The role and design of the service environment in creating favourable customer experiences

Jörg Pareigis CTF-Service Research Center, Karlstad University, Sweden jorg.pareigis@kau.se

Bo Edvardsson CTF-Service Research Center Karlstad University, Sweden bo.edvardsson@kau.se

Bo Enquist CTF-Service Research Center Karlstad University, Sweden bo.enquist@kau.se

Abstract

Purpose – The important role of the environment in service experiences is well established and accounted for in the marketing literature. Several theoretical frameworks and concepts have been suggested such as the servicescape. So far, the empirical studies have mainly focused on the effects of single variables, like music, scent or signage. Consequently, further empirical and conceptual research is needed with a holistic view. This paper contributes to this knowledge gap by building on a recent conceptualization of the experience room model. The aim of the study is to further explore design dimensions of an experience room. We examine the role of the experience room dimensions in the processes that result in the cocreation of value-in-use, while investigating their relative importance.

Methodology/approach – Contrary to current research in this field the context of this paper is a day-to-day continuous service, a journey using public transport. In line with the explorative character of the research aim, the study uses a qualitative approach. A special form of focus group interviews were conducted with the 24 travellers. The aim of the focus group discussion was to create an experience map consisting of design dimensions, which were subsequently specified with particular characteristics. The characteristics were categorised by the respondents into the different dimensions. In a second phase, these characteristics are rated according to their importance by the respondents.

Findings – Reliability, price and the schedule were the most important characteristics for the respondents, which were categorised by the respondents into different design dimensions. In the public transport context the dimensions Intangible artefacts and Technology seem to be of special importance.

Research limitation/implication – The study underlines that the customer perceives the environment holistically suggesting that the different dimensions of the environment are interdependent as perceived by customers.

Originality/value – The study contributes by providing a further development and deeper understanding of design dimensions available to service providers in order to design the service environment and the experience room supporting favourable customer experiences. **Keywords** – Service experience, experience room, design dimensions, experience map **Type** – Research paper

Introduction

In order to create a competitive advantage and to make a profit, companies are exploring new and better ways to differentiate their market offerings (Prahalad and Ramaswamy, 2004a; Shaw and Ivens, 2002). One such opportunity for differentiation is creating favourable prerequisites for the customer experience through the design of the service environment the company is providing. According to Ezeh and Harris (2007) however, this resource is widely unemployed. Due to our knowledge of the importance of the service environment (Bitner, 1992) this seems rather surprising. So why do companies not use this resource better? It could be argued that the answer lies in the current state of academic knowledge. What we know so far from several empirical studies is that different variables, like music (Dubé and Morin, 2001; Morin et al., 2007), scent (Orth and Bourrain, 2005; Zemke and Shoemaker, 2007), or lighting (Baker et al., 1992; Summers and Hebert, 2001), can influence the service experience. As a result of several empirical research projects in the retail industry (Turley and Milliman, 2000) we also know more about specific characteristics of how to design such environments and which of them are of greater importance in this context. Yet, we still lack knowledge about specific design dimensions and their relative importance in different service contexts.

The aim of this article is to contribute to the knowledge gap by answering the following research questions:

- 1. How can design dimensions for service environments be specified in a specific context?
- 2. Which relative importance do various dimensions of the environment have on the customer experience?

We apply a recent model of design dimensions for an experience room (Edvardsson *et al.*, 2005a) and aim at ensuring a customer perspective in order to be able to give recommendations to companies.

This article analyses the first part of two empirical studies in the public transport context and starts with a description of the theoretical framework for this work, in particular the experience room model. Subsequently our methodology for reaching our aim is described. After having presented the results of our empirical study we will focus the discussion on what this paper adds to the existing knowledge on service environment and finish with some managerial implications.

Theoretical framework

In order to attract and retain profitable customers, companies are exploring reconfigurations of roles and relationships among different actors (e.g. customers, suppliers, employees) to differentiate their market offerings (Bendapudi and Leone, 2003; Normann and Ramirez, 1993) and form the basis for favourable customer experiences (Edvardsson et al., 2008). This has been argued to be caused by the traditional value propositions not being able to achieve significant differentiation any longer. Being successful in this quest demands a focus on customers' experiences (Carbone, 1998). It is often these experiences that make the difference between high and low performing companies instead of just a cognitive assessment of the service (Johnston and Clark, 2001). That is, apart from functional qualities, emotional

