
Multi-channel consumer behavior: online and offline travel preparations

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Abstract

Elaborating on the first stage in the User-Centered Design (UCD) process, understanding the user, this study questions whether it is sufficient to look at the use of interactive systems in isolation. Starting from the assumption that consumers often use the Internet in combination with other channels (telephone, high street, mail order), this paper discusses a study on how consumers move between online and offline channels during the preparations for leisure travel. The theoretical framework was informed by literature from the fields of HCI, marketing and social sciences. The results of the first stage of this work-in-progress indicate that multi-channel use is a day-to-day reality for many consumers.

Keywords

User-Centered Design, e-commerce, consumer behavior, multi-channel context, user experience

ACM Classification Keywords

H.5.2 Information interfaces and presentation: User interfaces – User-centered design

Introduction

Several studies on the use of e-commerce [1, 5, 10] have reported that although consumers regularly use e-

commerce websites for browsing and searching, they often do not complete this process with online purchases. The percentages mentioned of consumers actually engaging in online purchase vary from 24% [1] to 32% [10]. HCI studies focusing on the use of e-commerce in relative isolation merely record that people move in and out of the online channel without buying goods or services. Most of the studies do not track consumers during the course of the consumption process to find out whether they have abandoned their initial quest, or completed their purchase at another time and/or through another channel. From the perspective of the consumers, these studies are just looking at snapshots of their behavior. To deepen our understanding of the user and the context of use, which is a requirement of User-Centered Design (ISO13407), the observation and analysis of complete consumption processes could be more informative. This was the aim of the reported study. Consumption processes are defined in the marketing literature to not only include the *tangible* consumption of a good or service, but also the activities wherein consumers select, purchase, or dispose of products, ideas and experiences [6]. An essential part of this process is searching and deliberating information from numerous sources before deciding whether or not to buy and use a certain product or service.

Literature on the use of e-commerce

Since the use of e-commerce environments by consumers involves the use of an interactive system as well as the use of a commercial service, this area of consumer activity is a topic of investigation in both the computer and marketing domains. Examples of early studies date back to the late nineties [9, 14, 15]. These studies have contributed to our understanding of how

people make use of e-commerce environments, and have resulted in various guidelines on how to improve the usability and effectiveness of e-commerce websites. The literature points to the importance of ease of use and usefulness [13], quality of information and technical performance [16], effectiveness of the search and online purchase process [7, 11], and the shopping enjoyment a website offers [16]. All these aspects have been reported to be important antecedents for the success of e-commerce websites. They explain if and why consumers are able, and willing, to use an e-commerce site. However, these factors are not sufficient to explain why people appear to browse, but not always buy online. Specifically when an e-commerce site is well designed; why do so many people not complete the consumption process online?

Other influencing factors, that go beyond the actual interaction with an e-commerce website, are also reported in the literature. These are consumer experiences associated with contextual issues such as trust [12], perceived service quality [16], perceived risks [5], and consumer satisfaction and involvement [7]. These contextual issues are, just as the characteristics of the website, antecedents to a consumer's choice to make use of an e-commerce environment. Some of the main concepts in this strand of literature originate from marketing research before the emergence of e-commerce. In recent years they are re-examined and adapted to also address consumer use of e-commerce. Similar to the studies on the influence of website characteristics, most studies that investigate the influence of contextual issues on the use of e-commerce, focus on the use of the Internet in relative isolation. They do not take into account that a consumer may use several channels during the course

of a consumption process. They seldom record what happened previous to the use of the e-commerce site, or what happens after it. The study reported in this paper aims to fill this gap.

Empirical study on travel preparations

To investigate how consumers move between online and offline channels, accounts of recent and actual consumption behavior were collected through semi-structured interviews and diaries, using Critical Incident Technique [4], laddering and card sorting. As the study focused on leisure travel, participants were asked to report on their preparations for trips in the year prior to the first interview. This period allowed for a time frame that is recent enough for reliable recall and long enough to include infrequent events [8]. In the first round of data gathering, 28 participants were interviewed throughout the United Kingdom. Over a period of six months after the interview 20 participants had returned one or more diaries and were interviewed for a second time. This final sample of 20 participants had a fair spread in demographics (9 males and 11 females; 5 singles, 9 couples, and 6 families; age 20-69; living in urban, suburban and rural locations), Internet experience (1-10 years access; 7 irregular and 13 frequent users) and travel experience (1-6 times per year; both package and independent travelers). The interviews were recorded and transcribed. The diaries were copied to an electronic format. The main technique for the analysis was content analysis, using Nvivo software to code and sort the data.

