# The impact of restaurant review website attributes on consumers' internal states and behavioral responses

A Dissertation Presented for the

Doctor of Philosophy

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# DEDICATION

This dissertation is dedicated to my parents, Worapon and Alissar Suntithammasoot. For their endless love, support, and encouragement. And to my husband, James L. Brewer, for always believing in me, being proud of me, and loving me unconditionally.

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# ABSTRACT

The restaurant review website is one of the most effective restaurant marketing tools that has emerged from the incredible growth of the internet over the past several decades. This study aims to assess consumers' initial psychological states and consumer behavior toward the attributes of restaurant review websites. By employing the Stimulus-Organism-Response framework, this study introduces seven attributes of a restaurant review website—usefulness, simplicity, visual appeal, social presence, informativeness, credibility, and scalability—and explores how these attributes impact consumers' cognitive and affective attitudes and behavioral responses. A mock restaurant review website was created according to the results of in-depth interviews and a focus group, and an online survey was linked to the mock restaurant review website. Data were collected on U.S. residents, aged 21 years old and over, yielding 529 completed responses. The data analysis employed multivariate statistical methods and structural equation modeling to test the hypotheses. All constructs had acceptable levels of composite reliability and were deemed valid for both convergent and discriminant validity. Several hypotheses were found to be significant, as expected, except for a few that may require further investigation. The results of the hypotheses testing revealed that the relationships between usefulness, visual appeal, social presence, and behavioral responses were fully mediated by cognitive and affective attitudes. The relationship between informativeness and behavioral response was only mediated by cognitive attitude, whereas simplicity and credibility were only mediated by affective attitude. The hypothesis for the relationship between scalability and behavioral responses were insignificant, and a recommendation for future research is provided. Research implications, limitations, and suggestions are also discussed.

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# CHAPTER I

# INTRODUCTION AND GENERAL INFORMATION

*"La bonne cuisine est la base du véritable Bonheur –*

*Good food is the foundation of genuine happiness.*"

*Auguste Escoffier*,

*King of Chefs (1846-1935)*

## Background of the Study

The rapid growth of consumer-generated content (CGC) websites has transformed the way people do business and the way consumers make decisions. Review websites have become a considerable source of information for consumers to determine the quality of products, services, local businesses, and dining experiences. In particular, for the restaurant business, positive word-of-mouth from customers is one of the most dynamic factors that helps improve a business. Recent statistics indicated that restaurant/café ranked as the first place for the most common types of local businesses that consumers read online consumer reviews for (Statista, 2016). Based on the National Household Survey, more than one-third (34 percent) of consumers reported that information on restaurant review websites affected their decisions when choosing a restaurant (National Restaurant Association, 2012).

In general, the consumer decision-making process for dining-out is simple when a familiar restaurant is selected, or the purpose of the meal is just a normal meal, i.e. to satisfy hunger. In the case that consumers want to dine out at a new fine dining restaurant, the decision-making process is more complicated due to the higher price and the purpose of the meal, thus, the restaurant

selection is more important to the consumer. Considering the fact that restaurant service is an experience good which is not only intangible but it is also harder to pre-determine (Nelson, 1974), the need for information search prior to making a purchase is important. When the internet becomes an integral part of our everyday life, the traditional forms of communication appear to be losing effectiveness while electronic communication forms are gaining in importance (Trusov, Bucklin, & Pauwels, 2009). Alternatively, a restaurant review website has become a more popular platform to access restaurant information because it is more easily accessible, less time-consuming, and significantly lower in cost. The emergence of these restaurant review websites, either created by consumers or professional editors, are found to attract more customers and produce a greater impact on restaurant sales (Zhang, Ye, Law, & Li, 2010).

## Statement of the Problem

Among the growing numbers of restaurant review websites, the two most popular review websites are Yelp and TripAdvisor. According to the statistic information on Alexa (2017), Yelp and TripAdvisor ranked as the 41$^{st}$ and the 88$^{th}$ places of the most visited websites in the United States respectively, whereas, Zomato, Zagat, or other restaurant review websites, are not included in the top 500 of the U.S. most visited websites (Alexa, 2017). Although Yelp and TripAdvisor include other types of local businesses, a consumer survey by Neilsen Holdings Company found Yelp to be the most frequently used review website when searching for restaurants specifically. Yelp is cited by consumers nearly 3 times as often as OpenTable and almost 4 times as often as Zagat (Yelp, 2014). In addition, TripAdvisor is currently including 4.2 million restaurant listings and over 100 million reviews on the site, which is bigger than Yelp's overall online content (Schaal, 2017). In recent years, many journalists have reported stories of companies posting fake

glowing reviews about their restaurants on TripAdvisor, and even negative reviews about their competitors on Yelp (e.g. Chamlee, 2016; Smith, 2013). These stories made a dramatic impact on consumers to start questioning the reliability of reviews on well-known restaurant review websites. Nevertheless, why do consumers still rely on these restaurant review websites? Why are these restaurant review websites more successful than others? Do the website attributes affect consumer behaviors? This raises questions to the researcher to investigate which attributes of these restaurant review websites attract consumers to engage in using information that they provide.

Despite the popularity of online restaurant reviews, there is scant literature documenting the underlying process in which restaurant review website attributes influence consumer responses. The causal relationships of consumer perception, attitude, and behavioral responses beyond the use of review website attributes, especially in a restaurant context, have also been only conceptually discussed. Additionally, conceptual clarification and logical linkages among each construct has been lacking.

Previous research suggests that the driving forces of online purchase intention can be derived from the desirable functions of a website, such as website design and information content (Ranganathan & Ganapathy, 2002). Although the context of this study is to explore the attributes of restaurant review websites whereby not involving a financial transaction, it is posited that the restaurant review website attributes will influence the consumers' adoption of recommendation and intention to revisit the restaurant review website. This study will also investigate the influence of three dimensions of restaurant review website attributes: performance (usefulness, simplicity), appearance (visual appeal, social presence), and overall content (credibility, informativeness, and scalability) on the individual's internal states of cognitive and affective attitudes, and then the impact on behavioral responses. This study will therefore address the following research questions:

**RQ1:** Which restaurant review website attributes influence consumers' internal states?

**RQ2:** How do consumers' internal states (cognitive and affective attitudes) impact the relationship between restaurant review website attributes and their behavioral responses?

**RQ3:** How do restaurant review website attributes influence consumers' cognitive and affective attitudes and behavioral responses?

## Purpose of the Study

The primary objective of this study is to explore and examine whether and how attributes of the restaurant review website influence the consumer internal states and behavioral responses. Prior electronic commerce research suggested that an increase of online sales is a consequence of a desirable website environment (Novak, Hoffman, & Yung, 2000) and online positive word-of-mouth (Chevalier & Mayzlin, 2006). Yet, very little is known about the factors that create a desirable online environment for restaurant review websites. Understanding how consumers perceive restaurant review websites and which factors influence their behavioral intentions are also necessary for both webmasters and restaurant operators to develop a profitable marketing strategy.

Drawing on the information processing perspective, this study first introduced the Stimulus-Organism-Response theory (S-O-R) (Mehrabian & Russell, 1974) to provide an overview framework of how consumers perceive a stimulus of the restaurant review website and form their internal states before generating behavioral responses. Second, the study explored previous literature regarding technology-mediated communication to explain the underlying pattern of a consumer initial states formation and how it affects consumer behavioral intention. Third, this study also touched lightly on the principle of the Technology Acceptance Model (TAM) (Davis, 1989), the Social Presence Theory (Short, Williams, & Christie, 1976), and previous

literature related to website quality to classify each dimension of restaurant review website attributes in order to strengthen the conceptual clarification and the distinction of this study.

Results of the study contributed to hospitality, marketing, and information management literature in providing a theoretical model which explained and measured consumer initial states toward restaurant review websites. This would help a website developer implement strategies on how to create a restaurant review website that would appeal and engage internet users to revisit the website. Once the number of visitors of the restaurant review website increased, the restaurant owners will have more chances to promote their restaurants to the public and to generate more customers. Website visitors, in turn, will be able to access to restaurant reviews and information more easily and efficiently. Further, restaurant review website visitors can also easily give feedback to the restaurant owners through the platform provided by the restaurant review website. This would help restaurant owners in resolving problems which occurred during the service, improving the restaurant service performance, or even building a better relationship with customers. Consequently, this research is designed to provide both theoretical and managerial implications for academic researchers in hospitality fields and stakeholders in the restaurant business.

## Dissertation Organization

This dissertation consists of five chapters. Chapter I (introduction and general information) provides this study's background, statement of the problem, research questions, purpose of the study, and definition of terms.

Chapter II (literature review) provides an overview of restaurant review websites available in United States and comprehensive literature that is applied to the theoretical framework of the current study. The research model and hypotheses are also addressed in this chapter.

Chapter III (methods) describes the development process of stimuli and a mock restaurant review website. An in-depth interview and a focus group were conducted to examine elements to be included in the stimuli and the mock restaurant review website. A pretest to determine the appropriateness of the restaurant review website for consumers was launched to pre-check the manipulation of the mock website attributes. A pilot test on Amazon Mechanical Turk was also conducted before launching the main survey.

Chapter IV (results) summarizes the data collection, the statistical analyses, and the results of hypotheses testing. This chapter presents descriptive analysis, construct validity and reliability tests using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), and hypotheses testing with structural equation modeling (SEM) approach.

Chapter V (discussion, conclusions, and recommendations) concludes the findings presented in Chapter IV and reports the implications of this study in theoretical and practical viewpoints. This chapter also reports the study limitations and recommendations for future research.

## Definition of Terms

***Simplicity*** - the degree to which a consumer believes that the navigation of the restaurant review website would be free of deliberate effort (Davis, 1989; Vantakesh & Bala, 2008; Lee, Ha, & Widdows, 2011).

***Usefulness*** - the degree to which a consumer evaluates the performance of the restaurant review website as being useful for his/her restaurant information search (Davis, 1989; Vantakesh & Bala, 2008).

***Visual Appeal*** - a consumer's perception of restaurant review website esthetics derived from website design factors including text, graphics, layout, background and other visual elements which act to enhance the overall look of a restaurant review website (Van der Heijden, Verhagen, & Creemers, 2003).

***Social Presence*** - the degree to which a consumer perceives the media-sharing feature as a medium that allow him or her to experience others as being physically present at the restaurant (Fulk, Steinfield, Schmitz, & Power, 1987).

***Informativeness*** - the degree to which a consumer evaluates the ability of restaurant review websites in conveying and passing restaurant reviews and restaurant information (Cheung, Lee, & Rabjhon, 2008; Ducoffe, 1996; Zhou & Bao, 2002;).

***Credibility*** - the degree to which a consumer perceives the believability of the reviews and information of a restaurant review website (Flanagin & Metzger, 2007).

***Scalability*** - the degree to which a consumer perceives rating - ranking scales and restaurant category filters as a collaborative filtering tool that minimizes massive amounts of restaurant reviews and facilitates his/her ability in making a restaurant visit decision (Koren & Bell, 2015).

***Cognitive Attitude*** - consumers' positive or negative cognitions about the restaurant review website (Wu et al., 2013).

***Affective Attitude*** - consumers' feelings as favorable or unfavorable toward the restaurant review website (Kim & Lennon, 2008).

