Models for Designing Excellent Service Through Co-creation Environment

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Abstract. Design approaches and methods that are currently widely used in practice target better customer satisfaction, without focusing on customer delight. Customer delight is essential to creating differentiated or better customer experiences. While "service excellence" as an organization's capability to achieve customer delight has standards, such as CEN/TS 16880, a standard method for designing "excellent service" has not yet been developed. This paper attempts to provide a foundation for what excellent service is toward a new standardization of designing excellent service. The co-creation aspect in excellent service is emphasized in this paper to achieve continuous customer delight. A structured model of excellent service and the concept of a co-creation environment are described. "Engaged customers and employees" and an "ecosystem of data collection and utilization" are sub elements to enhance the effectiveness of a co-creation environment, which is modeled and elaborated as a leverage mechanism to differentiate excellent service from basic service.

Keywords: Service excellence · Customer delight · Service design · Service modeling · Co-creation

1 Introduction

Customer expectations in today's competitive world have changed and are constantly evolving. An organization's ability to create differentiated or better customer experiences increases their business competitiveness. For this reason, it is essential for organizations to understand customer expectations, needs, wishes, problems, and experiences. These understandings of the customer are used as input into design services and products. To achieve this, organizations began adopting several design approaches, as follows:

- Human-Centered Design (HCD), described in ISO 9241-210 [1] and ISO 9241-220 [2],
- Design thinking promoted by IDEO and the Stanford d-school [3], and
- Service design thinking [4, 5], which builds on the work of HCD and the design thinking.

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The purposes of these approaches are not limited to offering guidance on delivering better customer satisfaction. However, these standards and methods do not cover how to create outstanding customer experience, despite many organizations noticing the need to move beyond "mere" customer satisfaction. Customer delight [6, 7] is regarded as a key concept to serve this need. Customer delight is defined as "emotions of pleasure and surprise experienced by the customer derived from either an intense feeling of being valued or by expectation" [8].

To achieve customer delight, the technical specification of CEN/TS 16880—"Service excellence: Creating outstanding customer experiences through service excellence" [8]—describes capabilities of an organization that enable "individual service" (Level 3) and "surprising service" (Level 4) toward customer delight, as shown in the left part of Fig. 1.

Compared to "service excellence" as an organization's capability, this paper deals with "excellent service" as an offering with individual and surprising service performed between the organization and the customer, facilitating the organization's creation of outstanding customer experiences to achieve customer delight. The delivery of excellent service also requires foundations comprised of "core value proposition" (Level 1) and "complaint management" (Level 2) to assure customer satisfaction, as shown in the middle part of the figure. A specific design method for such excellent service is necessary for improved success. In addition, to generate continual delight, the co-creation and development of preferred relationships with customers is required.

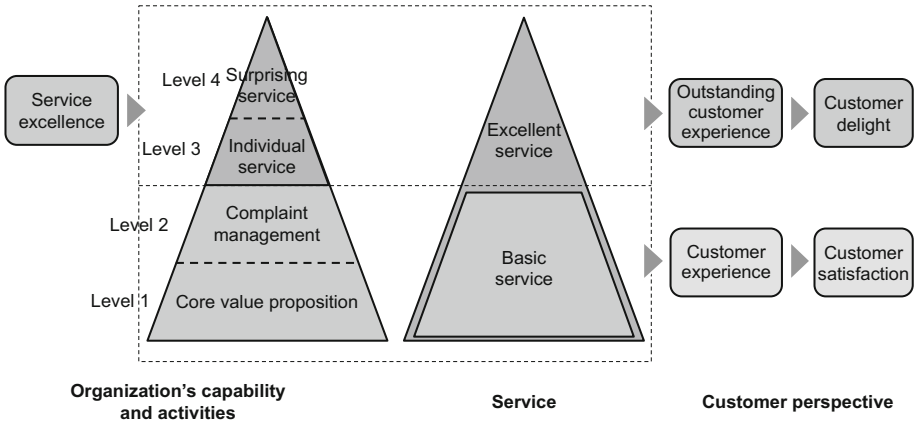

Fig. 1. The service excellence pyramid and excellent service.

