

UNDERSTANDING WEB TRAVEL SEARCH AND PURCHASE BEHAVIORS

Angela Kah, Ph.D. student
Dept. of Park, Recreation and Tourism Resources
Michigan State University
131 Natural Resources Bldg.
East Lansing, MI 48824-1222
kahjungh@msu.edu

Christine A. Vogt, Ph.D.
Michigan State University

Abstract

This study discusses the crucial aspects of tourism communication systems and examines the level of use of various information technologies at home and enroute, specifically, the use of the Internet for travel planning and purchases. The purpose of the study is to gain a better understanding of the use levels of various information technologies so that travel marketers can better service and sell to travelers those who use information obtained through web-based communication technologies.

1.0 Introduction

The rapid growth of information and communication technologies during the last decade has had reflective implications for the tourism industry. The Travel Industry Association's TIA Travel Survey (2004) estimates that 56 percent of the U.S. adult population uses the Internet and 67 percent of travelers claim to be Internet users. Diffusion of information and communication technologies may be approaching its maturity stage of which users have learned about and received the benefits of recent technologies such as the Internet. The rapid increase in Internet usage provides an efficient communication platform through which travelers and organizations interact and relationships develop (Dellaert 1999). For example, before innovative computerized systems, the purchasing of an airline ticket was a complex and often unsatisfactory process for tourism suppliers and consumers. Today however, the Internet allows tourists and agents to avoid traditional reservation systems (e.g., SABRE) and directly communicate with transportation providers or packagers such as Travelocity. This example illustrates how the Internet may reinforce or displace traditional information channels.

The various information sources travelers use to obtain information have changed considerably over the past few years. The research of Vogt (Vogt and Fesenmaier 1998; Vogt and Stewart 1998; Stewart and Vogt 1999) on information search across multiple phases of travel planning and vacation experiences suggests that consumers search for primarily problem solving reasons and will gravitate to sources which perform better on problem solving. Web-based information has the capabilities of improving the quality and quantity of travel-related information, however the web still remains fairly unavailable once on vacations. Selected accommodations, visitor or welcome centers, or other retail services may provide Internet access enroute or on-site, however up until 2005, has been limited in terms of access while away from home or work.

To understand shifts in traditional information sources to more contemporary or web-based information sources, an overview of information sources is needed. Here, two models are shown based on 1) information formats (Table 1) and 2) information providers (Table 2). In a tourism context, it has been shown to be useful to identify information sources by considering stages of a vacation, which is 'before trip' and 'during trip' (Tjostheim 1997). Formats refer to the media that communicates the information. Past research has suggested format categories such as interpersonal communications, mass media, interactive media, and computerized communication. Providers refer to the individual or sector in charge of creating or accessing the information and include transportation providers (i.e., departments of transportation), traveler controlled or demanded, and industry control. These information sources are generally available or relevant in certain stages of a vacation and not necessarily versatile across all stages. For instance, an important information source is a welcome center which is of particular relevance in the second or during trip stage, whereas TV advertising is designed for primarily the first stage, or before departing for travels.

As the online traveler market has expanded so has the number of online travelers who actually use the Internet

Table 1.—Information formats

	Stage 1 – before trip	Stage 2 – during trip
Interpersonal communication	face to face (word of mouth), telephone, fax, mail	information/welcome center
Mass media	magazines, brochures, newspapers, television, direct mail, radio	travel books, brochures, tourist guide, maps
Interactive media	-	travel information kiosks
Computerized communication	email, discussion groups, web	GPS, navigation system, on star service, cell phone, lap top, electronic sign

Source: Tjostheim, 1997

Table 2.—Information providers

	Stage 1 – before trip	Stage 2 – during trip
Transportation provider control	websites offering trip planning	signboards and road sign
Traveler control	websites, printed, word of mouth	car components, cell phone, GPS, satellite radio, Internet
Industry control	marketing and information packets, 800#, reservation systems	welcome center, visitor information center, hotel, billboards

to search for travel information or purchase travel products. With the recent advent of wireless technology, such devices can now be used to access the Internet for information, allowing people to stay connected while away from home or the office. This study focuses on the aforementioned aspects of travel and tourism communication systems and examines the level of use of various information technologies at home and en-route, specifically, the use of the Internet for travel planning and purchases. The purpose of the study is to gain a better understanding of the use levels of various information technologies so that travel marketers can better service and sell to travelers, particularly those on vacation, using necessary and desired information accessed through web-based communication technologies.

