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The perception of travel agents in Taiwan regarding travel website and training needs for adopting E-commerce

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Due to the popularity of the Internet and World Wide Web, many business sectors including the travel industry have benefited from the new virtual trade platform called E-commerce. The purpose of this study was to analyze the perceptions of travel agents in Taiwan regarding the important elements of constructing a travel website for E-commerce, and to assess the training history and needs of Taiwanese travel agents regarding computer technology required to adopt E-commerce. The major findings indicated that first, the commerce function and the content feature were considered the two most important elements for a travel website, with emphasis on online security issues. Second, it is necessary to provide training programs for travel agents to use computer technology more efficiently.

Key words: E-commerce, travel agents, internet, websites, training needs.

INTRODUCTION

In recent years, traveling has become a common and expected part of life for many people in Taiwan due to the country's rapid economic growth and increasing disposable personal income. This phenomenon has fueled the expansion of travel business enterprises in Taiwan. In 2004, Republic of China (ROC) citizens made a total of 7,780,652 trips abroad, up 31.36% from the 5,923,072 who made overseas trips the previous year ("Annual report on tourism 2004", 2005). Over the same period, the number of international visitor arrivals was 2,950,342, compared with the 2,248,117 visitor arrivals recorded the previous year. This was a growth of 31.24% ("Visitor arrivals, 1956 to 2005", 2006). In 2005, ROC citizens made a total of 8,208,125 trips abroad, an

increase of 5.49% from the 7,780,652 who made overseas trips the previous year ("Annual report on tourism 2005", 2006). Over the same period, the number of visits in the domestic travel market was 136,691,863—about 6.0 trips by each resident in Taiwan compared with the 136,256,598 visits recorded the previous year. This was a growth of 0.32%. This trend has made travel and tourism one of the fastest growing business sectors in Taiwan. The tourism industry is different from other industries because it provides intangible experiences which cannot be investigated prior to purchase. In addition, tourism products need to be distributed and made available to tourists by intermediaries such as travel agencies because these products are often at a distance from the potential customers (Mill and Morrison, 1992). However, people's purchasing behavior has been changed due to the convenience of Internet access and the development of virtual trade platforms known as E-commerce. For the travel business, the Internet has become a channel that makes travel information and online reservations available to travelers at low cost.

Today's travel industry is highly competitive, especially for traditional travel agencies. Tourists can arrange their own trips and purchase tickets conveniently at anytime, anywhere, via the Internet. As a result, airlines have

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Abbreviations: ROC, Republic of China; FIND, focus on internet news and data; ACI, advanced e-commerce Institute; DOIT, department of industrial technology; MOEA, ministry of economic affairs; WWW, world wide web; CAI, computer-aided instruction; ITM, interactive training manual; HIPAA, health insurance portability and accountability act.

reduced the commissions of travel agencies for selling flight tickets because they want to deal with customers directly through their own websites (Wilson, 2000). Additionally, more and more websites offer "online only" promotions with cheaper prices to attract customers, and this is another threat to traditional travel agencies. According to the survey from ACI-FIND, III ("Taiwan E-commerce Yearbook 2005", 2006), 34.61% of online shops were profitable in 2005, rising 2.61% from 2004 while 12.59% of online shops had reached an annual break-even point. This indicated that Taiwan's business-to-consumer (B2C) market was growing steadily. In terms of online transaction value, online travel accounted for 68% of the total B2C online sales in 2004 ("B2C E-commerce in Taiwan 2004", 2005) and 60% in 2005 ("Taiwan E-commerce Yearbook 2005", 2006). Therefore, the intermediate role of traditional travel agencies between tourism suppliers and consumers is threatened. For traditional travel agencies, applying E-commerce to extend their potential online markets while also running brick-and-mortar stores has become the crucial issue for them to survive in this industry. Thus, this study seeks to recognize important elements to construct a travel website based on the perceptions of Taiwanese travel agents which can be used by software designers to develop suitable E-commerce systems for travel agencies. Meanwhile, it will also help owners and managers of travel agencies to make decisions on adequate software and technology for adopting E-commerce. Furthermore, this study is designed to identify the training needs that Taiwanese travel agencies require to adopt and maintain E-commerce effectively.