To serve this need, this paper proposes models for designing excellent service with a co-creation mechanism to achieve customer delight. In Japan, JSA-S[1] 1002, "Guide

[1] JSA standards and specifications (JSA-S), which were established by Japanese Standards Association (JSA) in June 2017, are private sector standards in a wide range of fields, including the service sector that can be developed in an agile and efficient manner with good quality, proposed by private and public organizations including companies, associations, government agencies, and academic societies.

for the development of service standards aiming excellent service" [9], was published in June 2019. This specification provides service standard developers with general guidelines for developing interpersonal service standards for the realization of excellent services. The proposed models in this paper extend the co-creation environment concept described in the JSA-S 1002.

2 Structured Model of Excellent Service

Figure 2 shows a structured model of excellent service, depicted from a customer's standpoint, and a good co-creation environment. The inner circular arrow in the right part of the figure shows a customer journey, while the outer circular arrow depicts the service delivery process and the service provider's activities that support it. Interactions (touch points) occur between the two, and various consumer experiences take place during these interactions. Customer delight can be achieved when an outstanding customer experience is created through individual and surprising service provision by exploiting opportunities found during the interactions. Apart from touch points, any points that contribute to customer delight can be identified as points-of-data (data points) to be monitored and exploited. Touch points can be used as a data point since they provide an opportunity to create customer delight. Furthermore, a customer's journey continues as they return for repeat business. Repeated service use by customers can affect a level of customer knowledge and participation, as well as employee engagement.

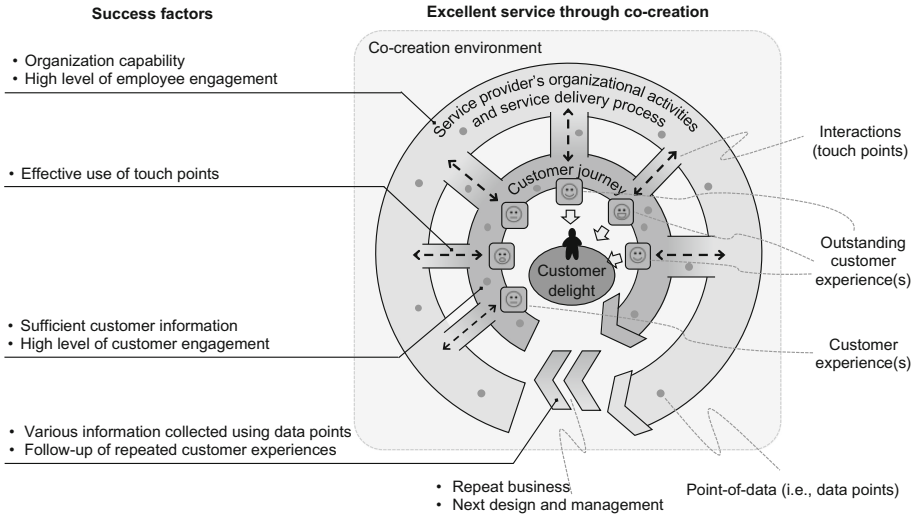

Fig. 2. Structured model of excellent service through co-creation.

Based on the structured model, the following can be described as success factors for achieving excellent service:

- Design and manage a co-creation environment that facilitates effective and continued implementation of excellent services through active participation of service employees and customers in co-creation. A good co-creation environment includes organizational capability, high level of employee engagement, effective use of touch points, sufficient customer information, and high level of customer engagement.
- Use various information collected using data points for improving future designs and management activities once the service has ended.
- Follow up repeated customer experiences to create delight by considering the accumulation of knowledge and changes in customer engagement.

