

Heritage sites experience design with special needs customers

Special needs
customers

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Abstract

Purpose – The purpose of this paper is to examine the effect of including customers with special needs in the design of cultural and heritage services before the actual experience takes place.

Design/methodology/approach – Inclusive research through co-creation took place in the city of Barcelona, Spain, in 2017, comparing the effect of including (Route 2) or not including (Route 1) customers with visual and learning difficulties in the service design process of heritage walking routes.

Findings – The results show that the most important encounter in the heritage site context is communication, although the usage and service touchpoints were also significant. In addition, results showed that the ideal encounter or touchpoint should take place before the stay.

Originality/value – This paper contributes to learning about the designing of cultural and heritage experiences and including people with special needs in the service design process before the actual experience takes place.

Keywords Co-creation, Cultural and heritage sites, Customers with special needs, Inclusive research, Service experience innovation, Tourism for all, Access, Special needs, Experience design

Paper type Research paper

Introduction

According to the [European Commission \(2013\)](#), from 2011 to 2020, the potential market of people with special needs is quite significant. The design of tourism and cultural sites and services for this segment of population will create new market opportunities ([Leidner and Bender, 2007](#)). Thanks to the United Nations Convention on the Rights of People with Disabilities ([United Nations, 2006](#)), the right of people with disabilities to have access to all parts of the world is fully recognized. Hospitality organizations are meant to facilitate enriching experiences for all. Therefore, managers of heritage sites that aim to offer satisfactory cultural experiences for disabled people need to have an in-depth understanding of any individual, meeting their needs using universal design principles. On top of that, they need to take into account the values of independence, equality and dignity, enhancing the

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“memorable accessible tourism destination experience” (Darcy and Dickson, 2009) as one of the key foundations for sustainable development (Zhelyazkova *et al.*, 2007).

Payne *et al.* (2008) introduced a framework of value co-creation based on service-dominant (S-D) logic (Vargo and Lusch, 2004; Vargo, 2009) using three components: consumer and supplier value creation, processes and encounters. The underlying study focuses on the third component, encounters. The encounter process takes place between customers and suppliers at any stage of the consumer experience.

Although co-creation has been fully recognized in academic and professional practices (Binkhorst and Den Dekker, 2009; Buhalis and Sinarta, 2019; Gössling *et al.*, 2010; Mossberg, 2008; Schmidt-Rauch and Nussbaumer, 2011), most organizations were found to have a surprising lack of insight regarding value co-creation when customers have special needs in general and at heritage sites. There is limited empirical research in hospitality on how to successfully create and manage co-creation processes with customers with special needs. A co-creation-based approach has seldom been used within the context of cultural heritage routes. The co-creation approach will help to gain understanding of how to cater to special access requirements at cultural heritage sites and face the challenges found in the literature. This paper reports on the “Heritage Sites Design Project” undertaken in Barcelona in 2017. It seeks to contribute to knowledge of how the co-creation process involving people with special needs can help improve the design and performance of routes in terms of visitor satisfaction when the touchpoints or encounters are conveniently co-selected and co-designed.

This involves obtaining greater knowledge on customers and their communication and access needs. It also requires the identification of touchpoints or encounters where co-creation with customers with special needs can add value to the process, because not all encounters are the same (Payne *et al.*, 2008). Furthermore, it means determining whether what Gremler (2004) refers to as “critical encounters” are present. It is essential to identify the opportunities for value co-creation and to look for ways to engage the customer with special needs in co-creation behaviors while considering the characteristics of the group (Payne *et al.*, 2008). Until now, the models studied in the co-creation of value have not considered the role of the consumer as an operant resource (Lusch *et al.*, 2007) when they have special communicative or learning needs. All of this will orient heritage site managers in preventing existing resources from being inappropriately used, impeding satisfaction with tourist destinations (Chathoth *et al.*, 2013). Therefore, this study hopes to take on these considerations and provide heritage sites with a guide on how to adequately manage the value co-creation process, identifying the touchpoints where co-creation with consumers could add value with the segment of customers with special needs.

First, the concept of co-creation is described and linked to people with special needs. Second, the methodological approach and empirical study are presented. Finally, the paper addresses findings, conclusions and theoretical and practical implications of the study for heritage sites.

Literature review

Value co-creation for hospitality heritage sites

When various actors create value in a collaborative way and on a voluntary basis, it is referred to as value co-creation (Busser and Shulga, 2018). Value co-creation is increasingly initiated by consumers, changing innovation from top-down to bottom-up (Binkhorst and Den Dekker, 2009; Merz *et al.*, 2009). Service providers nowadays are challenged to learn from customers to co-create value (Grönroos and Voima, 2013). Vargo and Lusch (2008) and

O’Cass and Ngo (2011) also argue that value co-creation is a collaborative process of co-innovation when new products and services are developed together with customers.

