



Exploring the role of the service environment in forming customer's service experience

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Abstract

Purpose – The aim of this paper is to identify and describe important dimensions of the service process as defined by customers, and to compare the results from a specific use context with the recent conceptualization of the experience room.

Design/methodology/approach – Public transport travellers were provided with a public transport travel diary and were encouraged to make detailed notes about their service experience during their journey. The diaries were then transcribed and coded in NVivo8 using a constant comparative method.

Findings – The qualitative analysis of the public transport travel diaries revealed six emerging themes of service experience: customer processes, other customers, physical environment, contact personnel, provider processes and wider environment. The interplay between these themes is what forms the service experience of customers. The inductive analysis of the empirical material contextualizes the experience room model in a utilitarian and facility-driven service. This deductive analysis of 100 customer experiences shows that the dimensions customer involvement, customer placement and physical artefacts are most important for the customer's service experience in this context.

Originality/value – This paper offers a set of important empirically based customer experience dimensions with public transport. The paper also provides a contextualization of a theoretical model, the experience room model. The contribution results show the importance of interactions with other customers and the physical environment for the customer's experience.

Keywords Transport services sector, Sweden, Customer satisfaction

Paper type Research paper

Introduction

In order to attract customers, achieve a competitive advantage, and make a profit, companies are always exploring new and better ways to differentiate their market offerings (Prahalad and Ramaswamy, 2004). One such opportunity for differentiation is creating favourable prerequisites for attractive customer experiences through the design of the service environment. The importance of the service environment in creating favourable experiences is unquestioned (Högström *et al.*, 2010; Lovelock and Wirtz, 2007; Reimer and Kuehn, 2005). However, it is still a resource that remains under-employed by many practitioners (Ezeh and Harris, 2007).

In the marketing literature, the relation between customer and environment has been described in many different ways. In the first conceptualization, Kotler (1974) depicted atmospherics as the deliberate design of space in order to positively influence buyers' emotions, in order to increase the likelihood of a purchase. He highlighted this as an important tool in marketing, and pointed out four sensory design dimensions; sight, sound, scent and touch. Bitner (1992) introduced the term and conceptual framework "servicescape", combining the terms "service" and "landscape". The framework



describes how the physical environment affects both employees and 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 in customers and employees. These responses are moderated by personality traits and situational factors. Subsequently, the internal responses affect the behaviour of the actors, in terms of either approach (affiliation, exploration, staying longer) or avoidance (the opposite of approach), and the social interactions between the actors. Based on the aforementioned models, numerous empirical studies have been conducted, focusing on one or several variables of the service environment, such as music, scent or signage and their effects on consumer expenditures (Morrin and Chébat, 2005; Chébat and Michon, 2003), perceived waiting time (Bailey and Areni, 2006), loyalty intentions (Harris and Ezech, 2008), or perceived quality (Reimer and Kuehn, 2005). These variables have been explored in numerous literature reviews (Ezech and Harris, 2007; Garlin and Owen, 2006; Turley and Milliman, 2000; Kearney *et al.*, 2007).

While providing valuable insights to research and practitioners, the research in the customer/service environment domain has been limited to what Turley and Fugate (1992, p. 41) call the atmospheric/image perspective; that is, on the “controllable factors associated with the internal and external environment of a service facility which elicits an emotional or physiological reaction from consumers.” Operational or customer use and experience perspectives have been largely neglected; that is, the extent to which the service environment is designed for use and around the customer rather than around operations, which is in line with the service-dominant logic (Vargo and Lusch, 2004, 2008a).

Edvardsson *et al.* (2005, 2010) provide a somewhat broader framework for the service environment/customer interplay. The authors develop the notion of the “experience room” – a place allowing representations of service experiences. Six design dimensions are argued to constitute the experience room, including:

- (1) physical artefacts;
- (2) intangible artefacts;
- (3) technology;
- (4) customer placement;
- (5) customer involvement; and
- (6) interaction with employees.

By including interactions with technology and its role in the service process, as well as the roles of the customer in the value-co-creation process, the experience room model incorporates operational, customer use, as well as atmospheric perspectives.