***Recommendation Adoption*** - a consumer's intention to engage in using information from the restaurant review website to support decision-making in visiting a restaurant (Filieri, Alguezaui, McLeay, 2015).

***Intention to Revisit a Restaurant Review Website*** - a consumer's intention to visit the restaurant review website in the future.

# CHAPTER II

# LITERATURE REVIEW

This chapter provides a comprehensive literature review on recommender systems, U.S. based restaurant review websites, functions of restaurant review websites, consumers' perceptions and attitudes toward the restaurant review websites, and behavioral intentions. Each construct is addressed in accordance with theoretical frameworks including the S-O-R theory, the TAM theory, the Social Presence theory, and the cognitive and affective components of attitude. The relationship among each construct is also addressed along with the research model and hypotheses.

## Recommender Systems

Recommender Systems (RSs) are software tools and techniques that analyze available data and provide suggestions that are most likely of interest to a particular website user (Ricci, Rokach, & Shapira, 2015). The suggestions of RSs assist website users in various decision-making process, for example what books to read, what items to buy, or which hotels to stay at. As global internet usage is continuously growing, the variety of information available on the Web and the introduction of new products or services frequently overwhelmed users, leading them to make poor decisions. The emergence of the RSs addresses this phenomenon by coping with the information overload problem. Upon a user's request, RSs automatically generate recommendations using various technical functions and available database stored in the system (Ricci et al., 2015).

The function of most RSs is based on two basic approaches: collaborative filtering and content-based filtering (Jones, 2013). Collaborative filtering is an approach that exhibits and filters information to a website user based on an automatic collaboration of data that is preferred by

previous website users who have similar preferences or behaviors (Jones, 2013). For example, an e-commerce website allows users to rate the quality of a product or service. The RSs collect this assessment data from multiple users and exhibit the information as a ranked list of items. In performing this ranking, RSs provide personalized recommendations to the website users based on their preferences and constraints (Ricci et al., 2015). Content-based filtering is an approach that recommends items or services based on historical browsing information of a particular user (Ricci et al., 2015). For example, if a user has rated a book that belongs to the science fiction genre, then the system can recommend other books from this genre. Thus, the focus of this approach targets the regular website users.

The recommender systems have been introduced in hospitality and tourism review websites in order to assist websites users in acquiring their goals, for example, travel planning, hotel booking, and restaurant reservation. TripAdvisor, for instance, is a well-known example that incorporates various recommendation paradigms, such as content-based and collaborative information filtering techniques, to improve users' navigating experiences and enable them to become their own travel agents. Indeed, the advance of this recommender technology has created other types of review websites such as restaurant review websites which provide a platform that allows consumers to get more information and reviews about restaurants. A well-designed restaurant review website will help consumers spend less time to discover great dining places around them.

## U.S. Based Restaurant Review Websites

Since 1990s, the advance of Web 2.0 technologies has enabled consumers to search, collect, and share online information at one time. Recommender systems are one of the intelligent e-commerce applications that allow consumers to move beyond traditional offline recommendations to online user-generated content. In particular, in the restaurant industry context, the recommender systems have made a major contribution to consumers in acquiring restaurant information and exchanging their opinions with other consumers. Restaurant review websites also assist restaurant owners in identifying customer needs and in responding to their complaints.

Based on the investigation of U.S. restaurant review websites available on the internet, 14 websites were found active in January 2017 (see Table 1). The locations of the restaurants being reviewed in these websites include larger cities in the U.S. and worldwide. Among these, four websites offer restaurant reviews generated by professional reviewers, eight websites offer the reviews generated by consumers, and two websites offer reviews generated by both professional and consumer reviewers. Since the main focus of this study is to explore the influence of consumer-generated content websites, the restaurant review websites that offer reviews only from consumers are explored. Additionally, the context of this study will not include the restaurant review websites whose main focus is to sell discount restaurant coupons, or to a offer food delivery mobile application because the attributes of these websites are not relevant to the stimulus of this study.

**Table 1**
U.S. Based Restaurant Review Websites

| Websites | Reviewers | Service offers | Restaurant review system being offered | Restaurant locations |
|---|---|---|---|---|
| Chowhound | Consumer Reviewers | Food-oriented discussion communities including restaurant reviews, recipes, cooking tips, and articles. | Discussion platform. | Worldwide |
| Dine | Consumer Reviewers | Restaurant reviews, and discussion communities. | Discussion platform, 5-star rating and ranking scales. | Worldwide |
| Eater | Professional Reviewers | Restaurant reviews, discussion communities, and food-related articles. | Discussion platform and 5-star rating scale. | U.S.A. |
| Fodor's | Consumer & Professional Reviewers | Restaurant reviews and discussion communities. | Discussion forum based on country or region. | Worldwide |
| Gayot | Professional Reviewers | Restaurants reviews, hotels, travel, events, and luxury lifestyle articles. | Discussion platform and 20-point rating scale. | Worldwide |
| Menuism | Consumer & Professional Reviewers | Restaurant reviews and articles related to food and restaurants. | Discussion platform, 5-star rating and ranking scales. | USA, Canada & some countries |
| MenuPages | Consumer Reviewers | Restaurant reviews. | Discussion platform and 5-star rating scale. | Only U.S. larger cities |
| OpenTable | Consumer Reviewers | Restaurant online reservation and restaurant reviews. | Discussion platform, media-sharing feature, and 5-star rating and ranking scales. | Worldwide |
| Restaurant | Consumer Reviewers | Restaurant reviews, restaurant deals, and coupons. | Discussion platform, 5-star rating and ranking scales | U.S.A. |
| The Infatuation | Professional Reviewers | Restaurant reviews and articles related to food and restaurants | Discussion platform and 10-point rating scale. | Only world larger cities |
| TripAdvisor | Consumer Reviewers | Reviews for restaurants, hotels, airlines, trip ideas, cruises, and travel forum. | Discussion platforms, media-sharing feature, 5-point rating and ranking scales. | Worldwide |
| Yelp | Consumer Reviewers | Reviews for restaurant and other local businesses. | Discussion platforms, media-sharing feature, 5-point rating and ranking scales. | Worldwide |
| Zagat | Professional Reviewers | Restaurant reviews and articles related to food and restaurants. | Discussion platform and 5-star rating scale. | U.S.A, London and Toronto |
| Zomato | Consumer Reviewers | Restaurant reviews and online delivery service. | Discussion platforms, media-sharing, 5-point rating and ranking scales | Worldwide (currently 23 countries) |

Note. Survey on January 2017.

After the exclusion of irrelevant restaurant review websites, there are seven websites that are still active and offer restaurant reviews in the United States and worldwide (see Table 2). The study found that all review websites offer a search function that allows users to search for information on the restaurant that they are interested in visiting. Some websites go beyond the search function by offering a category filter that allows users to narrow down their interests by clicking on the filter which allows them to collaborate and categorize all the review data into smaller categories according to the type of meals, ethnic cuisines, locations, establishment types, prices, and popularity. The review system being offered in these restaurant review websites includes a discussion platform, rating scale, ranking, and media-sharing features. The majority of restaurant review websites allow a consumer to provide both a rating (usually represented by star grade or numerical scale) and a detailed text review (discussion platform). Each review website also presents the total number of reviews that have been posted (see Figure 1). This finding corresponds with a study by Bakhshi, Kanuparthy, and Gilbert (2014) that examines three primary aspects of the restaurant review website content including overall rating, total number of reviews, and the reviews themselves.

According to the restaurant review website information in Table 2, the current study investigates how much traffic each restaurant review website gets by using statistical information from Alexa.com, a California-based subsidiary company of Amazon.com that provides commercial web traffic data and analytics. Results found the most popular restaurant review websites are Yelp (globally ranked 274$^{th}$), followed by TripAdvisor (297$^{th}$), Zomato (909$^{th}$), and OpenTable (2,887$^{th}$) respectively. To consider the website traffic statistics by country, Zomato is found to be unpopular in the United States (ranked as 2,102$^{th}$), whereas OpenTable (499$^{th}$), TripAdvisor (88$^{th}$), and Yelp (41$^{th}$) are found to be the top three most popular restaurant review

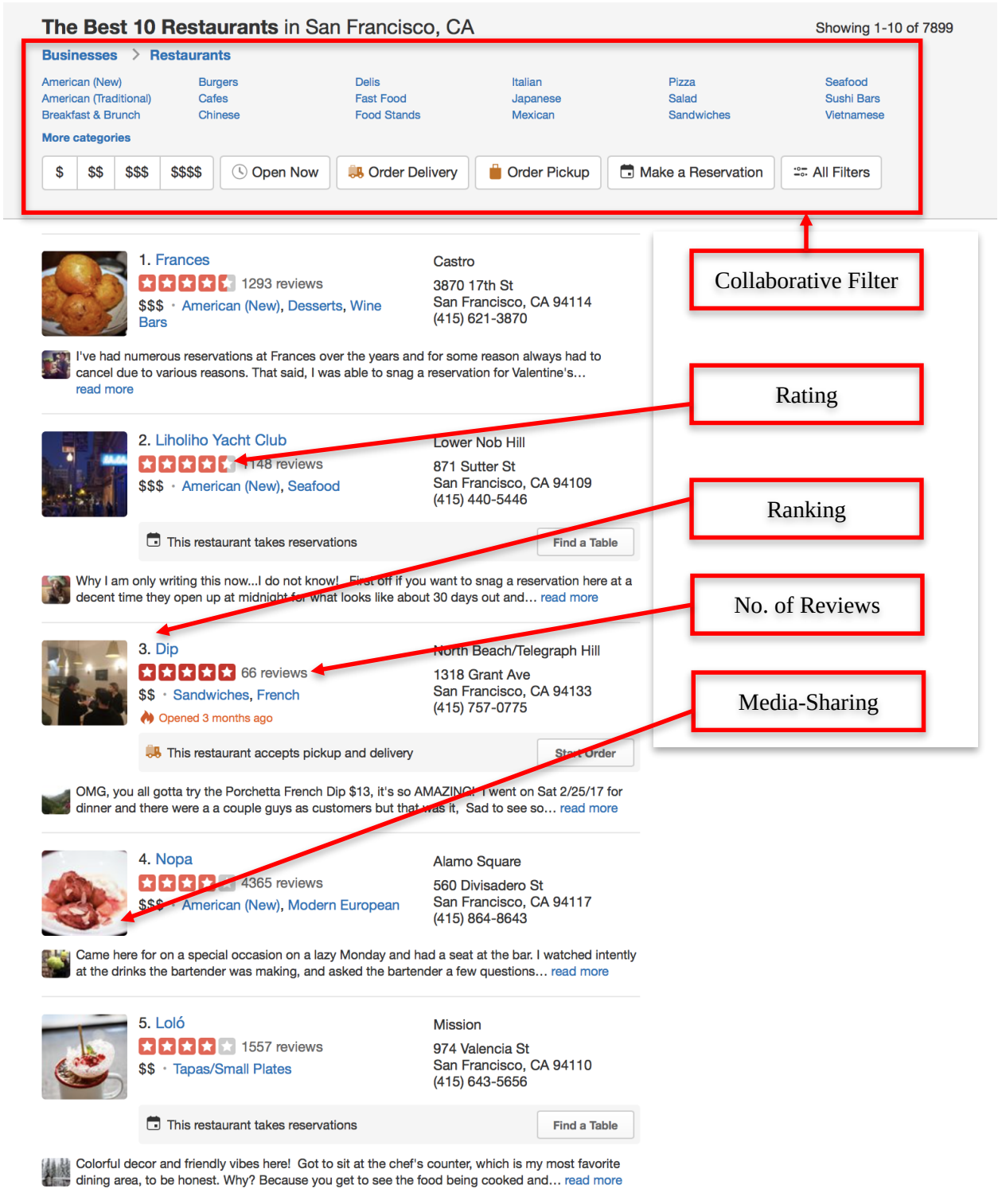


*Figure 1*. An Example of Restaurant Review Website Attributes on Yelp.com

**Table 2**
Information of Restaurant Review Websites Based on Popularity

| Websites | Year founded | Rank in U.S. | Global rank | Loading time (sec.) | Restaurant Review System Features | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Reviewer verification | Category filter | Discussion platform | Rating | Ranking | Media-sharing |
| Yelp | 2004 | 41 | 274 | 2.209 | ● | ● | ● | ● | ● | ● |
| TripAdvisor | 2000 | 88 | 297 | 1.824 | ● | ● | ● | ● | ● | ● |
| Zomato (Urbanspoon) | 2010 | 2,102 | 909 | 1.222 | ● | ● | ● | ● | ● | ● |
| OpenTable | 1998 | 499 | 2,887 | 2.402 | ● | | ● | ● | ● | |
| Chowhound | 1997 | 2,163 | 7,325 | 3.017 | ● | ● | ● | | | |
| MenuPages | 2011 | 8,766 | 48,527 | 2.032 | | ● | ● | ● | | |
| Dine | 1994 | 481,749 | 1,757,663 | 0.870 | ● | | ● | ● | | |