Travel stories as multi-channel vignettes

In the interviews and diaries the participants reported on three to ten different trips each. These trips ranged from short domestic trips (a day out, or a weekend

break) to longer holidays abroad (one week to a few weeks). In total 143 valid reports on travel preparations were collected. To overcome the often fragmented accounts in the interview transcripts and make a structured analysis possible, each account of a participant about the preparations for a specific trip was compiled into a one-page *travel story*. A travel story is a standardized reconstruction of the reported travel preparations, based on the accounts given by the participant. As this reconstruction is an interpretive activity by the researcher, the travel stories were validated by the participants during the second round of interviews [3].

Figure 1 shows an example of a travel story by participant 7 (female, 40-49 years old, married, two children, 4-6 years experience with Internet, travels 1-3 times per year). Each travel story consists of a diagram and a narrative description. The diagram is a visual representation that spans all the stages of the consumption process: from the recognition of the need to arrange a holiday, to the stages of deliberating the options, deciding on what to book, and doing the actual purchase. In this case there have been no dissonance activities (communications with suppliers after the purchase is done). The stages are derived from the services marketing literature [2]. The four available channels are Internet (website, email), high street (shop, travel agent), telephone (call center, shop) and mail order (catalogue).

The narrative description in the travel story is compiled from the accounts about a specific trip, given by the participant in the interviews and the diary. The text is kept as close as possible to the original transcripts and notes made by the participant. To give a concise and

Diagram that shows which channels were used in which stages of the consumption process

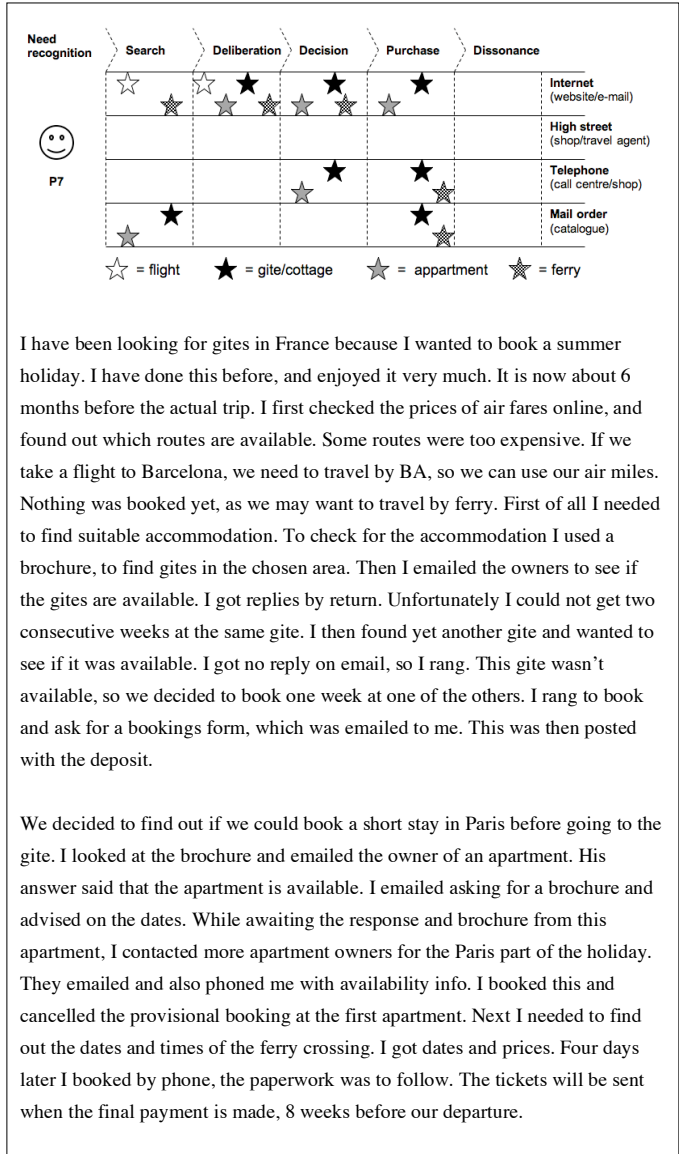


Figure 1 Example of travel story

Narrative description compiled from the accounts given by the participant

coherent overview of the reported travel preparations, needless repetition of facts has been edited. Combined with the diagram, the narrative description provides a rich representation of the dynamics and complexity of the preparations for each trip. The diagram in itself is sufficiently standardized to allow for comparison across participants and trips.