responses are part of customers' experiences which need to be attended to by companies (Edvardsson, 2005). This is in line with empirical findings on satisfaction responses of consumption experiences, consisting of both, cognitive as well as affective dimensions (Mano and Oliver, 1993). While emphasizing value co-creation Prahalad and Ramaswamy (2004a, p. 10) similarly make the case for experiences by postulating that "the opportunities for value creation are enhanced significantly for firms that embrace the concepts of personalized cocreation experiences as the source of unique value". Conformingly, Lusch et al. (2007) state that value co-creation, "value-in-use", and customer experience are related concepts, implying a relational perspective. A more concise account is presented by Holbrook (2006, p. 212), who defines customer value as an "interactive relativistic preference experience". The interactive part describes the interaction between an object and a subject, that is, any kind of good, service, or other offering and any kind of customer, private or business. Customer value is relativistic in several ways, comparative, situational and personal; comparative as in comparing two objects with each other; situational as in varying from one context to another; personal as in varying from one individual to the next. The preference part depicts preference judgements, which, depending on the specific viewpoint, has been termed in different ways, such as attitude, affect, satisfaction, or behavioural tendency. Their common denominator is the investigation of ways in which one object is preferred to another. The experience part acknowledges that value is not embedded in an object or the possession of one, but resides in a consumption experience. According to Li et al. (2001) experiences can emerge directly, indirectly and virtually, but always stem conceptually from the interaction between an object or an environment and an individual.

The interaction or relation between customer and environment has been described in many different ways in marketing literature. As early as in the mid 1970ies, Kotler (1974) highlighted the importance and postulated atmospherics to be an important tool in marketing. Atmospherics depicted to be the deliberate design of space in order to influence buyers' emotions in a positive way to increase the likelihood of a purchase. This is achieved through the design of four sensory dimensions, being sight, sound, scent, and touch. It is highlighted that a division between intended and perceived atmosphere exists. Next to providing a new typology for service organizations, Bitner (1992) provided the new term and conceptual framework servicescape. The framework describes how the physical environment affects employees as well as consumers in service organizations. Configurations of three different environmental dimensions, ambient condition (e.g. temperature, music), spatial layout and functionality (e.g. layout, furnishings), and signs, symbols and artefacts (signage, style of decor) are postulated to create a holistically perceived servicescape that activates internal cognitive, emotional and physiological responses with customers and employees. These are moderated by personality traits and situational factors. The internal responses affect subsequently behaviour of the actors in terms of approach (affiliation, exploration, staying longer) or avoidance (opposite of approach) and the social interactions between the actors.

A limitation of the two models is their focus on the physical environment only (Edvardsson *et al.*, 2005a; Rosenbaum, 2005) and the exclusion of social and emotional elements, which can affect the service experience to the better or worse (Grove and Fisk, 1997). Of late, Tombs and McColl-Kennedy (2003) suggest a social-servicescape model, accounting for this theoretical gap. All three models build on the stimulus-organism-behaviour concept stemming from environmental psychology (Mehrabian and Russell, 1974). In this concept, the customer is regarded as a passive element, which is affected by and responds to the environment. This passive view of the customer received criticism (Aubert-Gamet, 1997) and is not in line with current thinking within marketing suggesting a new service logic (Vargo and Lusch, 2004), in

which the customer is a important resource and an active co-creator of service and the resulting service experience. Bonnin (2006) suggests the concept of appropriation in order to increase our understanding of the service environment and calls for further research, especially to gain more knowledge about the interaction process between service environment and service experience. Yet a different model is suggested by Edvardsson et al. (2005a). The authors develop the notion of the "experience room", a place allowing simulated service experiences. Five design dimensions are argued to constitute the experience room, including (a) physical artefacts, (b) intangible artefacts, (c) technology, (d) customer placement, and (e) customer involvement. In a later development of the model Edvardsson et al. (2008) include a sixth dimension (f) interaction with employess. In the following, the dimensions shall be shortly explained (this section is based on Edvardsson et al., 2008).

Physical artefacts

Physical artefacts (P) represent the physical signs, symbols, products, and the infrastructure necessary to create the physical attributes of the experience room (cf. Bitner, 1992; Rafaeli and Vilnai-Yavetz, 2004).

Intangible artefacts

Intangible artefacts (I) incorporate the non-physical infrastructure and might include mental images, brand reputation, narratives, norms and values (Normann, 2001; cf. Edvardsson and Enquist, 2002).