websites in the United States (Alexa, 2017). When these four websites are further investigated, the study found that all of these websites require consumers to register their names, emails, or social media accounts with the websites before they can post reviews for a restaurant. In particular, OpenTable only allows consumers who have previously made a restaurant reservation through the website to submit ratings and reviews. These identity exposure strategies are believed to guarantee that the person submitting the restaurant feedback has recently dined at the restaurant being reviewed**.** The study further investigated the least popular restaurant review websites. Dine.com is found to be the first restaurant review website established in 1994, however, the website is the least popular among the other seven websites. Compared to Yelp, two possible reasons that make Dine.com unpopular are the unappealing appearance of the website (see figures 2 and 3), and the less credible restaurant reviews on the website (see figures 4 and 5).

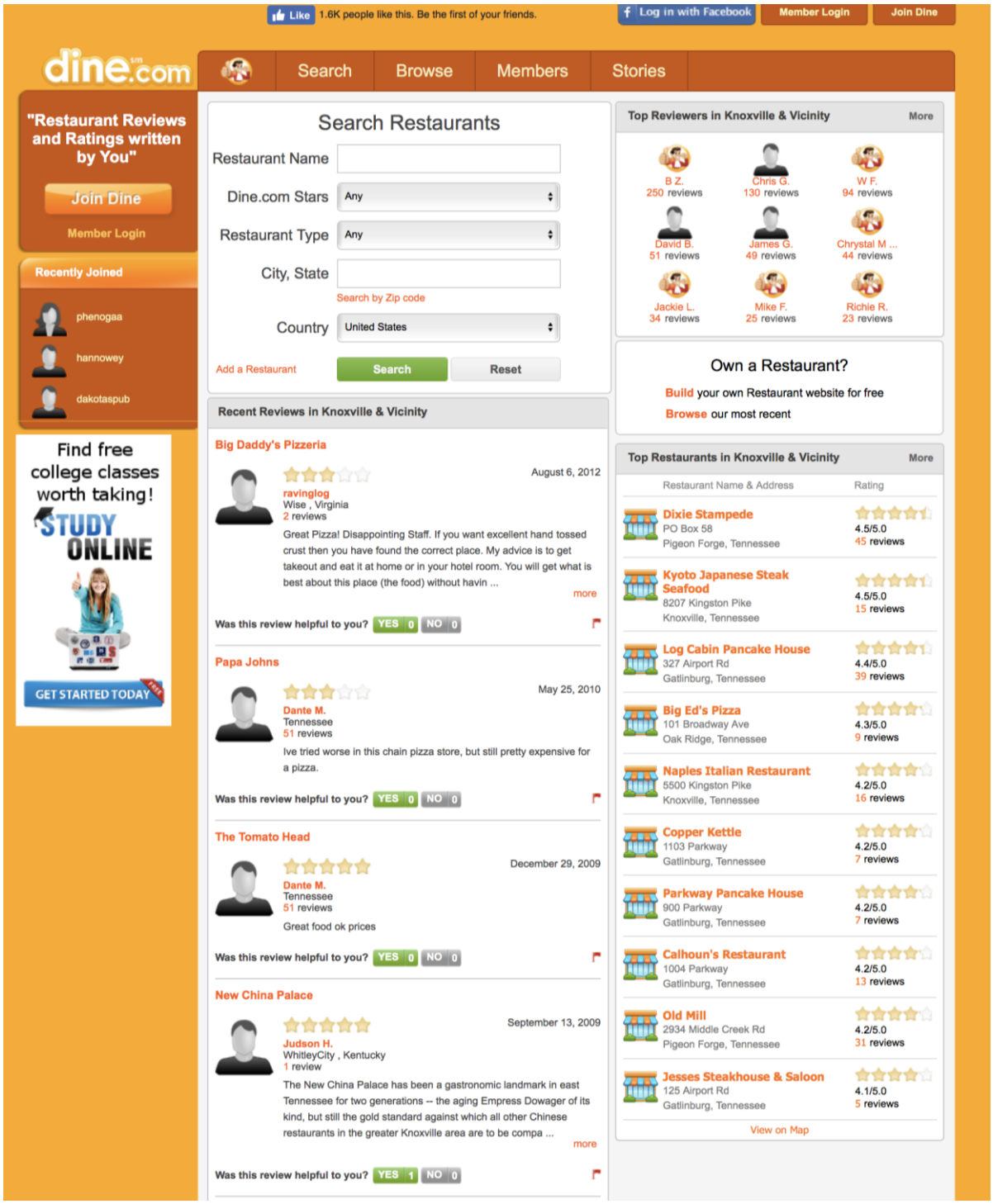


*Figure 2.* The First Page of the Restaurant Review Website Dine.com

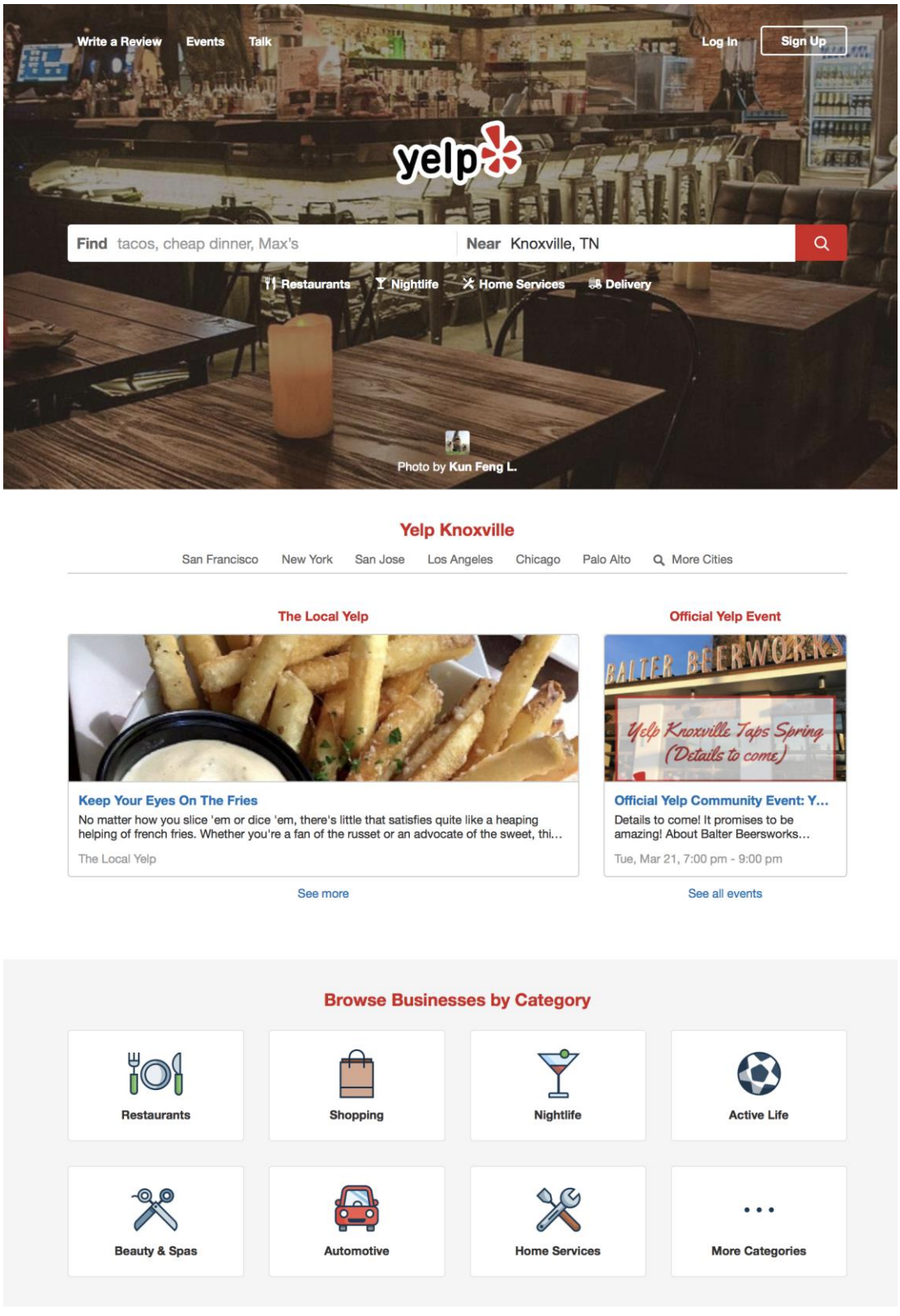


*Figure 3.* The First Page of the Restaurant Review Website Yelp.com




*Figure 4.* An Example of Restaurant Reviews on Dine.com




*Figure 5.* An Example of Restaurant Reviews on Yelp.com

The current study posits that the presentation capability of a website is another key ingredient for the success or failure of a restaurant review website. In a study by Google (Tuch et al., 2012), researchers found that users will judge whether a website is appealing or unappealing within 20-50 milliseconds of exposure. Users also preferred websites which are less visually complex (Tuch et al., 2012). In a restaurant review website context, millions of users generate millions of reviews for millions of restaurants, therefore it is important for a web developer to make scalable the massive amount of information that goes into one website. Features of restaurant review websites such as category filter, rating, and ranking can be critical because they allow users to be able to process information easier. Moreover, the media-sharing feature that allows users to post photos or videos can also make the review website appear more trustworthy. However, whether users will adopt the recommendation from the review website is still unexplored. Understanding the factors that determine how consumers perceive each attribute of the restaurant review website will be a major contribution for this study.

