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# **Impact of Women's Query Formulation on Searching Satisfaction: Implications for Online Marketing in Hospitality and Tourism**

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## **ABSTRACT**

*The internet's lack of organization and overwhelming size prohibits consumers from accessing useful and relevant information. The purpose of this study is to discern whether certain query types yield more satisfying search results for women during the vacation planning process. This research also addresses the discrepancies found between the internet's ontology of hospitality and tourism offerings and women's conceptualization of corresponding topics by analyzing search satisfaction. The implications for hospitality and tourism are to have a clearer and more accurate online ontology in order to achieve better target marketing. Women are the focus of this study because they are documented to have decision making authority in areas of restaurant selection, lodging accommodations, shopping excursions and other at destination decisions.*

**Keywords:** query formulation, gender, qualitative, marketing, internet search

## **INTRODUCTION**

Today, using a search engine to find hospitality and tourism offerings is becoming a dominant mode of consumers' use of the Internet (TIA, 2008; Xiang, Wöber, & Fesenmaier, 2008). Searching the internet can be challenging because thousands of Web domains and industry ontologies lack conceptual overlap with consumer supplied search terms (Furnas et al., 1987; Pan & Fesenmaier, 2006; Xiang, Gretzel, & Fesenmaier, 2009). As a result, consumers are left to choose among suboptimal search results or proceed with fulfilling their goal in a different manner and therefore businesses potentially forfeit opportunities to engage with these consumers.

Huang (2005) suggests that Web advertisers pay special attention to the needs of female Internet users because of the control they have over family spending. In order to increase the probability of frequent browsing and purchase intent, Web designers must first direct women to their websites. Recent studies suggest that segmenting by gender is important on the Internet and Web designers should consider creating gender specific components to cater to men and women separately (Huang, 2005; Moss et al., 2008; Rodgers & Harris, 2003; Wang, 2010). With this in mind, it is argued that marketers need to better understand gender differences in Internet searching. This paper proposes to specifically explore the query formulation characteristics of

each gender in the context of using a search engine to search for hospitality and tourism products in order to help marketers understand how they can compensate for gender uniqueness.

## LITERATURE REVIEW

Furnas et al. (1987) acknowledged that Web designers tend to underestimate the significance of the vocabulary problem. The vocabulary problem is the existence of the many alternative ways words can be used to describe essentially same thing. At the time of the 1987 study, Web designers were not assigning sufficient alternatives to web data entries and therefore only accounting for a fraction of the possible aliases and associations of each entry. Furnas et al. (1987) found a mere .07 to .18 probability that two people would apply the same term to an object. A 1999 study revealed that even with the help of information retrieval specialists formulating queries, users only ranked 2-10% of search results as relevant. This study confirmed that the vocabulary problem was less related to human ignorance and more to search engine effectiveness (Gordon & Pathak, 1999). In 2006, another study confirmed that system semantic models in hospitality and tourism did not sufficiently overlap with subject semantic mental models (Pan & Fesenmaier, 2006). In their study, only eight out of twenty five search words overlapped and some of the shared words had different meanings for each model. It is evident that the vocabulary problem persists in the hospitality and tourism industry. Xiang et al. (2009) also found incongruence between language used by the tourism industry to describe their products and the queries used by Internet users to find travel related products. More recently, Xiang and Pan (2010) conceptualized travel queries and examined travel queries on US cities based upon real search engine data. However, these studies failed to address the potential gender differences in search queries within the hospitality and tourism context.

Both Internet usage (Large, Beheshti, & Rahman, 2002; Li & Kirkup, 2007; Lorigo, Pan, Hembrooke, Joachims, & Granka, 2006; Richard, Chebat, Yang, & Putrevu, 2009; Rodgers & Harris, 2003; Schumacher & Morahan-Martin, 2001; Wang, 2010) and consumer behavior research (Nanda, Hu, & Bai, 2006; Kim, Choi, Agrusa, Wang, & Kim, 2010) have found gender to be a moderating variable on consumption or purchase behavior. Studies have found that women experience low self efficacy, less perceived control, and higher anxiety when online than men (Ford et al., 2001; Huang, 2005; Janda, 2008; Kim et al., 2007; Large et al., 2002; Li & Kirkup, 2007; Lorigo et al., 2006; Moss et al., 2008; Zhang, 2007). Bandura (1986) points out that self efficacy is a subjective evaluation of ones ability. This is an important detail to consider because studies that have compared searching abilities in relation to gender report that men and women perform similarly in the sense that both groups are able to retrieve the correct answer to the search task (Large et al., 2002; Schumacher & Morahan-Martin, 2001; Lorigo et al., 2006). This further suggests that the difference in women's search versus men's search is not linked to ability. The issue is related to effectiveness and efficiency due to cognitive style (Ford et al., 2001).