Whereas Kotler (1974) highlights four sensory channels creating atmosphere, which influences the “qualities of space” which subsequently impacts the probability of a purchase, Bitner (1992) extends the environmental or design dimensions impacting the customers. In her model, the four sensory channels are categorized as “ambient conditions” and extended by two additional categories “space/function”, that is the layout, equipment, furnitures, etc. as well as “signs, symbols and artefacts”, that is

personal artefacts, signage, style of decor. The experience room model (Edvardsson *et al.*, 2005, 2010) contributes with additional design dimensions, namely the placement and involvement of customers, their ability to interact with staff as well as technology. Owing to its recentness, comprehensiveness and the extensions made, it was deemed most appropriate to adopt it for the analysis of the empirical material in this study.

Knowledge gap and aim of study

Current research in the customer-environment interaction field is dissonant with respect to the current role of the customer, and neglects the customer perspective in its research and models. Moreover, diversity in empirical settings is needed in order to enrich understanding of customer-environment interactions. The aim of this article is to identify and describe important dimensions of the service process as defined by customers, and to compare the results from a specific use context with the recent conceptualization of the experience room.

Empirical context and research design

We chose public transport as an empirical context, as the service is essentially a utilitarian “people processing” (Lovelock and Wirtz, 2007) service, or in terms of Bitner’s (1992) categorization an “interpersonal service”, yet with a strong focus on its facilities in which the process is of particular importance. The trip needs to be planned in some form or the other by the customer, a ticket needs to be purchased, and the bus or train needs to be entered and departed at certain stages. This environment promises to provide a rich source of empirical data. The environment is complex – dependent on, for example, the weather and infrastructure – and the demand varies greatly over time, which places significant pressure on the service environment. Other contexts we considered were hotels, airlines and banks. However, in these cases customers might choose different service levels, such as the standard of hotel, or business class over economy class in an airline. In local transport service settings, there are no such differentiations. A well-functioning and generally accepted public transport system is often regarded as absolutely necessary in order to reduce the negative effects of private car use and to achieve sustainable development in today’s society (Gärling and Steg, 2007). Surprisingly, little research appears to be generally conducted in investigating customers’ perceptions of public transport services (Friman *et al.*, 2001). Clearly, this calls for further research, and a deeper understanding of public transport services is much needed, in order for such services to achieve a higher market share. As in other service contexts, the role of the service environment is very important in public transport. However, it is not only the carrier itself that can be regarded as experience room. Train and bus stations, with their many signs, timetables and layouts, are fruitful research contexts. Other customers also have an impact upon the service experience (Tombs and McColl-Kennedy, 2003). This can be argued to be especially the case in public transport, which is a public place, shared with many other customers of different socio-economic backgrounds. The research design must enable the capture of the process character of the service, and interaction processes between customer and service environment and must be of an exploratory nature. The simple pen/pencil (Goodwin *et al.*, 1996) and diary method (Bolger *et al.*, 2003) fulfils these criteria, and was therefore the method applied in this research. In total, 26 domestic and international students, recruited at a university in Sweden, each conducted four trips using

public transport, during a given week in 2007. The students were provided with a transport diary and were instructed to keep as detailed notes as possible about their service experience in order to ensure the customers' views were captured in the customers' own words (Echeverri, 2005; Griffin and Hauser, 1993). No further instructions were given to the students, in order that the respondents would not be guided in a certain direction. Hence, it can be argued that what respondents noted in their diaries was important to them. The diaries from the 26 students resulted in narratives of exactly 100 service experiences, covering a variety of local and regional buses, and local and regional trains.

Data analysis and coding process

The diaries were transcribed in NVivo8. The qualitative analysis, including memo writing, was conducted in the same programme, applying a constant comparative method and techniques from grounded theory (Glaser, 1978). The inductive coding process started with substantive coding in NVivo8. Open coding of the first four diaries, or 16 service experiences, were conducted. Descriptive codes (Miles and Huberman, 1994) or indicators (Glaser, 1978) were created, such as "driving style", or "activity during trip", which were closely based on the respondents' notes. At this stage, relatively descriptive memos were also written, which accounted for the properties of the indicators. Also, first refinements were made concerning the labels of the indicators, before the open coding process continued with the further diaries. Within that process, selective coding was initiated by comparing the different indicators. Memo writing continued, and this led, together with the selective coding, to the codes or dimensions, by the grouping of various indicators having similar meaning. For example, the indicator "attitude" and the indicator "driving style" were grouped to the code "contact personnel", as both referred to the service provider's staff and their interaction with the customers, as can be seen in Table I.

