

**Journal of Information Technology Management**

ISSN #1042-1319

***A Publication of the Association of Management***

## **THE IMPACT OF EXPECTATION DISCONFIRMATION ON CUSTOMER LOYALTY AND RECOMMENDATION BEHAVIOR: INVESTIGATING ONLINE TRAVEL AND TOURISM SERVICES**

**ALEXANDER SERENKO**  
FACULTY OF BUSINESS ADMINISTRATION  
LAKEHEAD UNIVERSITY  
[aserenko@lakeheadu.ca](mailto:aserenko@lakeheadu.ca)

**ANDREA STACH**  
FACULTY OF BUSINESS ADMINISTRATION  
LAKEHEAD UNIVERSITY  
[a\\_stach@yahoo.com](mailto:a_stach@yahoo.com)

### **ABSTRACT**

The purpose of this study is to investigate the impact of expectation disconfirmation on user loyalty and recommendation behavior with respect to online travel and tourism services. For this, the Expectation Disconfirmation Theory was employed as a lens of analysis, and the critical incident technique was applied to survey 94 Expedia users. In this study, a number of findings emerged that contribute to our understanding of the antecedents of loyalty and word-of-mouth behavior, and lead to important recommendations that may be utilized by online travel and tourism businesses. Particularly, the lack of a clear link between the type (i.e., positive or negative) of expectation disconfirmation and loyalty / service recommendation was observed. Consistent with prior research, it was concluded that the relationship between customer experience, satisfaction, loyalty and word-of-mouth is very complicated.

**Keywords:** Expectation Disconfirmation Theory, travel and tourism, loyalty, word-of-mouth, service, website, critical incident technique

### **INTRODUCTION**

The purpose of this project is to investigate the impact of expectation disconfirmation on customer loyalty and recommendation behavior with respect to online travel and tourism services. For this, 64 positive and 40 negative critical incidents were obtained from 94 users of Expedia and analyzed through classical content analysis techniques. The overall objective was to determine the effect of these highly significant events on both consumer loyalty to the service provider and future service promo-

tion through word-of-mouth. For this, Expectation Disconfirmation Theory, which takes its roots in the field of marketing, was employed as a lens of analysis. It is believed that this study's findings shed some light on online user behavior and allow developing recommendations for firms in the online travel industry that may help them better serve customers in the future.

For the past decade, the travel and tourism industry has dramatically changed not only at the corporate and business levels but also in terms of consumer engagement, with the introduction of the Internet and electronic commerce activities. While such changes have facilitated

innovative business strategies and offerings, they have also created many alterations and challenges to the user experience. The success of the travel and tourism industry relies on the flow of information, and this is exactly what the Internet offers its businesses and consumers [1]. Given the suitability of its business operations with electronic commerce, the online travel industry has been growing considerably over the past decade. The 2007 online leisure travel market in the United States constituted more than one-third of the total U.S. travel industry sector, and it is predicted to grow at a fast rate [2]. The Canadian online travel sector doubled between 2005 and 2006 to C\$6.5 billion, and it is forecast to almost double again by 2009. Almost one-third of all leisure-type travel was booked online by Canadian consumers in 2007 [3].

However, despite the ongoing adoption of online travel and tourism services by many consumers, the industry is not without its challenges. For instance, many people prefer to use the Internet to research the offerings rather than make online transactions [4]. Technical problems or usability issues sometimes complicate user online experience, and this can lead to negative outcomes for the corresponding websites and their owners, especially when the market becomes increasingly competitive. Bad online experiences include those that provide users with inaccessible, irrelevant or dated information, failed, inaccurate or incomplete transactions, and various usability pitfalls that take the user through infinite loops of navigation [5]. Websites with poor or non-existent pre-or post-sales customer services, in the form of either call centers or online feedback, may also dramatically frustrate online shoppers. An understanding of which facets of the online customer experience frustrate users is valuable to online travel and tourism service providers because improvement in user interaction may potentially increase sales by 33% [6].

From the Expectation Disconfirmation Theory perspective [7-9], when individuals utilize online travel and tourism websites, they accept and use the service, and therefore form perceptions about service performance. They also compare their actual perceptions with their initial expectations and develop a specific level of satisfaction or dissatisfaction. As a result, their likelihood of using the same website in future and recommending it to other potential users may be predicted. Specifically, a positive or negative critical event, which caused a great extent of satisfaction or dissatisfaction, may be parsimonious in determining future user behavior. For example, those who found that the online provider fully met their initial expectations and provided them with excellent services are going to use the same provider later and recommend it to family, friends and colleagues. In contrast, those whose expectations were not met, become dissatis-

fied with the provider, are unlikely to purchase its services and engage in negative word-of-mouth.

On the one hand, the online travel and tourism sector has been growing at an accelerating pace. For instance, most airline travelers in developed countries currently use e-tickets rather than their hard copy counterparts. In many cases, the only option is to go online to investigate, compare, and purchase travel and tourism products. On the other hand, both academic literature and anecdotal evidence suggest that whereas many users are highly satisfied with their online experience, some come across extremely negative critical incidents that affect their future behavior with respect to service provider loyalty and word-of-mouth service recommendation [10]. Loyalty and recommendation behaviors are the key factors because they are directly linked to customer retention, promotion, and overall financial performance of service providers. Therefore, by using the Expectation Disconfirmation Theory as a lens of analysis, it is important to understand how critical incidents that users of online travel and tourism websites experience affect loyalty and promotion-related factors. For this, the critical incident technique is employed since it fits well with the research objective of this study.

## THEORETICAL BACKGROUND

### The Online Travel and Tourism Industry

The online travel and tourism industry began in the 1960s when American Airlines and IBM launched the Semi-Automated Business Research Environment (SABRE, now SABRE Technology Group). Originally designed for use by the reservations staff at American Airlines, it was the first computerized airline reservation system in the industry [11]. Subsequent technological advances have facilitated the growth of online travel services and turned them into a growing electronic commerce sector. By their very nature, travel and tourism products fit well with the Internet and information communication technologies since they are distinct, commodity-like, intangible, and generally well understood by their consumers [12]. The overall success of the travel and tourism industry depends on real-time communication and collaboration among various partners. The Internet-based technologies enable effective communication, facilitate product differentiation and service personalization [13]. As a result, the sector has attracted millions of customers who relish their independence in booking travel to suit their desired specifications [14].

The traditional intermediaries, such as brick-and-mortar travel agents, have felt competitive pressure from both online companies and direct online booking. Record

numbers of traditional travel agencies have been forced to close as many of their customers go online. Revenues from the booking of airline tickets, such as commissions paid by the carrier, have dramatically decreased because the airlines try to cut costs, respond to changing consumer demands, and innovate their own online booking systems with emerging information technologies. Some travel agents disappeared. Others, who have adopted novel strategies, embraced new technologies and incorporated online systems into their business processes, are better able to serve their customers. By evolving with the technology, they can use their expertise to develop value-added services, capture market loyalty and design unique product strategies [15].

Traditionally, airlines have been a leading sector with respect to the adoption of information and communication technologies. For decades, computer-based systems have played a growing role in their strategy, operations, and communication functions [13]. However, the growth of the online travel and tourism sector, particularly the appearance of large online travel companies, has introduced both a new distribution channel and a booking competitor. It has also increased consumer demand for rapid access to flight information, booking options and reward/loyalty programs. In response, airlines have tried to achieve competitive advantages through marketing programs, cost-cutting initiatives (e.g., through commission caps and electronic ticketing), and rewards for direct booking. Hotels, car rental companies, and cruise lines have also felt the effects of information communication technologies. Each of these sectors has adapted its own online booking services and has been forced to make dynamic changes to marketing and business strategies [1].

Online-only travel websites have entered the travel and tourism industry very successfully and introduced a new type of competitor to the marketplace. According to Internet World Stats [16], based on 2006 revenues the top three leaders are Expedia, Travelocity, and Orbitz. Ever expanding and adapting to the needs and demands of consumers, these companies have established a strong presence in a very competitive market. The online players have been working hard to create brand identities and establish site loyalty, but this has proven to be challenging because customers prefer to site-hop when researching during their travel planning.

