Mobile Ethnography as an Innovative Tool for Customer Experience Research in Tourism – A Case of the Tourism Destination Upper Austria

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Abstract

Service marketing has evolved from focussing on products to services to experiences. Enterprises are nowadays competing for and looking for competitive advantages in experiences rather than customer satisfaction. Even though customer experience management is nothing new, it is a field that has evolved strongly in the last years. Especially in tourism destinations, various local tourism providers struggle with providing high service quality throughout the whole customer journey. Customer experience management has thus become an interesting approach also in tourism research. This paper applies customer experience research by using an innovative research method. Mobile ethnography as a qualitative method transfers the classic ethnographic approach by using mobile devices. Thus, the customer becomes a researcher himself and has the possibility to self-structure his or her data. Especially for tourism destinations, this method allows to “follow” the guest throughout the geographical space that he or she uses and collects data in real-time and in-situ. It therefore overcomes many of the disadvantages of both classic survey studies and ethnography. However briefing of participants and incentivising them turned out to be the main challenges in two projects carried out in the Austrian province of Upper Austria.

Resumen

El marketing de servicios ha evolucionado de centrarse en productos a servicios y experiencias. Las empresas compiten actualmente y buscan ventajas competitivas en las experiencias en lugar de la satisfacción de cliente. Aunque la gestión de la experiencia del cliente no es nada nuevo, es un campo que ha evolucionado mucho en los últimos años. Especialmente en los destinos turísticos, varios proveedores turísticos locales luchan por proporcionar una alta calidad de servicio durante todo el trayecto del cliente. La gestión de la experiencia del cliente se ha convertido así en un enfoque interesante también en la investigación del turismo. Este artículo aplica la investigación de la experiencia del cliente mediante el uso de un método de investigación innovador. La etnografía móvil como método cualitativo combina el enfoque etnográfico clásico mediante el uso de dispositivos móviles. Por lo tanto, el cliente se convierte en investigador y tiene la posibilidad de auto-estructurar sus datos. Especialmente para destinos turísticos, este método permite “seguir” al huésped a lo largo del espacio geográfico que utiliza y recolecta datos en tiempo real e in situ. Por lo tanto, supera muchas de las desventajas de las encuestas clásicas y la etnografía. Sin embargo, las instrucciones para los participantes y sus incentivos resultaron ser los principales desafíos en dos proyectos llevados a cabo en la provincia austríaca de Alta Austria.
Introduction. Problem Statement

International tourism is facing growing competition as new destinations are emerging and customers are becoming more demanding (Porter, 1990; Dwyer, Forsyth, & Rao, 2000; Morrison, 2013). The Internet has increased transparency and the access to information and consumers are therefore gaining more power as they are no longer just information seekers and users, but also content providers on social media and evaluation platforms (O’Konner, 1999; Buhalis, 2004; UNWTO, 2011; Batinic, 2013; Morrison, 2013). Marketing is therefore concentrating more on customer experience management than customer satisfaction (Meyer & Schwager, 2007). However, managing holiday experiences is still a challenge as various service providers need to cooperate in order to create a high-quality service experience (Morrison, 2013). Another challenge concerns the research of customer experience within destinations and the geographical range of customers (Stickdorn & Frischhut, 2012; Stickdorn, Frischhut, & Schmid, 2014).

From Service Management to Experience Management

Tourism as a service industry implies various peculiarities in comparison to the goods industry. The tourism industry is characterized by perishability (services are produced and consumed at the same time), the lack of storage (an unsold airline ticket is a lost one), inconsistency (it is difficult to guarantee high quality as it depends on the customer’s expectation and perception), asset intensity (hotels need to provide ground, a building and furnishing), dependence on location (it is crucial what the destination itself offers), people-orientation (tourism is all about the interaction of staff and customers), inseparability (travel products are sold first, but consumed at a later stage), intangibility (tourism products cannot be reproduced or reused), inflexibility (a hotel cannot change its capacity in order to react to fluctuations in demand), and imitability (how can a business develop a unique selling proposition which is difficult to copy?). (Chase, 1978; Cowell, 1986; Grönroos, 1998; Bateson, 2002). A tourism product in a destination consists of a bundle of services which focuses on a main service framed by auxiliary services (Normann, 2000; Grönroos, 2001; Kandampully, 2002). This bundle is, however, delivered by a number of local service providers within a destination. As destinations are “amalgams of tourism products, which offer an integrated experience to consumers” (Buhalis, 2000: 97), it is important to take a more holistic view (Palmer & Bejou, 1995; Buhalis & Cooper, 1998; Weaver & Oppermann, 2000).

Therefore, service marketing has to take into account these characteristics more than the goods industry (Shostack, 1977; Grönroos, 1982; Parasuraman, Zeithaml, & Berry, 1985). Marketing has seen various shifts in paradigm over the past decades. While at the beginning marketing focused on product brands, in the 1990s it shifted to service-based relationship marketing. In the 2000s, it was customer experience management that replaced this concept (Fine & Gilmore, 1999; Maklan & Klaus, 2011). Meyer & Schwager (2007) point out the differences between customer relationship management and customer experience management in subject matter, timing, monitoring, audience, and purpose.

