

Understanding Experiential User Value Through a Case Study of the Public Childcare Service in South Korea

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Abstract

Background Despite the importance of user value as the ultimate goal of service innovation and business activities, user value has not yet been systematically and empirically studied in the context of the holistic service experience journey. This study aims to empirically investigate the user value of the public childcare service in South Korea from the value-in-experience perspective and propose an initial experiential value map as a tool to support value-oriented service design.

Methods Beginning with a literature review of holistic service experiences and value dimensions, this study conducted a case study to explore users' holistic experiences of the childcare service and their perceived value from their service experiences.

Results The analysis of the case study identified ten key experiential elements that triggered the user value of the childcare service during the three stages of users' service experience process. Also, it was found that five value dimensions were involved in the childcare service, while functional value and relational value among others were dominant across the whole service experience process.

Conclusions Drawing on the view of value as the outcome of users' subjective assessment of their experience, this study provided an initial insight into the nature of the experiential user value of the public childcare service. This study's initial experiential user value map may complement existing service design methods by capturing subjective and interpretive user value in service experiences, thereby contributing to value-oriented service design.

Keywords Value-oriented Design, Service Design, Value-in-Experience, Childcare Services, Public Services

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1. Introduction

Customer value has been one of the critical topics for service innovation research and practice (Woodruff, 1997). Most of value research has focused on conceptualizing the ill-defined value notion (Sánchez-Fernández & Iniesta-Bonillo, 2007; Woodruff, 1997) and identifying different dimensions of customer value (Boztepe, 2007; Smith & Colgate, 2007). These traditional value studies mainly examined different levels of product offerings (i.e., the attributes, consequences/benefits, and basic goals) as an influential factor for the customer value of the offerings. However, they fail to integrate the modern understanding of value that value phenomenologically emerges in customers' consumption processes (value-in-use) and their contexts (value-in-context) (Gummerus, 2013), which are all related to customer service experience (Vargo & Lusch, 2008). While the distinction between products and services is regarded obsolete (Minkiewicz et al., 2014), it is instead argued that products and services are both consumed as experiences. Therefore, the need for understanding user value in experience has been emphasized (Minkiewicz et al., 2014; Turnbull, 2009).

User value and customer experience have both been considered as complex and debatable concepts for research (Helkkula & Kelleher, 2010). While user value concerns multiple dimensions and categories (Boztepe, 2007; Sánchez-Fernández & Iniesta-Bonillo, 2007; Smith & Colgate, 2007), user experiences are holistic, involving multiple stages of user processes (Shaw & Ivens, 2005; Turnbull, 2009). Whereas there is existing research that explores user value and user experience separately, studies that integrate both concepts, which explore the nature of user value in the holistic user experience are rare (Turnbull, 2009).

In this paper, we draw on the service-dominant, value-in-experience, and phenomenological perspectives on the user value of the public childcare service and investigate it during overall stages of users' experience processes in their life world. We start with theoretical foundations of service experience and user value and describe a case study.

2. Theoretical Foundations

2. 1. Holistic service experiences

The service-dominant (S-D) logic (Vargo & Lusch, 2008) puts forward customers' experiences in the center of exploring value creation. Scholars recognized customer experiences as a holistic phenomenon (Helkkula & Kelleher, 2010) and described multiple stages involved in customer experiences. For example, Arnould et al. (2002) outlined the customer's consumption experiences as a process consisting of pre-consumption, the purchase and core experiences, and the remembered consumption experience. Similarly, Shaw & Ivens (2005) proposed a four-stage model of customer experiences: Expectation setting, pre-purchase interactions, purchase interaction, product/service consumption, and post-experience review. Also, Tynan & McKechnie (2009) classified the customer's holistic experiences as pre-experience, customer experience, and post-experience.

As most of these existing multi-stage models of customer experiences are related to product experiences (Tynan & McKechnie, 2009), we synthesized them into a three-stage service experience process that better reflects the service experience context. This process draws on the study of Grönroos & Voima (2013) that considers (direct and indirect) interactions as main activities for the value creation mechanism of services. Table 1 provides the description of each stage of the process.

Table 1 Three phases of a holistic service experience model

	Definition
Pre-interaction	Before directly interacting with the service, customers anticipate or imagine their service experiences, while searching for relevant information.
Interaction	Customers engage in the service and co-create their service experiences by directly interacting with the providers.
Post-interaction	After the direct interactions with the service, customers remember or reflect on their experiences of the service over an extended time period.

From the value-in-experience perspective, customer value is constructed throughout these different consumption stages, beyond the point of direct exchange (Tynan & McKechnie, 2009). Therefore, we use the holistic service experience process as a framework to investigate the experiential user value of services.