## Theoretical Background

### Stimulus-Organism-Response Theory

Woodworth (1928) first introduced the stimulus-organism-response (S-O-R) to the psychological studies in the mid of 20$^{th}$ century, and its influence continues today. The model is developed from the stimulus-response (S-R) formulation which explains that behavior is a response to stimuli (MacKinnon, 2008). For example, a mother gives a new born baby food when the baby cries or a teacher asks students to respond to a math question. The S-O-R model outlined the mediational process of *organism* among the relationship between the stimulus and response and explained how organisms respond to a stimulus (MacKinnon, 2008). Another example to

illustrate this model would be when the teacher asks a student to find the product of two numbers, 10 and 15. The *stimulus* is the two numbers and the answer is the *response*. The *organism* or the mediating process occurs when students are thinking and doing other activities to find the answer during the time when the stimulus is given (MacKinnon, 2008).

Mehrabian and Russell (1974) subsequently developed the stimulus-organism-response (S-O-R) framework for an environmental and emotional perspective. The stimuli (S) refers to various elements of the external atmosphere that lead to an internal organism (O) or emotional reaction that evokes behavioral responses (R) (Mehrabian & Russell, 1974). The framework includes three emotional states: pleasure, arousal, and dominance, which mediate the relationship between the environmental stimulus and the behavioral responses of an individual (Mummalaneni, 2005). Results from mediation leads to the behavioral outcomes which can be either approach or avoidance behaviors. Approach behavior is defined as a desire physically to stay, explore, and communicate with others in the environment, whereas avoidance behavior is defined as a desire to escape, or to remove oneself from the environment, and to ignore communication attempts from others (Mehrabian & Russell, 1974) (see Figure 6).

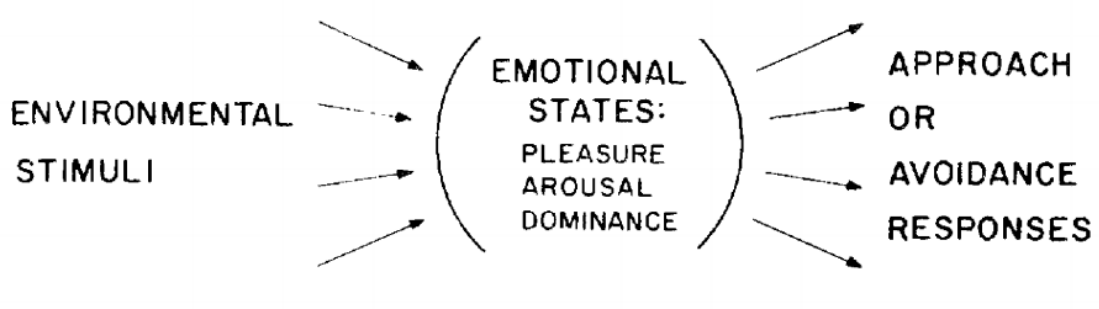


*Figure 6.* The S-O-R Model (Mehrabian& Russell, 1974)

The S-O-R framework has been applied in several contexts that involve the role of environmental stimuli as a predictor and emotional states as the mediator of consumer responses. For example, Donovan and Rossiter (1982) originally introduced the S-O-R framework into the retail context to explain how retail store atmospherics affect the emotions of consumers, and, in turn, influences their shopping behaviors. According to this study, researchers found that two major emotional states, pleasure and arousal, are significant mediators of the relationship between in-store stimulus configurations (such as color arrangements, store layouts, noise levels, lighting) and intended shopping behavior within the store. When the internet became an integral part of everyday life, several researchers extended the S-O-R framework to an online store context in order to investigate how the online environment influences consumer emotional states and online-shopping behavior (Eroglu, Macheleit, & Davis, 2001; Manganari, Siomkos & Vrechopoulos, 2009; Mummalaneni, 2005). In terms of a service context, Jang and Namkung (2009) applied the S-O-R framework to the restaurant segment by investigating the effect of three types of perceived quality (product, atmospherics, and service) on consumer emotions and behavioral intentions in the restaurant consumption experience.

Lee et al. (2011) proposed the S-O-R framework to investigate how high-technology product attributes elicit consumers' cognitive and affective states, and contribute to their approach-avoidance behavior. The study highlighted six factors of high-technology product attributes (usefulness, ease of use, innovativeness of technology, visual appeal, prototypicality, and self-expression) as a stimulus, and extended the organism into 2 states: cognitive (attitude towards the technology product) and affective (pleasure and arousal). The result revealed that adding cognition to the traditional S-O-R framework provided a better explanation as to how consumers' psychological processes contribute to their subsequent behaviors. The framework proposed by Lee

et al. (2011) will be adopted in the present study to identify the antecedents of attitude and response toward review website attributes. The primary reason for adopting this framework is because the structural model fits well within the S-O-R framework and it has not yet received empirical validation for restaurant review website context. However, it has to be noted that the nature of the Lee et al. (2011) framework is based on the context of high-technology products, therefore the peculiarities of product attributes will be adapted to fit the current research topic.

The present study aims to extend the existing studies by identifying a comprehensive set of restaurant review website attributes that play an important role to stimulate consumer cognitive and affective attitudes, and in turn, influence consumer behavioral responses. Prior research suggested that factors influencing the experience of website usage were derived from consumer perceptions of website usefulness (Lin & Lu, 2000; Mahlke, 2002), ease-of-use (Bauer, Grether, & Leach, 2002), visual appeal (Van et al., 2003), and information fit-to-task (Loiacono, Watson, & Goodhue, 2002). By applying the S-O-R framework to the restaurant review website setting, this study posits that the three domains of the restaurant review website attributes: performance, appearance and, content (Stimuli) trigger consumers' internal states (Organism), and lead to the intention to adopt recommendation and intention to revisit the restaurant review website (Response). The two dimensions of initial states include: (1) cognitive attitude toward the restaurant review website reflecting cognitive states, and (2) affective attitude toward the restaurant review website reflecting affective state.

**Stimuli: Restaurant Review Website Attributes**

Review website attributes refer to features or aspects of a website that offer a platform for users to share information, voice personal opinions, recommendations, complaints, and grievances

regarding experiences with a variety of goods, services, and companies (Chatterjee, 2001; Huang, 2003; Yeap, Ignatius, Ramayah, 2014). Through the internet, consumers can easily share their thoughts and opinions on the review websites, and a growing number of consumers who read these reviews are increasingly taking advantage of such content. Prior studies investigated how online consumer reviews impact consumer behavior (Chatterjee, 2001; Gretzel & Yoo, 2008; Park, Lee, & Han, 2007), however, only a handful of studies included the impact of different attributes of a restaurant review website as stimuli on consumer attitudes and responses. The focus of this study are restaurant review website attributes which are defined as features or aspects of a restaurant review website that offers a platform for users to share information, voice personal opinions, recommendations, complaints, and grievances about dining experiences with a restaurant.

In the context of a restaurant review website, consumers are surrounded by stimuli which consist of different characteristics of restaurant review website attributes. Applying the S-O-R model to this setting, the current study proposes three domains of restaurant review website attributes that influence consumer evaluation of the website: (1) *performance* (how well the restaurant review website achieves its functions as expected), (2) *appearance* (how much of the atmosphere of the restaurant review website is visually appealing) and, (3) *content* (how effective the restaurant review website presents review information to consumers). Each of the domains is a multi-dimensional construct consisting of sub-domains. That is, the performance domain includes usefulness and simplicity sub-domains, the appearance domain includes visual appeal and social presence sub-domains, and the content domain includes credibility, informativeness and scalability sub-domains.

*(1) Performance Attributes: Usefulness and Simplicity*

To investigate which attributes of a restaurant review website influence consumer responses, it is important to determine how consumers learn and accept the online information system. One of the most widely used models in studying the online information system is the Technology Acceptance Model (TAM) (Davis, 1989; Vantakesh & Bala, 2008) in which system use (actual behavior) is determined by consumers' perceived usefulness and perceived ease-of-use of technology. Davis (1989) defined perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance," while perceived ease-of-use referred to "the degree to which a person believes that using a particular system would be free of effort." The validity of this model has received support from researchers as a robust framework for explaining consumer acceptance to various formats of technology such as e-shopping (Koufaris, 2002; Gefen, Karahanna, & Straub, 2003; Ha & Stoel, 2009), web-based class management systems (Mun & Hwang, 2003), online banking (Pikkarainen et al., 2004), mobile commerce (Wu & Wang, 2005), and high-technology products (Lee et al., 2011).

In information system management context, researchers and website developers have always been aware of the need to improve website functionality. Huizingh (2000) proposed that the quality of a website is based on the usefulness of website content and the appropriateness of website design which included navigation structure and presentation style. Bart et al. (2005) defined navigation and presentation as the overall appearance, layout, and possible sequence of clicks, images, and paths on a website. An effective website navigation must allow users to access each part of the website as they want within a short time period to download (Voss, 2003). Poorly designed navigation has negative influences on online sales (Bellman, Lohse, & Johnson, 1999), increases more concern and anxiety (Thatcher & Perrewe, 2002), and decreases trustworthiness

toward a website (Belanger, Hiller, & Smith, 2002; Bart et al., 2005). If the design of a website is too complex, users' attention is also easily distracted (Wang et al., 2014).

In an attempt to develop a better understanding of what attributes should be included in an effective restaurant review website, this study proposes that the website must be designed to be useful and simple to create positive experiences, especially for the first-time website visitors. *Usefulness* hereby refers to the degree to which a consumer evaluates the performance of the restaurant review website as being useful for his/her restaurant information search, while *simplicity* refers to the degree to which a consumer believes that the navigation of the restaurant review website would be free of deliberate effort (Davis, 1989; Vantakesh & Bala, 2008; Lee et al., 2011). Previous research found that these two factors have direct and indirect effects on the formation of intentions for using a website (Lederer, Maupin, Sena & Zhuang, 1998; Lin & Lu, 2000).

*(2) Appearance Attributes: Visual Appeal and Social Presence*

Visual appeal refers to the choice of fonts and other visual elements such as graphics, which act to enhance the overall look of a website (Van der Heijden et al., 2003). This construct has been proven to be measurable and to affect attitude, emotion, and online trust. Phillips and Chaparro (2009), for instance, found that first impressions of consumers are influenced by the visual appeal of the website. The role of the visual appearance of a website is important because when consumers navigate the website, whether they make a purchase or not, they want to enjoy the experience (Lindgaard & Dudek, 2002). Internet users who search for health advice are found to spend more time on visually appealing websites, whereas visually unappealing websites are found to be rejected within a few seconds (Sillence et al., 2006). Previous literature also suggests that internet users are more likely to extend their trust to the website if the site is visually appealing (Karvonen,

2000; Lindgaard et al., 2011). Hence, this study posits that the more visually attractive the restaurant review website, the more favorable consumers' attitude, emotion, and online trust are toward the website. For this context, *visual appeal* represents a consumer's perception of restaurant review website esthetics derived from website design factors including text, graphics, layout, background and other visual elements which act to enhance the overall look of a restaurant review website.

Fulk, Schmitz, and Power (1987) defined social presence as the degree to which a medium allows an individual to experience others as being physically present. In social presence theory, factors such as eye contact, non-verbal facial cues and distance contributes to the different levels of intimacy through the indirect influence of social presence (Short et al., 1976; Hassnein & Head, 2007). For example, television produces greater intimacy because it has an ability to convey non-verbal cues more than audio-only communication (Short et al., 1976; Hassnein & Head, 2007). Due to the lack of human interaction and sociability in computers, social presence has been used in computer-mediated communication and electronic commerce literature as a communication medium that affects interpersonal perceptions and behaviors. When consumers perceive social presence on the web interface, they are found to increase their levels of trust in the online vendor (Dash & Saji, 2008; Cyr, Hassenein, Head & Ivanov, 2007) and have a more favorable attitude toward online shopping (Hassenein & Head, 2007).