Technology

Technology (T) stands for the nature and role of the equipment that customers interact with, either positively or passively (cf. Venkatesh, 1999) and is consequently not limited to information and communication technology (ICT). It includes as well how service processes are carried out (Edvardsson *et al.*, 2005a).

Customer placement

Customer placement (CP) refers to where the customer is placed and 'staged' in the experience room (Sherry, 1995) and is a prerequisite for interaction with others as well as products.

Customer involvement

Customer involvement (CI) represents the role(s) taken and enacted by the customer(s) in the experience room (cf. Prahalad and Ramaswamy, 2004b; Swaminathan and Zinkhan, 1996).

Interaction with employees

Interaction with employees (IWE) describes the ways in which customer contact with the service provider is present (cf. Bowen, 1990).

We argue that this model holds some key advantages. First of all, the focus is not on the physical surroundings, these are merely one part of it. Second of all, social interactions are an integral part of the model, which play an important role in the service environment.

Based on the dimensions of the experience room above, we will study how service organizations can go about designing experience rooms for their customers. The purpose of the paper is to explore characteristics in the dimensions from the customer perspective and assess the relative importance of the design dimensions and their characteristics respectively.

The empirical context

As empirical context, we chose public transport. A well functioning and generally accepted public transport system is often regarded as absolutely necessary in order to reduce the negative affects of private car use and to achieve sustainable development in today's society (Gärling and Steg, 2007). Surprisingly, little research is conducted to investigate the customers' perception of the provided service (Friman *et al.*, 2001). Obviously, this calls for further research and requires a deeper understanding of the public transport services, which seems necessary in order to achieve a higher market share. Similar to other service contexts, the role of the service environment is very important in public transport, as it is here, where the service is actually experienced by the customer. But not only could the actual carrier be regarded as a servicescape. Train and bus stations alike with their many signs, time tables and layouts represent fruitful research contexts. As was highlighted above, other customers have an impact on the service experience as well. This can be argued to be especially the case in public transport, which is a public place, shared with many other customers of different socioeconomic backgrounds.

Methodology

Twenty six domestic as well as international students recruited at the University of Karlstad each conducted four trips using Public Transport during a given week in 2007. The students were provided with a transport diary and instructed to keep as detailed notes as possible about their service experience in order to ensure the customers' definition and views are captured with the customers own words (Echeverri, 2005).

Based on the narratives from the 26 students and their service experiences during the four trips, we conducted three focus group interviews with a total of 24 students. We now focused on the most important environmental dimensions as defined and assessed by the respondents in the focus groups. The method used is a special form of focus group, in which the participants interpret their responses themselves, as described by Björlin and Edvardsson (2003). Each focus group session commenced with a presentation of the aim of the study and the question in focus was introduced; what is important for you when using public transport? The aim of the focus group discussion is to create an experience map which is consisting of first the design *dimensions* of the service environment e.g. the physical technical resources or the technology used. The customer defined dimensions are described in detailed in the form of characteristics. This is the first part of the map which is the description expressing the voice of the customers. The second part of the map consists of two main parts; the selection and ranking of the three most important characteristics which is carried out individually by the respondents as is the case with the fourth phase which is giving marks to the different characteristics. This is also done by the respondents individually. Finally the group is asked to suggest three areas to improve the design of the service environment to arrive at a more favourable customer experience of the service focused on. This method is a combination of quality function deployment and phenomenographics (Edvardsson, 2002; Björlin and Edvardsson, 2003).

Design dimensions of the experience room in a public transport context

The importance of the service environment is often highlighted in the marketing literature (Ezeh and Harris, 2007). Too often though, the focus is here on the physical environment, often associated with the term servicescape defined by Bitner (1992, p. 65) as the "objective physical factors that can be controlled by the firm to enhance (or constrain) employee and

customer actions". As our research highlights, when listening to the voice of the customer however, the focus is much broader. In the following the characteristics of the initially presented design dimensions shall be presented (see also table I). Note that some characteristics occur in several dimensions. This can be due to mainly two reasons. The first could be due to the fact that customers perceive the service environment holistically and consequently have problems with categorizing one characteristic into a specific dimension (Mattila and Wirtz, 2001). The second could be that the respondents interpreted the dimensions differently.