In a second stage of data analysis, the number of coded text segments or references of the emerging dimensions was computed with NVivo8. This quantitative approach enables us to quickly "get a feel for what we had", and supports the coding process that enables the comparison of the dimensions (Miles and Huberman, 1994).

Six dimensions of the customer's experience of public transport

The qualitative analysis of the public transport diaries revealed six important dimensions of customers' service experience:

- (1) customer processes;
- (2) other customers;
- (3) physical environment;
- (4) contact personnel;
- (5) provider processes; and
- (6) wider environment.

These themes are shown in Figure 1.

Details of the themes are provided in the following section.

Customer processes

"Customer processes" is defined as the activities and interactions customers undergo during their service experience. These include activities undertaken during the trip,

Dimensions and their definitions	Number of references in diaries for each dimension (total = 519)	Sub-dimensions
Customer processes Activities and interactions customers undergo during their service experiences, including activities undertaken during the trip, planning the trip, changing buses or trains, reasons for taking the trip, or buying the ticket	136	Activity during trip Buying ticket Changing bus Mood state Reason for travel Travel planning
Other customers Interactions with other customers – their number and their characteristics, as well as their distribution in the bus or train, as well as travel company	101	Characteristics Interactions Number Travel company
Physical environment The physical environment; that is, the carrier vehicle itself, such as bus or train, and its atmospheric elements, such as noise level, air quality or temperature	99	Distribution Air quality Cleanliness Interior design Luggage space Music Noise level Seats Temperature
Contact personnel Interactions with the staff of the service provider, their actions and attitudes	80	Attitude Actions
Provider processes The service provider processes that create the core service offering	74	Driving style Bus line Information about service Information about stops
Outer environment The wider environment that is not within the control of the service provider, but still has an impact upon the service experience	29	Timeliness Outside surroundings Traffic Weather

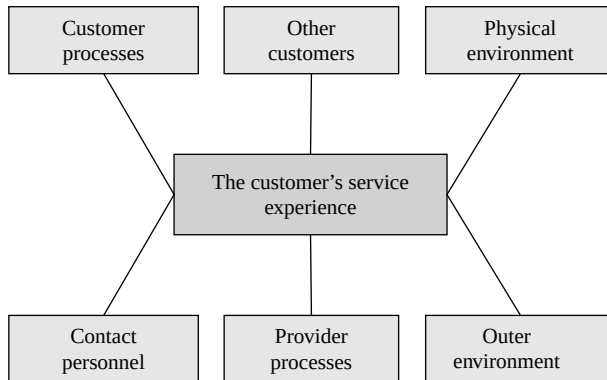
Table I.
Overview of dimensions
and sub-dimensions

planning the trip, changing buses or trains, reasons for taking the trip, buying the ticket and mood states. The different customer processes have a major impact upon the service experience. Whether customers take a planned or an unplanned trip has consequences for waiting time at the bus station. They either went, trusting that a bus would be coming, or planned their trip by consulting online, paper-based or digital timetables, as expressed by the following quote:

I did not plan this trip; I just went to the bus stop and took the next one coming.

Another process often mentioned was buying the ticket. Here, different methods are available, such as paying by credit card or in cash, depending on the payment methods the service provider offers. Moreover, how time was spent during the bus trip was another often-mentioned process, which has an impact upon the service experience.

Figure 1.
The service experience
model



Listening to music, reading, thinking, or just staring out of the window, were common activities, as highlighted in the following comments:

[I was] reading [and] listening to MP3 - > enjoyed the bus trip.

If no activities were available, the trip was regarded as boring:

Trip boring – not having my iPod with me.