As noted earlier in the investigation of current restaurant review websites available, three websites have the highest numbers of U.S. visitors are Yelp, TripAdvisor, and Zomato respectively (see Table 2). The unique feature that made these three websites different from other websites is the media-sharing feature that allows consumers to share their photographs of food and the physical environment of a restaurant they have visited. Among the three websites, Yelp is more

technologically advanced by enabling consumers to share clip videos about their dining experiences on the website. The media-sharing feature not only provides an in-depth look into the restaurant, but also emphasizes the social presence of the reviewer on the restaurant premises. If consumers perceive social presence on the website interface, it is likely that they will have more favorable attitudes and increase their trust toward the restaurant review website. Hence, the current study defines the construct *social presence* as the degree to which a consumer perceives the media-sharing feature as a medium that allow him or her to experience others as being physically present at the restaurant.

*(3) Content Attributes: Informativeness, Credibility, and Scalability*

Content is one of the most important functions of every website that serves as an information resource for either commercial or non-commercial purposes. Many companies have made great efforts to utilize the content on their websites to maximize profits in a competitive market. To ensure that consumers' interactions with the website are effective, Proctor and Salvendy (2002) suggest that the website content must include: (1) what information needs to be extracted, (2) how information should be stored and organized, (3) how information can be retrieved, and (4) how information should be displayed. When the advent of Web 2.0 technology allows users to publish their own content over social media websites, online consumer reviews appear to play an increasing role in consumer decision-making processes (Gretzel & Yoo, 2008). In the restaurant review website context, the content of the website is generated by consumers who want to share their thoughts and opinions about a restaurant to other internet users (Duan, Gu, & Whinston, 2008). This study posits that the content of an effective restaurant review website must include three dimensions: informativeness, credibility, and scalability. The explanation on why each dimension is important is as follows:

*(a) Informativeness*

Information is considered to be a critical factor in website creation. In current e-commerce context, consumers are more knowledgeable and demanding. With the extensive amount of information over the internet, consumers acquire the information before making a purchase, and they want their information acquisition needs to be met immediately, perfectly, and for free. Therefore, it is important for website developers to understand consumer requirements and to implement information system responding to the needs of consumers. In advertising context, informativeness is defined as the ability of ads to effectively convey and pass the information to targeted consumers (Ducoffe, 1996; Zhou & Bao, 2002). In online retailing context, information-fit-to-task is found to be one of the critical predictors of shopper satisfaction (Kim & Stoel, 2004). Previous researchers also found that the quality of the information on the website influences information adoption (Filieri & McLeay, 2014), purchase intentions (Park et al., 2007), and also represents the website's relevancy, sufficiency, accuracy, currency (Cheung et al., 2008), value, (Filieri & McLeay, 2014), credibility, and usefulness (Cheung, Luo, Sia, & Chen, 2009). For the restaurant review website setting, consumers retrieve the reviews to make informed decisions about their restaurant options. Since every consumer is different and has different needs, they would prefer to receive the information that is relevant to their needs in a timely, accurate, and complete manner. If consumers perceive that the information gained from the restaurant review websites are valuable and correspond to their needs, they are likely to project positive attitudes in the restaurant review website. Thus, the *informativeness* in this context is defined as the degree to which a consumer evaluates the ability of restaurant review websites in conveying and passing restaurant reviews and restaurant information (Cheung et a., 2008; Ducoffe, 1996; Zhou & Bao, 2002).

*(b) Credibility*

Online review websites are often criticized for their credibility. Unlike traditional face-to-face communication, consumers cannot adopt non-verbal cues to assess the credibility of the online word-of-mouth source (Litvin, Goldsmith, & Pan, 2008; Filieri et al., 2015). The problem with an online review website is that reviewers are commonly anonymous and have no prior relationship with the receivers (Dellarocas, 2003). For this reason, leading review websites require reviewers to create internet identities and register their profiles before posting their reviews. In TripAdvisor and Yelp, reviewers can register their profiles by using email accounts, Google accounts, or Facebook accounts. When they post a review, their names, photos, and locations are shown next to their reviews. Statistical information of each reviewer, such as how many reviews posted or how many photos shared, will also be visually presented to the other audiences (see Figure 7a). Nevertheless, many reviewers prefer not to reveal their identities and choose to use an anonymous avatar (see Figure 7b).




*Figure 7a.* An Example of Restaurant Reviews with Reviewer's Profile and Photo




*Figure 7b*. An Example of Restaurant Reviews with Anonymous Avatar

The two fundamental predictors of consumers' acceptance of a message in traditional word-of-mouth are source credibility and trustworthiness (Hovland, Janis, & Kelly 1953; Filieri et al., 2015). Source credibility refers to the believability of the information and/or its source (Flanagin & Metzger, 2007). Prior studies found that information credibility is often positively related with trustworthiness of an information source (Bickart & Schindler, 2001). Ayeh, Au, and Law (2013) described source credibility in the context of travel related CGC as a two-dimensional construct, with expertise and trustworthiness as distinct dimensions, that are found to have a strong impact on attitude but weak direct effect on behavioral intention. For the current study, it is proposed that consumers will have positive cognitive and affective attitudes for the restaurant review website if they perceive that the reviews and information on the website are credible. Thus, *credibility* is defined in this study as the degree to which a consumer perceives the believability of the reviews and information on a restaurant review website.

*(c) Scalability*

In the purchase decision process, consumer search behavior is stimulated by uncertainty and the perceived risks of consumers. The concept of risk represents consumer uncertainty about a particular product and/or brand (Murray, 1991). Depending on the level of risk perception,

consumers would seek information from a variety of sources to support their decision-making. Perry and Hammm (1969) proposed that the greater the perceived risk of purchase decision, the greater the importance of personal influence. This finding was later supported by numerous studies which indicated that word-of-mouth is the most preferred source of risk-reducing information and has a greater impact than mass-media communication (Hennig-Thurau, Walsh, & Walsh, 2003; Lee, 2014). When a consumer faced with the dilemma of hesitation to purchase a product because it involves taking the risk of suffering some type of loss, the consumer would acquire a variety of methods that could be used to reduce the risk of loss. In view of the intangible characteristic of restaurant services, consumers tend to seek information from other individuals who have experienced the service directly or indirectly (Murray, 1991).

Restaurant review websites are considered to be a part of the recommender system that provide suggestions for items that tend to gain the most attention from a particular user (Ricci et al., 2015). The recommender system plays an important role in many well-known websites such as Amazon, TripAdvisor, and Yelp. One of the most common techniques that the recommender system used for categorizing review information is a collaborative filtering method which, in a general sense, refers to the method that produces user specific recommendation of items based on the collaboration of multiple viewpoints, data sources, and ratings (Koren & Bell, 2015). As the system of restaurant review websites is designed to help consumers navigate in large collections of restaurants, one of the goals for a web designer is to scale down the extensive amount of data into a form that allows consumers to perceive and processing information more efficiently.

Rating is one of the most popular methods in which users provide an input for their absolute preferences of a specific option to the system of a website (Jameson et al., 2015). In a consumer behavior context, Bakhshi et al. (2014) defined rating as an overall consumers' evaluation toward

a service or product. Prior studies found that rating not only impacts product sales (Reinstein, & Synder, 2005) but it also influences a consumer's perception of product quality (Duan et al., 2008). This implies that consumers perceive ratings as a predictor for the quality of a product or service (Eliashberg & Shugan, 1997; Duan et al., 2008). The majority of restaurant review websites provide a numerical star-rating system to allow consumers, who have previously bought products or services, to evaluate the overall quality of products or services and then share their experiences to other consumers. The star-rating represents attitude extremity, that is, the deviation from the midpoint of an attitude scale (Krosnick et al. 1993; Mudambi & Schuff; 2010). In general, the numerical rating scale ranges from one to five stars. A one-star rating indicates an extremely negative review toward the service or product, while a five-star rating indicates an extremely positive review, and a three-star rating refers to a moderate review. Since consumers do not have to confront the seller or other customers, they have more freedom to provide their honest feedback for a product or service from their perspectives. This feature has become a critical element of marketing strategy for many online merchants because consumers seem to perceive consumer-created information more credible than seller-created information (Dellarocas, 2003).

Ranking algorithms is another method that is commonly found in review websites and it is considered as the popularity key index of a specific product or place on the listing. The high or low ranking of a product is based on ratings and a total number of consumer reviews of the product (Yu, Zha, Wang, & Chua, 2011). In TripAdvisor, the popularity ranking algorithm is based on three components: quality, quantity, and recentness of reviews (TripAdvisor, 2015). Hotel class (star-rating), types of restaurants, or price differences do not have an impact on ranking on TripAdvisor. Ranking can help consumers choose a product that is relevant to their needs. The highly ranked product on the listing can also induce the higher chance for the product to be sold

because it is an indication of the popularity of products among the majority of customers (Ghose, Ipeirotis, & LI, 2012). Therefore, the ranking system of the restaurant review website can help reduce the risk and uncertainty of a consumer in making a restaurant visit decision.

Based on the scalability attribute of restaurant review websites, this study defines *scalability* as the degree to which a consumer perceives rating - ranking scales and restaurant category filters as a collaborative filtering tool that minimizes massive amounts of restaurant reviews and facilitates his/her ability in making a restaurant visit decision (Koren & Bell, 2015).

**Organism: Cognitive and Affective Attitudes**

Based on the S-O-R framework, organism refers to the intervening processes and structures that occur when an individual is evoked by an external stimulus which then produces final actions or responses (Bagozzi, 1986). The organism process includes two intermediary states, cognitive and affective, that mediate the relationship between the stimulus and response (Kim & Lennon, 2013). Cognitive state refers to everything that goes on the consumers' minds concerning the acquisition, processing, retention, and retrieval of information (Eroglu et al., 2001; Lee et al., 2011). Affective state refers to emotions and feelings evoked by environmental stimuli (Kim & Lennon, 2013). The study on the cognitive component of attitude is paralleled with the affective component and has a long history in consumer behavior research. Traditionally, the cognitive component of attitudes includes beliefs, judgments, or thoughts associated with an attitude object, whereas the affective components of attitudes include emotions, feelings, or drives associated with an attitude object (Edwards, 1990; McGuire, 1969). More recent studies explain the component of cognitive attitude as the deliberate, conscious, and propositional thought process, and affective as the immediate evaluation and emotional responses to the attitude object (Kim & Lennon, 2008).

*(a) Cognitive Attitude*

Wu et al. (2014) define attitude toward the website as a psychological tendency that is developed through the cognitive state in order to express the evaluation of a website with some degree of favor or disfavor. Past research in the online retailing context has confirmed that the content and structure of the information provided by websites affect consumer's cognitive attitude, satisfaction, and purchase decisions (Eroglu et al., 2001; Eroglu et al. 2003; Wu et al., 2013).