Overall, the importance of the online travel and tourism sector is unarguable. At the same time, there are warning signs that already attracted the attention of major industry players. The National Quality Research Center at the University of Michigan (<http://www.theacsi.org>), which continually monitors the level of customer satisfaction with various industries including online travel websites, reports that the degree of customer satisfaction with

online travel websites declined by 1.4% in 2007. Particularly, the overall satisfaction level dropped 3.8% for Expedia, Inc. and 1.4% for Travelocity.com, L.P. This may have dramatic negative consequences for these companies. Lower levels of customer satisfaction may also diminish customer motivation to return to these websites since the gratification they receive in doing so has lessened [17]. The following sub-section highlights the importance of customer loyalty and service recommendations from the Expectation Disconfirmation Theory perspective.

### **Expectation Disconfirmation Theory, Loyalty and Service Recommendation**

According to Expectation Disconfirmation Theory [8, 9], individuals anticipate a specific level of service when they are about to engage in a purchase transaction. When they utilize the actual service, they form valid perceptions of service performance. The degree of positive or negative disconfirmation is developed when pre-and post-purchase expectations are compared that in turn influences overall satisfaction. A positive disconfirmation occurs when service performance exceeds initial expectations, which leads to higher satisfaction. In contrast, a negative disconfirmation takes place when service performance falls short of what was originally expected, which causes lower satisfaction [18]. This theory was developed in the field of marketing. Recently, it became popular in other scholarly domains, including information systems and electronic commerce [7, 19, 20].

The fact that customer satisfaction is one of the most critical factors for online service providers is unarguable. However, businesses are more interested in the outcomes of customer satisfaction. The extant literature advocates that those are loyalty and service promotion through the word-of-mouth.

The concept of loyalty has been studied in the business literature for decades. Loyalty is a commitment by an existing customer to a particular store, brand or service provider when other comparative options are accessible [21]. It creates favorable attitudes resulting in repeat purchasing behavior over time. There is a strong link between the creation of value for customers, loyalty and firm's profits. In other words, a business system works through a cycle that is fostered by customer loyalty. Market share and revenues increase as a result of the retention of loyal customers who make repeat purchases and referrals. The company's costs also decrease because less money is spent trying to lure in new customers. This may lead to increased retention of employees as a result of positive gains in job satisfaction and productivity that in turn adds to the retention of current customers who are

better served by more experienced company representatives [22]. Prior research demonstrates that this relationship holds true in both offline and online environments [23].

The introduction of electronic commerce has extended this concept to the phenomenon of e-loyalty. E-loyalty is a customer's perceived loyalty and favorable attitude towards an online business that results in site revisits and/or repeat purchasing behavior [24, 25]. The economic principles that apply to the traditional concept of loyalty also extend to e-loyalty. While the cost of attaining new customers remains high, often leading to a financial deficit in a company's early years, the cost of doing business with loyal customers decreases significantly as a result of the increased Volume of their future purchases. It has been demonstrated that increases in online customers' loyalty rates by only 5% may increase a firm's profits by 25%–95%. For example, in the online apparel sector, returning customers double their spending on a website after they have been purchasing from it for 24-30 months [26].

The competitive nature of the online travel industry is exacerbated by the unique nature of electronic commerce. While online businesses have lower overhead costs, broader market outreach and increased ability to offer greater convenience to their customers, these advantages may lead to a larger number of competitors entering the marketplace. In turn, this allows consumers to compare offerings provided by a number of online businesses with minimal effort [27].

There exist a number of factors that can act as precursors to the establishment of e-loyalty [27]. These include: customization of products and services; dynamic contact interactivity between the website and its customers; cultivation of the customer relationship over time; care taken to ensure satisfactory pre-and post-purchase customer interface activities; development of an online social community to encourage the interaction between current and potential customers; wide range of offerings for customers to choose from; and a website with character that promotes a positive reputation for the business. These ideas are similar to those expressed by Cyr, Hassanein, Head, & Ivanov [28] who emphasize the importance of the establishment of social presence between the customer and website. Social presence, the concept that a user perceives the website as being personal, sensitive and warm, allows a feeling of human contact to facilitate the human-computer interaction processes.

In addition to e-loyalty, another important consequence resulting from positive user experiences is future service recommendation, also referred to as word-of-mouth. It is the process of sharing of information regarding products and services from one consumer to another

through some channel of communication, mostly orally or electronically, for example, through email, blogs or forums [29]. Positive word-of-mouth can have a favorable impact on a company's profits when it helps to attract new customers. For example, EBay, the online auction website, reports that positive word-of-mouth has resulted in high levels of referred customers; this has lowered overall customer acquisition costs. In addition, the referred customers return to the experienced EBay users for guidance and support. This, in turn, lowers the site's technical and customer support expenses.

At the same time, word-of-mouth can be negative. Consumer dissatisfaction has been demonstrated to have at least a two-fold impact on the likelihood that a person will speak negatively about a company following an undesirable experience [30]. Furthermore, customers who switch from one company to another as a result of a dissatisfactory experience are more likely to engage in negative post-switching word-of-mouth behavior than those who switched purely due to price sensitivity. In essence, there can be greater long-term harm to a firm that fails to provide a client with satisfactory services; this may prevent the acquisition of future customers [31].

Word-of-mouth is stimulated by a number of factors. These include: the information a receiver needs about a firm, product or service; coincidental conversations between a current customer and a potential one; and high levels of either satisfaction or dissatisfaction. Knowledge of these factors may allow firms to design their marketing strategies to effectively stimulate a positive word-of-mouth situation [32]. In essence, the ability to maintain a current customer's loyalty and positive word-of-mouth behavior extends beyond an initial purchase. Therefore, firms need to be cognizant of this fact to ensure that they have quality post-purchase customer satisfaction programs in place.

Overall, the importance of e-loyalty and service recommendation has been clearly established in both offline and online business domains. The online travel and tourism industry represents a significant sector of economy, and its magnitude continues to grow. At the same time, the overall level of customer satisfaction with online travel and tourism services has declined, and many users have experienced negative critical events with the performance, functionality, or delivery of online travel and tourism services. The purpose of this project is to explore the effect of these positive and negative critical events on user loyalty and service recommendation behaviors. This was achieved through the application of the critical incident technique that is described in the following section.

## METHODOLOGY

### The Critical Incident Technique

The critical incident technique (CIT) was used to identify various scenarios of user behaviors. First described in John C. Flanagan's [33] seminal article, the critical incident technique is an approach for collecting direct observations of human behavior in order to make recommendations and develop broad psychological principles. Originating from studies completed within the Aviation Psychology Program in the United States Air Force during the Second World War, CIT has since been used to study behavior in a number of disciplines including, but not limited to, management [34], hospitality [35], marketing [36], and the Internet [37]. CIT has been fruitfully employed in projects that are somewhat similar to the present investigation. For example, by using the critical incident technique, Gilbert & Morris [38] investigated satisfaction of business travelers; Sweeney & Lapp [39] explored factors affecting Web site quality perceptions; and Bitner, Booms & Tetreault [40] studied service encounters of airline, hotel and restaurant customers. Khan et al. [41] demonstrated that CIT may be successfully applied in the MIS field. Results obtained using CIT are judged to be reliable and valid [42]. Andersson & Nilsson's [43] comprehensive study on the method's reliability and validity also reported that this approach is reliable; the authors also discovered no distinct difference between the data collection methods of written questionnaires and interviews.

CIT is a well-established method that uses a flexible set of principles that can be adapted to reflect the nature of the phenomenon under investigation. Flanagan [33] describes an incident as 'any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act' (p. 327). The technique requires the collection, analysis and interpretation of reports of actions taken by users in response to a certain experience. It includes the development of a classification system that placed the reported critical incidents into defined categories; subsequent analysis allows the researcher to make inferences regarding the improvement of outcomes for future scenarios. In this study, CIT allowed identifying specific events that turned a user's interaction with online travel and tourism products into a positive/favorable experience or a negative/unfavorable one.