LITERATURE REVIEW

In this research, Internet related demographic information was mainly from the Focus on Internet News and Data (FIND) website which is organized and operated by advanced e-commerce Institute (ACI), Institute for Information Industry (III) under the sponsor of Department of Industrial Technology (DOIT) of Ministry of Economic Affairs (MOEA).

Advantages of E-commerce

E-Commerce has provided great advantages for both demanders (consumers) and suppliers (businesses) of economic activities. With E-commerce, consumers can search and compare a variety of products and services in the global market (Quelch and Klein, 1996), and then place their orders conveniently anytime and anywhere without geographic limitations (Bhatnagar et al., 2000; Yang et al., 2003). This simplifies the buying process and provides more selections to consumers than traditional businesses are able to (Schneider, 2004; Turban et al., 2002). For businesses, Internet and web technology

provide new tools to market and sell products and services to customers at lower transaction and operating costs (Jarach, 2002). The main goal of conducting business is to make a profit based on the following fundamental formula (Kalakota and Whinston, 1997): Profit = Revenue – Cost. Kalakota and Whinston (1997) proposed that E-commerce can be used to decrease cost and increase revenue which would create the most profit. In terms of increasing revenue, E-commerce expands the market by eliminating geographical boundaries for both local and international companies. For cost control, E-commerce can reduce expenditures on operating overhead and labor with the assistance of technology. As a result, productivity can be improved enormously.

The travel agency sector

Traditionally, travel agencies act as intermediaries within the travel and tourism industry in Taiwan. At the end of 2005, Taiwan had a total of 2,052 travel agencies, of which 81 were consolidated agencies, 1,842 were A-class agencies, and 129 were B-class agencies ("The number of travel agencies by regions", 2005). All the consolidated travel agencies were located in the four major cities of Taiwan (58 in Taipei, 19 in Kaohsiung, 2 in Tainan and 2 in Taichung) ("The number of travel agencies by regions", 2005).

Taiwan E-commerce market scale

By the end of 2005, 13.2 million people, or 58% of Taiwan's population, were general Internet users compared to 2004, when the number was 12.2 million people or 54% of Taiwan's population, an increase of 2% ("General Internet users 2005", 2006). While the popularity of personal computers and the number of Internet users continue to grow rapidly, the practice of online shopping has been accepted only gradually. Some of the traditional retail suppliers have established websites to offer their products online to customers in order to minimize operating costs. According to research by the Department of Commerce, MOEA and ROC. In 2004, 53% of traditional retail suppliers have offered online shopping to increase sales channels, extend brick-and-mortar brand publicity to virtual markets, and expand the potential consumer market (Liang et al., 2003). As the number of Internet users continues to grow in Taiwan, a large population of computer literate people with consumption capacity has made the Internet an indispensable platform for commerce.

The travel agency and E-commerce in Taiwan

For many decades, the travel and tourism industry grew around the concept of travel agencies acting as the

bridge between customers and airlines, hotels and wholesale travel companies. However, the industry has experienced a complete revolution in more recent years with Internet technology which creates “electronic markets” to allow customers to easily and conveniently search for travel information and make their own purchases (Yang et al., 2003). Airlines and wholesale travel companies which offer their services and products online directly to consumers stand as the primary threat to traditional travel agencies by bypassing their conventional bridge role (Barnett and Standing, 2001; Shchiglik and Barnes, 2004). In spite of this competition from online alternatives, the Internet and web technology also offer opportunities for traditional “bricks-and-mortar” travel agencies to expand their customer base beyond their local region and to offer their own online services to consumers anywhere at any time using a virtual commerce platform. Visionary travel agencies, if they want to survive and thrive in the new economy, will learn how to utilize these new technologies to expand their market share.

Web technology and travel agencies

The Internet and web technology have tremendous potential to create new business opportunities and change the structure of the travel industry. Travel agencies can exploit the World Wide Web (WWW) to provide the following business processes via the Internet (Raymond and Bergeron, 1997):

1. Improve customer relationships by having interaction with customers and developing customer databases.
2. Collect information about customers for marketing use.
3. Increase publicity and attract potential customers.
4. Provide online transactions for the convenience of customers anytime, anywhere.
5. Provide up-to-date information for customers to browse and download.