Often, tourists are the object of study after they arrive at a destination, resulting in tourism and hospitality experience research focused on what happens during the stay (Blazquez-Resino *et al.*, 2013). However, especially for the relatively unknown group of people under study – customers with special needs – any activity should be adapted first to their special needs and characteristics. Consequently, in a kind of natural way, co-creation should be present before the actual visit takes place, to co-design the experience with the user. This is in line with how Auh *et al.* (2007) define co-creation or with co-creation as defined by Binkhorst and Den Dekker (2009): it means designing *with* people instead of *for* people. Jansen and Pieters (2018) introduced the procedure of “complete co-creation” consisting of a process based on seven principles in which the end users play a central role.

At any hospitality firm, employees can be seen as actors on a stage, or “operant resources” (Shaw *et al.*, 2011), challenged to connect with the increasingly participative guests to engage them in the co-creation of their own customer experience (Baum, 2006). In this environment for dialogue, communication has become an essential tool for co-creation. Tussyadiah (2014) provided additional evidence by introducing the concept of “mediator”, meaning human resources (e.g. tour guides) or materials (such as scripts or guidebooks) that, in many cases, facilitate or obstruct the tourist’s customer experience. A supplier normally provides customers with these in an attempt to improve their customer experience. Customer involvement in producing service experiences has become a fundamental practice for hospitality companies (Chathoth *et al.*, 2013).

Studies have proven that the outcomes of co-creation value processes have improved the experience significantly (Chan *et al.*, 2010) because of the interactions of various stakeholders (McCull-Kennedy *et al.*, 2012). Recently, Rihova *et al.* (2018) highlighted the social value for tourists because of customer-to-customer (C2C) interactions. This type of value goes beyond customer-dominant logic; it often cannot be controlled by managers, and it contributes to the bottom-up movement (Binkhorst and Den Dekker, 2009). Interestingly, their empirical study, realized in the context of a festival, shows that the social value of tourists could be enhanced using C2C co-creation practices (Rihova *et al.*, 2018). One can imagine that C2C co-creation for tourists with special needs is even more crucial, and the added value is expected to be even higher when it comes to sharing a tourism experience with “people of their kind.” People with special needs are probably more willing to help each other improve the tourism experience because of the simple fact that they know, more than anyone, how important it is to receive special attention for the special needs they have.

According to Björnsdóttir *et al.* (2015), people with special needs have had no say in their own lives throughout much of history. A change in focus from product thinking to consumer thinking enables the understanding of customers’ needs, making them active participants in generating innovative ideas for new products or services or improving existing ones (Bharadwaj *et al.*, 2012; Crawford and Di Benedetto, 2008). However, people with special needs were not considered valuable contributors to value co-creation until recently (Walmsley and Johnson, 2003). When giving voice to people with special needs in inclusive research, the exploratory process for understanding customer needs will inform the early stages of design (Tussyadiah, 2014).

In business literature, experience design is often referred to as the process of designing for services characterized by their experiential nature (Zomerdiijk and Voss, 2010). Engagement is stimulated through a personal and memorable way of connecting with the customer (Tussyadiah, 2014). Nevertheless, to maximize the value generation process (Chathoth *et al.*, 2013) and to ensure it is not merely an exercise, heritage site suppliers must

pay special attention to engaging customers with special needs in the process. They must be capable of giving learning support to participants by showing them the benefits of the process. Mutual learning and commitment during the process will depend on the supplier's capacity to involve customers with disabilities.

Participants with special needs will be likely to participate in the process when they see that the benefits of the process will improve their cultural experience, and when they feel they are an operant resource (Lusch *et al.*, 2007) capable of collaborating actively in all stages of the process. Some authors (Binkhorst and Den Dekker, 2009; Buhalis and Sinarta, 2019; Jernsand *et al.*, 2015) go even further, claiming that tourists are seen as co-producers of the experience. It can even be argued that innovation takes place above all in real-time, whilst the experience is underway (Buhalis and Sinarta, 2019).

It is important to remember that individuals with disabilities have to face significant barriers in their everyday lives, be they physical, communicative or attitude-based. Therefore, their predisposition to taking part in the co-creation process and benefitting from it will largely depend on the supplier's capacity to deal with a threefold challenge, which is as follows:

- (1) getting to know the special needs of the group;
- (2) responding to these needs for communicative adaptation; and
- (3) emphasizing the benefits that value generation will provide for the cultural experience in emotional, cognitive and sensory terms.