2. 2. Multidimensional user value

Customer value is defined as “a customer’s perceived preference for and evaluation of those product attributes, attributes performances, and consequences arising from use that facilitate (or block) achieving the customer’s goals and purposes in use situations” (Woodruff, 1997, p. 142). Against the traditional value concept based on “a trade-off between benefit and sacrifice,” this study adopts Sánchez-Fernández & Iniesta-Bonillo’s (2007, p. 428) multidimensional value concept that customers’ perceived value reflects “a variety of notions (such as perceived price, quality, benefits, and sacrifice).” While there are multiple studies that identify different value dimensions, Table 2 outlines some of them.

Table 2 Different value dimensions

Researchers	Customer value dimensions
Holbrook (1994)	Efficiency, excellence, play, aesthetics, status, esteem, ethics, and spirituality
Smith & Colgate (2007)	Functional/instrumental value, experiential/hedonic value, symbolic/expressive value, and cost/sacrifice value
Boztepe (2007)	Utility, social significance, emotional, and spiritual
Sánchez-Fernández et al. (2009)	Efficiency, quality, social value, play, aesthetics, altruistic value

While these dimensions are informative, they have their own limitations. For example, Holbrook’s (1994) work contains too subtle sets of value dimensions to operationalize in practice (e.g., status vs esteem or ethics vs spirituality) (Sánchez-Fernández et al., 2009). Sánchez-Fernández et al. (2009) tackled this weakness by proposing a more simplified and operationalized set of six value dimensions, but they focused only on customers’ post-purchase aspects. Although Smith & Colgate (2007) provide a good synthesis of traditional value dimensions, their work is rather too general and builds on conceptual developments

rather than empirical investigations of particular services. While Boztepe's (2007) work provides a useful insight into user value based on an empirical investigation, it is restricted to users' product experiences.

The characteristics and nature of the user value of a specific service may offer designers and managers practical insights into how to design the service that better facilitates users' value formation as well as the knowledge of what specific service elements can affect what user value. Therefore, more specified sets of value dimensions peculiar to the given service context need to be identified through empirical studies. Moreover, as existing value research does not relate value dimensions to users' holistic service experience journey, it provides limited insights into how user value is phenomenologically constructed not only during users' direct engagement with the service but also before and after their interactions with the service (Gummerus, 2013).

To address this gap, this study conducted an explorative case study of the public childcare service in South Korea, called "아이돌보미" in order to explore the service users' value formation process in the whole journey of their experiences.

3. An empirical case study

Along with an increasing interest in understanding value formation phenomena from a user's perspective (Helkkula & Kelleher, 2010), scholars recognize the need for investigating user value formation processes (e.g., how, where, and when value is created and what kind of value is created by users.) (Heinonen et al., 2013).

This study focuses on user value for the public childcare service in South Korea. This service is provided by the Ministry of Gender Equality and Family, with an aim of supporting work-family compatibility and improving a child-rearing environment. When people are registered to the service as a user, a child carer is assigned to the user and the carer visits the user's house on a regular basis to take care of the user's children under the age of 12. Since the launch of the service, its users have been steadily increasing with current users being 61,221 families.

To investigate users' experiential value from the service, this study explored the narrative of users' lived experiences. The case study aimed to recognize how users perceived and made sense of their experiences, recognizing that value is constructed from users' iterative sense making and interpretation of their holistic experiences across the past, present, and future (Helkkula & Kelleher, 2010). The benefits of collecting user value data from Internet blogs (Helkkula & Kelleher, 2010; Wilson et al., 2015) and documentary/online archives of users reviews for qualitative research (Tynan et al., 2014) have been acknowledged by previous research. Blogs enable service users to recount their individual, subjective, contextual, and holistic experiences and reflect on them (Wilson et al., 2015). Therefore, users' narrative data gained from user review blogs of the childcare service were very suitable for collecting users' service experiences and value perceptions. To select blogs, retrieved blogs after entering "the review of the public childcare service" as the query in a search engine were skim read and 20 blogs providing users' own holistic experiences of the public childcare service were randomly chosen. The authors of the selected blogs were all anonymous and their reviews

were implicitly aimed at publicly providing other fellow users with their experiences and guidance. In line with the research trend that blogs are often used as one method with other data collection methods (Wilson et al., 2015), this study also used the documental archives of user reviews of the service that has been published by the Korean Institute for Healthy Family over 3 years from 2014 to 2016. From these documents, 30 users' reviews of using the childcare service were gained.