Customer Experience Management

However, customer experience management is nothing new. The basis of CEM lies within the theories of consumer behaviour and service quality. Many authors already noticed that consumers buy products in order to satisfy expectations (Parsons, 1934; Keynes, 1936; Abbott, 1955). In their CAB theory (cognition, affect, behaviour) Sheppard, Hartwick, and Warshaw (1988) describe CE as sequences of evaluation of past, present and expected experiences, however only including the rational and not the emotional experience. Definitions of CE, however, are still rather vague (Richardson, 2010; Klaus, 2013). Richardson (2010: Online) marks that “it (CE) is the sum-totality of how customers engage with your company and brand, not just in a snapshot in time, but throughout the entire arc of being a customer”. Meyer and Schwager (2007) define customer experience as “the internal and subjective response customers have to any direct or indirect contact with a company”. Data about CE is collected as touchpoints, which are “instances of direct contact either with the product or service itself or with representations of it by the company or some third party” (Meyer & Schwager, 2007). A series of touchpoints is then referred to as customer corridor (Meyer & Schwager, 2007) or customer journey (Stickdorn & Schneider, 2010). Touchpoints can vary in importance and value, according to the customer’s wishes and needs. They can also change within a customer’s life (Meyer & Schwager, 2007).
Many authors agree that the measurement of CE is rather complex (O’Neill, Palmer, & Charters, 2002). Early work includes the SERVQUAL model (Parasuraman, Zeithaml, & Berry, 1988), which received much attention. It has, however, also been criticized for its dimensions, which do not seem to fully cover the complex concept of CE (Sureshchandar, Rajendran, & Anantharaman, 2002). Furthermore, it does not consider the mix of utilitarian and emotional factors (Chitturi, Raghunathan, & Mahajan, 2008) and focuses too much on the assessment of the service-delivery process through the customer (Cronin & Taylor, 1992; Richard & Allaway, 1993). CE however fulfills the service-dominant logic (Vargo, Stephen, & Lusch, 2008), has a much wider interpretation and involves rational and physical as well as emotional, sensorial and spiritual aspects (Gentile, Spiller, & Noci, 2007). In addition, multi-channel considerations have to be added (Sharma & Patterson, 2000; Chandon, Morwitz, & Reinartz, 2005) as well as the whole service process from pre- to post-service period (Berry, Carbone, & Haeckel, 2002; Payne, Storbacka, & Frow, 2008). Different authors worked on overcoming these limitations of SERVQUAL (Bauer, Hammerschmidt, & Falk, 2005; Kheng et al., 2010; Lemke, Clark, & Wilson, 2010; Lo & Chin, 2009; Nantel, 2000). However, they all focused on measuring only specific aspects of CE such as customer loyalty or satisfaction (O’Loughlin, Szmigin, & Turnbull, 2004; Reibstein, Day, & Wind, 2009; Klaus et al., 2013). Klaus & Maklan (2012) developed the EXQ (customer experience quality) as a multi-item scale and multi-dimensional model. Based on Morgan (2007), they define CE as a continuum, namely “an ongoing process of interactions, including gathering of information, evaluation of offerings, physical interactions, purchases, consumption of services, maintenance, and evaluations after consumption” (Klaus et al., 2013: 509f). Therefore CE includes three stages (Voss, Roth, & Chase, 2008): anything that happens before the actual purchase of a service, during the purchase or service delivery itself and after the service period. In the CE continuum, Klaus (2011) proposes that the post-service period turns into a new pre-purchase phase and therefore concludes that a positive CE increases loyalty and the willingness of recommendation (Brown et al. 2005). The application of the customer experience continuum seems to be rather relevant for services, as these are evaluated over all three stages (Zeithaml & Valarie, 1988; Klaus & Maklan, 2007).

Many authors still criticize the scarcity of research on CE (Hill et al., 2002; Roth & Menor, 2003; Stuart & Tax, 2004; Patricio et al., 2008; Verhoef et al., 2009) and the fact, that many methods and tools only focus on single elements of CE (e.g. personas, service delivery process, customer contact intensity) instead of providing a holistic approach (Chase, 1981; Saffer, 2010). While the focus has been strongly on descriptive aspects of CE so far (Weed & Bull, 2004), more recent research puts the measurement of customer experience quality into the centre of attention (Klaus & Maklan, 2012). Most studies on customer experience are still being carried out by classical surveys. Meyer & Schwager (2007) criticize, that companies lack data on emotions. “Yet unless companies know about these subjective experiences and the role every function plays in shaping them, customer satisfaction is more a slogan than an attainable goal.” (Meyer & Schwager, 2007: 11) They therefore created the customer experience modelling (CEM) which should serve as a method for capturing all elements that shape an experience. CE follows the service-dominant logic of Vargo & Lusch (2004). It is therefore not designed, but co-created through various interactions between the customer and the service provider. All these single service elements along a customer journey need to be taken into consideration (Berry et al., 2002). However, not all of these touchpoints (e.g. the social environment) can be designed, as they are not under the control of the service provider (Verhoef et al., 2009). Consequently we need to design situations, which support the customers in co-creating a desired experience rather than predicted outcomes (Forlizzi & Ford, 2000). Authors claim that service design methods need to focus on a holistic view of CE including all elements and touchpoints and slipping into the shoes of the customer (Berry et al., 2002; Teixeira et al., 2012).

**Customer Experience Management in Tourism and Destination Management**

- Customer experience is therefore what companies – also in tourism – are nowadays competing for and becoming crucial for every company’s success (Pine & Gilmore, 1998; Richie & Crouch, 2000; Prahalad & Ramaswamy, 2004; Shaw & Ivens, 2005; Badgett, Boyce, & Kleinberger, 2007; Johnston & Kong, 2011; Klaus et al., 2013) as it has a great impact on the business performance (Prahalad & Ramaswamy, 2004; Verhoef et al., 2009). Because of customer’s power, dissatisfied customers can become a threat to a company (Meyer & Schwager, 2007; Carroll, 2012).

