

User Research for Experience Vision

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Abstract. In the “Experience Vision: Vision Proposal Design Method,” the first step is to set a project target and to conduct a qualitative survey. Next, users’ essential needs are identified and an idea is developed to propose a vision. On the basis of a scenario from the perspective of users’ essential needs, the proposal is formed, given shape and made precise. Finally, the proposal is evaluated, and then evolves into the development of products, systems, and services. This paper presents the interview method, the photo diary method, the photo essay method, and the superior-subordinate relationship analysis method (laddering) in order to gain profound insight into users and to identify their essential needs, rather than their manifest needs. In addition, on the basis of users’ essential needs, it explains the method of setting a user with persona and cast to embody the target user, as a viewpoint from which to describe a value scenario, an activity scenario, and an interaction scenario. [1]

Keywords: experience vision, service design, user’s needs, persona.

1 What Are Intrinsic User Values?

Compared with the problem-solving design method frequently used to deal with manifest user needs, accurate grasp of intrinsic user values is required in the vision-centered design method that offers unprecedented products, systems, and services of higher customer satisfaction to meet user values that are more latent and intrinsic.

Intrinsic user values are not ones at specific levels of demand, such as the desire to have or do something. Intrinsic user values exist at a psychologically deeper level, wherein a person wants to feel something specific or has a deep desire to do something.

Needless to say, the levels of intrinsic user values differ from one project to another, just as intrinsic user values differ in the development of new scheduling software or in a customer service that offers a moment of greater enjoyment during a trip.

Discovered intrinsic user values are reflected in user evaluation items and the evaluation for scenario visualization (prototyping) that are developed in value scenarios, activity scenarios, and interaction scenarios.

2 Understanding Target Users and Methods Used

User understanding is the first step toward finding intrinsic user values. There are various ways for understanding users but generally put, there are external and internal understanding.

External understanding methods understand users externally by observing them from the outside and asking them direct questions. The questionnaire method, structured interviews for obtaining answers for predetermined items, the observation method and task analysis for observing user behaviors, and the photo diary method for making records by theme and time (explained below) represent external understanding methods.

Internal understanding methods are methods that ask users to look deep into themselves and express their feelings and thoughts. Representative internal understanding methods include the photo essay method for asking users to write an essay based on one or several photos chosen to match a theme (explained below), semi-structured interviews for changing questions and topics flexibly according to user reactions, in-depth interviews for obtaining deep answers by continually asking why, and the diary method involving recording the results of daily product or service usage.

The results of external user understanding are often compiled in the quantitative analysis method and tabulation method. Meanwhile, the results of internal understanding are presented in the method of assigning higher ranks to behaviors and feelings (laddering) in many cases. In the vision-centered design method, internal user understanding and the analysis of its results are prioritized over external user understanding and quantitative analysis of its results to reach intrinsic user values.

	Manifest needs	Potential needs
External understanding	- Questionnaire Method - Structured interviews - Task analysis	- Behavioral observations Photo diaries
Internal understanding	- Diary Method Semi-structured interviews	- Photo essays - In-depth interviews

Fig. 1. External and Internal User Understanding and Analysis Methods

Additionally, information collected for the purpose of understanding users becomes basic information for assuming and setting target users (user personas and user models).

3 Finding Intrinsic User Values Based on User Understanding in the Vision-Centered Design Method

In many cases where the vision-centered design method is adopted, a semi-structured interview or photo diary is produced as a means for internal user understanding. User needs are ranked higher based on such data and intrinsic user values are found for reaching user values that are more essential. A photo essay is also used to reinforce intrinsic user values in such cases. The visual flow of steps needed for finding intrinsic user values is shown below. There can be two or more intrinsic user values.