The most important characteristics were "doing as promised", price, and "schedule". The most important characteristic according to the respondents views in the focus group interviews and described and assessed in the maps are that the service provider is fulfilling its promises, that is, leaving and arriving on time, stopping at the bus stops, as advertised. A good price was rated by the participants as the second most important characteristic, followed by a schedule that fits the customers' needs, that is, the possibility to reach all destinations with public transport, with high frequencies. Safety was rated as the fourth most important characteristic, but scored almost only half the points as the third most important characteristic. Competent staff with proper driving behaviour and language skills was regarded as the fifth most important, scoring on similar levels as the safety characteristic. Rated by a fraction of the most important characteristics, the least two important characteristics rated by more than one person are easy to use and time needed for the trip.

Table I - Characteristics of design dimensions and their importance

Characteristics	Importance
On time/Reliable/Do as promised (T,T,I,I)	9+14+11+3=37
Price (T,I,I)	11+11+13=35
Schedule (T,CI,T)	4+6+23=33
Safety (I,CP,P)	9+5+3=17
Competent staff (driving behaviour, language) (I,IWE)	11+5=16
Easy to use (T)	5=5
Time needed (T)	4=4

Table II provides and overview of the design dimensions and the characteristics specified by the participants.

Physical artefact

Physical artefacts are, among others, the necessary physical infrastructure for the service experience (Edvardsson *et al.*, 2005a). Within this dimension, "safe vehicles" was the only characteristic rated as important for customers in the public transport context.

Intangible artefacts

Intangible artefacts provide the non-physical infrastructure and assist customers to envision how products and/or services are able to create value and positive experiences (Edvardsson *et al.*, 2005a). Here, the two most important characteristics mentioned by the respondents are the price as well as "do as promised" in a sense that the departure and arrival takes place on time and as advertised in the schedule. Safety, described as the "general feeling of being safe during the trip" and competent staff in regards to driving behaviour and language skills are other important characteristics in this dimension.

Technology

Technology is to be understood in a broad sense including information and communication technology (ICT) as well as how the intended service processes are to be carried out to "infer quality through meaning, arousal, and excitement" (Edvardsson *et al.*, 2005a, p. 153). Due to the broad definition and the importance of the service processes (Lovelock and Wirtz, 2006) it is not surprising that most characteristics named by the respondents were codified to this dimension. "Schedule and lines fit my needs" is here the most important characteristic followed by price. "Punctuality" and being "on time" were rated as third most important in this dimension, followed by easy to use and "time needed" for the trip.

Customer placement

Within the dimension customer placement, that is where the customer is placed and 'staged' in the experience room (Sherry, 1995), the participants codified "security on the bus and train".

Customer involvement represents the role(s) taken and enacted by the customer(s) in the experience room (cf. Prahalad and Ramaswamy, 2004b; Swaminathan and Zinkhan, 1996) and includes only one characteristic rated as important, namely departure and arrival times fit my schedule.

Interaction with employees

Interaction with employees describes the ways in which customer contact with the service provider is present (cf. Bowen, 1990). Here the participants coded competent staff with good language skills and driving behaviour.

Table II - Design dimensions and their characteristics in a public transport context

Dimensions	Characteristics	Importance
Physical artefacts	safe vehicles	3
Intangible artefacts	reliable/do as promised	23
	good price	11
	Safety	9
	driving behaviour	5
Technology	schedule and lines fit my needs/timetable	27
	Price	24
	punctuality/on time	14
	easy to use	5
	time needed	4
Customer placement	security on the bus and train	5
Customer involvement	departure and arrival times fit my schedule	6
Interaction with employees	competent staff (language skills/good driving behaviour)	11

In summary, the dimensions Intangible artefacts and Technology were rated most important by far with most characteristics specified by the respondents.

Discussion

The aim of this paper is to contribute to a deeper understanding of the role of the service environment for a favourable customer experience. Previous research has not included social, and emotional dimensions of the environment but more narrowly focused on dimensions of the physical environment only. Two research questions have directed this study: (1) How can design dimensions for service environments be specified in a specific context? (2) Which relative importance do various dimensions of the environment have on the customer experience? Our point of departure is a previously suggested framework focusing on six design dimensions of the experience room (Edvardsson et al., 2005a; 2008). In this study we test the relevance of the suggested design dimensions in a new context; public transport service and especially explore if new dimensions should be included or not.

Our empirical findings suggest that the six dimensions capture the range of characteristics that should be paid attention to when design experience rooms also in public transportation service settings. When comparing the results in this study with the results in previous studies in four very different service contexts (Edvardsson et al., 2005a; 2008): (1) retailing (IKEA), (2) buying a new house, (3) deciding on a MBA program (the open day at Warwick Business School in England) and (4) a website for a research conference (QMOD) we find that the overall design dimensions are useful but the characteristics are service environment specific. Thus, the design dimensions are not enough to design the environment in a favourable way. The dimensions are at a too high level of abstraction and need to be contextualized.