Tourism products consist of a bundle of intangible and immaterial services. It is rather information-intense with a high involvement (Bieger, 2004). In order to study CE in tourism, it is necessary to include all interactions between customers and service providers over all three-stages, during the pre-service, service and post-service period. During the pre-service period, potential travellers make up their mind about where to spend their next holiday by generating information on various channels such as magazines, social media or from recommendations from either close friends and family or from online recommendations (Xiang & Gretzel, 2010; Fotis, Buhalıs & Rossides, 2012; Amaro, Duarte & Henriques, 2016; Miguens, Baglio & Costa, 2008). Once in the destination, tourists seek for information on activities and consume touristic offers. (Gretzel, 2009; Cox, Bourges, Sellittà & Buultjens, 2009). After the journey, tourists often share
their experiences with friends and family or nowadays also on virtual platforms and thus generate electronic world-of-mouth (eWOM). This again serves as the basis for inspiring new potential tourists during their pre-service period (Fotis, Buhalis & Rossides, 2012; Hudson, Roth, Madden & Hudson, 2015; Landvogt, 2017). Therefore, in order to measure customer experience in tourism, both on- and offline services need to be included (Sharma & Patterson, 2000; Jamal & Naser, 2002; Klaus et al., 2013).

Already Pine & Gilmore (1999) stated that creating memorable experiences is the outcome that service providers are aiming for and what they are competing for – also in tourism. The tourism product with its specific characteristics lives from such memorable experiences. However, they are no longer an optional added value, but a must-have of any tourism offer (Larsen, 2007; Cooper & Hall, 2008; Hwang & Seo, 2016). “Consumers today do not ask themselves as often ‘What do I want to have that I don’t have already?’; they are asking instead ‘What do I want to experience that I have not experienced yet?’” (Clavé, 2006: 164) This is due to societal changes, which have led to much more power of consumers. Tourists are nowadays multi-option, quality-conscious, much more experienced in travelling, independent and looking for emotional experiences (Brügger-Sperdin, 2008; Grissemann & Stokburger-Sauer, 2012; Walis, Okumus, Wang, & Joon-Wuk Kwun, 2011; Minkiewicz, Evans, & Bridson, 2014; Mathis et al., 2016). These experiences include multiple interactions between tourists and service providers (Urely, 2005; Lashley, 2008) and have a processual character (Carlson, 1997). “Experiences don’t have a beginning or an ending. They are a continuum.” (Carbone 2004: 63) Experiences are co-created by the service provider and the customer in order to create these memorable experiences (Mathis, Kim, Uysal, Sirgy, & Prebenson, 2016). Experience cocreation is conceived as the new paradigm in marketing as it provides the basis for understanding how experiences are being created (Buhalis & Foerste, 2015; Kandampully, Zhang & Bilgihan, 2015; Torres, 2016). They are often visualized in customer journey maps including the pre-service (perceiving a need, information seeking, booking, travel planning), the service period within the holiday destination and the post-service period (travel back home, online evaluation, eWom) (Stickdorn, Frischhut, & Schmid, 2014). Hence, proposing successful experiences has become a key factor for service providers on destination-level. The main aim of tourism providers is to allow and support the framework and setting for such experiences, which are, however, subjective and individually different (Hirschman & Holbrook, 1982; Brügger-Sperdin, 2008). The tourist him- or herself constitutes his or her own holiday experience (Urely, 2005).

Various stakeholders within a destination deliver the touristic product as a bundle of services. Buhalis (2000) thus calls DMOs as amalgams of stakeholders with a big variety of touristic offers. In Austrian – similar to many other worldwide destinations, destination management organisations (DMO) function on the basis of a community-based model (Bieger, 2004) and thus differ from corporately managed destinations in Northern America (Flagestad & Hope, 2001). These DMOs are usually collectively financed as they emerge from local communities and embedded stakeholders. Another difference of this destination management model is that DMOS show a strong presence of small- and medium-sized enterprises as well as family-run businesses (Cooper, Fletcher, Fyall, Gilbert, & Wanhill 2005; Dregde, 2006). The tourism industry is thus fragmented as SMEs lack industry leadership in comparison to large tourism companies like e.g. in the airline business. DMOs and governments have to step in and take over a coordination role at both national and sub-national (Scott, Cooper, & Bagio, 2008). DMOs nowadays compete on an international level (Buhalis, 2000; Dwyer, Edwards, Mistsilis, Roman, & Scott, 2009) and tourism destination competitiveness has seen high interest in academic literature (Claver-Cortes, Molina-Azorin, & Pereira-Moliner, 2007; Dwyer, Edwards, Mistsilis, Roman, & Scott, 2009; Ritchie & Crouch, 2003, 2011). “Destination marketing has long been structured and had its strategies influenced by tradition, i.e. the colocated perspective of distribution processes and passive customers.” (Lemmetyinen, 2010, p. 131) and thus the consumer has been not considered sufficiently. King (2002) thus claims that the customer has to become an active partner in the marketing process of destination marketers. Also Beritelli, Bieger & Laesser (2014) claim for a new paradigm of destinations where the basic scope is to create added value for both the visitors and the suppliers other than just “serving” them.