Although traditional travel agencies are facing strong competition from online travel agents and direct marketing from upstream suppliers via WWW (Tapscott, 1996), web technology can still provide an alternative for traditional travel agencies to increase their competitive advantage. Therefore, in the construction of a website for conducting E-commerce, the functions, effectiveness, and elements of a website should be given the most attention. The website is considered a good advertising medium in the marketing communication mix (Berthon and Pitt, 1996). A well-designed website can increase customers' satisfaction and positively influence purchasing (Zhang et al., 2000). In addition, the Internet may assist enterprises in re-positioning and promoting

the image of their company. However, when constructing a website as a marketing tool, the functionality and effectiveness of the website should be evaluated by the travel company. Some scholars point out that the Internet is no longer simply a channel in marketing, but rather a market in itself (Hoffman et al., 1995). By utilizing the functions of the software and the hardware of the computer, suppliers and consumers can talk to each other, obtain information through online interaction and fulfill the business transaction. As a result, commercial websites give consumers more choice and control in their business transactions. Therefore, effectiveness of websites in promoting tourism services and products is very important and should be fully determined (Tierney, 2000).

The 7Cs framework

Traditional marketing elements involve product, price, promotion and place in addition to physical surroundings, participants, and processes for service marketing (Kotler, 2003; Wilson, 2001). These, however, do not fit into the Internet marketing paradigm. According to Rayport and Jaworski (2001), an effectively designed commercial website should provide valuable information to meet current customers' needs and simultaneously attract potential consumers via its online presence. Also, a successful website depends mainly on how well an appealing interface integrates with interactive functions for customers. In order to explain the design principles for constructing a commercial website based on consumers' viewpoints, the 7Cs framework of Internet marketing elements has been introduced. Figure 1 shows the representation of the 7Cs framework; a detailed explanation of each of the elements is as follows:

1. Context: “The context of the website captures its aesthetic and functional look-and-feel” (Rayport and Jaworski, 2001).
2. Content: “Content is defined as all digital subject matter on the site” (Rayport and Jaworski, 2001).
3. Community: “Community is defined as the interaction that occurs between site users” (Rayport and Jaworski, 2001)
4. Customization: “Customization is defined as the site's ability to tailor itself or to be tailored by each user” (Rayport and Jaworski, 2001)
5. Communication: “Communication refers to the dialogue that unfolds between the site and its users” (Rayport and Jaworski, 2001)
6. Connection: “Connection is defined as the extent of the formal linkages between the site and other sites” (Rayport and Jaworski, 2001)
7. Commerce: “Commerce is defined as the sale of goods, products, or services on the site” (Rayport and Jaworski, 2001)