The travel story in figure 1 shows that for every booking P7 made to prepare the summer holiday, she has used more than one channel to complete the consumption process. She used Internet, telephone and mail order various times to arrange the cottage as well as the apartment and the ferry. If this study had focused on just the use of the Internet, the observations would have been limited to the fact that P7 used a few websites in the early stages of the consumption process and then left the online channel without completing the purchase. By taking the use of other channels into account as well, a more complex and dynamic process can be observed. The use of the e-commerce websites seems to be embedded in a broader multi-channel consumption process. Afterwards P7 expressed her satisfaction with this procedure:

I am happy with the outcome and the process (...)
Next time I would probably do it again in the same way.

This indicates that for her the multi-channel use is not problematic, and not caused by major obstacles created through the design of the e-commerce environment.

Multi-channel consumption behavior

To further investigate which channels the participants had used during the course of their travel preparations, the travel stories were sorted into categories that

indicate the type of channels that were used, and the stages in the consumption process in which those channels were used. Table 1 shows that in less than half of the travel stories participants completed a whole consumption process by using just one channel.

No. of channels	1	2	3	4	
	53	54	35	1	143

Table 1. Number of channels used in the travel stories

Table 2 and 3 show the combinations of channels that were most frequently used in multi-channel consumption processes.

2 chan.	I-T	I-H	I-M	H-T	T-M	H-M	
	34	14	4	1	1	0	54

Table 2. Type of channels in case of combination of 2 channels (I-Internet, H=High street, T=Telephone, M=Mail order)

3 chan.	I-T-M	I-H-M	I-H-T	H-T-M	
	27	5	3	0	35

Table 3. Type of channels in case of combination of 3 channels

The numbers in these tables indicate that overall the use of the Internet is very high; it is used at some stage in almost every multi-channel consumption process. The phone is the second most-used channel. Many participants mentioned the usefulness of combining Internet with other channels.

I have just booked a trip to go diving. I wanted to go diving, so I found out about a website, I can't remember exactly who told me. From this website I ordered the

leaflet. And then all the bookings were on the phone. I went purely online to order the catalog. (Participant 8)

Table 4 shows that the use of the Internet is highest in the early stages of the consumption process. Towards the decision and purchasing stage some participants tended to switch to using the phone.

Stage	Sea.	Del.	Dec.	Pur.	Dis.	
Internet	209	205	181	155	8	758
High st.	10	11	19	18	3	61
Phone	11	33	53	63	19	179
Mail	30	23	12	11	0	76
	260	272	265	247	30	1074

Table 4. Channels used per stage in the consumption process. (Stages: Search, Deliberation, Decision, Purchase, Dissonance)

The numbers in this table illustrate that although many purchases were completed online, the use of the phone in the later stages is relatively high.

So I phone up, but first I will have checked it online, to see roughly what's possible. Then I phone up and just say 'look I want to go on this day, at this time, I think there are some deals like this, what can you do, and is there something better?'. (Participant 15)

Conclusions and future research

The findings from this study show that the use of e-commerce is embedded in a multi-channel context. Moving between online and offline channels seemed to be a day-to-day reality for the participants in the study. Their movements seem to be driven as well by their own choice as by obstacles in the websites or the

services offered. In most of the travel stories the Internet was used at some point. Often this was combined with the use of other channels, such as telephone or mail order. The next stage of this work-in-progress will further investigate the reasons for this observed behaviour; why do consumers choose to use a combination of channels? Further details from the interviews, as elicited through laddering and card sorting, will be analysed for this. The results of this study are relevant for designers and managers developing e-commerce websites that exist in the context of multi-channel environments. A deeper understanding of multi-channel consumer behavior contributes to the early stages of the UCD process, and may ultimately lead to e-services that better facilitate for this type of usage.

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