Other customers

“Other customers” is defined as the interactions with other customers, their characteristics and the number of them, as well as their distribution in the bus or train. Further, whether or not a customer is travelling in the company of someone else has a particular impact upon the service experience. In instances when the service was used in the company of an acquaintance, perceived travel time and service experience were invariably reported as shorter and positive, respectively. “Other travellers” was the category mentioned with the second highest frequency, and together with the category “contact personnel”, accounted for more than one-third of the references. Both categories refer to the social elements of the service environment. Consequently, it can be argued that this study has revealed the potential of other customers to influence the service experience, as reflected in various traveller comments:

I went to the bus station where I met my flatmate. We had to wait 5 minutes but since we were talking the time passed quite quickly.

In the bus we were sitting together and continued our conversation.

It was nice to talk to my flatmate because the trip seemed to go faster and I did not have to go back alone home.

The number of other customers – or social density (Hui and Bateson, 1991) – has a particular impact upon the service experience: situations of high social density result in negative experiences, while situations of low social density result in positive experiences:

The trip was during lunchtime, at the university bus stop, there are a lot of passengers queuing and it spent more than 5-7 minutes to get all passengers in the bus and seated. It was quite uncomfortable when all seats were filled up and everyone was talking at the same time. Messy Bus!

Physical environment

“Physical environment” refers to the vehicle itself – such as the bus or train – and to bus or train stations, as well as their various atmospheric elements, such as noise level, air quality or temperature. The physical environment impacts upon the service experience, either negatively or positively, through the air quality and cleanliness of the vehicle.

Within this dimension, functionality aspects of the environment – for instance, if the design-enabled customers to store luggage – were highlighted. Also, whether or not music was being played was mentioned, as well as comments about the noise level:

Fixed suitcase on a seat.
Enough space for luggage, easy to handle.

Contact personnel

“Contact personnel” refers to the interactions with the staff of the service provider, including their actions and attitudes. As often noted in the service management literature, the staff plays an important role in the service experience. Our empirical investigations support this. Characteristics of the contact personnel, and especially their attitude towards the customer, were highlighted. The actions of the contact personnel can also affect perceptions of safety. In instances when the bus driver was focusing on several other issues while driving, such as talking to customers, fixing the ticket machine, or talking on the mobile phone, customers expressed feeling unsafe. The visible usage of an “alcolock” – a device for testing the soberness of the driver – was expressed as increasing the perceived safety. Moreover, behaviour such as smiling, greeting, and asking relevant questions of the customers, and waiting for hurrying customers at the bus stop, was connected to positive experiences by the respondents. The following narrative illustrates this:

I almost missed the bus but I ran for it and the driver stopped again and greeted me nicely, which I thought was very nice. So I’m in a happy mood, [be]cause I caught the bus.

A context-specific dimension is the driving style of the bus driver, which had a strong impact upon the service experience, both positively and negatively. Two quotes represent these context-specific issues:

The bus driver was driving [at] normal speed, not hectic. So I felt comfortable.
All the turns and hitting breaks made me [nauseous].

Provider processes

“Provider processes” is defined as the service provider processes that create the core service offering; in the public transport context it includes the bus lines, how often the buses stop during the trip, and whether or not they are on time. Further, the dimension includes information about the stops and the service in general. Provider processes can be expected to have a fundamental impact upon the service experience. In the case of late, or not arriving buses, co-creation of the service does not occur, or it leads to decreased value for the customers. Yet, although the impact of this dimension can be significant, customers did not refer to it particularly frequently:

I really like the digital timetable boards, it makes (it) easy to choose a bus.
I think the new bus plan is very confusing, you always have to subtract 5 or 10 [minutes] to know when the bus arrives. Why not just write the times of departure on each bus station?

Outer environment

“Outer environment” is defined as the wider environment that is not within the control of the service provider, but which still has an impact upon the service experience. It includes the traffic situation, the weather and the natural landscape. It can be regarded as the natural servicescape, comparable to the wilderness servicescape (Arnould *et al.*, 1998) and includes views outside the buses and trains during the journey. While this dimension was not as frequently mentioned as others, it has an impact on important factors such as perceived travel time (Hensher *et al.*, 2003):

There are nice surroundings on the way, so the long time doesn't really matter today.

The trip was in the night so I couldn't see the outdoors, it was boring and tiring.

Interdependencies between dimensions

The inductive explorative empirical analysis revealed six dimensions in the service process, and the impact that these dimensions have on customers' service experiences. However, it is not just single dimensions that impact on the service experience, but to a large extent the interplay between, and the combined effect of, all dimensions. The dimensions form constellations.