On the regional level, thus Austrian DMOs act as the leading organization to coordinate those tourism providers in order to manage the tourism products (Flagestad & Hope, 2001; Strobl & Peters, 2013). The main tasks of DMOs include the planning and development of the destination, the coordination and improvement of all touristic offers and its infrastructure, as well as both strategic and operative marketing of the destination, network building and representation of interest among all stakeholders. The latter includes destination branding, positioning, promotion and distribution of the touristic product, provision of information as well as the coordination of marketing activities (Bieger, 2004; Munar, 2012). The DMO thus plays a crucial role within the coordination of all single tourism providers at a supra-regional level (Bornhorst, Ritchie & Sheehan, 2010; Volgger & Pechlaner, 2014).

**Mobile Ethnography as an Innovative Research Method**

Many authors argue that for understanding the experience from the customers’ point of view, a qualitative approach is necessary (Johns & Gyimothy, 2002; Browning et al., 2009; Jennings, 2010; Palmer, 2010;
Trischler & Zehrer, 2012) as customer experience cannot be measured with surveys and pre-defined categories. A more open approach is needed to analyse what customers experience (Stickdorn, 2009; Bosio, Rainer, & Stickdorn, 2017).

Ethnography as a discipline of anthropology focuses on understanding people’s behaviour and their relationships by observing them and using various techniques like photo/video observation, observation protocols, ethnographic interviews, reflexive photography, cultural probes or storytelling. One major disadvantage of classical ethnographic research is however the fact that it is very time-consuming and cost-intensive, as researchers have to put much effort into observations and need to be on the spot. This is especially the case in tourism because of the geographical scope and temporal extension of tourist journeys (Agar, 1996; Buscher & Urry, 2009; Segelström, Raimakers & Holmåld, 2009; Stickdorn, Frischhut & Schmid, 2014). The rise of digital technology has become a game changer in research. Mobile research ranges from participants taking videos of themselves, calling or texting them to ask them questions, to using mobile devices for geo-location. All of these methods have the common aim to gain richer insights about attitudes and behaviour (Baker et al., 2017).

Mobile ethnography has first been addressed as ethnography “on the move” (Marcus, 1995; Newman, 1998) and only later on as a term for ethnography with a mobile device (Axup & Viller, 2005). Stickdorn, Frischhut & Schmid (2014: 495) refer to mobile ethnography as “geographically independent ethnographic research for a specific subject matter through the utilisation of mobile devices.” Mobile ethnography as an innovative form of classical ethnography transforms the tourist into a researcher. It applies the practice of self-tracking where the tourist can use his own mobile device as a research tool in order to track his journey and document positive as well as negative touchpoints (Hein, O’Donohoe and Ryan, 2011; Rettberg, 2014; Lupton, 2016). The sum of experiences will then make up the customer journey.

Authors however still disagree whether the researcher himself should be present during data collection. While Marcus (1995), Watts and Urry (2008) as well as Buscher and Urry (2009) see mobile ethnography as multi-sited and therefore as a walk along ethnographic research, Stickdorn and Zehrer (2009), Segelström and Holmåld (2011) and Stickdorn and Frischhut (2009) follow the concept of self- or auto-ethnography (Coffey, 1999; Alvesson, 2003; Chang, 2008) and claim that the tourist him- or herself collects data without the presence of a researcher.

Koschel (2018) states, that the main advantages of mobile ethnography include research in real-time (Stickdorn, Frischhut, & Schmid, 2014; Poynter, Williams & York, 2014), with authentic, spontaneous data collection through video, photo, audio and text, longer spans of field work, a

bigger number of cases (Stickdorn & Frischhut, 2012; SIS International Research, 2015), simultaneous and multi-cultural observations throughout various countries or regions, no bias through the researcher present, an easy capture of emotions, moods and sensations, of everyday life, less cost and time-intensity as well as a possibility or multi-perspective. Furthermore it minimizes recall bias (Schwarz, 2007) as it enables researchers to capture both cognitive as well as emotional factors at the same time (Urry, 2007). Other researchers further argue that this method minimizes the researcher’s influence (Hulkko, Mattelmäki, Virtanen & Keinonen, 2004) and supports investigator, method and data triangulation (Bosio, Rainer, & Stickdorn, 2017). Another advantage of the use of mobile ethnography is the fact that the tourist him- or herself decides what is important for him or her and that data is recorded in real-time and can even be geo-referenced (Mager & Gais 2009; Stickdorn & Schneider, 2010; Stickdorn, Frischhut & Schmid, 2014). Thus mobile ethnography helps fostering innovation in self-centred and participatory design (Buscher & Urry, 2009; Segelström & Holmåld, 2011; Stickdorn & Frischhut, 2012). It allows to have more “participant controlled social interaction during the research process” (Boivin & Cohen Miller, 2018: 585) and “to gain a deeper understanding of how people experience, perceive, create, and navigate the social world” (Hallet & Barber, 2014: 307).

The challenge of ethnographic research is the balancing act between researchers immersing themselves (Anders, Yaden, Da Silva Iddings, Katz, & Rogers, 2016; Bell & Phal, 2017) and assessing and interpreting what they observe (Heath & Street 2008). Therefore there has been a growing interest in ethnography as co-participatory research and giving voice to participants (Mitchell & De Lange, 2011; Hart et al., 2013; Banks et al., 2014; Pauwels, 2015). Boivin & Cohen Miller (2018) follow a new research paradigm and apply a co-participatory research method using mobile devices. They “allow participants to construct their lived experience from their point of view in providing their choice of data, instead of confining them to the perspective of the researcher, to provide more inclusivity and giving more authentic voice to the participants.” (Boivin & Cohen Miller 2018: 584) This leads to a more balanced position of interviewers and interviewees, as participants are not just data objects, but giving voice and the possibility to define what the research is about (Chimiri, 2015). Mobile ethnography follows this co-participatory approach by giving the participant the power to decide what he captures, when and where.