3 Design Elements of Excellent Service

In the book, *this is service design doing* [5], in 2018, six principles of service design are described: human-centered, collaborative, iterative, sequential, real, and holistic. These principles base the original five principles of service design proposed in the book, *this is service design thinking* [4], in 2011. The originals are user-centered, co-creative, sequencing, evidencing, and holistic, which have been widely quoted ever since. The authors of the books revised the originals according to people's usage and understanding of them in practice. Among revisions, it should be noted that the original principle of "co-creative" was divided into "collaborative" and "iterative" in new principles. This was completed because, in most cases, people tend to focus on the collaborative and interdisciplinary nature of service design, rather than the fact that a service only exists with the participation of a customer. The new six principles can be applied to the design of excellent service, as well. Regarding design processes, design thinking [3] and human-centered design [1, 2] give such typical collaborative and iterative processes. Among them, the five processes (empathize, define, ideate, prototype, and test) are widely used.

However, as explained in the abovementioned revision, the original meaning of co-creative nature of service with customer became limited in the service design approaches. Without co-creation with the customer, it is difficult to ensure and sustain customer delight in excellent service. Therefore, this paper emphasizes the co-creation aspect of excellent service by setting design elements consisting of "3E" and "AT-ONE," as shown in Fig. 3. A basic structure for excellent service and creating customer delight are developed by identifying projected actors, touch points, offerings, needs, and experiences—the five key areas identified in the AT-ONE method [10]. In addition, an environment for co-creation should be designed as a leverage mechanism to enhance the delivery of better and sustained customer delight. Sub elements to evolve the co-creation environment are "engaged customers and employees" and "ecosystem of data collection and utilization." These are detailed in the next section.

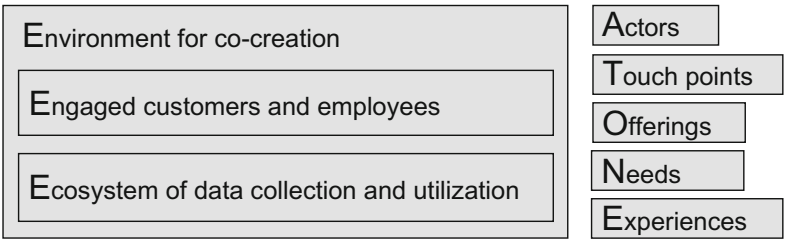

Fig. 3. Design elements for excellent service: 3E and AT-ONE.

The 3E and AT-ONE design elements require organizations to have a clear understanding of what excellent service quality entails, especially when designing excellent services, and include elements that bring surprises and delight to customers. Kano's model [11] is useful to understand customer requirements and their impact on customer perceptions. Kano's model refers customer delight, as well as customer satisfaction, which are both integral components of service excellence. Figure 4 is a revised diagram of the Kano model by replacing the degree of satisfaction (vertical axis) with the degree of customer experience. Excellent service quality can be regarded as an attractive quality that delights customer or a one-dimensional quality with high performance that exceeds customer expectation.

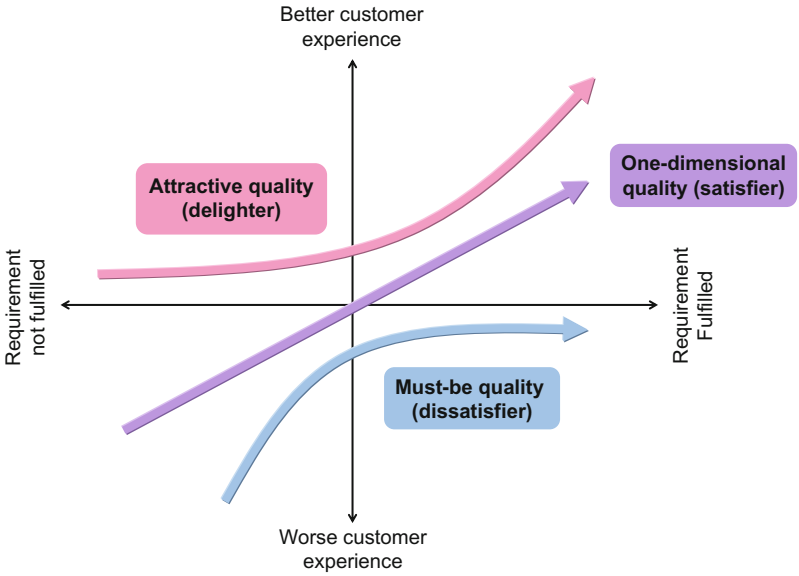

Fig. 4. Revised diagram of Kano model in terms of customer experience.