Only then will the consumer with special needs feel that the effort involved in participating in the process is worthwhile, once the new cultural and heritage experience has been created for their benefit. Tourists are particularly involved and able to express themselves on site (Mathisen, 2013).

To successfully co-create, organizations should create experience environments in which dialogue can take place between different stakeholders. Ideally, this should be done for each of the encounters during the co-creation process, communication, usage and service touchpoints. In such an experience environment, long-term relationships with customers can start and grow, and new communication activities may be tried out in each stage of the co-creation process. All this will consequently support customer learning and foster organizational learning.

Communication encounters are considered activities which connect visitors with staff for communication and information. For instance, through "anticipatory story materials" with visual elements and pictograms designed specifically for a better understanding of the activities for participants with learning or cognitive difficulties. The second encounter or touchpoint, usage, is the concept of use of the product or service and the supporting features of this use. The third encounter, service, refers to participants' interactions with visitors and staff (e.g. the tour guide).

Methodological framework

The underlying empirical study, based on the "Heritage Sites Design Project", released in Barcelona in 2017, consisting of two cultural heritage routes:

- (1) Route 1: Sants-Montjuïc, initially meant to be a pilot test for designing heritage routes "for all." Customers with special needs were taken into account mainly during the intake when starting the route. Route 1 is referred to as Study 1.
- (2) Route 2: Pedralbes-Monestir de Pedralbes, starting from a new participative and co-creative focus in which people with special needs co-designed the route before

the actual stay to ensure a successful experience, discovering touchpoints that would help to ensure an excellent experience. Route 2 is referred to as Study 2.

Special needs customers

The project was approved by the University Research Ethics Committee, and it sought to answer the following research questions:

RQ1. Which encounters or touchpoints – communication, usage, or service – generate the most value for collaboration and learning when co-creating with participants that have special needs?

RQ2. When is the effect of value co-creation generated before, during or after the stay?

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Participants

In Study 1, 20 individuals participated – 13 with special needs and 7 without special needs. In Study 2, 32 individuals participated – 27 with special needs and 5 without special needs. Both groups were made up of individuals from 17 to 65 years old (Table I). Nine individuals responded to the post-route questionnaires in Study 1 and 11 did so in Study 2 (Table II). Participants were selected for the study according to two criteria. First, given the nature of the research, the study focused on participants coming from representative associations that

Route	No. of participants with intellectual disabilities	No. of participants with sensorial disabilities (visual)	No. of participants with physical disabilities	No. of participants without special needs	Total participants
Route 1	9	2	2	7	20
Route 2	12	14	1	5	32

Table I.
Sample description (Participants)

Participant	Route	Name	Disability type	Gender	Age	Degree of disability
#P1	Route 1	Alba	visual	Female	32	mild
#P2	Route 1	Miguel	visual	Male	57	mild
#P3	Route 1	Clara	intellectual	Female	23	mild
#P4	Route 1	Ana	intellectual	Female	37	mild
#P5	Route 1	Narcís	intellectual	Male	34	severe
#P6	Route 1	Genís	intellectual	Male	31	severe
#P7	Route 1	José	intellectual	Male	26	severe
#P8	Route 1	Mario	physical	Male	23	severe
#P9	Route 1	Lluís	none	Male	57	none
#P10	Route 2	Paquita	visual	Female	65	mild
#P11	Route 2	Neus	visual	Female	53	severe
#P12	Route 2	Alba	visual	Female	25	severe
#P13	Route 2	Miguel	visual	Male	20	mild
#P14	Route 2	Paco	intellectual	Male	56	severe
#P15	Route 2	Raquel	intellectual	Female	26	mild
#P16	Route 2	María	intellectual	Female	17	mild
#P17	Route 2	Pol	intellectual	Male	32	mild
#P18	Route 2	Martín	physical	Male	57	mild
#P19	Route 2	Marta	none	Female	63	none
#P20	Route 2	Andrés	none	Male	65	none

Table II.
Responders from the sample

were willing to take part in the visit. Therefore, any participant willing to experience the visit was able to do so. Second, the study sought diversity in users' profiles, so participants came from different organizations representing different types of disabilities. The participants involved in the research were heterogeneous, suffering from diverse disabilities or from none. The level of disability of participants in each group ranged from mild to severe. Individuals with impaired hearing did not participate, although they were invited to do so by the corresponding organizations.

Research methods for data collection before, during and after the stay

For both Study 1 and 2, data collection was undertaken in Phase 1, before the start of the pilot test (stay), and in Phase 2, during and after the pilot test (stay).