Even though some customers might be intrinsically motivated to participate in mobile ethnography projects (Stickdorn & Frischhut, 2012), researchers highly depend on the willingness of the participants to collect and share their data and the recruitment of participants can thus become a challenge. Authors therefore argue that offering incentives for participants is crucial (Bonner & Sprinkle, 2002; Rainer, 2016). Moreover a good and profound
briefing of participants is necessary in order to obtain quality data (Bosio, Rainer, & Stickdorn, 2017). Even though becoming less important, for some target groups technology readiness might still be an issue (Parasuraman, 2000).

Mobile ethnography has been applied in recent research for various service industries such as the health industry (Rodgers et al., 2005; Connelly et al., 2006; Logan et al., 2007), retail (Kourouthanassis, Giaglis, & Vrechopoulos, 2007), tourism (Stickdorn & Zehrer, 2010; Frischhut, Stickdorn, & Zehrer, 2012; Muskat et al., 2013; Bosio, Rainer, & Stickdorn, 2017), mobility (Spinney, 2011) and education (Beddall-Hill, Jabbar, & Al Shehri, 2011). “Mobile ethnography research in combination with smartphone use and other internet-based technology is becoming more prevalent, driven by the increased usage of mobile devices and especially smart phones by consumers.” (Muskat et al., 2013: 2)

Methodology

Mobile Ethnography is a rather young discipline with a clear qualitative focus. To date only few mobile research tools are available (Stickdorn & Schneider, 2010; Segelström & Holmlid, 2012; Stickdorn & Frischhut, 2012). ExperienceFellow is one of them, which offers a free mobile app for customers (in this case tourists) and a web-based software tool for researchers. The tool has already been applied to various studies in order to research customer experience in tourism destinations (Stickdorn & Frischhut, 2012; Stickdorn, Frischhut, & Schmid, 2014). It allows researchers to invite tourists to become “holiday testers” and document their personal customer journey. This is done by adding touchpoints, naming, evaluating and describing them by means of pictures, videos or text. Furthermore for each touchpoint a time stamp and GPS-location is recorded. Once the data is uploaded from the app to the back-end system, researchers can start analysing the data by sorting touchpoints, tagging them and applying various filter options. Moreover all touchpoints can be viewed in a map to identify hotspots within the destination and their performance (ExperienceFellow, 2016a).

The Upper Austria Tourism Board is the first of 9 Austrian regional DMOs on provincial basis to install the position of a “Service Designer” within the organization. As part of their strategic work the DMO launched two research projects, which made use of mobile ethnography. In the first case they defined and evaluated the winter sports product in the Dachstein-Salzkammergut region. In the second case they were looking for improving the touristic experience on the Danube cycling path. The research design followed the approach of mobile ethnography and made use of the ExperienceFellow mobile app (ExperienceFellow, 2016b). In the case of Dachstein-Salzkammergut, participants were recruited by the local tourist board or directly in the hotels and received a free cable car ticket as an incentive. The project was rolled out from March to April 2015. 20 guests had signed up for the project, 5 of which did however not submit any data. In some cases two people used the app together to document the couple’s experience, they were, however, only counted once. For the Danube cycle path participants were recruited by a travel agency and got the rental bike offered for free plus a tablet for documenting their journey. Out of 17 people that were contacted by the travel agency by email, 2 refused to participate in the project and further 5 guests had signed up at the first stage, but did not submit any data. As various authors (Arnould & Wallendorf, 1994; Frischler & Zehrer, 2012) suggest the use of multiple methods for data collection in ethnographic research, the authors of the present paper decided to combine mobile ethnography with a group discussion in the second case. During their one-week holiday, the participants of the Danube cycle path were invited for dinner to further discuss their holiday experience and details of their touchpoint documentation with ExperienceFellow.

Results

Dachstein-Salzkammergut

The 15 participants collected a total of 174 touchpoints with a minimum of 1 and a maximum of 42 touchpoints per participant. This accounts for an average of 12 touchpoints per participant. In comparison to similar projects using the same tool, this is a rather good result while at the same time delivering high-quality data. For the holiday evaluation with the ExperienceFellow tool mainly the text and picture functions were used. Only one participant added a video. The overall average emotion value was 1.0 on a scale ranging from -2 to +2. Average emotional values of participants ranged from -0.5 as the worst and 2.0 as the best average value. The vast majority of touchpoints collected were rated very positive (103 out of 174 TP), 33 positive, 17 neutral, 12 negative and 8 very negative. Male evaluations were slightly more negative with an average of +0.83 in comparison to evaluations of female participants with +1.3. Also the average total evaluation of younger participants aged between 17 and 35 years old was slightly more positive (+1.03) than that of older participants (+0.9).