Customer processes/physical environment

The immediate physical environment potentially provides resources that enable the customer to carry out important activities. For instance, as noted by one respondent: “If I would be Swedish, I would love to read [a] newspaper in the bus for free”; referring to the free newspapers provided in some buses. Changing buses or trains is another customer process that has an impact on the service experience, and which is influenced by the physical environment:

From then I took two trains to reach Karlstad. I enjoy travelling during the day, but my bags were so heavy and to move from one platform to the other in the train station with my bags was not easy.

Other customers/physical environment

The interaction of this dimension with others is very important here; the actions of an interaction with the bus driver, for instance having the door open or closed (resulting in, for instance, cold air entering), or the actions of other travellers (leaving garbage or free newspapers behind) have an impact upon the service experience:

Lots of school children/teenagers on the bus that loudly discuss their teenage problems. Not so excited with the ride, glad to get off.

Not only did the mere presence of other travellers influenced the service experience, but it also influenced the customers' actions, both positively and negatively, as illustrated in the above traveller's quote. Customers have an influence on the service process, for instance by asking questions, getting on the bus or pressing the stop button. Other customers can play their role, either in accordance with the intentions of the service provider, or in dissonance with them. In turn, this can lead to positive or negative service experiences for the other customers. The following quote illustrates:

One of the other passengers pushed the stop button too late so the driver did a full braking.

The six dimensions related to the experience room model

In a second step of the analysis, our empirical results are related to the experience room model (Edvardsson *et al.*, 2005, 2010). To what extent does the experience room model capture the set of dimensions suggested in the present empirical study? Which dimensions are most important? What are the contents of these dimensions?

The interplay between dimensions identified in this study is not discussed in the experience room model. Therefore, we focus on the comparison of the various dimensions. The customer processes dimension overlaps with the customer involvement dimension – which was described in the experience model as the role(s) taken and enacted by the customer(s). However, instead of becoming involved with the service, some customers instead distance (avoid too much involvement) themselves from the service through their activities, like reading or listening to music. Other travellers can be linked to customer placement, which refers to where the customer is placed, and “staged” in the experience room, and which is argued to be a prerequisite for interaction with others as well as with products. The focus in the current empirical data remains on the interactions with other customers. The physical environment is comparable to the physical artefacts dimension, which represents the physical signs and products, and the infrastructure. In the empirically derived dimension, we also included atmospheric elements, such as temperature, noise levels and music, which were not mentioned in the experience room model. The dimension “contact personnel” is strongly linked to interaction with employees, describing the ways in which the customers’ contacts with the service provider’s staff is present. In the current dimension, the context-specific details are the driving behaviour of the contact personnel. We also provide a definition that was not available in the experience room model – “the interactions with the staff of the service provider, including their actions and attitudes.” The provider processes dimension is comparable to the technology dimension of the experience room model. In the experience room model, technology refers to the nature and role of the equipment that customers interact with, either positively or passively, and also includes how service processes are carried out. However, the experience model does not cover how reliably the core service is provided, nor the core service offering, as included in the provider processes dimension.

One dimension that could not be identified in the empirical data was intangible artefacts, which refers to aspects such as brand and image. One possible explanation for this is that brands and image are not important in forming customers’ experiences of public transport service. Another interpretation is that intangible artefacts exert a more indirect influence on the customer experience, and are consequently not directly experienced, and therefore are not expressed by respondents. The dimension outer environment is not represented in the experience room model. One explanation for this is that the experience model may have a stronger provider perspective, as this dimension is not possible for a service provider to influence. Nevertheless, the impact of this dimension on the customer’s service experience should not be neglected. An overview of the analysis is presented in Table II.

Discussion

The aim of this article is to identify and describe important dimensions of the service process as defined by customers, and to compare the results from a specific use context with the recent conceptualization of the experience room.

