Assessing the User Experience of Consumer Products

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Introduction

- Consumer products have become prevalent in every aspect of our lives, from our pockets homes, classrooms, and work environments.
- As companies continuously advance consumer technology, they hope users will have a positive experience while using their products.
- To better understand the usability and user experience of these products, Human Factors methods can be applied both quantitatively and qualitatively to gather consumer perceptions and provide guidance to product design.

Out-of-Box Experience

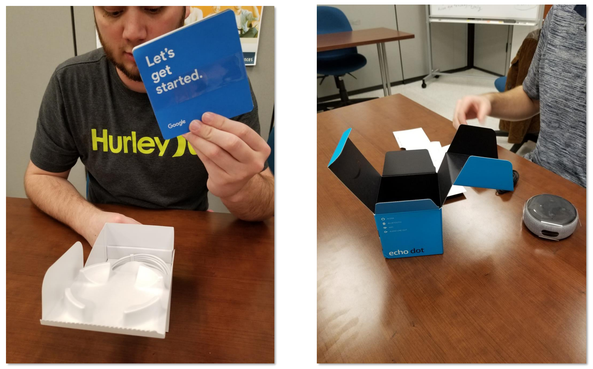

Figure 1. Users unboxing smart home device

Diary Study

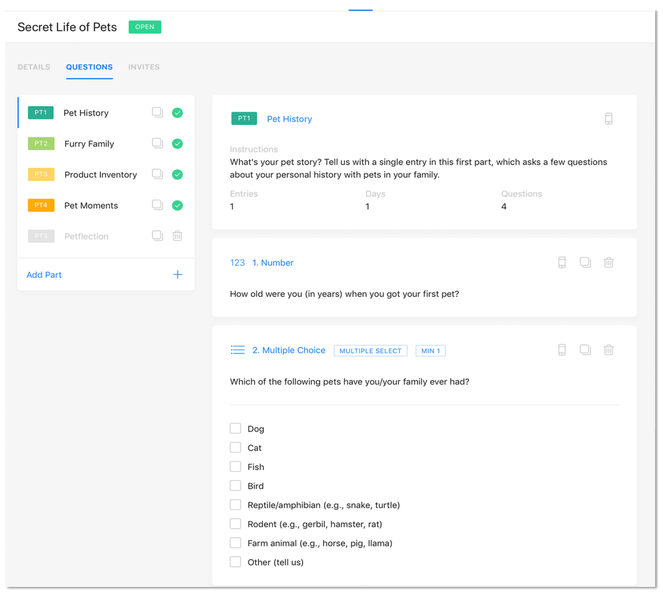

Figure 2. Example dscout webpage with diary question

UX Methods	Description	Advantages	Disadvantages
Usability Testing	Users are asked to complete a set amount of tasks that assess the overall user experience of a product	• Direct feedback from users • Potential problems are identified early on	• Mainly qualitative testing methods • Not always representative of real-world use
OOBE (Out-of-Box Experience)	First interaction and impression that a user has with a product	• Captures whole process of interaction	• Can be time consuming • Data may be complicated to analyze
Surveys	Identify design errors of an interface or design concept	• Easy to use • Low cost	• Captures data on one point
Interviews	Researcher collects in-depth information by talking directly to the participant	• Flexible • Deep dive to user's perspective	• Participant bias • Time consuming analysis
Competitive Analysis	Users compare two or more similar products to provide feedback on the features and usability of the products	• Compares two or more products • User preference of product	• Complicated data analysis • Design focus can be narrowed
Diary Studies	Collect data based on a person's experience in their natural environment	• Naturalistic user experience • Data collection over long periods of time	• Subject to bias • Time consuming

Table 1. Description of UX Methods

UX Tools	Description	Advantages	• Disadvantages
Journey Maps	Visualization of a process for completing a goal	• Shows user experience with product • Conveys important information	• Specific training needed • Analysis time consuming
GUESS (Game User Experience Satisfaction Scale)	Provides a measure of video game satisfaction utilizing nine dimensions	• Follows best practices of scale development • Comprehensive measure of satisfaction	• 55 items is long • Limited to those who play games
SUS (System Usability Scale)	Quick and simple use questionnaire to assess the usability of a product	• Quick and easy to use • Offers usability score for product analysis	• Output is limited • Subjective data
NPS (Net Promoter Score)	Participants rate the product on a scale of 1-10 to measure the loyalty of customers to a company	• Easy to use • Gives common language to classify customers	• Not specific enough • Only one item measure
NASA-TLX	Most used mental workload assessment utilizing six sub-scale ratings	• Quick and easy to use • Consistent	• Complex to analyze • Individual workload only

Table 2. Description of UX Tools

Game User Satisfaction

GUESS uses these nine dimensions:

- Usability/Playability
- Narratives
- Play Engrossment
- Enjoyment
- Creative Freedom
- Audio Aesthetics
- Personal Gratification
- Social Connectivity
- Visual Aesthetics

Figure 3. Nintendo Super Smash Bros GUESS analysis

Competitor Analysis

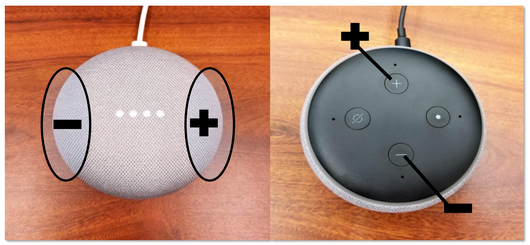

Figure 4. Google Home Mini vs. Amazon Alexa

Net Promoter Score

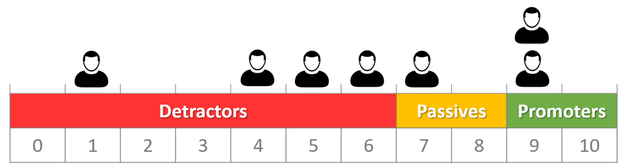

Figure 5. Net promoter score for assessing products

Takeaways

- Using these Human Factors methods, helps to bring to understand overall user experience of the consumer product.
- Results from these methods can be used to enhance product design.

References

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