In this study, CIT was used to obtain a number of scenarios of user interaction with online travel and tourism services in order to understand the impact of these interactions on user loyalty and service recommendation behaviors. The scenarios help to establish the de-

gree of users' expectation disconfirmation and its effect on future behaviors that are of interest to online businesses. Cenfetelli [44] suggests that positive and negative user experiences with information technologies influence different kinds of user perceptions and cause opposite decisions towards future technology acceptance. Therefore, it is possible that positive and negative expectation disconfirmations would lead to different user actions, feelings, loyalty and word-of-mouth behavior changes with respect to online travel and tourism services.

As a methodology, the critical incident technique has a number of strengths [45, 46]. First, the researcher's bias is minimized since subjects decide what events are the most applicable in a specific context. Second, CIT is an inductive methodology that helps to identify new factors that might be potentially missed by other inquiry methods. Third, it provides rich data of original user experiences that may be explored in detail to understand their behavior, its causes, and its consequences.

CIT also has several limitations. First, researchers may misunderstand the data and misinterpret people's stories. Second, similar to other qualitative techniques, ambiguities in data coding may arise that may threaten the reliability and validity of the findings. Third, a recall bias may affect data quality since some respondents may forget important details over time. In order to mitigate these limitations of CIT, two independent coders were employed. A draft codebook was developed in advance based on existing literature that is considered a valid qualitative research principle [47]. This helped the researchers more accurately identify theoretical and practical issues arising from the data. When a new code was required, it was discussed by the research team. Changes to existing codes were made throughout the investigation to better fit the data. One coder was very familiar with this study's research domain, and another was not. This potentially reduced researchers' biases and preconceived notions of what to expect from the survey data. The questionnaire presented detailed instructions on each aspect of the critical incident that minimized cognitive load on respondents and allowed them to concentrate on recalls. The respondents were given no deadline by which to complete the questionnaire. It was hoped that this approach addressed most of the CIT shortcomings.

### Study Design

In this project, Expedia, Inc. was selected to collect positive and negative critical incidents. Collecting incidents from many different service providers may produce a high number of codes with only a few cases each; this will make it difficult to group similar cases together to identify cause-and-effect patterns.

On the one hand, the generalizability of this project's findings may be limited. On the other hand, this study design is likely to solicit incidents that may be grouped together to construct causal diagrams which is frequently done in CIT investigations.

Expedia, Inc. is the world's largest online travel and tourism company offering services to customers around the globe. It started as part of Microsoft in 1995 and began trading publicly in 1999. Headquartered in Bellevue, Washington, it has 6,500 employees. The company has positioned itself as a travel community where customers can find detailed, real-time information about products and services offered by a multitude of airlines, accommodations, car rental companies, and cruise lines. As an online travel and tourism company, Expedia facilitates the booking of transactions and passes customer reservations to suppliers.

Expedia has become the world's leading travel provider; it processes 25 million transactions per month. Its recent customer-centered product initiatives include: a 'best price guarantee' in which the site promises to provide the best rates available online; 'your personal trip guide' in which extensive travel information is offered; and the 'Expedia promise' which provides the customer with the assurance that the company will support them through the completion of their journey. To remain competitive in an increasingly challenging market, the company has invested heavily in various initiatives to achieve high levels of customer service. Expedia was rewarded for its efforts in 2006 when it received the highest customer satisfaction rating among online travel providers, based on the American Customer Satisfaction Index (ASCI). Expedia was also identified in 2006 as a leader in the areas of customer experience and customer acquisition.

Despite its successes, many customers have reported dissatisfactions with the various aspects of Expedia's products and services, for example, lost reservations, incorrect hotel accommodations, and difficulty in obtaining customer support. Frustrated customers have complained to the Better Business Bureau ([www.bbb.org](http://www.bbb.org)) and online ([www.victimsofexpedia.com](http://www.victimsofexpedia.com)). The ACSI's e-commerce report for the fourth quarter of 2007 revealed that Expedia's customer satisfaction score dropped by 3.8%, although it still remains the highest rated travel

website [17]. The Better Business Bureau registers over 15 complaints with Expedia per month. In addition, general reliability of the website is reported to be an area of weakness since three percent of the visitors experience a significant site failure [48].

Therefore, Expedia is the largest online travel and tourism service provider whose users have had both positive and negative experiences with the service. While there are public data highlighting successes and failures that customers have had using Expedia, no prior study has evaluated the behaviors of users following an occurrence of a critical incident with respect to loyalty and service recommendation behavior changes.

Data collection was completed using a paper-based questionnaire. Flanagan (1954) stated that motivated participants who respond to written questionnaires provide results comparable to those obtained through individual interviews. Questionnaire design used open-ended questions and was based on previous investigations that used CIT [49-52]. The instrument solicited the participants' experiences with Expedia regarding incidents that they felt were highly satisfying (positive) and those they found extremely dissatisfying (negative). Every respondent was asked to provide at least one positive and one negative critical incident with Expedia although the questionnaire provided space for two positive and two negative incidents if respondents wished to offer more events (see Table 1). To avoid bias, the order of positive and negative situations was randomized. Basic demographic data were also obtained. When respondents had questions about the study or instructions, they contacted the researchers in person, phone or electronically for explanations.

The minimum sample size requirements in CIT investigations depend on the complexity of the phenomenon. A meta-analysis by Urquhart et al., [53] revealed that most sample sizes of previous CIT projects varied between 50 and 100 incidents, with only a few exceeding 300. Since the phenomenon explored in the present study is relatively simple and has a prior literature base, collecting 100 critical incidents would be sufficient. 94 individuals who were personally known to the researchers and who previously utilized Expedia completed the questionnaire.

Table 1: Questionnaire

Item	Positive Incident	Negative Incident
	<b>Instructions:</b> Answer the questions below with respect to the latest most significant POSITIVE incident that you experienced with Expedia. This incident could have occurred during or after when you interacted with this website (e.g., a time when you were extremely satisfied with the use of this online travel and tourism service).	<b>Instructions:</b> Answer the questions below with respect to the latest most significant NEGATIVE incident that you experienced with Expedia. This incident could have occurred during or after when you interacted with this website (e.g., a time when you were extremely dissatisfied with the use of this online travel and tourism service).
1	Before the incident happened, why did you decide to go online at www.expedia.ca?	Before the incident happened, why did you decide to go online at www.expedia.ca?
2	Provide a complete and detailed description of the incident.	Provide a complete and detailed description of the incident.
3	When did the incident take place? (e.g., days, weeks, months or years ago?)	When did the incident take place? (e.g., days, weeks, months or years ago?)
4	What were your feelings and perceptions of this situation?	What were your feelings and perceptions of this situation?
5	What actions did you take during the incident?	What actions did you take during the incident?
6	How often has the same or a similar situation occurred when you used Expedia in the past?	How often has the same or a similar situation occurred when you used Expedia in the past?
7	Has the incident caused you to utilize Expedia more often compared to other online travel websites or other means of purchasing travel products? If yes, please elaborate.	Has the incident caused you to switch to other online travel and tourism websites or other means of purchasing travel products? If yes, please indicate the service you switched to.
8	Did the incident persuade you to recommend or not to recommend the use Expedia to others? Please explain and offer examples (if any).	Did the incident persuade you to recommend or not to recommend the use of Expedia to others? Please explain and offer examples (if any).

## RESULTS

### Overview

During the study, 104 critical incidents (64 positive and 40 negative) were collected from 94 Expedia users. Even though all respondents were asked to offer at least one positive and at least one negative event, many stated that they experienced only one incident that they might consider critical. Nevertheless, this did not affect the validity of the data.

The average respondents' age was 37 years old, ranging from 19 to 64. Seventy percent were female. They used Expedia an average of four times, ranging from one to 20. The respondents purchased travel services from other online businesses (i.e., in addition to Expedia), an average of nine times, ranging from zero to 100. When a randomly selected group of subjects was asked to explain what other travel services they had purchased online, most mentioned online ticket purchasing directly from airlines.

