

Human-Side Emotional Service Design for Experience-Centric Amusement Park

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Abstract

Service company puts effort on how to increase customer satisfaction and loyalty. At least, there are two main issues addressed. First, how to understand customer need and impression is critical. Second, customers expect more than they are expected. It is beyond customer satisfaction. It leads to customer delight, which it drives customer loyalty. Recent studies on human factors in services show the importance of customer emotional need as a complement to the usability and functionality of services. Hence, this study proposes an applicative framework of customer experience-centric through human-side emotional design for amusement park. A case study on the amusement park is chosen to validate the applicability of the proposed applicative framework. It contains more on emotional-based customer experiences. It is quite interesting of how to understand the customer emotional needs, analyze and prioritize strategies for the improvement plan. The purposive sampling involving 100 participants has been conducted. Kansei Engineering, SERVQUAL and Kano model were utilized. In addition, Kansei mining methodology was embedded in the applicative framework. This study found and offered 24 valid and reliable main experience-centric service attributes. The cleanliness of the area was found to be the most critical attribute. Both theoretical and practical contribution were discussed.

Keywords

Emotional Design, Kansei Engineering, Amusement Park, Mining, Service Quality

1. Introduction

Service company and industry put effort on how to manage and increase customer satisfaction and loyalty. At least, there are two main issues addressed. First, how to understand customer need and impression is critical. Traditional method such as survey using questionnaire is powerful yet lack of detail on what the real customer needs are still relevant. Moreover, protocol errors are quite often found. Hence, the issue of validity and reliability of the instrument and data collected has been intensively questioned. Second, nowadays customers expect more than they are expected. It is beyond customer satisfaction. It leads to customer delight, which it drives customer loyalty. Recent studies on human factors in services show the importance of customer emotional need as a complement to the usability and functionality of services. It has been shown that purely cognitive approach will be inadequate in evaluating and modelling customer satisfaction; hence, emotions should be included (Liljander and Strandvik, 1997).

We use Kansei Engineering (KE) to understand the customer emotional needs related to amusement park services. It highlights that it is not just understanding the rationale or cognitive side of human needs, but also exploring the emotional needs of customer. It is a deeper layer of customer satisfaction booster. Once we understand customer emotions, we will win their heart. The captured emotional needs will lead to a better decision-making process. Customers will decide quicker once they are emotionally fulfilled. In coping with protocol errors of understanding customer emotional needs, the text mining is proposed. Referring to the recent study which is also engaging Kano and SERVQUAL model (Hartono, 2020), it is hoped that this study in an amusement park will give more comprehensive understanding of customer experiences.

By taking into account issues discussed above, this study proposes an applicative framework of customer experience-centric through human-side emotional design for amusement park. Amusement park is full of complex human-system interaction, involving both customers and service providers. In the amusement park, customers expect joy and happiness; it is a place for family gathering. Surely, emotional satisfaction is highly expected. This experienced

emotions will lead to overall satisfaction and behavioural intentions. A case study in one of the amusement parks in Indonesia was chosen to validate the applicability of the proposed applicative framework. It contains more on emotional-based customer experiences. It is quite interesting of how to understand the customer emotional needs, analyze and prioritize strategies for the improvement plan.

1.1 Objectives

This study has two objectives. First, it proposes an applicative framework of how human-side emotional service design applied into an amusement park. Second, it is to show the applicability of the proposed framework into real case of amusement park services, followed by practical contribution.

2. Literature Review

2.1 Human-Side Emotional Service Engineering

A series of both interaction and encounters in service domain create full experience-centric services. It is hard to be controlled by any service providers. They should understand the core concept of activity and context before an offering is delivered to the customers (Gupta and Vajic, 2000). More personal and also memorable service for individuals or groups is desirable. In other words, it is called as customer engagement in services. According to Pullman and Gross (2004), it is considered a key characteristic of customer-centered service offerings. How to engage customers can be done in various ways. Customers may enjoy the service-scape, aesthetics, or entertainment. They can be engaged then. The level of customer engagement can be emotional, intellectual, spiritual, or other types of customer connection.