Data analysis was undertaken using the combination of inductive and deductive approaches (Patton, 2002). As for coding users' experience process, we took a deductive approach by applying the framework of the holistic user experience of service (i.e., pre-interaction, interaction, and post-interaction), which has been earlier defined in this study. Thus, the data of users' experiences has been coded following the three stages of holistic service experiences. Users' experiences before their registration for and direct interactions with the childcare service were assigned to the pre-interaction stage. Their experiences during their use of the service were related to the interaction stage. Their experiences after stopping using the service were linked to the post-interaction stage.

On the other hand, an inductive approach has been taken to identify experiential elements triggering users' value assessments and to capture emerging user value. As already stated in the "theoretical foundations" section, the value dimensions defined by existing value research are too complex or general, while most of them build on theoretical developments or product experience contexts. Therefore, the data have been analysed in search of a set of emerging user value dimensions from the user experiences of the given service.

4. Findings

First of all, experiential elements that acted as triggers for users' value assessments were identified. They consisted of communication media, word of mouth, service networks, service rule/policy, customer center staff, service registration processes, interactions with the childcarer, users' short-term life change, physical evidence of care, and users' long-term life transformation. This result differs from Smith & Colgate's (2007) product-centered value sources (i.e., information, products, interactions, environment, and ownership), in that it adds communication-related elements (communication media and word of mouth) and processes (service registration processes) as important factors to cause the user value of services. Furthermore, as the experiential value triggers were recognized alongside the users' holistic service experience stages, it provides insights into how the value triggers shift as users go through different stages of their holistic service experience (Table 3).

Table 3 Experiential triggers and their components of the childcare service

	Experiential triggers	Description
Pre-interaction	- Communication media	- Bad news regarding child care services - Other users' reviews from blogs and online communities
	- Word of mouth	- Opinions of people in the user's relational network
	- Service networks	- The accessibility and availability of the service
	- Service rule/policy	- The flexibility of the rule and policy of the service
Interaction	- Customer center staff	-The staff's kindness and consideration -The staff's responsiveness to user requirements
	- Service registration processes	- Convenient registration procedures - Quick service processes
	- Interactions with the child carer	- The first impression of the child carer - Attachment relationships between the child carer and the child - The carer's flexibility in service schedule - Trustworthiness of the carer - The carer's teaching ability and skills
	- Users' short-term life change	- The user's increased free time - Changes in the child(ren)'s habits and lifestyle
Post-interaction	- Physical evidence of care	- The carer's daily records - The carer's personal gifts - Hand-made artifacts co-created by the child(ren) and the carer
	- Users' long-term life transformation	- The user's improved career - The user's promotion at the job - The user's more positive mindset

Next, different dimensions of user value were identified associated with the defined experiential triggers during the holistic service experience process. Table 4 reports detailed user value belonging to different dimensions and specifies how the value was destroyed (-) or constructed (+) by what qualities of the experiential triggers. The value destruction was related to users' negative feedback whereas the value construction to their positive response. Before the interaction with the service, most of users felt negative or suspicious about the childcare service due to bad media reports about similar kinds of services. Also, even when users were registered to the service, their value had still remained unrealized until they built trust in their assigned childcarer. However, their value of the service gradually became positive, once they interacted and had a good relationship with the carer.

Table 4 The experiential user value map of the public childcare service

		Value dimensions					
	Experiential triggers	Functional value	Relational value	Educational value	Social value	Self-esteem value	
Pre-interaction	Communication media	(-) feel anxious about the reliability of the service due to bad news of childcare services. (±) feel worried or relieved about the quality of the service at other users' negative or positive reviews in Internet blogs.					
	Word of mouth	(±) be encouraged or discouraged to use the service by friends or neighbors.					
	Service networks	(-) feel worried about whether the user's place has the service.					
	Service rule/policy	(+) feel relieved to know that the user can change the carer as needed.					
Interaction	Customer center staff	(+) be satisfied with the staff's operations based on the user's personal needs and contexts.		(+) feel emotionally supported by the staff's empathic and responsive attitude. (+) be touched by the staff's consideration of the child(ren).			
	Service registration process	(+) be satisfied with the easy and convenient registration procedure. (+) be surprised at the quick assignment of a childcarer.					
	Interactions with the child carer	(+) feel easy about specialized care for the child(ren) with specific physical and mental conditions. (+) inform the users of the child(ren)'s conditions and activities via mobile chatting applications, text messages, or phone calls.		(±) feel friendly toward or a sense of distance from the childcarer. (+) feel relieved to see the child (or children) seemed attached to the childcarer. (+) feel thankful for the childcarer's flexibility in (re)scheduling. (+) feel touched for the childcarer's sincere care for the child(ren). (+) feel like a family member about the carer and share comradeship.		(+) the child(ren)'s enhanced social and intellectual development (+) the child(ren)'s emotional stability (+) learn the carer's knowhow of child rearing.	
	Users' short-term life change				(+) positive changes of the child(ren)'s lifestyle (e.g., having healthier eating habits, enjoying books, and not playing games and videos)		(+) concentrate more on work. (+) better time management (+) enhanced social relationships with neighbors