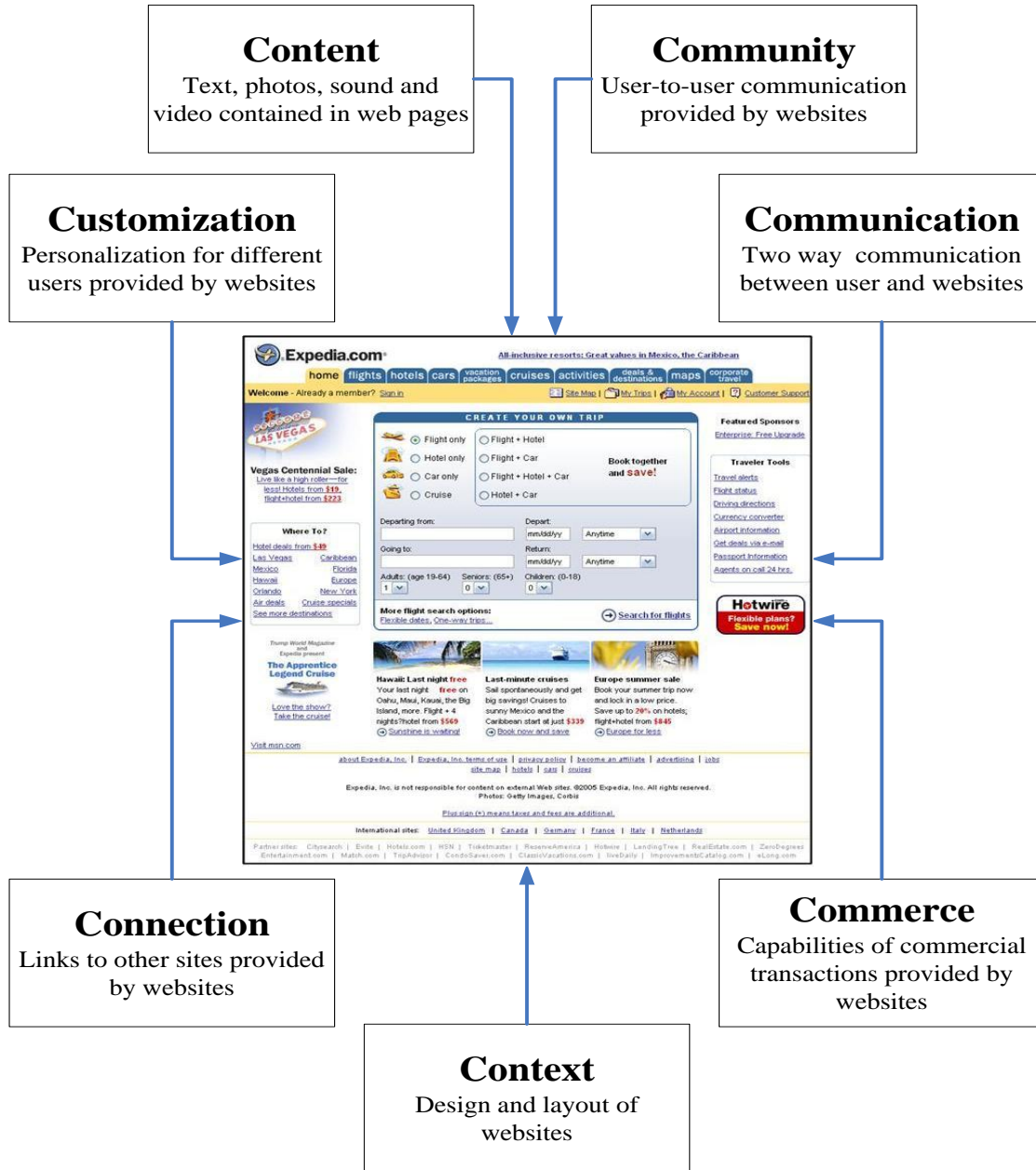


Figure 1. 7Cs Framework (Rayport and Jaworski, 2001), Note: screenshot reproduced with permission of expedia.com.

Training needs for adopting E-commerce

According to Chin and Gopal (1995), organizations usually deploy new computer technology, and then employees have to adopt it without choice. Therefore, it is very important to provide encouragement and technical support to the management in the work place in order to create a supportive environment to encourage adoption of computer technology (Gefen and Keil, 1998; Igbaria et al., 1997). For technical support, training has been considered an important factor which has positively

affected users' perceptions of technology (Zoltan and Chapanis, 1982). Therefore, the impact of training on technology acceptance and usage has been studied in information technology research. Empirical studies have concentrated on finding effective training methods to improve technology usage. Venkatesh (1999) argued that training programs can provide end-users with knowledge and practical skill to apply technology effectively. Based on the study of Sprague and Carlson (1982), Nelson and Cheney (1987) developed seven software training methods including tutorial, courses/lectures or seminars,

computer-aided instruction (CAI), interactive training manual (ITM), resident expert, help component, and external training. Other research has proposed similar training methods: instruction-based, document-based and online training (Czaja et al., 1986). Effective training programs are very important in helping employees increase their computer skills so that they feel more comfortable and willing to adopt computer technology.

METHODOLOGY

In order to explore the perceptions of travel agents regarding travel websites used for E-commerce, there was a need to establish a framework/model that can be used in this research. Rayport and Jaworski's 7C's model the seven design elements of a customer interface was chosen as a reference framework (Rayport and Jaworski, 2001). The 7C's framework can provide valuable information on the website's context, content, community, customization, communication, connection and commerce (Figure 1). Despite the fact that this framework concentrates primarily on the design perimeters of effective consumer websites, the experiences of travel agents from their interaction with customers could provide helpful information for website designers and software programmers to create practical and user friendly web-based technology that expands E-commerce opportunities.