The service contexts and settings may be varied which influence the fulfilment of customer rational and emotional needs. They can be physical and intangible components in the experience environment. Related to SERVQUAL dimensions (Parasuraman et al., 1988), they are tangible and intangible dimensions (i.e., empathy, reliability, responsiveness, and assurance). In other terms, service contexts (tangible and intangible elements) will have impact on both cognitive and affective processes. Emotion is found to be more dominant in human decision-making process. Once customers in a “status quo” state in which they face similar quality of services or products, the emotional mode will take place. Referring to recent study by Hartono (2020), Kansei will help and make decision complete. Emotion has a unique characteristic in judging something quicker (Khalid and Helander, 2006).

2.2 Kansei Engineering and Customer-Centric Experience

Kansei is found to be a dependent variable of any perceived service attributes (Hartono and Tan, 2011). A comprehensive evaluation of any service attributes in a particular customer-service experience will produce the perception of Kansei. Service attributes may be physical environment, service employees, information flow, and back-office service. According to Bitner (1992), physical environment (known as service-scape) is positioned to be the cause of emotional, cognitive and psychological responses of both customers and employees. Again, emotional satisfaction is regarded to be critical in customer-centric experience.

Kansei words are common in representing the emotional needs of customers. Basically, Kansei is sensitive to the human five senses (sound, taste, sight, smell, and touch). Humans gain information, interpret it, and take action according to what are connected through their five senses. Senses can have a direct influence on human emotions (Roberts, 2004). Sensory design that stimulates and influences more on all human senses is deemed to be critical to the development of human experience-centric services (Zomerdiijk and Voss, 2010).

3. Methods and Framework Development

This study starts with the human-system interaction design thinking. Inherently, the applicative framework is inspired by a linear 5-step of design thinking, i.e., empathizing, defining, ideating, prototyping, and testing, and also modified from the previous Kansei Engineering (KE) study in services (Hartono, 2020). Initially, complex problems are defined. In this study, human needs and expectations in the amusement park are chosen. It is considered complex since there are various expectations occurred such as family outbound activity, stress-relief activity, hanging out activity, or just “nothing-to-do” activity. How to understand and fulfill various human expectations is a challenging job. Whether to provide general or customized offer is a concern, and also a combined general and customized services. Yet, a new and existing customer is also another issue. This human-system interaction design thinking will end with the provision of a solution-based approach to this customer concerns and problems due to the perception of amusement park services.

One of the biggest amusement parks in Indonesia has been selected as case study. In understanding the basic human needs, this study used literature review, online interview and face-to-face questionnaire. There were two sampling methods used, i.e., random sampling and purposive sampling. Random sampling was conducted to collect secondary data, namely random initial reviews obtained from various platforms such as Traveloka, TripAdvisor, and Google Review.

Purposive sampling involving 100 participants has been conducted. It is to focus on the particular characteristics of a population (i.e., homogeneous sampling) which are of similar interest, i.e., those who have experience at least 1 visit in the particular amusement park within 1 year. With respect to the main backbone of the research framework on emotional needs and customer satisfaction and loyalty, Kansei Engineering and Kano model have been applied. Kansei Engineering is used to capture the customer emotional needs and translate/model them into service attribute design. Kano model maps the service attributes into 3 main categories (i.e., attractive, one-dimensional, and basic needs). In coping with potential problem on traditional survey method using questionnaire, Kansei mining methodology was introduced and embedded in the applicative framework. This Kansei mining methodology tried to capture and validate what the representative emotional needs of customer in the amusement park were.