Design dimensions of the experience room	Empirically derived dimensions	Contents in the public transport
<i>Customer involvement.</i> The role(s) taken and enacted by the customer(s) in the “experience room”	<i>Customer processes.</i> The activities and interactions customers undergo during their service experience	<i>Similarities:</i> buying the ticket, changing bus, etc. <i>Differences:</i> activities during trip, mood state, reason for travel and travel planning
<i>Customer placement.</i> The “staging” of the customer in the “experience room”	<i>Other customers.</i> The interactions with other customers, their characteristics and the number of them, as well as their distribution in the bus or train	<i>Similarities:</i> characteristics, interactions, number, and distribution, travel company <i>Differences:</i> “Staging” does not apply; the focus rests on the interactions with other customers
<i>Physical artefacts.</i> The physical signs, symbols and infrastructure of the “experience room”	<i>Physical environment.</i> The vehicle itself, such as the bus or train, bus or train stations and their atmospheric elements, such as noise level, air quality or temperature	<i>Similarities:</i> interior design, luggage space, seats, etc. <i>Differences:</i> air quality, cleanliness, music, noise level and temperature
Interactions with employees	<i>Contact personnel.</i> The interactions with the staff of the service provider, including their actions and attitudes	<i>Similarities:</i> attitude <i>Differences:</i> actions and driving style
<i>Technology.</i> The technological equipment with which customers interact, either actively or passively	<i>Provider processes.</i> The service provider processes that create the core service offering	<i>Similarities:</i> information about service and information about stops <i>Differences:</i> bus lines and timeliness
<i>Intangible artefacts.</i> The non-physical infrastructure of the “experience room” – including mental images, brand reputation, narratives, norms and values Not applicable	Not applicable <i>Outer environment.</i> The wider environment that is not within the control of the service provider, but which still has an impact upon the service experience	Intangible aspects such as brand reputation were not reported by the customers Outside surroundings, traffic and weather

Table II.
Contextualisation of the
experience room model in
a utilitarian
facility-driven service

From the inductive analysis of the empirical data, six important dimensions emerged which impact upon the customer’s service experience with (or in) public transport. These dimensions are predominantly reflected in the experience room model. The model can thus be regarded as a useful model in the public transport context. The experience room model consists of important design dimensions of the service environment from the provider’s perspective (Edvardsson *et al.*, 2010). The customer’s and the provider’s processes and resources must be aligned in creating a service system in order to form the basis for favourable customer experiences resulting in use-value.

The experience room model is presented at a high level of abstraction, and needs to be contextualized in specific customer use contexts. As shown by Edvardsson *et al.* (2010), some dimensions are more frequently cited by customers, and have a higher impact on service experience, than others. In the context of customer involvement in the public transport system, customer placement and physical artefacts were mentioned most frequently, and can be regarded as most important to the customer service experience.

Our empirical findings can also be related to the ongoing debate about a new dominant logic of marketing. According to Vargo and Lusch (2004, 2008a), the service-dominant logic perspective posits goods as resources that are used in service provision; that is, customers evaluate the experience of goods and services as “value-in-context.” Service-dominant logic describes “economic and social actors within networks interacting and exchanging across and through networks”, which implies the context of value creation is networks of networks (resource integrators) (Vargo and Lusch, 2008b, FP 9). Value is uniquely and phenomenologically determined by the customer (or beneficiary) on the basis of value-in-use in the customer’s own context (Vargo and Lusch, 2008a). The service environment can be viewed as the context within which service is co-created and value-in-use is assessed. Customers may assess the same service very differently, and the same customer might assess the service differently from one occasion to another.

Since both the servicescape, and the experience room model and research building on servicescape model, seem to focus predominantly on the provider perspective, taking the customer perspective – as this study does – provides new insights. When focusing on dimensions of the customer’s experience, and focusing on value in-use, the service environment should be viewed as a resource; one that assists the customer in the value-co-creation process (Vargo and Lusch, 2008a).

Although Bitner (1992) includes the facilitation of customers’ goals as one function of the servicescape, subsequent research building on her framework largely focuses on the effect on the customer, rather than the usability of the servicescape/experience room for the customer. One explanation for this predominant focus of most research is the common empirical setting, which is retailing. In retailing, the atmospheric and image perspective is more predominant than in a facility-driven utilitarian service context such as public transport. Consequently, a new view of the customer in connection with different empirical contexts for the research of customer/environment interaction is proposed. This original perspective allows for new insights in the research domain, and enables us to make various contributions to the field. Opportunities arise to include other concepts in the analysis of the environment, as was done in Dziekan’s (2008) study of public transportation, including concepts such as usability and self-explanatory systems. This is consistent with a service logic, in which the role of the company is to support the customers’ processes (Vargo and Lusch, 2008a; Grönroos, 2007).