2.0 Methods

Data were collected in a computer-assisted telephone-interviewing laboratory maintained by the Travel, Tourism, and Recreation Resource Center at Michigan State University. The survey population consisted of households in the states of Illinois, Indiana, Michigan,

Ohio, Wisconsin, and the province of Ontario. The survey employed random digit-dial samples of household telephone numbers in this region purchased from Survey Sampling, Inc. The CATI laboratory was in operation from 6 p.m. to 10 p.m. EST Monday through Thursday evenings and on the weekends from noon to 4 p.m. EST on Saturday and from 2 p.m. to 6 p.m. EST on Sunday. In the evenings, households in the Eastern time zone were called from 6 p.m. to 9 p.m. EST and households in the Central time zone were called from 7 to 10 p.m. EST so that attempts to contact potential respondents in the different time zones were made within the same time span. In addition, numbers within each time zone were randomized so interviewers did not call the same state/province throughout their shifts. Up to five attempts were made to contact each household in the designated sample. Interviewers randomly selected respondents within households by asking to speak to the adult over 17 years old who would have the next birthday. If that person was not available, interviewers asked to speak to the person who would have the following birthday. The procedure was used to minimize the potential bias

Table 3.—Internet use segments

	Frequency	Percent
No Internet access	630	33.5%
Internet access only	279	15.6
Internet access and travel information search only	402	21.6
Internet access, travel information search, buying nontravel products	230	12.2
Internet access, travel information search, buying travel products	254	13.5
Internet access, no travel information search, buying nontravel products	60	3.2
Internet access, no travel information search, buying travel products	7	0.4

caused by the tendency of certain persons in a household to answer the phone more frequently. The data set included 2,099 completed interviews during four months of summer/fall, 2001 (these data represent available information technologies during that time period and may not reflect today's technology environment, however, are a benchmark for understanding consumer demand).

Questions on information technology were developed by researchers at MSU in collaboration with the Michigan Dept. of Transportation. The questions asked in the phone survey ranged from travel, in general, to focusing on a specific trip in Michigan.

3.0 Findings

Respondent Demographic Profile. The distribution of respondents by state or province of residence is as follows:

- Michigan 25%
- Ontario 20%
- Indiana 11%
- Ohio 16%
- Wisconsin 15%
- Illinois 13%

The respondents were likely to be women (61%) and without children in the household (65%). The largest income group's income range was above \$65,000 (39%), followed by below \$42,000 (33%).

Auto Dependent Travel Market. Seventy-five percent of respondents reported driving a vehicle that they owned or leased for their most recent trip. Two-thirds of the respondents had taken a car trip in the year of the study (2001), 22 percent reported their last trip in the prior year (2000) and 11 percent reported that it had been a few years since taking a trip. The reasons respondents preferred vehicles travel were rated on a 10-point scale. The main reason was convenience and flexibility (mean=7.5) and other reasons were safety and cleanliness, need for local transportation at their destination, and want to make stops along the way (mean 6.3 each).

Preferences for Enroute Information-near and away from home. Respondents rated (on a scale of 1 to 10) information they would desire or need during a vehicle trip. Heavy traffic and congestion, as well as construction and detour information, were the most needed types of information during a vehicle trip (mean=8.2 both). Directions and routing information (mean=7.6) and weather condition (mean=7.4) were also requested, followed by information about accommodations (mean=6.9) and auto service centers (mean=6.4).

Internet Usage. Based on a series of questions about Internet access and use over the past 12 months (Table 3), respondents (n=1,862) were placed into one of seven

groups – no Internet access (n=630), access to the Internet but have not searched for travel information or made purchases (n=279), only searched the Internet for travel information (n=402), searched for travel information and purchased nontravel products on the Internet (n=230), searched and purchased travel products on the Internet (n=254), purchased nontravel products on the Internet with no reported travel search behaviors (n=60), and purchased travel products on the Internet with no reported travel search behaviors (n=7). Summing across selected groups shows that 66 percent of the households participating in the survey have Internet access (either at home or work) and 48 percent of the households participating searched for travel information on the Internet in the past 12 months. Of the 551 households who purchased any type of product over the Internet, 47 percent of the households purchased travel products.