Classical content analysis was employed for coding. It is a technique for reducing textual responses to a unit-by-variable matrix and analyzing this matrix through quantitative principles to understand the phenomenon [54]. Classical content analysis may be applied to describe the issue, answer research questions, establish relationships among the variables, and make inferences [55-58]. This approach is useful when brief textual responses,

similar to the ones obtained in this project, are provided. The positivist paradigm was followed [59, 60].

Draft a priori codebook was designed by the researchers based on the literature in information systems, human-computer interaction, and travel domains. During the coding process, new codes were continuously introduced and previous ones were adjusted based on the new data. The codebook was reviewed and modified by a non-coder expert. Two trained, independent coders completed the coding and achieved an acceptable level of inter-rater agreement (Krippendorff's [61] coefficient was above 0.8). All discrepancies were discussed in person, and the opinion of an independent expert was obtained in several ambiguous cases to reach agreement on item classification. Each critical incident was analyzed along the following dimensions: 1) pre-purchase intentions and expectations; 2) incident description; 3) user feelings; 4) user actions; 5) loyalty change; and, 6) recommendations behavior change.

### Positive Critical Incidents

Out of the 64 positive critical events, 40 occurred within the past year, 7 within the last 18 months, 7 two years ago, and 10 over three years ago. 23 incidents occurred once, 6 – twice, 7 – three times, 8 – 5 times, and 14 took place frequently or every time. Six responses were missing.

Figure 1 outlines a model explicating the impact of positive incidents on user behavior and service recom-

mentation. All users had very positive pre-purchase expectations; they hoped to successfully complete a transaction online, obtain required information and utilize the service. During the incident, most people made a purchase (53%), searched for information (27%), or comparison shopped (20%). Most of them were motivated by a potentially low price, good prior experience, advertising, or word-of-mouth. Some booked a package or group of items together. Many continuously monitored prices before booking, for example:

*“I was looking for flights to San Jan, P.R. I checked the site every couple of days to compare costs. Each time the cost was different. Finally after a few weeks the cost dropped significantly so I called everyone traveling and we agreed the price probably wouldn’t get any lower, so I booked everything... As it turned out, the cost of our flights was about half as the cost continued to rise after.”*

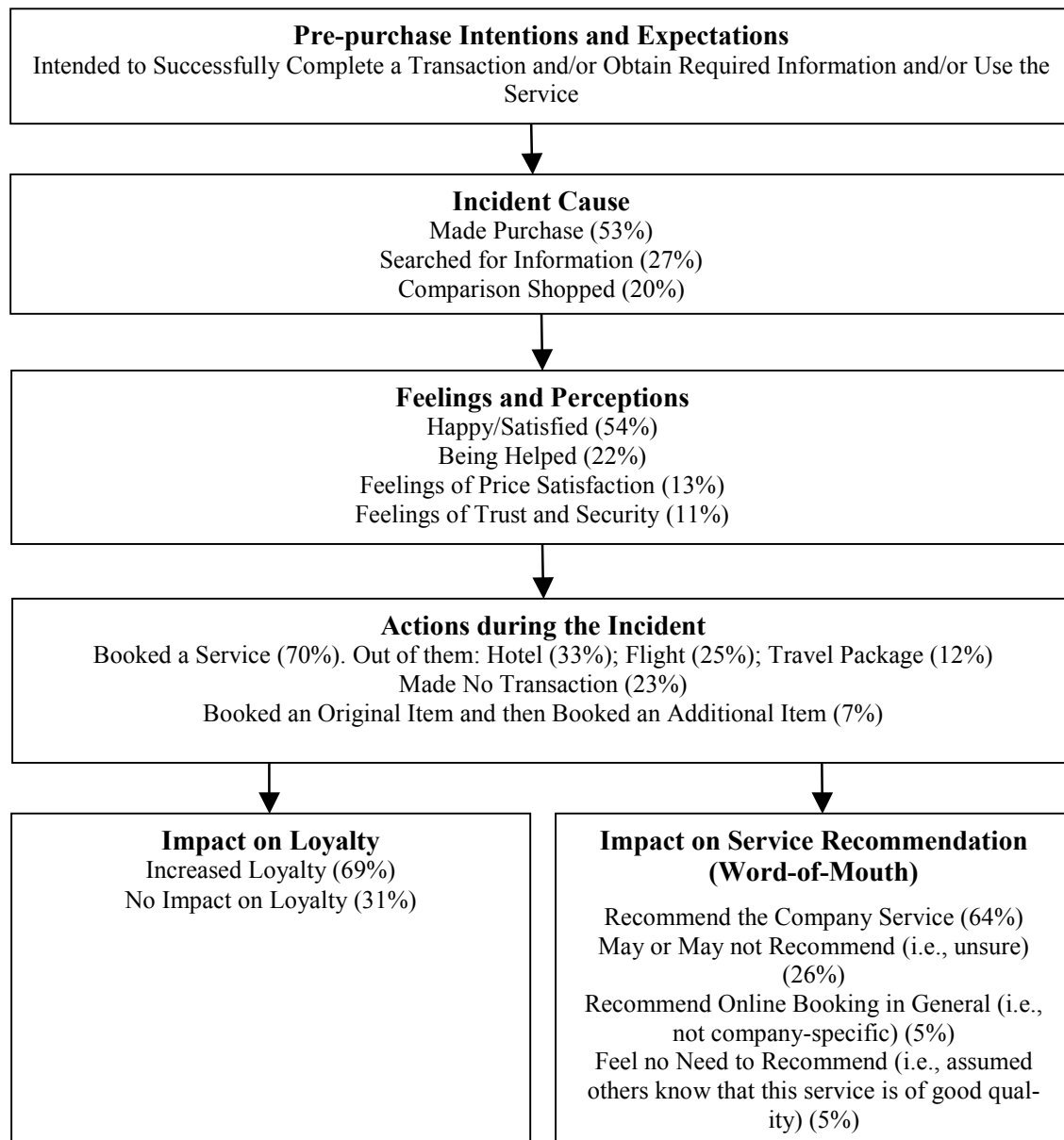


Figure 1: Positive Critical Incidents – Impact of User Loyalty and Service Recommendation



As expected, all users expressed positive feelings during the incident. Most booked a service (70%), such as a hotel, flight or travel package, and 7% booked an original item and then an additional item. Even though 23% made no transaction during the incident, they believed they achieved their purpose, for example, obtained necessary price information:

*"I booked most convenient flight for excellent price."  
"Booked vacation package. Also booked some activities at the same time."  
"I was looking for car rental prices to determine if it was affordable during a one week vacation/business trip in Southern Ontario. I quickly and easily was able to find the information I needed. I did not book at the time as I was still unsure of the scheduling for the week."  
"I did not book a flight but went and found out more hotels and directions around where I was going".*

In a result of a positive incident, a positive disconfirmation of initial expectations occurred. Most users increased their degree of loyalty to the company (69%), but some did not (31%). Almost half of the respondents who increased their loyalty reported that they will continually return to the website but will always comparison shop with other online travel companies for best deals. One-third stated that they would now go to Expedia first when they need travel-related products, services and information, but they keep other options open. Others indicated that they will use Expedia exclusively for specific travel and tourism products only, for example, only for flights or only for hotels. On the one hand, their loyalty increased; on the other hand, this was insufficient to ensure permanent patronage if a better deal was available:

*"I tend to look at Expedia first but I compare with travelocity.ca when looking into flights, hotels, etc."*

A majority of customers revealed that they started recommending the company services to other potential online shoppers, for example, their friends, family and co-workers (64%). A few stated that they will promote online bookings in general (i.e., not necessary Expedia) (5%), and some believed that Expedia is so well known that there is no need to promote its services to others (5%). At the same time, 26% were unsure about their future recommendation behaviors. For example:

*"I always recommend Expedia to others because it is a quick and efficient source."  
"I have neither persuaded nor dissuaded anyone from using Expedia."*

## Negative Critical Incidents

Out of the 40 reported negative critical events, 15 occurred within the past 3 months, 13 one year ago, 6 from 12 to 18 months ago, 2 – two years ago, 2 – 3 years ago, and 2 – 4 years ago. 24 incidents took place only once, 6 – twice, 2 – thrice, and 4 – every time a person used the service; 4 people provided no answer.