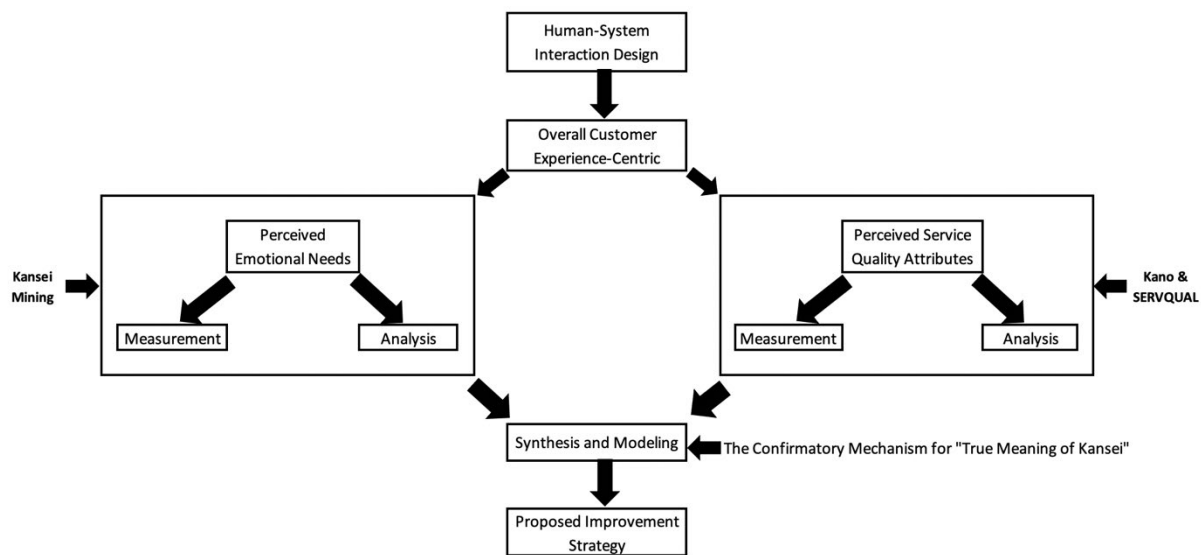


Figure 1. Applicative framework of Human-Side Emotional Service Design for Experience-Centric Amusement Park

4. Empirical Study and Discussion

In understanding the human-side emotional service design for amusement park, it focuses on the motivation of why people come and visit the site. What the emotional needs (Kansei) are expected and experienced. How they are pampered. It seems to be in-lined with the first stage of the design thinking methodology which is known as empathy. It is gaining Kansei, the emotional needs of customer, in solving any possible problems faced. Kansei is regarded as the backbone of any human-side emotional service design stressing the importance of Kansei as the critical point. Kansei may include the motivation of people coming and enjoying the amusement park service. Both physical and non-physical environment and surrounding were explored, which are significantly connected to particular Kansei. Hence, both customer experiences and motivations are captured.

Text mining processing was done based on comments or feedback from visitors which were collected from multiple platforms. KNIME software was utilized. This text mining processing stage was carried out by text mining analysis and sentiment analysis processes. Text mining analysis is useful for producing words that often appear or represent sentences. The words were expressed in terms that were considered to appear frequently or represent the sentence and were divided into several topics. In this study, it was divided into 30 topics, each topic had 5 words so that 150 words appeared with a certain weight which was used as one of the bases for determining the attributes and Kansei words.

According to the text mining process, there were 24 service attributes and 9 Kansei words finalized. They were deemed to be valid and reliable. As mentioned earlier, Kansei words are critical as they represent needs and problems at the same time. They included ‘happy’, ‘interested’, ‘secured’, ‘satisfied’, ‘clean’, ‘friendly’, ‘comfortable’, ‘speedy’, and ‘calm’.

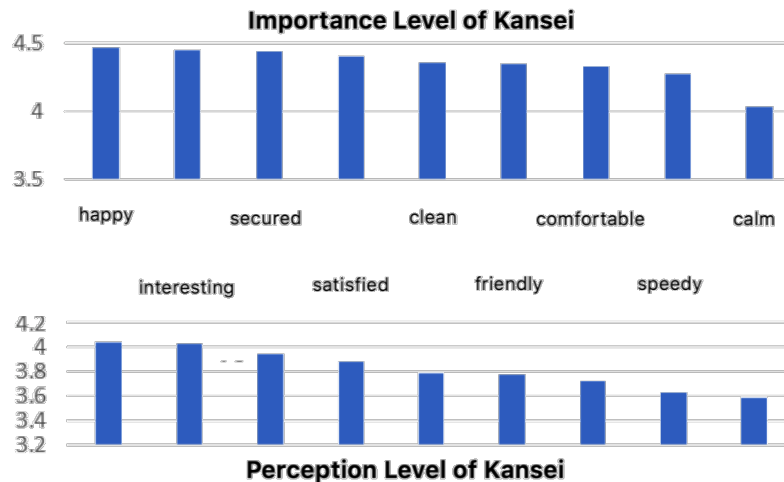


Figure 2. Kansei Descriptive

It seemed that Kansei ‘happy’ was regarded as the most critical customer concern to solve (see Figure 2). It had the highest score on importance and perception of Kansei. It was understandable as the nature of amusement park is to make people happy, for both individual- and family-oriented. This study found and offered 24 valid and reliable main experience-centric service attributes, comprising 6 rated as attractive/delighting attributes, 5 considered as one-dimensional attributes, whereas the rest were basic and indifferent attributes.