3.1 Overview of Co-creation Environment

For improved excellent service, in addition to collaboration with stakeholders in design processes, it is important to design and manage an environment that facilitates co-creation with stakeholders through interactions that occur during the service delivery process.

Customers are an especially important partner in value co-creation. For this reason, organization should thrive to increase customer engagement and participation, as well as employee engagement. Co-creation between service organizations and customers can increase the likelihood of creating customer delight and customer loyalty. A co-creation environment is established by cultivating elements (opportunity, information, knowledge, attitude, etc.) that encourage interactions between the organization and customers across the service delivery, mainly at the key points of contact that are clearly identified through the customer journey mapping. The established co-creation environment works as a leverage mechanism to enhance the delivery of better and sustained customer delight. Two sub elements in creating a co-creation environment are "empowered engagement of customers and employees" and "ecosystem of data collection and utilization."

Engaged Customers and Employees. One of the sub elements of the co-creation environment is the engaged customers and employees. Organizations should implement measures to enhance an overall level of engagement with both customers and employees and consolidate efforts as appropriate. Figure 5 illustrates this concept as vector addition and the area of a parallelogram. The higher an overall level of engagement is, the more likely the organization can produce outstanding customer experiences through co-creation.

First, organizations should determine the current level of engagement demonstrated by employees in customer service settings and launch initiatives to improve employee engagement. Similarly, organizations should determine the current level of engagement demonstrated by customers at points of contact across the service delivery and launch initiatives to improve customer engagement. Tables 1 and 2 exemplify different levels of customer and employee engagement for co-creation.

Table 1. Example of levels of customer engagement and its key activities for co-creation.

Level	Key activities
1	Accept
2	Clearly express needs
3	Use efficiently and effectively
4	Give feedback
5	Recommend to others
6	Feel psychological ownership

Table 2. Example of levels of employee engagement and its key logics for co-creation.

Level	Behavior logics
1	Rewards and punishment
2	Regulations
3	Requests from customers
4	Observation from customer's perspective
5	Empathy for customers
6	Psychological ownership

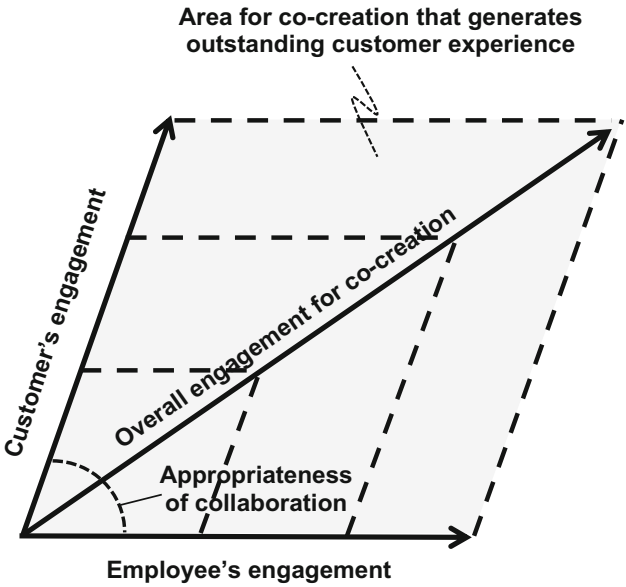

Fig. 5. Customer and employee engagement for co-creation environment.

Ecosystem of Data Collection and Utilization. Feedback from customers and front-line employees is essential for improving service quality. For this reason, a mechanism should be incorporated into their service delivery framework that allows them to monitor interactions at different points of contact, across the entire customer journey, and in the service delivery process. These can be used as data points, and they enable feedback provision, service personalization, adoption, improvement, and learning.