Figure 2 presents a model explicating the impact of negative incidents on user behavior and service recommendation. All individuals exhibited very positive pre-purchase expectations. Four types of problems were identified. First, 35% of the respondents indicated that they had an issue with the price of the product/service offered by Expedia, for instance:

*"Comparison of the price with the airline's website indicated that there would be no savings from booking with Expedia. The Expedia price was higher."*

Second, 25% experienced issues with the actual service delivery. After paying for the service online, they later realized that the service provider received no or wrong confirmation from Expedia:

*"This happened in fall '06 during Grey Cup Weekend in Winnipeg. I had booked our hotel with Expedia. When I called the hotel to confirm they did not have our confirmation number although we had the number given to us by Expedia. The reservation information was never forwarded to the hotel and we had to look elsewhere because they were full."*

Third, 23% of the users reported dissatisfaction with the information provided to them by Expedia when the information was insufficient, unclear, deceiving or missing:

*"[I] searched for a one-way flight from Thunder Bay to Phoenix. Response was 'no flights from Thunder Bay to Phoenix.' But the WestJet site provided this flight and Northwest did too."*

Fourth, 16% of the respondents said that their negative event involved the process of cancellations of reservations with Expedia, either by the user or by the airlines. For example:

*"I received notice that there was a flight change and I was to call Expedia. I waited 15 minutes on the phone. When a person answered they stated that there was a 2-3 hour wait to speak with someone who could help. I had to*

*sit on the phone for two-and-a-half hours to talk with customer service.”*

*”My flight was cancelled and although it was through no fault of my own, the hotel charged me for the night that I was unable to arrive at my destination. We had also pur-*

*chased travel insurance through the website. The first phone number provided did not work. Eventually, after 3 different agents spoke to me, they advised I could not get [a]refund.”*

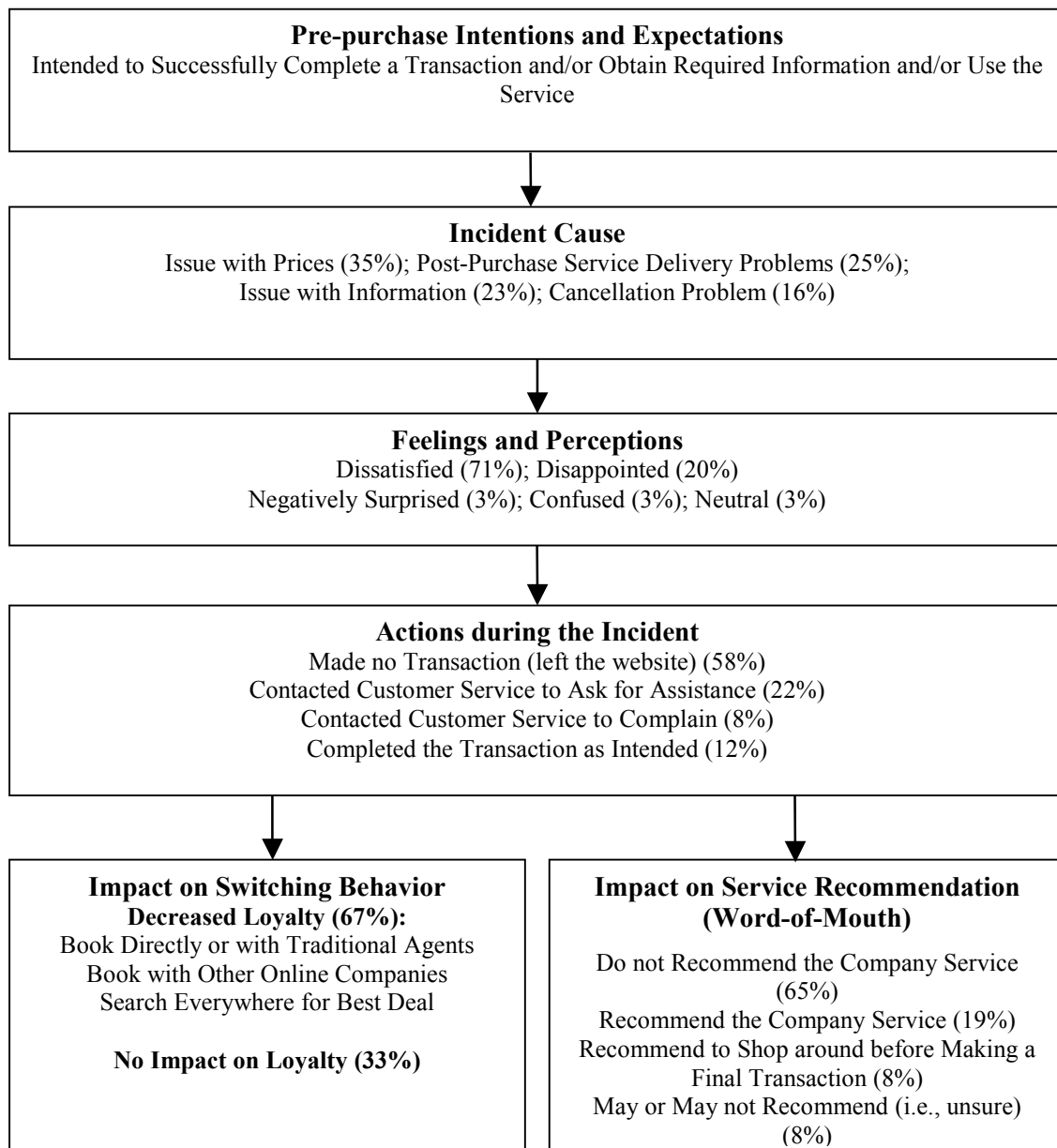


Figure 2: Negative Critical Incidents – Impact on User Loyalty and Service Recommendation

As a result, 94% of individuals were very dissatisfied or disappointed, and a negative disconfirmation of their pre-purchase expectations took place. At the same time, 6% expressed more neutral emotions, for example, being confused. They also exhibited a negative disconfirmation, but to a lower extent. During the incident, most people made no transaction (58%), some contacted customer service for assistance by email or phone (22%), complained to the company (8%), whereas only 12% completed a transaction as they initially intended. In fact, most of those who made no transaction, for example, being disappointed by the lack of information, purchased the same or similar service elsewhere:

*"I decided to go through a local travel agent instead. They were more than willing to help with all of my needs."*

After the incident, 67% stated that they decreased their loyalty, but 33% did not. Those who did, instead of using Expedia in future, started booking their trips directly with airlines, traditional agents, other online companies, or simply searching everywhere for the best deal, for instance:

*"I now prefer to use a local travel agent. I currently use Marlin Travel."*

Two-thirds of the respondents stated that the event would encourage them not to recommend the use of the website to others. An example of this type of response is as follows from a user who arrived at his/her Mediterranean resort (booked with Expedia) to find that they needed a paper copy of a voucher (that they had not received from the website after booking) to check in:

*"I would likely not recommend Expedia and I will go to an actual travel agency to ensure a human contact and someone that is accountable for the arrangements."*

At the same time, despite their negative experience, almost one-third of all respondents stated they still promote Expedia (19%), recommend shopping everywhere, including Expedia before making a purchase (8%), or were unsure about their recommendation actions (8%). Some of those, who still recommend Expedia, do so with caution:

*"I recommend it but advise anyone that their trip or reservations had any chance of being cancelled."*

## IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSIONS

The purpose of this study was to explore the impact of expectation disconfirmation on user loyalty and service recommendation (word-of-mouth) behavior with respect to online travel and tourism services. For this, 104 critical incidents (64 positive and 40 negative) were obtained from 94 Expedia users. Data were analyzed by two independent coders who employed classical content analysis techniques by using Expectation Disconfirmation Theory as a lens of analysis. Two models explicating initial expectations, typical incident causes, user feelings, actions, and changes in loyalty and recommendation behaviors were constructed. Based on the findings, seven implications emerged that may be of interest to both researchers and practitioners.