Post-interaction	Physical evidence of care	(+) reflect the child(ren)'s activities with the carer. (+) recall good memories of the childcarer and the service.		
	Users' long-term life transformation	(+) improved family relationships	(+) social achievements (+) have a confidence and stability at a job. (+) introduce and suggest the service to others.	(+) be emotionally encouraged (+) overcome depression (+) feel hopeful for life (+) not afraid of having more children.

Overall, the main dimensions related to users' value construction (i.e., their satisfaction and positive feedback) or value destruction (i.e., dissatisfaction and negative feedback) were functional value, relational value, educational value, social value, and self-esteem value. The functional value was concerned with the utilitarian benefits of the childcare service. Whereas Boztepe's (2007) utility value is related to the utilitarian consequences and the accomplishment of a behavioral or cognitive task enabled by a product, this study's functional value includes intangible qualities of the service (e.g., reliability and service availability), as well as process qualities (e.g., convenient registration processes). The relational value was concerned with users' feeling or perception caused by interpersonal relationships in the childcare service. The educational value was related to the benefits of users' learnings or their children's growth/development. The social value is similar to the social significance value as identified by Boztepe's (2007) in that both refer to socially oriented advantages. However, whereas Boztepe's (2007) dimension is achieved through owing or experiencing a product, this study's one is attained through the short-term and long-term outcomes of using the service. Finally, similar to Holbrook's (1994) esteem value, the self-esteem value is concerned with users' benefits in terms of their own dignity, identity and status.

Among the five value dimensions, the dominant ones that emerged across the entire service experience process were affected by the functions of the service and the relational benefits resulting from using and reflecting on the service. In the earlier stages of the service experience process, the functional value was dominant, while during the later stages, the relational value was highlighted. Not surprisingly, the role of childcarers was definitely important in enhancing user value. The childcarers affected the user's perception of the functional quality of the service (e.g., systematic and professional care systems for children with special needs) as well as the relational quality (e.g., human touch). Thus, the key functions of the public childcare service were embodied and enacted by the human actor's performance.

Therefore, it can be argued that for value-oriented childcare services, the development of human resources should be prioritized. Particularly, service providers can concentrate on the factors enabling the (+) value experiences as key points for maximizing user value. Training the staff and carers in terms of building their empathy for users and professional skills, knowledge, and competencies is required. Also, enhancing the satisfaction and needs of the staff and carers is required and important, given the delivery actors' job satisfaction and

mindset greatly affect the quality of their interaction and engagement with users (Zeithaml & Bitner, 1996).

5. Conclusion and future research

Built on the S-D logic, this study considered user value as emerging from the holistic service experience, and explored how different dimensions of user value were constructed in different stages of the holistic user experiences of the public childcare service. The study indicated which dimensions of user value were involved in the childcare service and what experiential triggers concerned user value.

This study's finding can offer designers and managers an holistic view of users' experiential value involving the childcare service. The initial experiential user value map that this study proposes has a different benefit from existing service design tools such as customer journey maps and service blueprints, which all chart a flow of event-centric customer experiences along the service process. Although they help designers understand the holistic customer service experience, that understanding alone has a limitation in capturing insights into user value; which elements of the service experience are valued by users and how. Much value literature emphasizes that customer experiences are "not" customer value, but the interpretation or evaluation of them leads to value (Helkkula & Kelleher, 2010; Sandström et al., 2008). Therefore, existing service design research focusing on understanding service experiences may be complemented by the experiential user value map to better achieve the ultimate goal of service innovation, which is the creation of user value (Woodruff, 1997).

Since this study initially explored experiential user value, its finding is specific to the context of the public childcare service in South Korea, selected for this study. There may exist different childcare service models that have different service elements, structures, and processes. Therefore, to build more generalizable theory of the experiential user value of childcare services, multiple case studies with different types of childcare services could be investigated. Also, while this study offers an understanding of user-centered, experiential value formation, there is a need for integrating this knowledge and insights into providers' value proposition processes in order to contribute to value-oriented service innovation and business.

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