Research questions

Research question 1: What are the perceptions of Taiwanese travel agents regarding the important elements of a functional website?
 Research question 2: Are Taiwanese travel agents in need of further computer training?

Sampling method

A random cluster sampling was used to select participants because it is more practical to select groups of individuals than it would be to select individuals from the population (Gall et al., 2003). This approach allowed for overcoming the constraints of costs and time associated with a dispersed population. A sample of 16 consolidated travel agencies was taken from the 81 agencies registered with the Tourism Bureau, Ministry of Transportation and Communication, ROC. All individuals who worked for the selected consolidated travel agencies were studied, excluding those who could not be reached.

Questionnaire

The web design questions of the questionnaire were developed based on Rayport and Jaworski's 7C's framework to understand travel agents' perceptions of the importance of travel website elements. The training questions were developed by the researcher to examine the perceptions of travel agents regarding the importance of training programs on the job. The participants will answer those questions by choosing a number from one to seven points on a Likert scale. Finally, data about the attributes of travel agencies and demographic characteristics of the respondents was collected. The attribute section included questions to collect relevant information such as participants' gender, number of years of computer experience, years of work experience and the background of the company they work for. The participants completed the web-based questionnaire by self-report.

RESULTS

Personal information

Gender and age

There were 16 travel agencies randomly selected from 81 consolidated travel agencies for this survey. A total of 208 travel agents working at these 16 consolidated travel agencies submitted the questionnaires. Two hundred useable surveys were valid for statistical analysis. The participants consisted of 66 males and 134 females with ages ranging from 19 to 57 and an average age of 30.

Educational background

The majority of male respondents (56%) have university/college degrees or graduate school degrees. Nearly a majority of female respondents (49.3%) have only a junior college degree.

Computer experience and work experience

The average amount of computer experience was 5.49 years. 27% of participants had computer experience of 8 years or more, and 26.5% of them had computer experience of between 4 and 5 years. 23% of participants had work experience of between 1 and 2 years, while 22% of them had work experience of 7 years or more.

Statistical analysis for research question 1

Research question 1 aimed to investigate the perceptions of Taiwanese travel agents regarding the important elements of a functional website. Table 1 report the means and standard deviations of the importance of website elements on content and function which divided Internet marketing elements into 7 categories based on the 7Cs framework (Rayport and Jaworski, 2001) according to the perceptions of travel agents. The most important category was commerce ($M = 5.99$, $SD = .88$), and the least important category was customization ($M = 5.24$, $SD = 1.24$). The breakdown analysis of each category with the most important elements within each category is shown in Table 2.

Statistical analysis for research question 2

Research question 2 was to explore whether travel agents need computer technology training for adopting E-commerce.

Perceptions of travel agents on training

Of the 200 participants, only 42.5% responded that their

Table 1. Importance of website elements.

Website element	M	SD
Commerce	5.99	0.88
Content	5.94	0.98
Communication	5.82	0.91
Connection	5.64	1.03
Context	5.60	0.97
Community	5.31	0.95
Customization	5.24	1.24

Table 2. The most important element within each C's category.

Website element	M	SD
Commerce		
Transaction security system	6.27	0.91
Content		
Online security information	6.18	1.18
Communication		
Contact details	6.14	1.00
Context		
Download speed	5.89	1.04
Connection		
Link to corporate sites	5.78	1.09
community Membership service	5.52	1.03
Customization		
Multi-language service	5.30	1.42

Table 3. Perceptions of travel agents on training needs.

Variable	N	Percent
Necessity of training		
Disagree	1	0.5
Neutral	13	6.5
Agree	19	9.5
Strongly agree	97	48.5
Very strongly agree	70	35.0
Total	200	100.0
Effectiveness of training		
Disagree	3	1.5
Neutral	12	6.0
Agree	21	10.5
Strongly agree	89	44.5
Very strongly agree	75	37.5
Total	200	100.0

Learning style and desired computer training courses.

companies have provided a computer training program, and 57% of them have never attended a computer training program before. Table 3 reports the means and

standard deviations of the perceptions of travel agents regarding their training needs. The results revealed that 93% of travel agents agreed on the necessity of training

Table 4. Learning style of participating travel agents for training.

