigned to the codes. These numbers are then used to label each element in each ladder in order to produce a matrix in which each respondent's ladder is represented in a row by using the code numbers.

Following the Implication Matrix is generated based on the prior described Summary Content Codes. It shows the number of times each element leads to every other element in the same row.

The numbers in the matrix are expressed in fractional form with direct relations to the left of the decimal and indirect relations to the right of the decimal.

Final result of the analysis is the Hierarchical Value Map (HVM) for which the Implication Matrix is considered to be the «blueprint».

HVMs are produced by creating chains from the Implication Matrix. A common approach for this is to set a cut off. This means that only elements are considered in the HVM that have a minimum of links from one element to another. This minimum is suggested to be set at the attribute level higher than 5 and at the value level as low as three.

Instructions

Results



Outcome of these interviews are not only the attributes, consequences and values of customers but especially the correlations between these elements.

Qualitative aspects of the results: by starting from attributes and reaching the values and learning about the relationship between it, researchers gain precious insights and understand the meaning that product attributes bring to users.

Quantitative aspects of the results: Laddering entails both an interviewing technique and a specific procedure for data analysis. When the ladders are being transformed into the matrixes the process becomes a quantitative research effort.

Strengths:

Provides comprehensive info about the target group.
Specific root cause is revealed.
Empathise on concrete attributes leading to design guidelines.

Weaknesses:

Problematic with sensitive subjects. Respondents must be open for in-depth interviewing. Laddering questions can become annoying.



Contact

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