*Implication I – A positive expectation disconfirmation facilitates online transactions*

During the study, it was observed that all people who exhibited a positive expectation disconfirmation when they made an online reservation felt very satisfied. They made purchase (53%), searched for information (27%) or comparison-shopped (20%). Overall, they completed a transaction (70%) or even booked an additional item (7%). This indicates the importance of positive user experience. First, it facilitates transaction completion. Second, positive customer experience may potentially increase the probability of cross-selling that may dramatically increase company profits. The marketing literature suggests that cross-buying is closely related to higher revenue, customer retention, and loyalty [62]. In fact, when a customer purchases an additional travel and tourism service online, a marginal transaction cost for a seller is minimal. Those users who did not make an immediate transaction (23%) but obtained necessary information may potentially return to the website in future and become a customer. It is recommended that businesses offer complimentary services to the customer who is about to complete an online transaction.

*Implication II – A positive expectation disconfirmation instills loyalty in most, but not in all customers*

According to the results, over two-thirds of the respondents, who exhibited a positive expectation disconfirmation and felt satisfied, increased their degree of loyalty to a particular service provider. This finding is intuitive and echoes results found in other studies that demonstrate that customer satisfaction positively influences consumer loyalty [63-65]. According to the American Customer Satisfaction Model, which is frequently employed in customer satisfaction research, people's satisfaction

with products and services has a positive direct effect on their degree of loyalty to a brand, company, product, or service [66]. In the Management Information Systems domain, end-user satisfaction with information systems [67, 68] is considered a critical factor since it leads to system acceptance behaviors.

At the same time, almost one-third of those who experienced a positive expectation disconfirmation reported no change in their loyalty. It is likely that there are other important predictors of loyalty, other than a satisfactory user experience, that play a key role in online user behaviors. Keaveney [36] reported similar findings in her research when she found that some satisfied customers would switch from a service provider due to convenience, actions by competitors, or prices. Essentially, a positive expectation disconfirmation is a strong predictor of loyalty. However, it does not appear to guarantee loyalty for all customers.

*Implication III – A positive expectation disconfirmation leads to positive word-of-mouth, but service providers should further encourage satisfied users to promote their services*

On the one hand, a positive expectation disconfirmation makes two-thirds of all users express a positive opinion about company services to others, such as friends, peers, family and co-workers. This is a highly desirable customer behavior. On the other hand, even though nobody mentioned his or her unwillingness to do so, approximately one-third of the users stated they do not promote the company through word-of-mouth for various reasons. As such, many of them were still unsure whether they need to engage in promotion behaviors (26%), some recommend online services of all companies (5%), and some feel no need to do so since they assume that everybody knows about the company and its high-quality services (5%). Most well-established online travel and tourism companies serve thousands of customers daily. If one-third of those who are satisfied with the received service would never promote it, hundreds of thousands of new clients may be lost resulting in millions of dollars in missed revenues. For this, online companies may develop strategies to encourage service promotion. For example, after each completed transaction, a customer may be sent electronic discount coupons that he or she may forward to other individuals. The importance of service promotion may be explicated in a post-purchase thank you email. Various new customer referral options may be implemented. Overall, it is suggested that online travel and tourism companies educate their users on the importance of company service promotion and develop mechanisms to reward such behaviors.

*Implication IV – Most negative incidents are caused by incorrect pricing, post-purchase service deliv-*

*ery, issues with online information, and service cancellation problems*

During the study, 94 Expedia users reported 40 negative critical incidents; therefore, it is likely that approximately one out of two or three users has experienced a negative event. This is a very high rate that should be considered by online sellers. Although it is virtually unfeasible to eliminate all factors that cause negative incidents, it may be possible to recognize the most frequent ones and reduce the likelihood of their occurrence. For this, the underlying cause of each category of negative incidents should be identified and possible solutions implemented. Incorrect pricing, which is the most frequently reported factor, may result from the lack of fast electronic communication between the front-end (i.e., the actual website that belongs to the online company) and the back-end (i.e., the service provider database); when a service provider, such as an airline, updates its prices, this should be instantaneously reflected in the front-end user interface. Post-purchase service delivery issues also result from the lack of coordination between the online seller and the service provider. For example, when a user places an order and a confirmation number is electronically forwarded to the provider, a verification mechanism should be in place to ensure that the provider actually received all necessary information.

Problems with online information, which is sometimes incorrect, incomplete or missing, are perhaps the easiest to address. First, a user survey should be conducted to understand what types of information individuals look for when booking various travel and tourism services. Second, this information should be presented online so that individuals are able to easily access it. Service cancellation functions should also be presented online. In fact, it is extremely frustrating when people have to spend hours staying on the phone waiting for a customer service representative to cancel a service. Often, service cancellation options are the last to be considered by online merchants who need to quickly develop and promote the website to secure revenues through purchasing functions. Automating the retraction of revenues through cancellation mechanisms is rarely an initial priority. However, since this impacts loyalty and reduces future revenues, the case for implementing these features becomes strong.

*Implication V – A negative expectation disconfirmation decreases loyalty in most, but not in all customers*

Negative critical incidents created a negative expectation disconfirmation. It was followed by dissatisfaction that had a devastating impact on the loyalty of 67% of all customers. As a result, they permanently switched to the traditional offline means of purchasing travel and tourism services, booked directly from a service provider,

or shopped everywhere to get the best deal. It is unlikely that they would return to the same website in the short-term. At the same time, 33% of individuals did not change their loyalty. Nevertheless, 77% of potentially lost customers is a significant number that online travel and tourism businesses should take into consideration.

*Implication VI – A negative expectation disconfirmation leads to negative word-of-mouth for most, but not for all customers*

The results demonstrate that 67% of those who developed a negative expectation disconfirmation conveyed their concerns to other potential users. This link may be explained theoretically since it is reasonable to assume that unhappy consumers often complain about their experience to others. This relationship between user experience and engagement in word-of-mouth behavior was previously examined empirically [69, 70]. At the same time, not all individuals who came across a negative event start openly expressing their negative opinion to others.

*Implication VII – The lack of a clear link between an expectation disconfirmation and loyalty / service recommendation may be explained by user price sensitivity, convenience, and expectations of general unreliability of computer systems*

Prior research suggests that the link between customer experience and loyalty / service recommendation behavior is more complex than most people assume [29, 71]. For instance, Mangold et al. [32] suggest that only 9% of word-of-mouth cases are a result of customer satisfaction or dissatisfaction. In the present investigation, this number was much higher, yet past experience with the service did not fully explain loyalty and recommendation behavior. There are three explanations for this phenomenon.

First, many people book travel and tourism services online to get the lowest possible price. Traditional brick-and-mortar agents usually charge extra fees. In return, they may offer extra value added services. However, most travel and tourism services have become a commodity, therefore, many individuals, regardless of their past experience, may still go online to the same website to get the best price. Customers who were very satisfied with the services of a particular online company may still switch if a better option is available somewhere. This demonstrates that it is very difficult to instill loyalty online.

Second, there are a number of key players in the online travel marketplace that offer comprehensive selections of travel and tourism services searchable on a single webpage. Therefore, some users may go to any website as long as it is convenient.

Third, Serenko [72] offers both a theoretical explanation and empirical evidence to further explain this

phenomenon. It is possible that some computer users have become accustomed to poor designs, usability problems, errors, bugs, and missing functionalities of all computer systems. As a result, when problems occur, some individuals take this fact for granted since they expect all computer applications, including travel and tourism websites, to be unreliable to some extent. Therefore, when a negative critical incident takes place, they simply tolerate it and exhibit no change in loyalty and/or word-of-mouth behavior.