Therefore, technological support should be embedded into the mechanism to efficiently collect and provide sufficient data.

3.2 Effect Model of Co-creation Environment as Leverage Mechanism

The leverage mechanism based on "engaged customer and employee" and "ecosystem of data collection and utilization" in this section, it enhances the potential for co-creation and enables organizations to create customer delight by achieving "better"

outstanding customer experiences. See Tables 1 and 2 for examples of different levels of customer and employee engagement for co-creation. Implementing this mechanism into delivery of excellent service requires organizations' agility. Therefore, designing excellent service should be planned while referring to this mechanism.

Figure 6 illustrates the mechanism structure as a lever system to catapult a ball onto the bar into the air. Figures 7 and 8 show how the structure works in the case of basic service and excellent service, respectively. This paper explains basic logics to calculate the effect of co-creation environment on customer delight. Mathematical model is expected, based on the logics.

Structure of the Leverage Mechanism. In Fig. 6, a leverage system is placed on the slope, consisting of a pole brace, a rotatable bar attached with the pole, a ball to be catapulted in the left part, and weights to be put and released in the right part. Vertical coordinates of the ball represent how well a service delivers good customer experience, which can result in either customer satisfaction or customer delight. Customer satisfaction switches to customer delight when the ball is catapulted to a height above the horizontal state of the bar.

The effort force by weights that presses the bar down represents employee engagement, the current level of which corresponds to numbers of weight. The effort arm, the distance between the fulcrum and the effort force, represents customer engagement. The current level of customer engagement determines the position where weights should be placed and released.

The greater the effort force and effort arm are, the greater the moment of force causing the bar to rotate clockwise becomes. This force moment corresponds to areas for co-creation that may bring outstanding customer experience, shown in Fig. 5. The resistance arm, the distance between the fulcrum and the ball, represents necessary cost of data collection and analysis through data points. The smaller the resistance arm is, the smaller the moment of a force by the ball weight causing the bar to rotate counterclockwise becomes.

Basic Service for Customer Satisfaction. Using this structure, Fig. 7 represents a case of basic service aimed at customer satisfaction. With lower engagements and/or higher cost of data collection and utilization, the bar rotates slowly and stops at the horizontal state (State B-2) due to the slope. At this time, the ball stays on the bar and does not go upwards at State B-2, because the ball's momentum is too small to jump. This means that high customer satisfaction can be obtained, but no customer delight would be expected.

Excellent Service for Customer Delight. Figure 8 represents a case of excellent service through co-creation aiming at customer delight. With higher engagements and lower cost of data collection and utilization, once the bar comes into a horizontal position (i.e., from State E-1 to State E-2), the bar launches the ball upwards. The ball's max vertical distance from the bar in the horizontal position represents outstanding

customer experience (State E-3). The greater the distance is, the more customer delight is. Furthermore, the lightness of the ball itself, as the organization's agility, reduces the opposite moment and affects how high the ball will go.

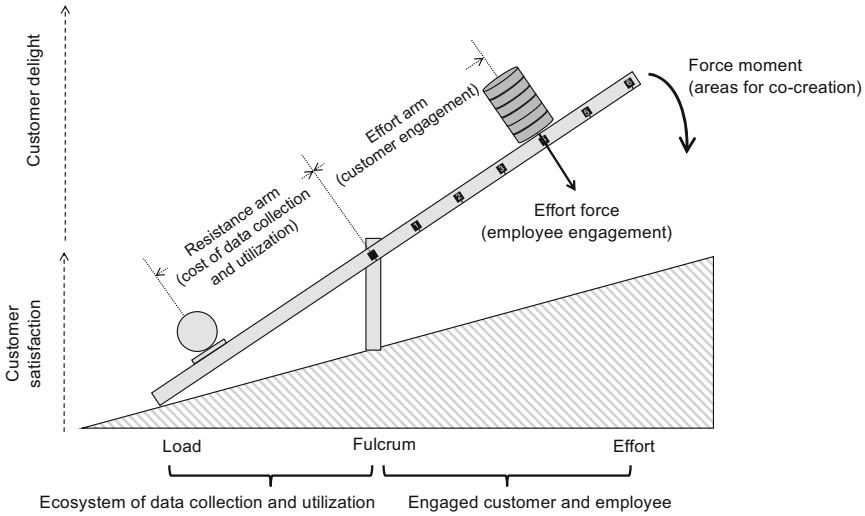

Fig. 6. Structure of leverage mechanism through co-creation environment.