To address the role of atmospheric cues in an online store, Eroglu et al. (2001) proposed a conceptual model to suggest that visual cues (e.g. colors, graphics, layout, and design of a website) can either signal the quality of a retailer or influence consumer response during the website visit. Researchers have further investigated this research model with empirical testing and found attitude, pleasure and arousal mediated the relationship between online atmospheric cues and shopper behavioral responses (Eroglu et al. 2003). Wu et al. (2013) has later confirmed that store layout design has significant indirect impact on purchase intention through emotional arousal and cognitive attitude toward the website. Other website factors, such as usefulness, ease-of-use, information, and entertainment, also play an important role in affecting consumer cognitive attitudes toward the website (Van der Heijden, 2003; Kim & Stoel, 2004). In terms of review website context, many studies confirmed a strong impact of online word-of-mouth on consumer attitudes (Ayeh et al., 2013; Lee, Park, Han, 2008; Vermeulen & Seegers, 2009). For the present study, *cognitive attitude* refers to a consumer's positive or negative cognition about the restaurant review website.

*(b) Affective Attitude*

The original S-O-R model proposed by Meharabian & Russell (1974) includes the pleasure, arousal, and dominance (PAD) dimensions of affective response as expected reactions to environmental stimuli. Russell (1979) further proposed that only pleasure and arousal can adequately apprehend the emotional reactions to stimulus. However, researchers later criticized that the scope of PAD dimensions are too narrow and inadequate to explain the range of possible variations in emotional response (Machleit & Eroglu, 2000; Eroglu et al.; 2001; Kim & Lennon, 2013). Based on the S-O-R framework, emotions are found to play significant roles in mediating consumer responses to advertising (Holbrook & Batra, 1987), online shopping websites (Eroglu et al. 2003; Wu et al., 2013), and restaurant quality (Jang & Namkung, 2009).

Studies in human-computer/technology interaction and information systems have confirmed that both the usability and aesthetic of electronic products or website designs have an impact on consumer affection (Zhang & Li, 2005). When an individual interacts with an information system, they perceived usefulness based on how pleasant, unpleasant, exciting, boring, upsetting, or soothing the system is (Zhang & Li, 2005). The complexity or simplicity of technical functions also influence an individual to perceive ease-of-navigation of the system, and then evoke subsequent emotions such as pleasure or arousal. If the individual is faced with difficulty in using the information system, it is likely that he or she would feel anxious or angry, whereas, if the information system is easy to use, the individual may also feel joy or a sense of fun (Ventakesh, 2008). Therefore, *affective attitude* in the restaurant review website context refers to consumers' feelings as favorable or unfavorable toward the restaurant review website.

**Response: Recommendation Adoption and Intention to Revisit a Restaurant Review Website**

The S-O-R model proposed by Donovan and Rossiter (1982) describes avoidance and approach behaviors as an outcome of the relationship between stimuli and emotional determinants. In their study, the physical environment is mediated by pleasure and arousal then influences retail outcomes which include time spent strolling in the store, the tendency to spend more money than initially planned, and the likelihood to return to the store (Donovan & Rossiter, 1982). Similarly, previous research extended behavioral response into different contexts such as willingness to buy, willingness to buy more in the future, willingness to recommend the store, and willingness to generate positive word-of-mouth to others (Baker, Grewal, & Levy, 1992; Hightower, Brady, & Baker, 2002; Jang & Namkung, 2009). For the context of restaurant review websites, this study aims to identify consumers' evaluations of actual website experiences by extending behavioral response into recommendation adoption and intention to revisit the restaurant review website. *Recommendation adoption* refers to consumer intention to engage in using information from the restaurant review website to support decision-making in visiting a restaurant. *Intention to revisit restaurant review website* refers to consumers' intention to visit the restaurant review website in the future. Both responses are the outcome constructs influenced by cognitive and affective attitudes toward the restaurant review website.

Taken together, this study posits that when consumers perceive the overall restaurant review website attributes through their cognitive and affective attitudes, they will make a judgement whether the website is a useful, attractive, and reliable information source. Once they decide to adopt the recommendation from the restaurant review website, they are likely to revisit the website in the future. Figure 8 indicates the theoretical framework for this study.

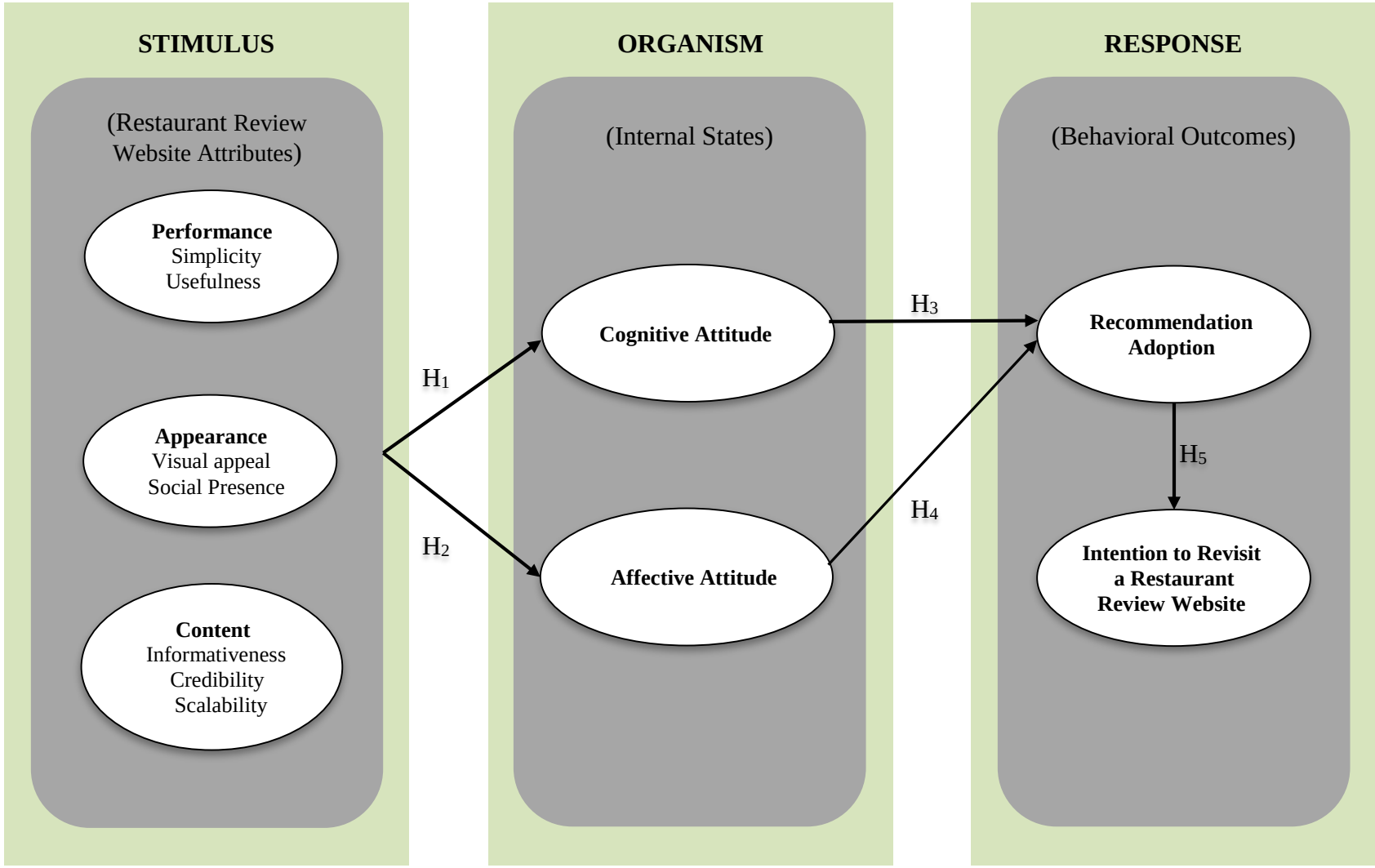


*Figure 8.* Theoretical Framework

## Hypothesis Development

This study adopts Mehrabian and Russell's (1974) Stimulus-Organism-Response (S-O-R) framework to understand the impact of restaurant review website attributes on consumers' cognitive-affective attitudes and behavioral responses. The proposed theoretical framework is illustrated in Figure 7. In the present context of the restaurant review website setting, cognitive attitude represents consumers' internal mental processes to evaluate three dimensions of website attributes (performance, appearance, and content) which are visually presented on the computer screen. Affective attitude reflects consumers' feelings as favorable or unfavorable toward the three dimensions of the restaurant review website. To provide more specific directions for this model, three sub-models are delineated with the research hypotheses.

### Sub-Model (A): The Role of Restaurant Review Website Performance

*Performance of Restaurant Review Website → Cognitive & Affective Attitudes*

Grounded from Fishbein and Ajzen's theory of reasoned action, the Technology Acceptance Model (TAM) proposes that usefulness and ease-of-use predict attitudes toward information systems (Davis, 1989; Vantakesh & Bala, 2008). Davis (1989) tested the original version of the TAM model on the usage of a word processing program and confirmed that the usefulness and ease-of-use of the program have a positive relationship with the attitude construct. Van der Heijden (2003) further investigated factors influencing the usage of a website with over 300,000 website users. The researcher distributed an online survey in a sample size of 828 respondents to ask their opinions about the website usage. The result confirmed that perceived usefulness and perceived ease-of-use of the website will positively impact the attitude of an individual before he or she performs an intended behavior. In terms of affective attitude, the study

of Venkatesh (2008) also confirmed that technology usage can cause anxiety or enjoyment. When an individual is faced with complexity in using computers, he or she may feel stressed, or even fear (Simonson et al., 1987). On the contrary, if the computer system is simple, an individual would feel enjoyment or fun (Ventakesh, 2008). Taken together, the sub-model (A) illustrates the direct impact of usefulness and simplicity constructs on cognitive and affective attitudes (Figure 9).