As participants could choose by themselves, what to them was important and therefore worth mentioning, it is interesting to see which elements of the service chain were evaluated. By far the most evaluations were associated with gastronomy (41), lifts & ski slopes (23), weather (18), accommodation (14), attractions, great views (13 each), thermal bath & swimming pools (10), snowshoe- & winter hiking (9), self-catering (7), signage, relaxation, shopping, rentals and entertainment (4 each). In terms of locations...
which had been visited outside the area, Salzburg was rated the most attractive one (6), followed by Hallstatt (4), Wolfgangsee and Fuschlsee (1 each). Other evaluations concerned transportation, the fact that there were a lot of Asian guests (in Hallstatt and Salzburg), opening hours (3 each), cross-country skiing, tobogganing, advertising material, churches and local architecture (2 each). Single evaluations were made for mountain rescue, a petrol station, toilets, spotted animals, the tourist information, parking, smoking, medical services, a playground, and the ExperienceFellow tool itself. When looking at the various service providers within the destination, most evaluations concerned gastronomy followed by the cable car company, the accommodation sector and attractions. Nevertheless, it becomes obvious that other services within the destination like supermarkets, shopping facilities, medical services, petrol stations or even churches are also part of the touristic customer journey.

Negative evaluations mainly concerned the cable car: queues at lifts or gondolas (3), crowded or bad condition of slopes and dirty toilets (2 each). Single remarks were made for smoking in the public area of hotels, bad weather, opening hours of shops and churches, an overprized cappuccino, the organization of the bus transport from the ski station back to the hotel, a wrong page listing in a destination catalogue. Dissatisfaction also occurred as a guest expected to use the discount card in the thermal bath, which was not accepted. But even personal experiences, which cannot be influenced by any service provider, have an impact on the customer journey. This included the fall of a guest while skiing and someone burning his milk in a guest appartment. The tracking of GPS data also allows the visualisation of touchpoints on a map. This is especially interesting for destinations to either analyse positive or negative hotspots and also understand the geographical range of guests. Furthermore personal customer journeys can be visualized (Figure 1).

Danube cycle path

The 10 participants collected a total of 132 touchpoints. Again some participants were couples and thus documented their journey together. Participants were equal in sex (5 male and 5 female) and were aged from 45 to 67 years old. Participants submitted a minimum of 5 up to a maximum of 25 touchpoints. This means that on average every participant uploaded 13 touchpoints. Similar to the Dachstein-Salzkammergut project, participants mainly added text and pictures as media. There was, however, a difference between the amounts of text added. Participants of the Danube cycle path added much more text at a much higher level of detail. This would even allow to give feedback on single accommodation providers. Therefore also the number of tags used per touchpoint was much bigger. At the same time, this makes it harder to analyse...
data as many aspects are combined in one touchpoint. The overall average emotion value was 1.5 (scale -2 to +2). Average emotional values of participants ranged from +1.1 to +2.0. Hardly any gender difference could be noted. The average total evaluation of male participants was slightly more positive (+1.575) than the one of female participants (+1.5). The majority of touchpoints were rated very positive (82 out of 132 touchpoints), 34 positive and only 10 neutral, 4 negative and 2 very negative.

As for categories, most evaluations concerned accommodation, sights on the Danube cycle path (33 each), gastronomy (32), the biking route itself (22), landscape (16), hotel staff (15), breakfast in hotels (13), transportation of bicycles (11), travel documents which guests received beforehand, and the weather (10 each). Other evaluations targeted signage (7), tour description, the arrival, WLAN in hotels, swimming possibilities (6 each), hotel bathrooms, hotel location, distribution of bikes, great views (5 each), check-in at the hotel, luggage service and the garden exhibition in Tulln (3 each). The most mentioned locations were Passau (11), Linz (10), Wien, Grein, Niederranna (7 each), Melk (6) and Enns (5). No negative hotspots could be identified. The geographical visualisation showed that some participants even documented their pre-service period (booking decision & process).

According to service providers within the destination, again evaluation mostly concerned accommodation and gastronomy. According to the touristic product many comments were related to the biking route and sights on the Danube cycle path (corresponding to the cable car company in the Dachstein-Salzkammergut project) as well as to the tourist offices which are responsible for signage and maintenance of the cycle path, travel agencies, but also attraction manage-ment. Negative evaluations resulted from the biking track itself (too steep), missing signage at a crossing, insufficient directions to a hotel (as it is known amongst the locals under a different name), problems with WLAN in hotels, problems with the speedometer on the rental bike (as the size of the tyres was not correct and therefore distances were wrongly calcu-lated) and one accommodation which received bad evaluation from one guest.

The main findings from the two projects were rather diverse for the Tourism board. In the first case, it was interesting to track the radius within which guests move around. This implies that the tourism board needs to work on a supra-regional basis in order to offer a holistic tourism experience. Furthermore it turned out that food and culinary art was a major element of the touristic experience in the Dachstein-Salzkammergut region during the winter season. In the case of the Danube cycle path it was remarkable how the use of ExperienceFellow allowed the project team to become part of the participants’ world of images. They themselves claimed that their holiday was experienced a lot more intensely through the use of this app and the documentation of their journey. In addition, the Upper Austrian Tourism Board received important advice on necessary improvement of the cycle path signage (ExperienceFellow, 2016b).

Discussion and limitations

Mobile ethnography has proved to have various advantages in contrast to classical survey studies in tourism. Mobile devices have become game changers in research. Participants have collected data and become researcher themselves while their mobile device has functioned as the research tool. This co-participatory research provides more equity between researcher and participant. “(...) research shifts from a static researcher-controlled data collection perspective to co-constructed research practice. Consequently, utilizing mobile digital technology appears to be a strategy to overcome this predicament.” (Boivin & Cohen Miller, 2018: 585) Using digital and mobile technologies thus has proved to also
affect the participants’ roles. They reported that they had enjoyed being a holiday tester and stated that their holiday experience had become even more intense by using ExperienceFellow. Rainer (2016) also stated that the participation in mobile ethnography projects had a positive influence on the participants’ experience quality.