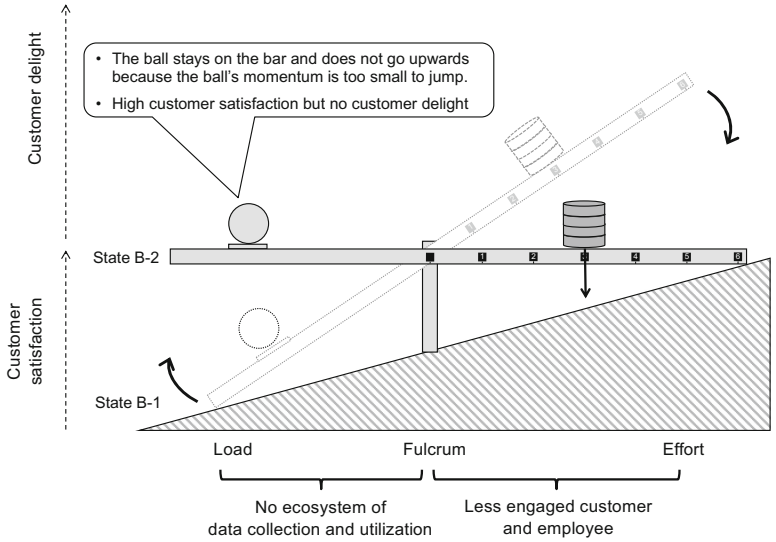

Fig. 7. A case of basic service aimed at customer satisfaction.

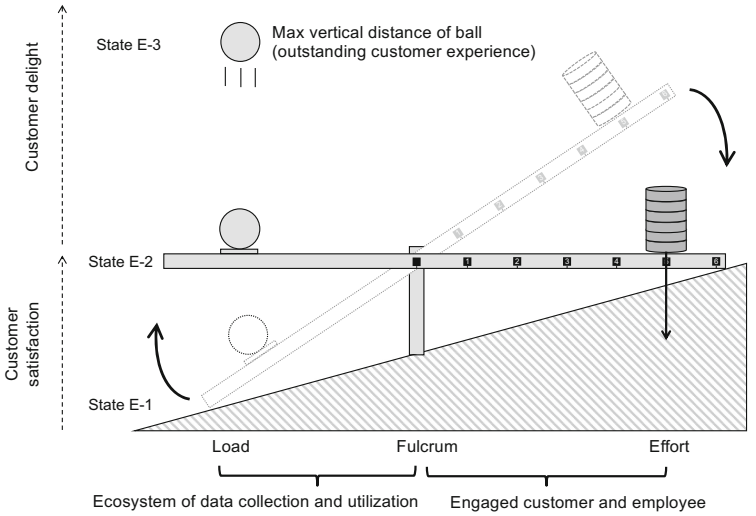

Fig. 8. A case of excellent service through co-creation aimed at customer delight.

4 Conclusion

This paper proposed models for designing excellent services through a co-creation environment. The co-creation aspect in excellent service was emphasized to achieve continuous customer delight. A combination of customer engagement and employee engagement was a sub element of the co-creation environment. The ecosystem of data collection and utilization was another sub element and is enabled by data points embedded in the delivery of excellent service.

The effectiveness of a co-creation environment was modeled and elaborated as a leverage mechanism, so that excellent service for customer delight is differentiated with basic service for customer satisfaction. This provides a foundation for what excellent service is toward future standardization of designing excellent service.

Future work includes to develop a calculation model based on the leverage mechanism and conduct case studies in several fields.

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