Data collection in Phase 1, before the pilot test (stay)

Conversations within focus groups were recorded and transcribed to obtain information on the valuable ideas generated in the touchpoints prior to the pilot test. Participants with disabilities only participated in the focus groups from Study 2 before the stay; they were unintentionally excluded from Study 1 before the stay. The participants involved in the focus groups in Study 2 were P10 and P16, with mild levels of visual and intellectual disability, respectively. The stakeholders involved were two members of heritage site staff, two representatives of the local administration, two individuals from associations representing the disabled and the two researchers.

In Study 1, only two previous focus groups were organized. Stakeholders were made up of two members of heritage sites staff, two members of local administrations, two individuals from associations representing the disabled and the two researchers. Decisions related to the design of the route (the appropriateness of including relevant items such as the number of sites initially selected, route length or the adapted material to be used on the route to increase autonomy) were decided exclusively by the group of stakeholders initially involved and fully developed by the researchers.

In Study 2, six focus groups were organized and people with special needs were included from the first stage. Innovation basically occurred in Study 2 from the third to the fifth focus group session, where appropriate initiatives coming from the opinions of people with special needs were incorporated.

Data collection in Phase 2, during and after the pilot test (stay)

In their role as participants and observers, researchers collected information drawn from participants' comments and behavior during the pilot test. After the stay, multiple participants from pilot tests were individually interviewed in both studies. Nine out of 20 individuals from Study 1 answered a satisfaction questionnaire on their travel experience. In Study 2, 11 out of 32 individuals participated (Table II). In both data collection phases, researchers attempted to maintain participants' level of diversity in terms of both, their type and level of disability. The questionnaire included questions about participants' heritage route experience. The questions were similar for Studies 1 and 2. Participants were asked about their experience using a variable dichotomy: positive/negative perception of the heritage experience. The studies also used open questions on participants' perception of the experience, communication with the heritage site staff (communication encounter), provision of services (usage encounter) and the quality of customer service (service encounter).

To set the scope of the framework and of the data collection process, the practice elements' concept introduced by Holttinen (2010) was used. Therefore, researchers collected more than 60 photos and took notes throughout the visit, including reflections and

observations made during the fieldwork, types and patterns of individual behavior and group dynamics generated, and features of the natural environment and physical landscape.

This was also used recently by [Rihova et al. \(2018\)](#) in their study of C2C practices in the context of a festival. Along the same lines, data from the identification of emotions expressed by participants were collected throughout the route through observation techniques, handwritten notes and in interviews held after the visit.

Data analysis

Data analysis started with the immersion into data and familiarization with researchers' notes once fieldwork was finished. Notes were digitally transcribed, and Atlas-Ti software was used to analyze and codify the data. Thematic analysis was used in the first stage ([Bazeley, 2007](#)); codes were identified, distilled, re-labelled and merged to ensure proper analysis. Three main categories emerged in the co-creation process and some abstract categories emerged from the codes used in the co-creation process (e.g. perceived individual differences and behavior), emerged emotional outcomes (e.g. satisfaction, happiness, learning outcomes, perceived sense of belonging to a group, security, disappointment) and value outcome encounters (e.g. verbal communication and relationships, tactile maps, signposting, scripts, storytelling). Codes were then re-codified, which allowed information to be grouped into three main categories with sub-codes: communication, usage and service for both Studies 1 and 2. Sub-codes were used to select the most relevant theoretical-practical codes to be used in the cross-case analysis in the following step. The Atlas-TI software was found to be of great use when identifying patterns of data related to the three encounters and the observable value outcome.

Findings

In terms of customer satisfaction, significant results were obtained after including visitors in the service design process before the stay (Route 2). The level of satisfaction of the participants from Route 1 was very low and was significantly higher in Route 2.

The findings show that the most important encounter in the heritage site context is communication, although the usage and service touchpoints were also significant. Regarding the communication encounter, the potential visitors in Study 2 assessed the anticipatory material very positively. Visual and tactile elements and updated information were used ([Appendix 1](#)).

Applying the wayfinding design system ([Paolis and Guerini, 2015](#)) during the second encounter or touchpoint, usage, contributed to better engaging customer dialogue and understanding. The process allowed for the generation of prototypes in the form of 3D tactile models and dossiers with relief and braille ([Appendix 2](#)). In Study 1, it was observed that the absence of adapted materials in braille or plain language, aimed at providing visitors with autonomy, was a significant constraint to customers having a positive cultural experience, as they were unable to take part in the activity using support elements to gain autonomy and improve their learning. On the other hand, when the adapted material met the needs of participants with communicative and learning difficulties, as in the case of Study 2, new opportunities for active participation and the enhancement of customers' experiences emerged, increasing their level of satisfaction with the cultural visit enormously.