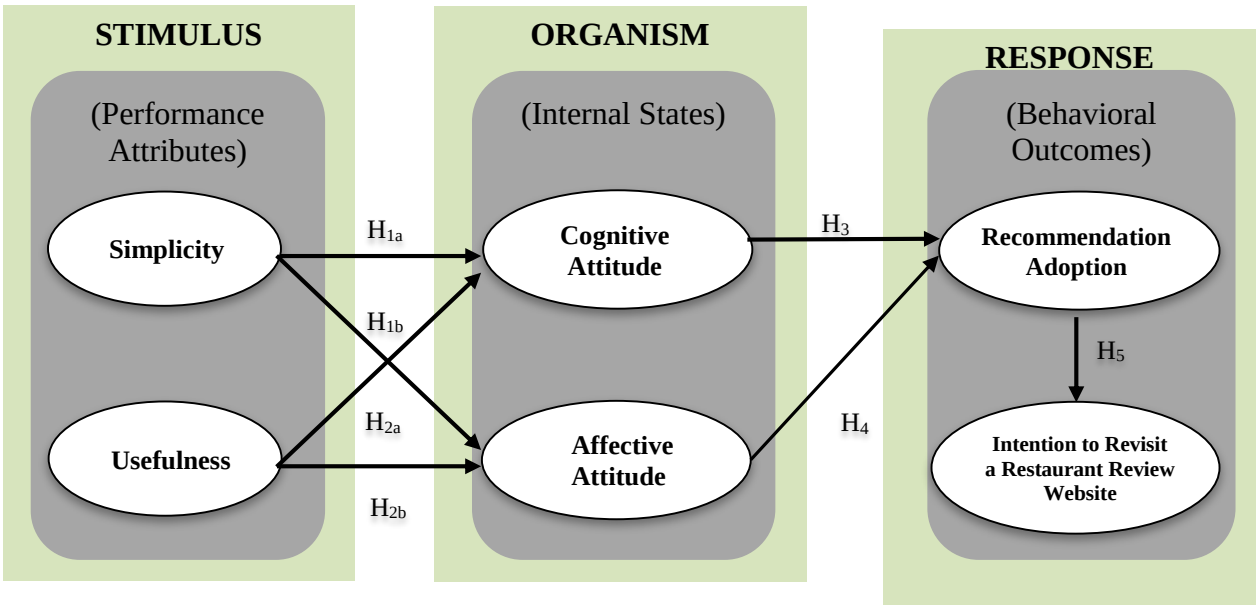


*Figure 9.* Sub-Model (A)

**Sub-Model (B): The Roles of Restaurant Review Website Appearance**

*Appearance of Restaurant Review Website → Cognitive & Affective Attitudes*

Online retailing has attracted a lot of attention in recent years due to its high growth in market size and number of buyers and sellers (Doherty & Ellis-Chadwick, 2010; Wu et al., 2013). Researchers indicated that online-store atmosphere is one of the key success factors that influence consumer purchasing decisions (Carroll, 2012; Wu et al., 2013). According to a report by Neilsen Norman Group (Neilsen et al., 2000), consumers trust a website when it is easy to navigate, easy to search, images of products look professional, free of grammatical and typographical errors,

overall website appearance looks professional, and provides useful and appropriate content. Further studies found that the website atmosphere not only impacts consumer attitude toward the website, but also evokes pleasure and arousal emotions of consumers before influencing consumer responses (Mummalaneni, 2005; Wu et al. 2013). In the restaurant review website settings, the content being presented in the website can be categorized as facts (physical information about restaurants) and reviews (consumers' opinions about restaurants). One of the reasons that motivate consumers to generate online reviews is to release their emotional expressions toward a restaurant. Previous researchers found that emotional expressions in electronic word-of-mouth are abundant because of the lack of ability to communicate face-to-face (Kiesler, Siegel, & McGuire, 1984; Rice & Love, 1987). These emotional expressions include negative emotions (e.g. anxiety, anger, dislike) and positive emotions (e.g. enjoyment, entertainment, like) (Cheung & Lee, 2012; Schindler & Bickart, 2012; Yin, Bond, & Zhang, 2013). However, it has to be noted that the main focus of the current study is to explore how consumers evaluate the function of website attributes, not the emotional expressions on online reviews generated by other consumers. In particular, this study aims to explore how the visual appeal of the restaurant review website influence consumer cognitive and affective attitudes.

Besides visual appeal, social presence is found to have an impact of consumer attitudes. In traditional face-to-face communication, people exchange various non-verbal cues such as facial expressions or body languages. In contrast, the online communication is viewed as lacking in human warmth and sociability (Gefen et al., 2003). The concept of social presence is examined in many studies related to computer-mediated communication, especially in online learning and online shopping. Richardson and Swan (2003) found positive relationship among students' perceptions of social presence in online courses, perceived learning and perceived satisfaction with

their instructor. In the online shopping context, Hassanein and Head (2007) investigated the impact of social presence perception on the online retail website by comparing clothing advertisements with three different levels of social presence. The study found higher level of social presence, the more favorable consumer attitudes. For this study, social presence is related to the media-sharing feature of a restaurant review website that allows reviewers to share photographs of food or the physical environment of a restaurant they have visited to other website users. When a consumer perceives social presence on the restaurant review website interface, it is likely that they will believe that the restaurant reviews are genuine opinions and they will increase their cognitive and affective attitudes toward the restaurant review website. The sub-model (B) illustrated how visual appeal and social presence constructs influence consumer attitudes and behaviors (Figure 10).

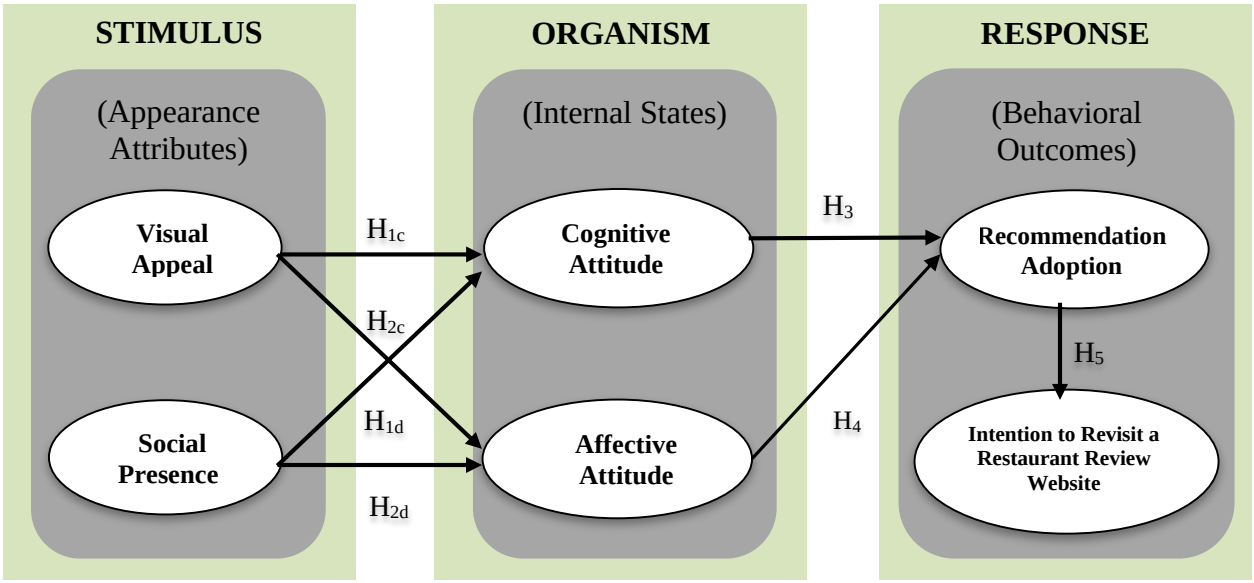


*Figure 10.* Sub-Model (B)

**Sub-model (C): The Roles of Restaurant Review Website Content**

*Content of Restaurant Review Website → Cognitive & Affective Attitudes*

In e-commerce, building a suitable website is a requirement which will help companies to communicate with their existing customers and attract new customers (Rahimnia & Hassanzadeh, 2013). For a restaurant review website, besides from the performance and appearance attributes that have been mentioned in this study earlier, another key success factor is the content of the restaurant review website which generally consists of three dimensions: restaurant information, restaurant ratings, and text message which include consumers' thoughts and opinions about restaurants (Duan et al., 2008). To enhance consumers' positive attitudes, these dimensions of the restaurant review website must be informative, reliable, and be scalable and presented in a proper presentation (Figure 11).

Many researchers confirmed that source credibility and trustworthiness are important predictors of consumers' cognitive and affective attitudes toward the website (Bickart & Schindler, 2001; Ayeh et al., 2013). Since restaurant reviews are written by strangers, consumers infer positive attitude through their perceptions of *informativeness* and *credibility*, drawn from the quality and source of information made available as a cue. This cue refers to the reviewer's identity with a verified symbol presented in the mock restaurant review website for this study. It is proposed that consumers will have positive cognitive and affective attitudes for the restaurant review website if they perceive that reviews on the website are credible. In terms of scalable information, this dimension refers to how well the restaurant review website can manage the large amount of restaurant reviews before presenting the information to the users of the website. As consumers currently encounter an overload of information on the internet, the web-based technological developments have been invented to manipulate and disseminate information

(Edmunds & Morris, 2000). Previous research suggested that information can lead to negative attitude such as anxiety, stress, loss of job satisfaction, physical ill health, and in turn, affects their decision-making (Malhotra, 1982). In online shopping, rich information impacts consumers' perception of information overload and lead consumers to a worse subject state towards a decision (Chen, Shang, & Kao, 2009). For this reason, the web developer designed a recommender system to filter and manage consumer reviews data which will help consumers abate the burden of product reviews screening and processing. This system includes features such as category filtering, rating, and ranking. Based on the results of an investigation on U.S. based restaurant review websites (see Table 2), the majority of popular restaurants review websites include all the main features of the recommender system, whereas the review websites that only provide a discussion platform seems to be unpopular. Therefore, this study posits that *scalability* influences consumers' cognitive and affective attitudes toward the restaurant review websites.

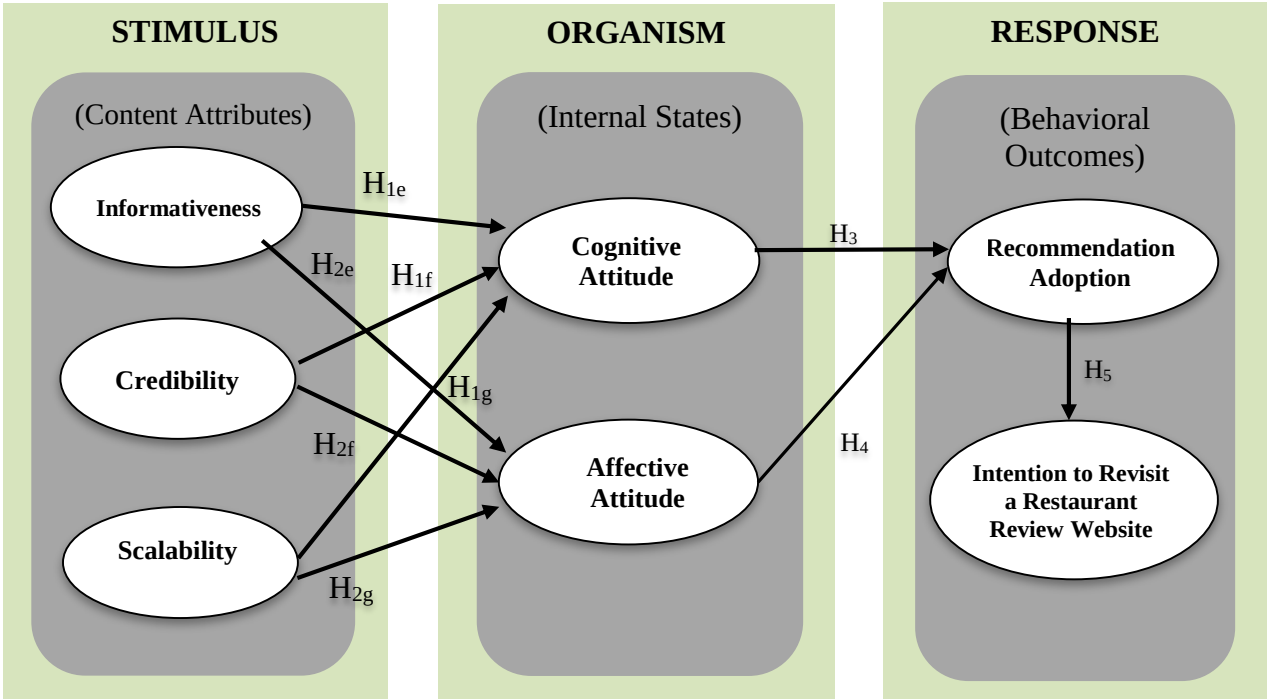


*Figure 11.* Sub-Model (C)

**Main Model: Internal States and Behavioral Outcomes**

*Cognitive & Affective Attitudes → Recommendation Adoption*

The success or failure of the restaurant review website is given by the number of people using it and by the influence it has in the restaurant industry. To provide an example, the higher the popularity and influence of Yelp in the restaurant industry, the more food suppliers and businesses in the same industry would be willing to pay for a sponsored link from this website. Hence, two key performance indicators of the restaurant review website are influences on consumer decision and visitor retention.