Participants are thus not only becoming researchers giving detailed and precise feedback, but also co-creators of the touristic product giving ideas for improvement on the product development of destination management organizations and the service providers. Already previous studies have shown that actively involving tourists into the co-creation of experiences leads to higher tourists’ satisfaction, level of expenditure and happiness (Grisemann & Stokburger-Sauer, 2012; Buonincontri et al., 2017). As stated by Buonincontri et al. (2017: 274) “tourism service providers should improve their interaction with real and potential tourists along all the experiential process before, during, and after their stay at destination by offering different direct communication channels and involving tourists in the organization and development of their trips.” Mobile ethnography allows this interaction between service providers in the destination and guests in order to create more valuable and memorable experiences. As a result of these projects, the Upper Austria tourism board adapted and improved various aspects of their touristic service together with other service providers. The Danube cycle path has already existed for more than 30 years. However, this was the first project that included a customer-centric approach. A personalized handbook has been developed for each guest in order to include detailed information about the place of picking up the bike, the selected cycle path, booked hotels, average time of each section of the cycle path, etc. An auxiliary app provides a detailed map of the chosen path and more details on sights, supermarkets, repair stations, etc.

Mobile ethnography allows not only real-time, but also in-situ collection of data through participants making use of geo-referenced data. This is especially important for tourism research as guests usually move around within a destination. “The integrated use of geo-referenced data is invaluable for studies on mobility, and the unique ability of mobile devices to stay ‘in-world’ with the participants is the key attraction of using this technology for research.” (Beddall-Hill, Jabbar, & Al Shehri, 2011: 86) One of the aims of the Dachstein Salzkammergut project was to better understand the geographical radius of guests during their holiday. As a result, the tourism board has understood that guests frequently move out of the region and that the tourism board has to cooperate more intensively with neighbouring destinations as guests perceive “their” destination not necessarily in accordance with political boards. This result corresponds with Beritelli, Bieger & Laesser (2014) who ask for deframing the construct of the destination and apply variable geometry in order to solve this problem. This mean instead of considering just one area, DMOs have to be based on multiple different, partly overlapping spaces. One disadvantage of the app is however, that the GPS function does not work within buildings. Furthermore GPS data is recorded at the time a touchpoint is created. In case a participant adds touchpoints at the end of the day in his hotel, the location of the hotel will be captured instead of the spot where the experience actually took place.

Mobile ethnography has proved to be applicable mainly for longer stays within a destination like in the present study. Especially participants of the Danube cycle path collected a vast number of very detailed touchpoints during their own-week holiday. The method has proven to be less valuable for shorter stays or events (Segelström & Holmlid, 2012).

Participant recruitment and motivation has proved to be a challenge as also experienced in other research projects (Stickdorn & Frischhut, 2012; Stickdorn, Frischhut, & Schmid, 2014; Bosio, Rainer, & Stickdorn, 2017; Koschel, 2018). Even though it is not the aim of a qualitative study to attract a vast number of participants, these projects have shown that it is crucial to get motivated participants, which are willing to take the time to document their experience throughout their holiday. While in former research projects participants needed to have their own smart phone, in the case of the Danube cycle path participants were provided with a new tablet. This might have motivated participants even more to collect high quality data. Incentives have proofed to be crucial for participants’ willingness to take part in the project and to foster motivation (Stickdorn & Frischhut, 2012; ExperienceFellow, 2016a; Rainer, 2017). In the Dachstein Salzkammergut project the tourism board had defined and created personas in an initial project phase. However it proved to be difficult to get hold of these people in reality as the local tourism board as well as hotel owners, who were very busy during high season, carried out the recruitment. The drop-out rate was rather low with 5 participants of each project signing up for the project, but not collecting any data.

Many authors (Palmer & Bejou, 1995; Buhalís & Cooper, 1998; Weaver & Oppermann, 2000; Berry et al., 2002; Payne, 2008; Saffer, 2010; Teixeira et al., 2012) claim that following a holistic approach in capturing customer experience is indispensable. The tool would in general enable the collection of data throughout all service periods (Klaus & Maklan, 2011). This depends, however mainly on the time of participant recruitment for the pre-service and on communication for the post-service period. The projects at hand do not include any data for the post-service period. Participants concluded their data collection and uploaded the data once the holiday was finished. A more detailed briefing and communication would be necessary in order to include also the post-service period. The app therefore has now included the function to send out push notifications to participants in order to remind them to collect data, upload it or also include touchpoints once they have returned home. The Danube cycle path
The data of the Danube cycle path project have turned out to be much more detailed. Even though the Salzkammergut-Dachstein project collected a higher number of total touchpoints (174), single touchpoints of the Danube cycle path included much more text and details on various aspects of services (total of 132 touchpoints). When evaluating a whole destination, managers can learn about the geographical range of guests, understand what is important to them, but often the detail level does not allow feedback for single service providers. In the case of the Danube cycle path, however, this was possible due to the vast amount of detailed feedback given by participants. They used the ExperienceFellow tool as a travel diary giving a lot of information on single services (even mentioning prices and directions how to get there).