The contributions of the paper are threefold. First, the paper contributes by acknowledging the importance of dimensions such as interactions with other customers (Tombs and McColl-Kenndey, 2003) as well as the physical environment (Bitner, 1992) on the customer service experience, and the applicability of the experience room model (Edvardsson *et al.*, 2010) in a different service context.

Second, the paper demonstrates the interdependencies between dimensions and their impact on the customer’s service experience through an inductive analysis of empirical data from the customer’s perspective. The results were then related to the dimensions in

the experience room model, and similarities and differences were identified. One of the most important differences is the impact from the external service infrastructure; in this case the surroundings, other traffic and the weather. External infrastructure may therefore be proposed as a new dimension in the experience room model. “Intangible artefacts” was not identified as an important dimension in the public service context. Our interpretation of this result is that brand and image are not important in this context. In relation to the other five dimensions in the customer experience room model, some differences in each of these dimensions were identified, suggesting some refinements in the model. However, other service contexts should be studied to corroborate these findings.

Third, the empirical data highlights a forgotten perspective in the study of the interaction between customer and physical environment: the customer use perspective. This perspective appears to be promising in its potential to contribute to the understanding of this phenomenon, especially given the increasingly predominant focus on self-service environments such as retail banking, retailing and airports.

Managerial implications

This is an explorative study, and managerial implications cannot be drawn too broadly. However, the results suggest that the customer processes, social interactions between customers, and the physical environment, have a major impact upon the service experience and value-in-use. However, the dimensions do not operate solely in isolation in having an impact. The customer’s activities and interactions with other customers throughout the service process, and in co-creating the service, are interdependent and important drivers of the resulting service experience and value-in-use. Thus, public transport service providers need to identify and manage these “experience drivers”, perhaps more carefully than they have generally done so to date. This is not to say that the intangible environment, contact personnel and provider processes are not important. The managerial implication is rather that it is not sufficient to focus solely on these factors in isolation, in managing and developing public transport services. Or, as Prahalad and Ramaswamy (2002) put it, “companies must learn to co-create value with their customers”.

In regards to the physical environment, the managerial implication is to focus on the use perspective for customers. Is the physical environment designed for use and from a customer perspective? Is the physical environment usable for diverse customers (Hansson, 2006)?

The findings of this study of public transport service are assumed to be equally applicable in other service contexts, since the results are very much consistent with the models of the service environment suggested in earlier research. However, industry- and company-specific issues must always be taken into consideration, and impacts upon aspects such as image and brand may be major considerations in some companies and for some services. The latter aspects have not been identified in this study.

Limitations and future research

A limitation in this study is its focus on only one empirical context, with data collected from customers, each with various earlier experiences of public transport service. In future studies, other empirical contexts should be included, such as hotels, airlines or education services (such as a university environment). Comparing results from studies

taken across at least four different service environments and including various customer groups would provide a richer empirical basis than is provided in this study of one service environment only. Furthermore, we recommend a study in which the impact of customers' favourable and unfavourable service experiences on value perceptions, word-of-mouth and future behaviour are studied. Based on such a study, a theoretical framework could be developed in which the impact of customer service experiences on value perceptions and behaviours are explained. We also suggest a study in which the customer use perspective of the physical environment is explored in greater depth, since this appears to have a major impact upon the service experience.

We also suggest a study in which the point of departure is favourable and unfavourable service experiences, as defined by customers, and which explores the drivers of the respective experiences. Such a study will assist in identifying the role of the environment compared to other factors, and also in identifying the environmental dimensions that are most influential in forming customers' experiences and in driving customers' behaviour. Finally, we suggest a further study in which the service environment is simulated, and in which different "service test-drives" are provided, where customers experience their interactions in a simulated experience room. Such a simulated laboratory environment would enable the exploration of various service environment designs, and comparison of the resulting customer experiences.

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