사용자 중심 디자인 연구방법의 택소노미를 위한 5Ps 프레임웍에 관한 연구

5Ps Framework for User-Centered Design Research Method Taxonomy

Tran Thu-Trang
이재화, 박우성, 이기원
박선종, 오주현, 오영학
한국과학기술원 산업디자인학과
윤주현
서울대학교 산업디자인학과
이건표
한국과학기술원 산업디자인학과

Trang T. Tran
Jaehwa Lee, Woosung Park, Kiwon Lee
Sungjong Park, Joohyeon Oh, Younghak Oh
Department of Industrial Design, KAIST
Juhyun Eune
Department of Industrial Design, SNU
Kunpyo Lee
Department of Industrial Design, KAIST

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1. Introduction

Throughout the design research history, there are numerous user-centered design (UCD) research methods and their off-springs currently in used and reported academically and commercially. Despite the affluence of tools, thoroughly understanding all the methods and being able to select the appropriate set of methods to apply to a specific design problem appear to be a difficult job for many designers and researchers. Therefore it is a significant need of organizing these rich resources into taxonomic order yet maintaining the flexibility in structure, as it is part of the nature of design practices.

There have been several attempts to classify the research methods in both academic and commercial field. Although much work has been done to date, there exist some limitation, mainly including (1) number of actual UCD research methods covered or considered are small and (2) the dimensions of classification only cover a few aspects of practical design project. This study attempted to address these two key issues and create a ready-to-go toolbox for designers and researchers from all levels to quickly grasp the essence of the UCD research methods and effectively plan their set of methodswithin the given constraints. The study was carried out as the core activity of "User Research Methodology", a graduate-level course taught in Fall semester 2007 in Department of Industrial Design, KAIST.

2. Research process

The procedure of this project was divided into four phases:

2-1. Review of existing frameworks and methods

We scanned the big landscape by collecting various frameworks and research/design/analyzing methods. At the end of this phase, 8 frameworks of classification and more than 120 design research related methods were reviewed.

Among the frameworks, Melican's diagram (1997, 2004) organized the methods in terms of level of focus from stake holders, research activity, and research-design process. Sanders (1999) correlated the levels of user experience and user's participatory levels. IDEO (2003) method cards classified each method based on the researcher's activity (learn-look-ask-try). The collaboration of Thoughtform Inc. and DaedalusExcel (T&DE) (2005) suggested organizing the methods in two dimensions: user's level of conscious of needs and (also) researcher's activity (ask - observe). Most recent map from IIT Institute of Design (2007) categorized the methods by process modes and focused issues. Several other (unfortunately, confidential) studies also focused on the classification by process and level of issues revealed.

At the same time, the obtained methods first went through preliminary screening to discard non-UCD methods (i.e. methods that focus on industry or business rather than design problems and users). The remaining methods were then roughly categorized into groups of family methods - primary methods and their sub-methods or offspring methods - based on the nature of research activity and methods' origins.

	Melican, 1997	Sander, 1999	IDEO, 2003	Thoughtform Inc. & DaedalusExcel, 2005	IIT Institute of Design, 2007
Purpose and focus					
User study	●	●	●	●	●
Design development	●		●		●
Analysis					●
Evaluation	●				●
Business/ marketing	●				●
Criteria range					
Process	●				●
Research activity		●	●	●	
Collective outcomes		●		●	●
User's participation		●			
Stake holders	●				●

Table 1. Classification framework comparison

2-2. UCD methods anatomical study

The representative methods of each family were thoroughly investigated by secondary research. Materials for study were collected from academic papers and articles, our past practical projects, as well as reliable online sources. The study of each method was condensed and composed into the format including (1) Origin of development and related methods; (2) Definition/ description (3) Procedure and notes for conducting; (4) Empirical examples; (5) Pros and Cons and (6) References for further study. Our current database contains 42 representative UCD research methods.

2-3. Categorization

Various categorizing criteria were initiated based on