For the third encounter, service, visitors' suggestions and opinions were included, and they were able to share their experience with the tour guide or the staff of the heritage sites. In Study 2, participants were encouraged to take part in a group activity called "Identifying natural elements in the leaves of trees along the route" aimed at better understanding the natural elements along the route in a dynamic and experienced way. This was possible

thanks to adapted tactile material in braille or visual material with easy reading to provide customers with special needs with the required resources. It was shown that by doing so, customers experienced improved group participation and greater enjoyment when interacting with other participants and the tour guide during the activity. Meanwhile, in Route 1, it became clear that when the tour guide, as a personal mediator, lacks knowledge or communication skills, their scarce experience and knowledge regarding disability and social inclusion became a limiting factor for the cultural experience. This was especially true for customers with special needs, who were not satisfied with the overall experience. Consequently, in the case of Route 1, the nonpersonal mediating elements such as adapted materials failed to be useful, and participants failed to make good use of them.

Table III shows a description of the quotes from each touchpoint, taken from the focus groups and post-route interviews. From the information obtained, it is clear that it is essential to create communication touchpoints to design products and services before the stay, giving a voice to the customer with special needs to generate opportunities to co-design the improvement of the service.

New signposting was used for clearer indication within the heritage sites, the most sensorial paths were selected with a wayfinding design system, taking into account the different special needs of the visitors, and resting areas were selected for the group. Professional and experienced tour guides and interpreters and special materials to improve the understanding of the route ensured that enough information was provided for participants to make decisions.

Touchpoint	Quotes Study 1	Quotes Study 2
Communication	<p>“Nobody provided us with the information we needed to make decisions before the stay, and we found the route very boring.” (#P1, #P2, #P3, #P4)</p> <p>“There was not much information available online, and it seemed that the materials from this activity had already been used.” (#P1, #P2, #P3, #P4)</p>	<p>“We took part by giving our opinion of the route before the stay, and we found the route very entertaining and appealing.” (#P15, #P16, #P17, #P18)</p> <p>“We were given all the material to be used during the route in advance, so we could make a decision on the appropriateness of our participation.” (#P15, #P16, #P17, #P18)</p> <p>“We were given a very visual anticipatory story with pictograms, so it was very easy to understand what was going on in the route.” (#P15, #P16, #P17, #P18)</p>
Usage	<p>“We were missing a tactile map and adapted materials in braille, so we were unable to orient ourselves.” (#P1, #P2)</p> <p>“We didn’t visit any sensorial or pleasant spots, so we felt a bit stressed out during the activity.” (#P1, #P2)</p>	<p>“There were tactile maps available, and throughout the route we were able to touch different heritage objects.” (#P10, #P13)</p>
Service	<p>“The tour guide talked very quickly, so it was difficult for us to follow the activity.” (#P1, #P2, #P3, #P4)</p> <p>“The tour guide was nice, but didn’t seem to have prior experience dealing with people with special needs.” (#P1, #P2, #P3, #P4)</p>	<p>“Throughout the route, we were accompanied by staff who asked us how we felt.” (#P10, #P13, #P15, #P16, #P17, #P18)</p> <p>“The tour guide was fantastic and very professional, he really made all the difference” (#P10, #P13, #P15, #P16, #P17, #P18)</p>

Table III.
Content of quotes on each theme

Discussion and conclusion

Conclusion

From the underlying study, it can be concluded that universal accessibility is an area of significant underperformance by heritage site organizations.

This study proves that when people with special needs are included in the design process, they become co-producers and co-innovators of their cultural experience, improving the experience and adapting it to their needs (Binkhorst and Den Dekker, 2009; Jernsand *et al.*, 2015; Tussyadiah, 2014).

Contrary to the studies by Navarro *et al.* (2015), in answering RQ1, it can be concluded that the most influential criteria for co-creation emerges before the stay and in the booking phase, during the communication encounter, when the service has to be adapted to a new segment of people with special needs.

It can also be concluded that by giving a voice to individuals with disabilities and by using communication aids when needed, a mutual and voluntary process of collaboration, learning and dialogue can be generated.

Theoretical implications

The results of the underlying study are in line with previous studies by Tussyadiah (2014) and Hwang and Seo (2016), who assert that being aware of users' needs in advance can lead to a better customer experience. A voice should be given to the customer with special needs before the stay (Bharadwaj *et al.*, 2012; Crawford and Di Benedetto, 2008) so the experience can be co-created and/or adapted to respond to their specific needs and to turn the route into a unique and excellent experience.