It is noted that online service providers can do little about the problems causing some negative incidents. For example, they have no direct control over the post-purchase service delivery by an airline, hotel, car renting company, etc. However, it is within their responsibility to identify and eliminate specific unreliable partners to reduce the probability of negative incidents. For this, they need to collect and analyze customer satisfaction data pertaining to both the online transaction and post-purchase experience.

Currently, the Internet provides consumers with access to an abundant amount of information and gives them many options for the purchase of travel and tourism services. This investigation offered further insight into customers' behavior following positive and negative critical events. The key limitation of this project is the selection of only one online company (i.e., Expedia) that constraints the generalizability of the findings. It is hoped that future researchers will be able to continue this line of research and re-validate this project's conclusions.

## REFERENCES

- [1] Zhou, Z. *E-Commerce & information technology in hospitality & tourism*. Delmar Thomson Learning, Scarborough, Canada, 2004.
- [2] PhoCusWright. "PhoCusWright's U.S. online travel overview, Seventh Edition. Retrieved March 21, 2008 from <http://www.phocuswright.com>," 2008.
- [3] PhoCusWright. "PhoCusWright's Canadian online travel overview. Retrieved March 21, 2008 from <http://www.phocuswright.com>," 2008,
- [4] Anckar, B. "Consumer intentions in terms of electronic travel distribution," *E-Service Journal*, Volume 2, Number 2, 2003, pp.68-86.
- [5] Crossman, P. "Online failures impact loyalty online," *Intelligent Enterprise*, Volume 9, Number 11, 2006, pp.14-15.
- [6] Meekings, A., Russell, C., Fuller, M., and Hewson, W. *Profit of pain from your user experience*. Hewson Group Consulting, Norfolk, United Kingdom, 2003.

- [7] Bhattacharjee, A. "Understanding information systems continuance: An expectation-confirmation model," *MIS Quarterly*, Volume 25, Number 3, 2001, pp.351-370.
- [8] Oliver, R. L. "Effect of expectation and disconfirmation on postexposure product evaluation: An alternative interpretation," *Journal of Applied Psychology*, Volume 62, Number 4, 1977, pp.480-486.
- [9] Oliver, R. L. "A cognitive model of the antecedents and consequences of satisfaction decisions," *Journal of Marketing Research*, Volume 17, Number 4, 1980, pp.460-469.
- [10] Holloway, B. B. and Beatty, S. E. "Service failure in online retailing: A recovery opportunity," *Journal of Service Research*, Volume 6, Number 1, 2003, pp.92-105.
- [11] Gasson, S. "The impact of e-commerce technology on the air travel industry," *Annals of Cases on Information Technology*, Volume 5, Number 2003, pp.234-249.
- [12] Hueng, V. C. S. "Internet usage by international travellers: Reasons and barriers," *International Journal of Contemporary Hospitality Management*, Volume 15, Number 7, 2003, pp.370-378.
- [13] Buhalis, D. "eAirlines: Strategic and tactical use of ICTs in the airline industry," *Information & Management*, Volume 41, Number 7, 2004, pp.805-825.
- [14] Doonar, J. "Special report - travel: A state of independence," *Brand Strategy*, Volume December, Number 2003, pp.26-29.
- [15] Lewis, I., Semeijn, J., and Talalayevsky, A. "The impact of information technology on travel agents," *Transportation Journal*, Volume 37, Number 4, 1998, pp.20-25.
- [16] Internet World Stats. "Travel online revenues to double by 2007: Usage and population statistics. Retrieved November 26, 2006, from <http://www.internetworldstats.com/ind/ind001.htm>" 2006.
- [17] Fornell, C. "ACSI scores and commentary. Retrieved March 2, 2008 from <http://www.theacsi.org>," 2008.
- [18] Yi, Y. "A critical review of consumer satisfaction," in *Review of Marketing*, V. A. Zeithaml, Ed. American Marketing Association, Chicago, IL, 1990, pp. 68-123.
- [19] Khalifa, M. and Liu, V. "Satisfaction with Internet-based services: The role of expectations and desires," *International Journal of Electronic Commerce*, Volume 7, Number 2, 2002, pp.31-49.
- [20] Bhattacharjee, A. "An empirical analysis of the antecedents of electronic commerce service continuance," *Decision Support Systems*, Volume 32, Number 2, 2001, pp.201-214.
- [21] Shankar, V., Smith, A. K., and Rangaswamy, A. "Customer satisfaction and loyalty in online and offline encounters," *International Journal of Research in Marketing*, Volume 20, Number 2, 2003, pp.153-175.
- [22] Reichheld, F. F., Markey, R. G., and Hopton, C. "The loyalty effect – the relationship between loyalty and profits," *European Business Journal*, Volume 12, Number 3, 2000, pp.134-139.
- [23] Reichheld, F. F., Markey, R. G., and Hopton, C. "E-customer loyalty – applying the traditional rules of business for online success," *European Business Journal*, Volume 12, Number 4, 2000, pp.173-179.
- [24] Ilsever, J., Cyr, D., and Parent, M. "Extending models of flow and e-loyalty," *Journal of Information Science and Technology*, Volume 4, Number 2, 2007, pp.3-22.
- [25] Andreson, R. E. and Srinivasan, S. S. "E-satisfaction and e-loyalty: A contingency framework," *Psychology and Marketing*, Volume 20, Number 2, 2003, pp.123-138.
- [26] Reichheld, F. F. and Shefter, P. "E-loyalty: Your secret weapon on the web," *Harvard Business Review*, Volume 78, Number 4, 2000, pp.105-114.
- [27] Srinivasan, S. S., Anderson, R., and Ponnayolu, K. "Customer loyalty in e-commerce: An exploration of its antecedents and consequences," *Journal of Retailing*, Volume 78, Number 1, 2002, pp.41-50.
- [28] Cyr, D., Hassanein, K., Head, M., and Ivanov, A. "The role of social presence in establishing loyalty in e-service environments," *Interacting with Computers*, Volume 19, Number 1, 2007, pp.43-56.
- [29] Brown, T. J., Barry, T. E., Dacin, P. A., and Gunst, R. F. "Spreading the word: Investigating antecedents of consumers' positive word-of-mouth intentions and behaviors in a retailing context," *Academy of Marketing Science*, Volume 33, Number 2, 2005, pp.123-138.
- [30] Yu, L. "The quality effect on word-of-mouth," *MIT Sloan Management Review*, Volume 49, Number 1, 2007, pp.7-8.
- [31] Wangenheim, F. "Postswitching negative word of mouth," *Journal of Service Research*, Volume 8, Number 1, 2005, pp.67-78.
- [32] Mangold, W. G., Miller, F., and Brockway, G. R. "Word-of-mouth communication in the service marketplace," *Journal of Services Marketing*, Volume 13, Number 1, 1999, pp.73-89.
- [33] Flanagan, J. C. "The critical incident technique," *Psychological Bulletin*, Volume 5, Number 4, 1954, pp.327-358.