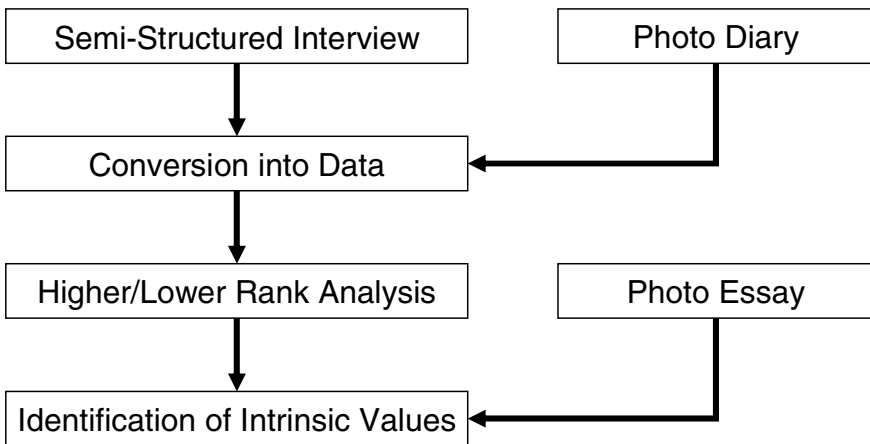


Fig. 2. Major Flow of Steps for Finding Intrinsic User Values

4 Semi-structured Interviews

Semi-structured interviews are also known as contextual interviews. Interview scenarios are produced for these interviews. Semi-structured interviews are an interview method for eliciting answers close to users' real intentions by flexibly changing questions and topics according to user reactions as needed. This interview method requires certain skills, such as those needed for flexibly changing the order of questions. Those skills can be obtained by accumulating a certain amount of practical experiences.

The most important point in the planning stage of a semi-structured interview is to clarify the objective, in other words, deciding what answer to elicit from an interviewee will make the interview successful. Preparations become more sufficient and more appropriate questions may be set when the interview objective becomes more specific. The efficiency of analysis also improves.

A scenario must be produced in the planning stage of a semi-structured interview. Essential points in the planning stage include anticipating the flow of the interview, arranging topics in order and eliminating omissions and oversights in question items.

Listening techniques can be cited as skills required in the implementation stage. An interviewer must develop conditions that make an interviewee feel comfortable, to speak with the attitude of paying consideration to the interviewee and lending an ear to what the interviewee has to say. An interviewer must not speak too much, but needs to share personal experiences and opinions with an interviewee. An interviewer also needs to summarize what an interviewee said on the spot for confirmation and sound out the interviewee's true feelings with open questions asking why and closed questions confirming the answer using "yes" or "no" in order to clarify the interviewee's opinions and views. Additional points an interviewer must be mindful of include time allocation for preventing topic omissions and changing question styles in accordance with the characteristics of each interviewee. For the interview periods, approximately five minutes should be reserved for introduction, including interview objective explanations, and five to 10 minutes for closing, including confirmation and expressing gratitude. Concluding an entire semi-structured interview in about an hour is one criterion.

Interview methods		Survey objectives	Sites	Time required
Structured interviews		Statistical aggregation	Venues	Short
Semi-structured interviews		Statistical aggregation or qualitative surveys	Venues or field sites	Medium
Unstructured interviews	In-depth interviews	Qualitative surveys	Venues	Long
	Ethnographic interviews	Qualitative surveys	Field sites	Long
Group interviews		Statistical aggregation or qualitative surveys	Venues	Medium

Fig. 3. List of Interview Methods [2]

5 Photo Diary Method

The photo diary method is for understanding user needs and the state of product and service usage by taking the photos of user behaviors according to fixed periods and themes, and supplying the captured scenes with simple explanations and comments. Many of the scenes cut out from everyday life offer new discoveries.

Specifically, the photo diary method asks users to take photos of events in their immediate environment using fixed time units, such as one shot every 30 minutes.

Alternatively, the method requests that users photograph scenes related to specific themes, such as schedule management, and supply each photo with a simple comment and brief explanation. Users are asked to explain a scene in each of these photos. Previously unnoticed values are discovered through this procedure. The photo diary method also permits in-depth analysis of the state of usage when a specific product is chosen as a theme. Discoveries from a photo diary can be used as information for setting target users (user personas), as well as data for finding intrinsic user values.



Fig. 4. Photo Diary Example

6 Higher and Lower Rank Analysis Method

The higher and lower rank analysis method is a method for analyzing group interview data. Nobuyoshi Umezawa developed this method in 1993. Originally, higher and lower rank analysis was a method for classifying consumer needs identified in group

interviews into three hierarchical groups (demands to have, demands to do, and demands to be) and finding intrinsic values from their relationships. In the vision-centered design method, the higher and lower rank analysis method is used for finding users' intrinsic values and potential needs by assigning higher ranks to users' behavioral targets (major reasons for behaviors), based on factual data and discoveries from interview data (remarks about values and events), photo diaries, and behavioral observations. In the vision-centered design method, intrinsic user values are found primarily through the assignment of higher ranks. The assignment of lower ranks, carried out for finding specific actions for higher rank assignment, can be used for creation of ideas.