In line with previous studies by Suri (2002), the use of scripts was found to be very useful because of the fact that storytelling and narrative is a method that positively engages users.

The findings of Minkiewicz *et al.* (2016) can also be confirmed; service failures occur mostly when the group is made up of different cultural groups as, in the case of Route 1, the different needs of those with and without disabilities were not considered. As a result, it proved difficult to keep the group unified and not divided by type of disability. Nevertheless, when the co-creation process involving those with disabilities took place before the stay, there was sufficient room to make adjustments to meet the needs of different groups. However, it was still more complicated than if the group in question was homogenous in terms of disabilities. Here, it is important to avoid what Abney *et al.* (2017) and Heidenreich *et al.* (2015) call "negative co-creation outcomes" and to instead ensure that customers with special needs serve as operant resources in the process (Lusch *et al.*, 2007), facilitating customers' participation in the creation of services (Auh *et al.*, 2007; Binkhorst and Den Dekker, 2009) and enhancing positive interactions among customers (Torres, 2016).

When people participate in the design process in an open space created specifically for the purpose where stakeholders interact on a voluntary base, this clearly has a positive effect on the outcome of the value co-creation process (Grönroos and Voima, 2013; Matthing *et al.*, 2004; Yen *et al.*, 2004).

Practical implications

For effective targeting of the diverse range of people with special needs, a new marketing approach should be adopted that is different from traditional heritage and cultural marketing.

Marketers could use the S-D logic model to help design encounters and relationships with the disabled market. Encounters were identified to get customers and companies to interact and to determine the use of the allocated resources. Blind or visually impaired visitors are essential partners in co-designing tactile and braille support material, and visitors with intellectual disabilities are essential partners in co-designing support materials in visual and plain language for a better understanding of the cultural heritage route. Moreover, material adapted beforehand, that is available both online and offline, will help managers to better understand the activity and facilitate the decision-making process of people with special needs. Accessible routes can help heritage sites stand out to the special needs market. This may be particularly important for positively impacting society and specifically for customers with special needs.

For managers to take on new forms of professional performance, each encounter can serve as a design setting in which prototypes for products and services can be co-designed with all stakeholders, including people with special needs and mediating staff (e.g. tour guides), as well as nonpersonal elements (e.g. adapted materials). This will help to engage customers with special needs and maximize the effectiveness of the value co-creation process (Chathoth *et al.*, 2013).

Limitations and future directions

The authors recognize that some of the limitations of this research were that data were only collected from one location that they were only collected before, during and immediately after the stay, and they only included individuals from the corresponding organizations that were able to accept the invitation to participate. It would be highly recommendable to conduct research with a wide range of organizations representing the diversity of people with special needs, as well as to conduct research sometime after the stay. It would also be a good idea to explore new ways of including and processing all possible customer feedback at any stage of the service – before, during and after the stay, in both the offline and online experience environment. That way, insightful information could result in the co-design of experience environments for dialogue in which consumers, site managers and other stakeholders could be engaged dynamically. It would furthermore be interesting to explore the value added by C2C co-creation (Rihova *et al.*, 2018) particularly for people with special needs. Finally, it would be very interesting to start investigating real-time co-creation and nowness services within the framework of “tourism for all,” concepts recently introduced by Buhalis and Sinarta (2019), as especially tourists with special needs could benefit from enhanced moment creation. At the same time, tourism and hospitality sites could enrich their experience design process learning from this target, enabling the connection with any other target.

References

- Abney, A., White, A., Shanahan, K. and Locander, W.B. (2017), “In their shoes: co-creating value from deaf/hearing perspectives”, *Journal of Services Marketing*, Vol. 31 Nos 4/5, pp. 313-325.
- Auh, S., Bell, S.J., McLeod, C.S. and Shih, E. (2007), “Co-production and customer loyalty in financial services”, *Journal of Retailing*, Vol. 83 No. 3, pp. 359-370.
- Baum, T. (2006), “Reflections on the nature of skills in the experience economy: challenging traditional skills models in hospitality”, *Journal of Hospitality and Tourism Management*, Vol. 13 No. 2, pp. 124-135.
- Bazeley, P. (2007), *Qualitative Data Analysis with NVivo*, SAGE Publications, London.