Training method	N	Percent
Face-to-face training by experts	126	63.0
Web-based self-training	20	10.0
Web-based training by experts	45	22.5
Self-training through training manuals	9	4.5
Total	200	100.0

and 92.5% of them agreed on the effectiveness of training. As shown in Table 4 regarding travel agents' desired learning style, the majority of participants (63%) favored face-to-face training by experts. Only 4.5% of participants selected self-training through training manuals. In addition, an open question was asked to obtain their preferable learning style other than methods listed on the questionnaire. Sixteen participants preferred video demonstrations and 7 participants favored one-on-one training methods. A multiple answer question was asked to obtain travel agents' opinions of the need for specific computer training courses. One hundred seventeen agents (58.5%) desired to learn general computer knowledge and application; 114 agents (57%) would like to learn about Internet marketing and database management; 60 agents (30%) would like to learn information on security issues.

DISCUSSION AND IMPLICATIONS

Research question 1

The first research question was designed to investigate the opinions of Taiwanese travel agents regarding the important elements of constructing a travel website based on the 7Cs framework (commerce, content, communication, connection, context, community and customization) (Rayport and Jaworski, 2001). According to the survey results, commerce was the most important category for travel websites. According to a survey conducted by ACI-FIND, III the E-Commerce market in Taiwan (including both online sales and online purchasing) grew 20.7% from 2004 to 2005, from NT\$177.86 billion to NT\$214.7 billion ("Business online 2005", 2006). This measure demonstrates that most businesses have embraced the importance of and need for E-commerce functions on their websites. One of the advantages of online business is its global market reach without geographical limitation. In order to attract customers globally, customization such as multiple-language service for a diverse base of customers should be considered an important feature to expand the market. However, the customization category received the lowest score compared to the 6 other elements. Based on the review of 16 selected travel agency websites, only 2

websites provide multiple-language function. It reveals that most travel agencies focus mainly on the domestic market. Greater attention will need to be paid to diverse language capabilities in order to attract international customers.

For the commerce feature of travel websites, a transaction security system was ranked as the most important element. Survey results of B2C E-commerce in Taiwan also showed that 33% of online consumers had security concerns regarding the use of their credit cards and 20% were concerned about the privacy of personal information while doing online transactions. Hence, one barrier to expanding E-commerce involves the perceptions of some consumers regarding online security and their concerns about privacy when doing business with online sellers. (Ko et al., 2004; Lang, 2000; Metzger, 2004). It is expected that a secure online shopping environment will earn consumers' trust and stimulate online sales (Chircu et al., 2000; Hoffman et al., 1999; Mathieson and Chin, 2001). Therefore, website security features should be considered an important element to help bolster trust during the development of commercial websites (Kim and Lee, 2004; "Online travel booking survey 2000", 2000). These findings provide information for software designers and web programmers to design travel websites for travel agencies which are interested in E-commerce. To summarize, a travel website should focus on online transaction features and security elements which satisfy potential consumers.

Research question 2

The second research question was to investigate the training needs of travel agents regarding the use of computer technology. The results show that 57.5% of participants have not received training for their job from their company. Meanwhile, over 82% of respondents strongly agree that training is important for better job performance. Research on barriers to adoption of technology show that the more complex a technology is, the more difficult it is for untrained users to adopt (Attewell, 1992). This highlights the importance of training programs for travel agents to make use of computer technology. Regarding the most suitable training method for travel agents, only 14.5% of participants chose

self-training. The vast majority of agents (85.5%) in this study prefer training methods with the presence of an expert. This reveals that travel agents are anxious when dealing with technology and computer experts can help alleviate this "computer anxiety" during the learning process. Among the most valued elements which respondents said should be included as a part of travel websites were information security features. This earned high scores from most respondents, especially in comparison to other features. However, it seems very incongruous that respondents also gave information security issues a low average score when rating their own computer training needs. Why might this be? There are (at least) four possible explanations: perceived current skill, perceived frequency of use, perceived risk, and perceived job responsibility. Perhaps most travel professionals feel highly skilled in the area of computer security ("perceived current skill") with little need to improve their skills.