Those service attributes categorized as attractive/delighter (A) and one-dimensional (O) were as described in Table 1, followed by the cognitive-based satisfaction score, and significant Kansei words. The linear model of Kansei = function (perceived A- and O-based Kano category) has been gone through the confirmatory mechanism of true meaning of Kansei (see Hartono, 2020 for the details of Kansei modelling mechanism).

It was shown that the attribute “the cleanliness of park” was to be critical as it was connected to dominant Kansei, i.e., happy, speedy, secured, satisfied, calm, interesting, clean, comfortable, and friendly. It is understandable since the more Kansei influenced, the more important the service attribute is (Hartono and Tan, 2011). Due to limited resources (e.g., budget, labour hours, materials), the critical service attributes are prioritized for improvement. This was facilitated through the calculation of importance weight of those selected service attributes above. Once the importance weight of each selected service attribute is calculated, then the percentage of weight and accumulated percentage of weight are set, followed by the decision for improvement (see Table 2).

Table 1. Integration of SERVQUAL, Kano categorization, and significant Kansei for amusement park

Code	Service Attribute	Satisfaction Score*	Kano Category	Significant Kansei Words
T ₄	The temperature at the playground, restaurant and waiting room	-3.74	A	-
T ₅	The cleanliness of park	-2.96	O	Happy, Speedy, Secured, Satisfied, Calm, Interesting, Clean, Comfortable, Friendly
T ₆	The modernity of park	-1.84	A	-
Res ₁₃	The provision of "lost and found"	-3.63	O	Calm
Res ₁₄	The queueing process at the amusement rides	-6.45	A	-
Res ₁₅	The queueing process at the toilet	-3.89	A	-
Rel ₁₉	The safety of physical facilities	-2.42	O	Satisfied, Comfortable
Rel ₂₀	The punctuality of amusement rides	-2.84	A	Happy
A ₂₂	The safety of amusement rides	-2.71	O	Secured
A ₂₃	The responsiveness of staff in handling any concerns	-2.03	A	-
A ₂₄	The safety of parking lots	-1.65	O	-

*Satisfaction Score = (Perception – Expectation) x Importance

Table 2. The importance weight of selected service attributes for amusement park

Code	Service Attribute	The Importance Weight*	% of Weight	Accumulated % of Weight	Decision for Improvement
T ₅	The cleanliness of park	203.8	50	50	Prioritized
Rel ₂₀	The punctuality of amusement rides	45.8	11	61	Prioritized
Rel ₁₉	The safety of physical facilities	37.1	9	70	Prioritized
Res ₁₃	The provision of "lost and found"	26.4	6	76	Prioritized
Res ₁₄	The queueing process at the amusement rides	25.8	6	83	Prioritized
A ₂₂	The safety of amusement rides	21.4	5	88	Not-Prioritized
Res ₁₅	The queueing process at the toilet	15.6	4	92	Not-Prioritized
T ₄	The temperature at the playground, restaurant and waiting room	15.0	4	95	Not-Prioritized
A ₂₃	The responsiveness of staff in handling any concerns	8.1	2	97	Not-Prioritized
T ₆	The modernity of park	7.4	2	99	Not-Prioritized
A ₂₄	The safety of parking lots	3.3	1	100	Not-Prioritized

*The Importance Weight = |Satisfaction Score| x Kano weight x Number of Signifcant Kansei x Average Kansei Score

Through prioritization mechanism using Pareto principle, there were 5 strategies proposed (as seen in Table 2). Those were as follow: (i) cleanliness of park, (ii) the punctuality of amusement rides or on-time show with full performance, (iii) safety of amusement rides, (iv) availability of lost-and-found system, and (v) well-organized queueing system. This study complements the existing method and study in the field of amusement park taking into account customer

emotional needs through Kansei Engineering (KE) methodology. For practitioners in the amusement park services, this results of this study can be utilized as a practical guidance for setting up prioritized improvements.

5. Conclusion

This study offers contribution on the refinement of Kansei-based service design incorporating Kansei mining methodology and the provision of a practical guide to service designer and manager in understanding more on the representative of customer's emotional needs. The inclusion of human-side engineering in amusement park services will provide a better understanding of customer need and satisfaction. Sure, this study has a limit on the contextual background and small sample size. All data have been collected online. For future study, another potential service setting should be considered. Field-based data collection such as ethnography and face-to-face interview may be proposed as well.

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Biographies

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