- Bharadwaj, N., Nevin, J. and Wallman, J. (2012), "Explicating hearing the voice of the customer as a manifestation of customer focus and assessing its consequences", *Journal of Product Innovation Management*, Vol. 29 No. 6, pp. 1012-1030.
- Binkhorst, E. and Den Dekker, T. (2009), "Agenda for Co-creation tourism experience research", *Journal of Hospitality Marketing and Management*, Vol. 18 No. 2, pp. 311-327.
- Björnsdóttir, K., Stefánsdóttir, G. and Stefánsdóttir, A. (2015), "It's my life: Autonomy and people with", *Journal of Intellectual Disabilities*, Vol. 19 No. 1, pp. 5-21.
- Blazquez-Resino, J.J., Molina, A. and Esteban-Talaya, A. (2013), "Service-Dominant logic in tourism: the way to loyalty", *Current Issues in Tourism*, Vol. 18 No. 8, pp. 706-724.
- Buhalis, D. and Sinarta, Y. (2019), "Real-time co-creation and nowness service: lessons from tourism and hospitality", *Journal of Travel and Tourism Marketing*, Vol. 36 No. 5, pp. 563-582.
- Busser, J.A. and Shulga, L.V. (2018), "Co-created value: Multidimensional scale and nomological network", *Tourism Management*, Vol. 65, pp. 69-86.
- Chan, K.W., Yim, C.K. and Lam, S. (2010), "Customer participation in value creation, a double-edged sword? evidence from professional financial services across cultures", *Journal of Marketing*, Vol. 74 No. 3, pp. 48-64.
- Chathoth, P., Altinay, L., Harrington, R.J., Okumus, F. and Chan, E.S.W. (2013), "Coproduction versus co-creation: a process based continuum in the hotel service context", *International Journal of Hospitality Management*, Vol. 32 No. 1, pp. 11-20.
- Crawford, C.M. and Di Benedetto, C.A. (2008), *New Products Management*, McGraw-Hill Education, Boston, MA.
- Darcy, S. and Dickson, T. (2009), "A whole-of-Life approach to tourism: the case for accessible tourism experiences", *Journal of Hospitality and Tourism Management*, Vol. 16 No. 1, pp. 32-44.
- European Commission (2013), *EU Study, Economic Impact and Travel Patterns of Accessible Tourism in Europe*, European Commission, Brussels.
- Gössling, S., Hall, M., Peeters, P. and Scott, D. (2010), "The future of tourism: can tourism growth and climate policy be reconciled? A mitigation perspective", *Tourism Recreation Research*, Vol. 35 No. 2, pp. 119-130.
- Gremler, D.D. (2004), "The critical incident technique in service research", *Journal of Service Research*, Vol. 7 No. 1, pp. 65-89.
- Grönroos, C. and Voima, P. (2013), "Critical service logic: making sense of value creation and co-creation", *Journal of the Academy of Marketing Science*, Vol. 41 No. 2, pp. 133-150.
- Heidenreich, S., Wittkowski, K., Handrich, M. and Falk, T. (2015), "The dark side of customer cocreation: exploring the consequences of failed co-created services", *Journal of the Academy of Marketing Science*, Vol. 43 No. 3, pp. 279-296.
- Holttinen, H. (2010), "Social practices as units of value creation: theoretical underpinnings and implications", *International Journal of Quality and Service Sciences*, Vol. 2 No. 1, pp. 95-112.
- Hwang, J. and Seo, S. (2016), "A critical review of research on customer experience management: theoretical, methodological, and cultural perspectives", *International Journal of Contemporary Hospitality Management*, Vol. 28 No. 10, pp. 2218-2246.
- Jansen, S. and Pieters, M. (2018), *The 7 Principles of Complete co-Creation*, BIS Publishers, Amsterdam.
- Jernsand, E.M., Kraff, H. and Mossberg, L. (2015), "Tourism experience innovation through design", *Scandinavian Journal of Hospitality and Tourism*, Vol. 15 No. 1, pp. 98-119.
- Leidner, R. and Bender, M. (2007), *The European Tourism Industry in the Enlarged Community*, Gaps are Potentials and Opportunities, European Commission, Brussels.
- Lusch, R.F., Vargo, S.L. and O'Brien, M. (2007), "Competing through service: insights from service-dominant logic", *Journal of Retailing*, Vol. 83 No. 1, pp. 2-18.