Some touchpoints however only include a touchpoint name and evaluation, but no further description. This makes it often difficult to understand what customers want to communicate. Misinterpretations might follow. Therefore it is advisable to combine data collected through mobile ethnography with analog methods like qualitative interviews, group discussions or even quantitative surveys and apply a mixed-method (Stickdorn & Frischhut, 2012; Bosio, Rainer, & Stickdorn, 2017; Koschel, 2018). This allows going much more into detail, clarifying aspects of touchpoints and might even include a workshop for future product development.

Thus, it should not be underestimated that mobile ethnography as a qualitative approach leads to a high expenditure of time for recruiting and motivating participants as well as analysing the data. Even though the analysis function of the back-end of ExperienceFellow tool helps to find patterns within the data, data analysis remains time-intensive. However, the software is constantly under development in order to improve researchers’ possibilities to get the most out of the data. Currently, the ExperienceFellow team has started a project to implement automated data analyses applying algorithms and machine learning. As touchpoints are rather complex and include various aspects of the holiday experience, it would however be necessary to add a more detailed tagging function. This could include the possibility to not only tag the whole touchpoint, but also selected parts of the text or pictures. Furthermore it would be useful to allow tagging on various levels. In addition to tagging aspects of various services at the first stage, it would be desirable to create a second level of tagging in order to mark which service providers are assigned to which touchpoints.

As stated before, smart phone ownership as well as technology readiness might also be limitations of mobile ethnography. According to Pouster (2016), smart phone ownership in Europe is highest amongst millennials (18-34 years old) with 92% compared to only 50% among people older than 35 years. It also varies according to education and income; the higher the education or income level, the higher the probability of smart phone ownership. While in former projects participants tended to be quite young (Stickdorn, Frischhut, & Schmid, 2014; Bosio, Rainer, & Stickdorn, 2017), especially the Danube cycle path attracted mainly older participants (45 to 67 years old). The distribution of tablets however might have helped in this case.

Further limits and challenges of mobile ethnography stated by Koschel (2018) including problems of self-portrayal of participants, the handling of big volumes of data, limited data volume of participants, higher drop-out rates through app downloads and log-ins, the limitation of types of questions (e.g. matrix questions) or special requirements of surveys (structure, length, formulations) These challenges have not been remarked in the present study. Participants did not make many selfies, but rather captured pictures of the service being provided. Due to the limited number of participants, the software could easily handle the volume of data. Neither limited data volume of participants nor the drop-out rate proved to be a hurdle.

In comparison to other use of mobile devices in ethnographic research (Consolvo & Walker, 2003; Mikkelsen & Christensen, 2009; Ravert, Calix, & Sullivan, 2010), the ExperienceFellow app offers a combination of a short participant profile, GPS-tracking, a time stamp, the evaluation of touchpoint capturing videos and pictures from the customer’s perspective as well as a short quantitative survey. As theory clearly states (Meyer & Schwager, 2007), customers experience the same touristic product differently (Bosio, Rainer, & Stickdorn, 2017). The mobile app combined with the web-based software enables researchers to gain insight through the whole customer experience of a large number of participants across both offline and online channels and thus, covering the whole complex service bundles in tourism (Pine & Gilmore, 1998; Meyer & Schwager, 2007; Konus, Verhoef, & Neslin, 2008; Neslin et al., 2006; van Birgelen, de Jong, & de Ruyter, 2006; Kwornik & Ross, 2007; Bosio, Rainer, & Stickdorn, 2017). It further allows researchers to “follow the people” (Marcus, 1995) within vaster geographical areas and illustrate heatmaps, which is especially relevant for destination management organizations. Hence, it overcomes the challenge of spatial and temporal di-
dimensions in tourism destination (Stickdorn & Zehrer, 2010). Touchpoints captured by participants included both tangible and intangible aspects of the service. Quite some participants have not only included pain point experiences during their trips, but also provided ideas how to improve them and thus have helped tourist destinations to stay competitive and innovative and follow a customer-centric approach in their product development. The present study underlines that destination management organizations have to keep in mind that the touristic experience is composed of both direct and indirect aspects of the service (Verhoef et al., 2009; Klaus & Maklan, 2012). Public services and personal experiences form part of the holiday experience, but are beyond the control of service providers.

Further development of ExperienceFellow would be necessary for a better and quicker analysis of data including multilevel filters or an automated analysis. Additionally, a combination of the app with an online application would be useful, where participants can edit touchpoints at a later stage from a laptop or tablet as typing long texts on the smart phone can become painful. Better GPS tracking within buildings would further help to locate touchpoints also in buildings such as hotels or touristic attractions. Further research in mobile ethnography should focus on the use of various incentives for participant recruitment and motivation, the right participant briefing in order to assure high-quality data and the differences between gender and age groups. Beyond that, it would also be interesting to include sensorial aspects of customer experience.

To conclude, mobile ethnography is a very young discipline and at the moment only single case studies exist in tourism. More case studies in various destinations as well as comparative studies of the use of mobile ethnography in destination management would be necessary in order to analyse whether results are only applicable specifically for single or whether they can be found in various destinations. Furthermore the method has recently also been applied not only for consumer-centric research, but also for investigating employer experience (Bosio, Rainer, & Stickdorn, 2017; ExperienceFellow, 2016c). This could help improve the image of the sector as a potential employer and help overcome the big challenge of skills shortage (OECD, 2018) by improving the employee experience in a similar way as customer journey mapping.


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