In actual practice, data transcribed to cards are first grouped for finding if they belong to higher or lower ranks. Targets needs in higher ranks are then labeled and the levels of needs are adjusted. After these steps, values in higher ranks are deduced from among the related groups of needs, by answering the question asking the main reasons for finding values in it. Values in the highest rank tend to be something like, "I want to become happy," but there is no need to assign the top rank to this level. Hierarchies number three in principle, but there could be more. There is no need to adopt only one value as an intrinsic value either.

There is also a method called laddering for finding hierarchical structures. This method is similar to the higher and lower rank analysis method. Laddering is an interview method that structures concepts by developing hierarchical structures known as attributes, results, and values. Values found through the process of laddering are close to intrinsic user values identified in the vision-centered design method.

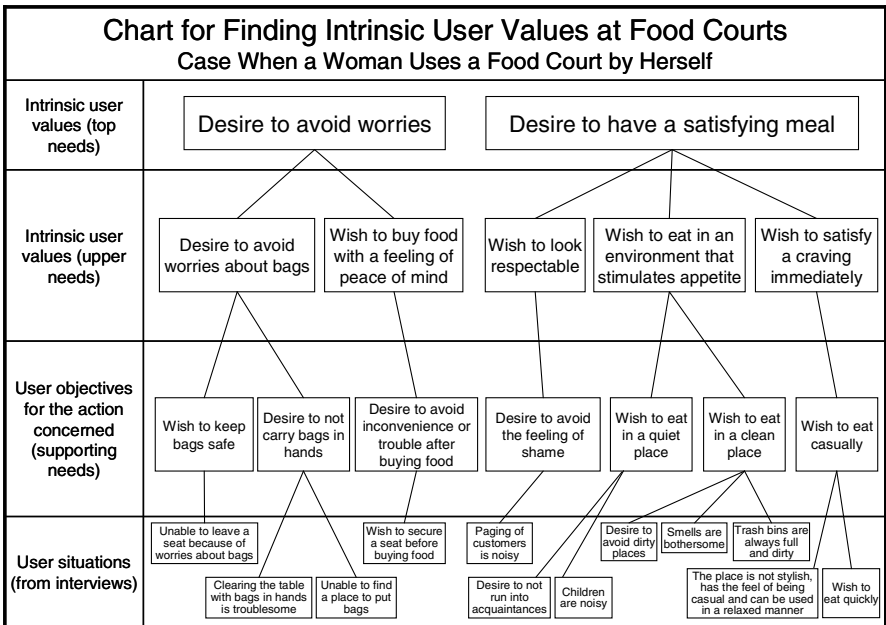


Fig. 5. Higher and Lower Rank Analysis (Laddering) Example [3]

7 Photo Essay Method

Photo essays are a method through which other people find users' intrinsic values or potential needs from an essay written by a user that is associated with a single photo taken by the user.

A user looks deep into himself or herself based on a theme, and expresses his or her thoughts through one or several photos combined with accompanying essays. The combined photos and essays express the user's reason for the thought and the meaning the user tries to communicate. Other people can use them as clues for finding intrinsic user values and materials for creating ideas from a user perspective.

In the vision-centered design method, discoveries from photo essays may be used for reinforcing intrinsic values found through higher and lower rank analysis, explained earlier. The discoveries can also be added to as new intrinsic values.



Shoe selection troubles me when I prepare for a trip.

Choosing clothing and other travel goods does not take that long because I have packaged them to a certain extent for my relatively frequent business trips. But selecting the right shoes is still sometimes difficult for me.

My personal wish is to travel with just one pair of shoes. But I must consider possibilities such as rain being forecast in areas I visit and long distances I am supposed to walk. I have also had problems in the past by having only one pair of leather shoes for business. Shoe selection always comes last when I prepare for a trip.

I currently handle the need to travel with an extra pair of shoes by using a suitcase that has shoe storage space. But the second pair in the suitcase has been keeping me from making my baggage more compact. Travelling lightly with two pairs of shoes has been a nagging issue for me.

Fig. 6. Photo Essay Example (Theme: Travel)

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