Types of Internet Usage-at home/before trip. Thirty-two percent of those with Internet access indicated that before leaving on a trip they searched for highway information on routes, construction or maps, 30 percent searched for general transportation information, and 17 percent searched for accommodation information, and 6 percent attractions and activity information. Other information searched by even fewer respondents included destination information, weather information, or reservation-related information.

Number of Internet Purchases. Forty-eight percent of those with Internet access reported purchasing general products through online means two to five times over 12 months, while 21 percent indicated only a 1 time on-line purchase, and 22 percent purchased online 6 to 15 times. Regarding travel product purchase, 48 percent of those who have purchased through the Internet purchased travel products 2 to 5 times in a 12 month period.

Type of Internet Travel Product Purchases. The major travel purchases through the Internet were airplane tickets (75% of those with Internet access), followed by accommodation reservations (22%).

Information Technology Use on a Recent Michigan Trip. A series of questions were asked about enroute or

at the destination information technology use during a recent vacation to the state of Michigan (Table 4). Individuals who search for and purchase travel products on-line were more likely to bring a cell phone on a trip (81% of this group would bring), pager (22%), palm pilot (17%), or laptop (16%); compared to individuals who search for travel information but have not purchased travel products on the Internet (cell phone 75%, pager 21%, palm pilot 5%, and laptop 10%) or individuals with no Internet access (cell phone 57%, pager 12%, palm pilot 1%, and laptop 3%).

4.0 Discussion

As technologies are brought to market, travelers are benefiting from the information made available through them. These findings show that sizable travel segments are using the Internet for a variety of purposes. Besides cell phones, other portable technologies that could provide web access for real time data or web-based information storage are being used at fairly low levels (at the time these data were collected). Therefore, it is important for future studies to watch for shifts in information sources, formats, providers, and hardware through which travelers search for and obtain travel information.

Businesses and destination marketers need to develop information platforms and databases that are compatible with hardware and services. Also, information providers need to monitor both at home and on vacation information technology uses in order to create appropriate information (i.e., content, file types, purchase capabilities) for tourists making vacation decisions. This research suggests that vehicle-based travelers desire or need real-time highway information, as well as travel service information. Traditionally this type of information has been offered in printed highway maps, telephone services, and welcome centers. Recently, cell phones offer travelers the opportunity to call service providers directly; use GPS systems either handheld, provided in a car (telematics), or in a response system (Onstar); or view live transportation sign boards in urban areas or construction areas. Research on this topic should guide future department of transportation information systems and other information providers in the travel and tourism industry.

Table 4.—Information technology use on a recent Michigan trip

Experiences during a recent Michigan trip	No Internet access	Internet access only	Internet access and travel information search	Internet access, travel information search, buying nontravel products	Internet access, travel information search, buying travel products	Internet access, no travel information search, buying nontravel products	Internet access, no travel information search, buying travel products	Total
Notice and read electronic message boards	60.6%	53.0%	64.5%	72.1%	69.6%	63.2%	50.0%	63.7%
Change route as a result of reading the message boards	27.4	26.9	30.0	29.3	23.4	5.0	100	27.7
Travel with cell phone in vehicle	57.2	71.3	74.6	81.7	80.5	47.4	100	71.0
Travel with pager in vehicle	12.2	18.8	21.4	16.5	22.1	5.3	50.0	17.6
Travel with global positioning system/ GPS in vehicle	4.4	3.0	3.5	4.6	5.3	5.3	50.0	4.3
Travel with lap top computer in vehicle	3.3	10.9	10.4	10.1	15.9	15.8	0	9.6
Travel with Onstar service in vehicle	2.8	4.0	1.7	7.3	1.8	0	0	3.2
Travel with navigation system in vehicle	2.2	5.0	4.0	2.8	2.7	0	0	3.2
Travel with palm pilot in vehicle	1.1	5.0	4.7	13.8	16.8	10.5	0	7.3

These segments were formed through a series of questions asking about Internet access and purchase behaviors over 12 months in 2000/2001.

5.0 Citations

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