In the public transport context, we have found that the physical artefacts (e.g. the bus itself) have been rated by the participants less important than maybe expected. This underlines the importance of the social dimensions (Tombs and McColl-Kenndey, 2003) as well as the experiential character of a service (Holbrook, 2006). When reminding us of the definition of services as activities, deeds or processes, and interactions (Edvardsson *et al.*, 2005b) the lower importance of the physical artefacts do not seem too surprisingly. Consequently, not the design of the design dimensions should be the main focus in service environment development, but rather the interaction processes between customer and environment. This is in line with the active role of the customer as co-producer (Kalaignanam and Varadarajan, 2006).

In this study we have learnt that the customer perceive the environment holistically suggesting that the different dimensions of the environment are interdependent as perceived by customers when it comes to forming the prerequisites for the customer experience. Thus, we can not understand how to design the environment by focusing on individual design dimensions only but focus on the drivers of the total customer experience also and the relative importance of the various service specific environmental characteristics. The findings in this study suggest that the interplay between different dimensions is important, as they may convey the same message, e.g. safety is expressed through not only the vehicles as such but also in the way the driver is handling and driving the bus.

The results in this study contribute to the emerging conceptualization of the service-dominant logic (SDL) of marketing (Vargo and Lusch 2004; 2008). SDL is based on a resource advantage perspective combining *operand resources* (linked to physical resources) and *operant resources* (linked to people, both customers and employees). Goods, services and information and combinations of these enable and facilitate the customers own value creation. Value is not embedded in the resources e.g. services but value is rather created and realized

by the customer and assessed on the basis of value in use in the customers' own context. SDL does not explicitly pay attention to the dimensions and resources in the service environment, the relative importance of these resources and how the resources are perceived, used and assessed by customers and their role in forming customer experiences of service.

The results of our study that characteristics are belonging to different dimensions from the customer perspective, lead as well to methodological consequences. First of all, having the same characteristics in different dimensions can be regarded as a break with traditional coding and formation of dimensions. In the method used in this study, the participants themselves coded the characteristics into the dimensions. Consequently, reducing misinterpretations that at times occur in traditional focus group research (Krueger, 1998). Second of all, criticism of a piori models used in questionnaires (Silverman, 2007) often used in servicescape research can be supported. This holds true as well as for context unspecified, generic instruments like SERVQUAL (Parasuraman et al., 1988), arguing for more qualitative research designs or at least contextual adaptations of measurement instruments.

Managerial Implications

Three managerial implications will be discussed here. First, the results in this study show that five characteristics are most important: (1) On time/Reliable, (2) Price, (3) Schedule, (4) Safety and (5) Competent staff in the frontline. Characteristics 1-3 are the most important ones according to the customers in the focus groups. The design of the environment should focus on these areas and investing in these should be more profitable than in other areas such as physical artefacts. This is in line with the service logic suggesting that services, also public transport services, come about and are assessed in use on the basis of activities and interactions perceived by customers. Second, different design dimensions of the experience room or service environment contribute to the same characteristic or component of the customers' experience. One example is safety where the physical resources e.g. the bus together with the interaction with front line staff and the way the bus is handled by the driver. Thus to focus on individual design dimensions only is not enough since the customer experience is a gestalt, customers experience the service as both prerequisites, processes and outcomes holistically. The implication of this is that customers should be integrated or involved in designing the service environment and experience room which is our third managerial implication.

Limitations and future research

The choice of students as respondents can be argued to be a limitation of our study. However, students as respondents are rather common in contemporary marketing research. Moreover, their knowledge concerning the model in focus was considered to be an advantage. Another limitation could be the amount of only three focus groups. Consequently, we are not aiming to make generalisations for all public transport customers or speak of representativeness in a statistical sense. Nevertheless are students an important customer segment in this context. Students have often no choice then to use public transport due to their economic situation. Satisfied student customers could ensure that they would continue to use public transport once their financial situation improves.

As mentioned above, this article is the first part of two empirical studies. In the next article, the public transport diary material will be included and analyzed and compared to the focus group results. Future research should continue this path of more *in situ* research, that is,

observational studies that make use of the diary method or videography for instance. This is in line with explicit calls for observational studies by Bitner (1992). Moreover, similarities and differences of the importance of design dimensions in different context could be examined.

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