This seems unlikely, and the survey data do not indicate this. Another possible theory is that security elements on computers and websites are seen as something to be dealt with very infrequently, perhaps once a month or even less often ("perceived frequency of use"). As such, respondents might have given higher scores to training needs for those features used on a daily or more frequent basis. If so, respondents must also be minimizing the possible risks of security breaches ("perceived risk"). It seems unlikely that the risks of security breaches are perceived to be so low in the travel industry that greater computer security skills are unnecessary. Surely the worldwide publicity of computer viruses, spyware, "hacking," and other security risks is so pervasive that most computer users are aware of the risks. There appears to be a growing trend to hold businesses liable for the loss, theft, or inappropriate use of personal information or data held by companies on their computers on behalf of their clients and customers. In the United States, the national Health Insurance Portability and Accountability Act (HIPAA) addresses concerns over the privacy of personal medical data and provides criminal penalties. In the state of California, a new law mandates that businesses which own or license computerized records containing personal information must notify all of their customers if there is a breach in computer security with only a possibility of stolen personal data ("Notice of security breach civil code sections 1798.29 and 1798.82-1798.84", 2003). These and other such legislative mandates increase the costs on businesses for any possible security breaches, and this trend is likely to reach Taiwan eventually. If travel professionals are unaware of the growing risks of security breaches and possible penalties, their awareness is likely to increase in the near future.

Finally, a more likely explanation for the low scores received on the training needs of travel agents regarding security issues is the perception that computer security is

"someone else's job" ("perceived job responsibility"). Internet and computer security may be deemed a highly specialized area within a business's computer network, and as such, should be left to the computer specialists in the firm (or outside contractors). Most computer users realize that the field of computer security is rapidly changing and requires constant vigilance. Perhaps they feel this subject is most efficiently handled by a security specialist. More research regarding these possible perceptions is warranted.

There were some important practical implications for the findings in this research. Training is an important and necessary method to overcome computer anxiety and transfer computer knowledge to users in the workplace (Venkatesh and Morris, 2000). The current research reveals the necessity of training programs for travel agents to adopt technology better and training methods with experts is a preferable way for agents to learn new technology. This information can help travel agencies and businesses prepare their employees for better job performance before making an investment in E-commerce technology.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions were drawn from the findings of this research: All the travel agencies selected in this study have their own websites. Commerce function was considered the most important category followed by content features. Online security issues such as a transaction security system and online security information were emphasized based on the opinions of the respondents.

Over 90% of the respondents agreed on the necessity of computer training programs on the job. In addition, the effectiveness of training programs to improve computer skills was confirmed. 63% of the participating travel agents reported their preferred learning style to be traditional face to face training with the presence of an expert. Porter (1998) indicated that intermediaries can survive only within a distribution channel with continued added value. The traditional role of travel agencies of providing information and selling travel products and services is being replaced by Internet technology because customers can search for information and make purchases online easily. Therefore, travel agencies must change to provide consulting services for customers instead of being just a sales agent of travel products.

The tourism industry will tend to become increasingly specialized in the years to come (Standing and Vasudavan, 2001). With the emergent information technology, travelers will become more sophisticated and tend to prefer more exotic and independent travel in the future (Buhalis, 1998; Reinders and Baker, 1998). Therefore, travel agencies will need to serve more knowledgeable customers by becoming travel advisors and developers of personalized travel products instead of

being merely simple resellers and information providers if they want to survive and thrive in the future. For example, travel agencies could focus on certain tourist markets and design customized tour packages in order to attract tourists with special interests in some destinations and activities.

The present research is just a starting point. While understanding the important elements of constructing and using a travel website are important, for full utilization of E-commerce it is also necessary to know how to retain the loyalty of customers in such an environment. Additional research is needed to investigate customers' perceptions regarding their online buying experiences, as well as to ascertain practical training programs to increase technology acceptance among travel agents. Both will be necessary to help pave a road to successful E-commerce.

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