- [34] White, F. M. and Locke, E. A. "Perceived determinants of high and low productivity in three occupational groups: A critical incident study," *Journal of Management Studies*, Volume 18, Number 4, 1982, pp.375-387.
- [35] Warden, C. A., Liu, T., Huang, C., and Lee, C. "Service failures away from home: Benefits in intercultural service encounters," *International Journal of Service Industry Management*, Volume 14, Number 4, 2003, pp.436-457.
- [36] Keaveney, S. M. "Customer switching behavior in service industries: An exploratory study," *Journal of Marketing*, Volume 59, Number 2, 1995, pp.71-82.
- [37] Mattsson, J. and Helmersson, H. "Internet banking: Modeling the e-competence of customers with a text-analytic CIT approach," *International Journal of Bank Marketing*, Volume 23, Number 6/7, 2005, pp.470-483.
- [38] Gilbert, D. C. and Morris, L. "The usefulness of critical incident technique in isolating travel satisfactions," *International Journal of Contemporary Hospitality Management*, Volume 7, Number 4, 1995, pp.v-vii.
- [39] Sweeney, J. C. and Lapp, W. "Critical service quality encounters on the Web: An exploratory study," *Journal of Services Marketing*, Volume 18, Number 4, 2004, pp.276-289.
- [40] Bitner, M. J., Booms, B. H., and Tetreault, M. S. "The service encounter: Diagnosing favorable and unfavorable incidents," *Journal of Marketing*, Volume 54, Number 1, 1990, pp.71-84.
- [41] Khan, B. K., Pliskin, N., and Trauth, E. M. "Cooperation, autonomy, and control in corporate information management," *Journal of Information Technology Management*, Volume V, Number 4, 1994, pp.1-16.
- [42] Ronan, W. W. and Latham, G. P. "The reliability and validity of the Critical Incident Technique: A closer look," *Studies in Personnel Psychology*, Volume 6, Number 1, 1974, pp.53-64.
- [43] Andersson, B.-E. and Nilsson, S.-G. "Studies in the reliability and validity of the critical incident technique," *Journal of Applied Psychology*, Volume 48, Number 6, 1964, pp.398-403.
- [44] Cenfetelli, R. T. "Inhibitors and enablers as dual factor concepts in technology usage," *Journal of the Association for Information Systems*, Volume 5, Number 11, 2004, pp.472-492.
- [45] Gremler, D. D. "The Critical Incident Technique in service research," *Journal of Service Research*, Volume 7, Number 1, 2004, pp.65-89.
- [46] Schluter, J., Seaton, P., and Chaboyer, W. "Critical incident technique: A user's guide for nurse researchers," *Journal of Advanced Nursing*, Volume 61, Number 1, 2008, pp.107-114.
- [47] Miles, M. B. and Huberman, A. M. *Qualitative data analysis: An expanded sourcebook*, 2 ed. Sage Publications, Thousand Oaks, 1994.
- [48] Berkowitz, D. "Keynote Systems, Inc. News & Events: Press Releases, March 23, 2006. Retrieved November 20, 2006 from [http://www.keynote.com/news\\_events/releases\\_2006/06mar23.html](http://www.keynote.com/news_events/releases_2006/06mar23.html)," 2006.
- [49] Johnson, B. L., Jr and Fauske, J. R. "Principals and the political economy of environmental enactment," *Educational Administration Quarterly*, Volume 36, Number 2, 2000, pp.159-185.
- [50] Serenko, A. and Turel, O. "Rigor and relevance: The application of the Critical Incident Technique to investigate email usage," *Journal of Organizational Computing and Electronic Commerce*, in-press, 2010.
- [51] Serenko, A. "The use of interface agents for email notification in critical incidents," *International Journal of Human-Computer Studies*, Volume 64, Number 11, 2006, pp.1084-1098.
- [52] Wang, K.-C., Hsieh, A.-T., and Huan, T.-C. "Critical service features in group package tour: An exploratory research," *Tourism Management*, Volume 21, Number 2, 2000, pp.177-189.
- [53] Urquhart, C., Light, A., Thomas, R., Barker, A., Yeoman, A., Cooper, J., Armstrong, C., Fenton, R., Lonsdale, R., and Spink, S. "Critical incident technique and explicitation interviewing in studies of information behavior," *Library & Information Science Research*, Volume 25, Number 1, 2003, pp.63-88.
- [54] Ryan, G. W. and Bernard, H. R. "Data management and analysis methods," in *Handbook of qualitative research*, N. K. Denzin and Y. S. Lincoln, Eds., 2 ed. Sage Publications, Thousand Oaks, CA, 2000, pp. 769-802.
- [55] Budd, R. W. and Thorp, R. K. *An introduction to content analysis, including annotated bibliography*. University of Iowa School of Journalism, Iowa City, Iowa, 1963.
- [56] Budd, R. W., Thorp, R. K., and Donohew, L. *Content analysis of communications*. The Macmillan Company, New York, 1967.
- [57] Kerlinger, F. N. *Foundations of behavioral research*, 2 ed. Holt, Rinehart and Winston, New York, 1973.
- [58] Weber, R. P. *Basic content analysis*, 2 ed. Sage Publications, Newbury Park, CA, 1990.

- [59] Myers, M. "Qualitative research in information systems," *MIS Quarterly Discovery*, Third edition. Available online at [http://www.misq.org/discovery/MISQD\\_isworld](http://www.misq.org/discovery/MISQD_isworld). 1998.
- [60] Benbasat, I., Goldstein, D. K., and Mead, M. "The case research strategy in studies of information systems," *MIS Quarterly*, Volume 11, Number 3, 1987, pp.369-386.
- [61] Krippendorff, K. *Content analysis: An introduction to its methodology*. Sage Publications, Beverly Hills, CA, 1980.
- [62] Reinartz, W., Thomas, J. S., and Basco, G. "Investigating cross-buying and customer loyalty," *Journal of Interactive Marketing*, Volume 22, Number 1, 2008, pp.5-20.
- [63] Serenko, A., Turel, O., and Yol, S. "Moderating roles of user demographics in the American customer satisfaction model within the context of mobile services," *Journal of Information Technology Management*, Volume 17, Number 4, 2006, pp.20-32.
- [64] Turel, O. and Serenko, A. "Satisfaction with mobile services in Canada: An empirical investigation," *Telecommunications Policy*, Volume 30, Number 5-6, 2006, pp.314-331.
- [65] Turel, O., Serenko, A., Detlor, B., Collan, M., Nam, I., and Puhakainen, J. "Investigating the determinants of satisfaction and usage of Mobile IT services in four countries," *Journal of Global Information Technology Management*, Volume 9, Number 4, 2006, pp.6-27.
- [66] Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J., and Bryant, B. E. "The American Customer Satisfaction Index: Nature, purpose, and findings," *Journal of Marketing*, Volume 60, Number 4, 1996, pp.7-18.
- [67] Doll, W. J., Deng, X., Raghunathan, T. S., Torkzadeh, G., and Xia, W. "The meaning and measurement of user satisfaction: A multigroup invariance analysis of the End-User Computing Satisfaction Instrument," *Journal of Management Information Systems*, Volume 21, Number 1, 2004, pp.227-262.
- [68] Doll, W. J. and Torkzadeh, G. "The Measurement of end-user computing satisfaction," *MIS Quarterly*, Volume 12, Number 2, 1988, pp.259-274.
- [69] Anderson, E. W., Fornell, C., and Lehmann, D. R. "Customer Satisfaction, Market Share, and Profitability - Findings from Sweden," *Journal of Marketing*, Volume 58, Number 3, 1994, pp.53-66.
- [70] Athanassopoulos, A., Gounaris, S., and Stathakopoulou, V. "Behavioural responses to customer satisfaction: an empirical study," *European Journal of Marketing*, Volume 35, Number 5/6, 2001, pp.687-707.
- [71] Bontis, N., Booker, L. D., and Serenko, A. "The mediating effect of organizational reputation on customer loyalty and service recommendation in the banking industry," *Management Decision*, Volume 45, Number 9, 2007, pp.1426-1445.
- [72] Serenko, A. "Are interface agents scapegoats? Attributions of responsibility in human-agent interaction," *Interacting with Computers*, Volume 19, Number 2, 2007, pp.293-303.

## AUTHOR BIOGRAPHIES

**Alexander Serenko** is an Associate Professor of Management Information Systems in the Faculty of Business Administration at Lakehead University, Canada. Dr. Serenko holds a M.Sc. in computer science, an MBA in electronic business, and a Ph.D. in Management Information Systems from McMaster University. His research interests pertain to scientometrics, knowledge management, and innovation. Alexander's articles have appeared in over 40 refereed journals, and he has received awards at several Canadian, American, and international conferences. In 2007, Dr. Serenko received the Lakehead Contribution to Research Award which recognizes him as one of the university's leading researchers.

**Andrea Stach** graduated from the Master of Science program at Dalhousie University in 1999, specializing in speech language pathology. While working as a manager in the field of rehabilitation, she completed a Master in Management degree at Lakehead University. Her love of travel and scholarly interest in ecommerce were the motivation behind this paper.