- McColl-Kennedy, J.R., Vargo, S.L., Dagger, T.S., Sweeney, J.C. and Van Kasteren, Y. (2012), "Health care customer value cocreation practice styles", *Journal of Service Research*, Vol. 15 No. 4, pp. 370-389.
- Mathisen, L. (2013), "Staging natural environments: a performance perspective", *Advances in Hospitality and Leisure*, Vol. 9, pp. 163-183.
- Matthing, J., Sandén, B. and Edvardsson, B. (2004), "New service development: learning from and with customers", *International Journal of Service Industry Management*, Vol. 15 No. 5, pp. 479-498.
- Merz, M.A., He, Y. and Vargo, S.L. (2009), "The evolving brand logic: a service-dominant logic perspective", *Journal of the Academy of Marketing Science*, Vol. 37 No. 3, pp. 328-344.
- Minkiewicz, J., Bridson, K. and Evans, J. (2016), "Co-production of service experiences: insights from the cultural sector", *Journal of Services Marketing*, Vol. 30 No. 7, pp. 749-761.
- Mossberg, L. (2008), "Extraordinary experiences through storytelling", *Scandinavian Journal of Hospitality and Tourism*, Vol. 8 No. 3, pp. 195-210.
- Navarro, S., Cervera, A. and Andreu, L. (2015), "Key factors in value co-creation for disabled customers and hotel services: An exploratory study of hotel managers", *Revista de Análisis Turístico*, Vol. 20 No. 2, pp. 15-21.
- O'Cass, A. and Ngo, L.V. (2011), "Examining the firm's value creation process: a managerial perspective of the firm's value offering strategy and performance", *British Journal of Management*, Vol. 22 No. 4, pp. 646-671.
- Paolis, R. and Guerini, S. (2015), "Wayfinding design and accessibility. Experimental research of new ways to approach the landscape and cultural heritage for wider range of users", *Journal of Engineering Technology*, Vol. 3 No. 2, pp. 72-79.
- Payne, A.F., Storbacka, K. and Frow, P. (2008), "Managing the co-creation of value", *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 83-96.
- Rihova, I., Buhalis, D., Gouthro, M.B. and Moital, M. (2018), "Customer-to-customer co-creation practices in tourism: lessons from Customer-Dominant logic", *Tourism Management*, Vol. 67, pp. 362-375.
- Schmidt-Rauch, S. and Nussbaumer, P. (2011), *Putting Value co-Creation into Practice: A Case for Advisory Support*.
- Shaw, G., Bailey, A. and Williams, A. (2011), "Aspects of service-dominant logic and its implications for tourism management: examples from the hotel industry", *Tourism Management*, Vol. 32 No. 2, pp. 207-214.
- Suri, J. (2002), "Designing experience: whether to measure pleasure", *Green, W. and Jordan, P., Pleasure with Products: Beyond Usability*, Taylor and Francis, London, pp. 161-174.
- Torres, E.N. (2016), "Guest interactions and the formation of memorable experiences: an ethnography", *International Journal of Contemporary Hospitality Management*, Vol. 28 No. 10, pp. 2132-2155.
- Tussyadiah, I.P. (2014), "Toward a theoretical foundation for experience design in tourism", *Journal of Travel Research*, Vol. 53 No. 5, pp. 543-564.
- United Nations (2006), *Convention on the Rights of Persons with Disabilities*, United Nations, New York, NY.
- Vargo, S.L. (2009), "Toward a transcending conceptualization of relationship: a service dominant logic perspective", *Journal of Business and Industrial Marketing*, Vol. 24 No. 5, pp. 373-379.
- Vargo, S. and Lusch, R. (2004), "Evolving to a new dominant logic for marketing", *Journal of Marketing*, Vol. 68 No. 1, pp. 1-17.
- Vargo, S.L. and Lusch, R.F. (2008), "Service-dominant logic: continuing the evolution", *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 1-10.
- Walmsley, J. and Johnson, K. (2003), *Inclusive Research with People with Learning Disabilities: Past, Present, and Futures*, Jessica Kingsley Publishers, London.

- Yen, H., Gwinner, K.P. and Su, W. (2004), "The impact of customer participation and service expectation on locus attributions following service failure", *International Journal of Service Industry Management*, Vol. 15 No. 1, pp. 7-26.
- Zhelyazkova, I., Yarkova1, Y. and Zheleva, A. (2007), "Tourism for handicapped people responsibility and commitment in the period of Bulgaria's accession to the European Union", *Trakia Journal of Sciences*, Vol. 4 No. 4, pp. 39-43.
- Zomerdijk, L.G. and Voss, C.A. (2010), "Service design for Experience-Centric services", *Journal of Service Research*, Vol. 13 No. 1, pp. 67-82.

4224



Figure A1.



Figure A2.



Special needs
customers

4225

Figure A3.

Appendix 2: Usage encounters. Wayfinding design system applied. The best route for groups with special needs was selected (Study 2)



Figure A4.



Plate A1.



About the authors

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