Research has found that men and women conceptually approach the Internet differently due to their distinctive uses of the Web, how they perceive it (Kim, Lehto, & Morrison, 2007; Schumacher & Morahan-Martin, 2001; Wang, 2010), their different cognitive styles (Ford, Miller, & Moss, 2001), and varying emotional needs (Rodgers & Harris, 2003). In the case of hospitality and tourism planning, women also spend more time researching purchase decisions

than men (Kim et al., 2007; Lorigo et al., 2006; Wang, 2010). Furthermore, Wang (2010) determined that women's browsing frequency is positively related to purchase intent.

## **METHODOLOGY**

In order to understand the basis of women's query formulation, a structured vacation planning exercise to Rome, Italy, will be conducted. Twenty-four graduate students, twelve male and twelve female, from a Southwestern public university in the US will be observed. It has been established that small samples sizes are appropriate in qualitative interpretive research due to the nature of the research and considerable amount of data that can be produced from such samples (Kwortnick, 2003). University students are deemed appropriate for this study due to Wang's (2010) recognition of their great significance to the service industry, online familiarity, and future and current use of online services. Also, a homogeneous sample will reduce the impact of non-controllable intervening variables. Rome, Italy is chosen as the destination because it is rich in its offerings as a tourist destination but limited exposure to research participants.

Prior to the exercise, participants will be informed about the study and will be asked to participate in an interview regarding their vacation planning upon completing the plan at the research site. They will also be asked to verbalize their thoughts during the planning process. Following suit with similar task driven studies, the time of one hour will be allotted for the planning process (Pan & Fesenmaier, 2006) and one hour will be used for the in-depth post-task interview (Kwortnick, 2003; Li et al., 2009).

A workstation will be setup with equipment to record audio and visual nonverbal cues. As in Fesenmaier & Pan (2006), technology similar to Camtasia Studio Documentation will be used for recording mouse clicks and keyboard strokes and Internet macro software will be used to record websites visited, time stamps, keystrokes, and the names of computer programs used in the planning process. All of these data sets will be combined and analyzed to fully relate how the cognitive process in vacation planning effects word choice and query formulation.

Participants will be familiarized with the monitoring and verbalization process prior to the experiment and will be asked to fill out an electronic survey to record basic demographic information as well as their experiences using the Internet for travel purposes. Each participant's interaction with a search engine will be recorded and analyzed with quantitative text analysis tools such as CATPAC. In addition, the post-task semi-structured depth interview will help the researcher to measure the level of satisfaction in their searching experiences. The depth interview's purpose is to gather data regarding emotions, cognitive processes, and participants' feedback regarding the encountered search results pages (SRP) during their vacation planning process. The data will then be mapped, categorized, and analyzed using methods from Huberman and Miles (2002).

## **IMPLICATIONS**

It is estimated that there are almost 2 billion Internet users worldwide (Miniwatts Marketing Group, 2010). The exponential growth of Internet content and users further complicates the vocabulary problem because there is no standardized method for categorizing or

indexing Web content and each new user introduces an additional variance in object definition. Web publishers, designers, and SEO specialists can use knowledge about consumer conceptualization to their advantage by refining hospitality and tourism industries' online ontology and ensuring that their system models will increasingly match consumers' mental models, therefore supporting Web searching with high relevancy. More relevant Web searches lead to higher consumer satisfaction and more opportunities for the numerous independent hospitality and tourism business to connect with potential customers.

This study addresses these issues within hospitality and tourism industries by exploring women's experience with Internet search using a qualitative research method. By understanding the implications of women's query formulation patterns and their effect on search satisfaction, this research will be able to report on women's cognitive process and provide an understanding of the relationship between query formulation and search satisfaction. Search satisfaction plays a role in women's perception of ease of use, higher frequent browsing and there for higher purchase intent (Huang, 2005; Janda; 2008; Wang, 2010). I This can offer insights into the way women conceptualize their search tasks and therefore lead Web designers down the right path to directing more traffic to their websites.

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