In previous information systems literature, researchers apply dual process theories and the elaboration likelihood model (ELM) to explain how people are influenced in adopting ideas, knowledge, or information (Sussman & Siegal, 2003; Bhattacherjee & Sanford, 2006). Information adoption is the process by which people fully engage in using information and the actual impact of the information received may vary person to person, depending on the recipients' perceptions, experience and sources (Cheung et al., 2008). Since the objective of this study is to explore the impacts of a newly emerging restaurant review website on consumers' internal states and behavioral responses, this study expected that both consumers' cognitive and affective attitudes will influence the consumers' intention to adopt the recommendation and intention to revisit the restaurant review website. If the restaurant review website users have positive attitudes toward the restaurant review website, they will be more likely to adopt the recommendations contained in their decision making.

*Recommendation Adoption → Intention to Revisit the Restaurant Review Website*

Revisit intention is one of the most common descendant variables being used in tourism research. Tourists are likely to revisit the destination if they are satisfied with their previous visit (Bowen, 2001). In marketing research, customer's overall satisfaction or dissatisfaction is derived from total service experiences including performance, process, and transaction (Bitner & Hubbert, 1994). A study conducted by Cronin and Taylor (1992) found that customer satisfaction in the service sector, such as casual dining, banking, and dry cleaning, has a significant impact on repurchase intention. Anderson and Sullivan (1993) also confirmed that a high level of customer satisfaction decreases switching of service providers, thereby increasing customer repurchase intention. Hence, revisit intention has been regarded as an extension of satisfaction rather than an initiator of the revisit decision-making process (Um, Chon & Ro, 2006). For a restaurant review website, this study posits that satisfied website users are more likely to revisit the restaurant review website if they are satisfied with the overall experiences with the website so that they will decide to adopt the recommendation. Therefore, recommendation adoption has a direct impact on intention to revisit the restaurant review website.

After the literature review, this study posits that the three dimensions of restaurant attributes including performance, appearance, and content will influence consumers' cognitive-affective attitudes and behavioral responses. Each attribute includes sub-constructs and they are delineated in sub-models (A), (B), and (C) which are described above. Therefore, the following statements are hypothesized.

H1: Consumer perceptions of restaurant review website attributes significantly influence cognitive attitude towards the restaurant review website.

H1a: Perceived simplicity positively influences cognitive attitude towards the restaurant review website.

H1b: Perceived usefulness positively influences cognitive attitude towards the restaurant review website.

H1c: Perceived visual appeal positively influences cognitive attitude towards the restaurant review website.

H1d: Perceived social presence positively influences cognitive attitude towards the restaurant review website.

H1e: Perceived informativeness positively influences cognitive attitude towards the restaurant review website.

H1f: Perceived credibility positively influences cognitive attitude towards the restaurant review website.

H1g: Perceived scalability positively influences cognitive attitude towards the restaurant review website.

H2: Consumer perceptions of restaurant review website attributes significantly influence affective attitude towards the restaurant review website.

H2a: Perceived simplicity positively influences affective attitude towards the restaurant review website.

H2b: Perceived usefulness positively influences affective attitude towards the restaurant review website.

H2c: Perceived visual appeal positively influences affective attitude towards the restaurant review website.

H2d: Perceived social presence positively influences affective attitude towards the restaurant review website.

H2e: Perceived informativeness positively influences affective attitude towards the restaurant review website.

H2f: Perceived credibility positively influences affective attitude towards the restaurant review website.

H2g: Perceived scalability positively influences affective attitude towards the restaurant review website.

H3: Cognitive attitude towards a restaurant review website has a positive influence on consumer recommendation adoption.

H4: Affective attitude towards a restaurant review website has a positive influence on consumer recommendation adoption.

H5: Recommendation adoption has a positive influence on consumer intention to revisit the restaurant review website

# CHAPTER III

# METHODS

The methods of this study comprise three sections. The first section addresses the research design, including the development of the stimuli, the mock restaurant review website, and the development of a survey instrument. The second section describes the procedure of the research, including survey instructions and content validity testing. The third section explains the preliminary tests, including a pre-test and a pilot test. This study was reviewed and expedited by the University of Tennessee Institutional Review Board prior to data collection (Approval No: UTK IRB-17-03754-XP) (Appendix A).

## Research Design

To achieve a deeper understanding of the impact of restaurant review website attributes on consumers' internal states and behavioral responses, a mixed-method research approach was applied in the present study. The mixed-method research approach combines elements of quantitative and qualitative research approaches for the broad purpose of achieving breadth and depth of understanding and corroboration (Johnson, Onwuegbuzie, & Turner, 2007). The qualitative elements included in the study were a structured interview and a focus group discussion, while the quantitative element consisted of an anonymous online survey.

**The Development of the Stimuli and the Mock Restaurant Review Website**

The participant—a frequent restaurant review website user ($n$ = 1)—was initially engaged in an unstructured interview. The researcher asked the participant to share personal experiences with and insights into the use and function of the restaurant review website that she had frequently visited. Examples of interview questions included reasons for using the restaurant review website, navigation processes from the beginning to the last step, her feelings while navigating the restaurant review website, and the restaurant review website features that were likely to influence her decision (Appendix E). The interview was conducted on a Skype audio call, and it lasted about 35 minutes. After the interview was completed, an online gift card was sent to the participant's email address as a reward for participating in the research.

Second, a focus group interview was conducted with a faculty member, a college student, and two graduate students enrolled at a major southern U.S. university ($n$ = 4). The focus group was also conducted on a Skype audio call to allow participants to be relaxed during the interview. The main objective of the focus group was to draw upon participants' attitudes, feelings, and behaviors while using a restaurant review website. Questions such as how much do they usually spend on a special occasion meal, how they define the term "fine dining," how many restaurant reviews they usually read and compare before making a decision, and which attributes of the restaurant review website influenced their decision the most were included in the discussion (see Appendix E). The focus group interview lasted approximately 50 minutes. After the focus group interview was completed, online gift cards were sent to the participants' email addresses as a reward for participating in the research.

Third, a short online survey was conducted via a public food-related Facebook page to ask people's opinions about their dream destinations and favorite cuisines. The purpose of this short

survey was to enable the researcher to create a scenario of a tourist who was traveling to a specific city for the first time. This tourist was looking for a fine-dining restaurant to celebrate a birthday with his or her travel companion and was using a mock restaurant review website created by the researcher. The researcher posted two questions: "What is your dream travel destination?" and "What is your favorite cuisine?" on a food-lovers community page on Facebook, which had approximately 3,000 members (April 2017). Within two days, the result yielded 404 responses, and the survey found that people's dream city was Honolulu ($n$ = 184, 45.54%), while the most favorite cuisine cited was seafood ($n$ = 87, 21.53%).

Previous studies found a strong relationship between involvement and information processing. When the level of consumer involvement with a product is high, the consumer tends to focus not only on the product information obtained from reviews (quality of reviews) but also on the product's popularity as shown by the reviews (number of reviews) (Park et al., 2007). As involvement increases, individuals have greater motivation to comprehend the information (Lee et al., 2008; Petty, Cacioppo, & Schumann, 1983). Thus, the scenario in this study was that a participant was on a trip to Honolulu and used a mock restaurant review website to search for a restaurant to celebrate a birthday during the journey. As the study needed to control the variables on the mock restaurant website, participants were required to choose a fine-dining seafood restaurant in the mock restaurant review website setting.

Fourth, content analysis was conducted to generate information to be included in the mock restaurant review website. The research studied the attributes of four existing restaurant review websites—Yelp, TripAdvisor, OpenTable, and Zomato—and then it generated a pool of information, including a list of the top 10 most popular restaurants in Honolulu; restaurant locations, menus, prices, operation hours, and available services; restaurant reviews ranked from

one to five stars; and photos of the food and restaurant atmosphere. The names and addresses of the restaurants were manipulated to limit the possibility that research participants may have previously visited the restaurant. The focus of this study was to investigate the impacts of overall restaurant review website attributes, not the influence of restaurant reviews on consumers' initial states and behaviors; therefore, the content of the online restaurant reviews included positive (four and five stars), moderate (three stars), and negative reviews (one and two stars). The length of the reviews was also manipulated to correspond with previous research that found direct impacts of review length on readers' attitudes toward the product (Chevalier & Mayzlin, 2006; Sridhar & Srinivasan, 2012).

Fifth, the mock restaurant review website was created using the platforms of Yelp and TripAdvisor as examples. The mock restaurant review website included functions such as a category filter, reviewer verification, a discussion platform, a photo-sharing function, and five-star rating and ranking scales. Nevertheless, the visual design of the mock website was differentiated from Yelp and TripAdvisor in an attempt to limit participant familiarity with the existing restaurant review websites. Brand names, logos, fonts, and background colors that may reveal the identity of the Yelp or TripAdvisor platforms were not included. To make the mock website look professional, the layout, navigation, text, restaurant information, restaurant reviews, restaurant images, and reviewer profiles from Yelp were retained. Based on an investigation into the Yelp platform and other restaurant review websites, the study found that although websites encourage reviewers to verify identification and upload their own photos before writing restaurant reviews, many reviewers prefer not to reveal their identities. Therefore, this study aimed to improve the website's credibility by adding verified user and verified check-in symbols next to the photos of reviewers. For the social presence of the website different types of photos were selected, as this medium

allows an individual to experience others as being physically present (Fulk et al., 1987). The images included photos of food, drinks, the physical atmosphere of the restaurant, and service persons presented on the restaurant review website. These photos were grouped into two categories: those posted by restaurant owners and those posted by reviewers. After the design process was completed, the researcher then registered the host and domain name of the restaurant review website before launching it on the internet. A manipulation check of the restaurant review website was later conducted by a jury of five academic professionals (two professors and three graduate students majoring in consumer sciences and hospitality management) to review the performance, navigation speed, and quality of the website.

**Results of an In-Depth Interview and a Focus Group Discussion**

The use of open-ended questions in the interviews and the focus group had the exploratory research advantage of allowing participants to respond in their own words rather than forcing them to choose from fixed answers (Trochim, 2006). For this study, two qualitative research methods were applied to obtain people's general opinion about the attributes of a restaurant review website. After the interviews and the focus group had been conducted, the researcher recorded the information in audio files and then transcribed them for analysis (see Appendix I).

The data were categorized using an inductive categorization method in which recurring factors found in a text passage were identified (Spiggle, 1994). The results revealed that three functions were frequently used by restaurant review website users: category filter, rating-ranking scales, and restaurant information. The sub-functions within the category filter included filters that allow the website users to narrow down the area of the restaurants, type of cuisine, type of meals, cost of meals, and type of dining occasion. The rating and ranking scales function was one of the most important in terms of influencing restaurant review website users' decision-making as to

whether or not to visit a given restaurant. In the current study, interview participants were likely to choose a top-ranking restaurant with at least a four-star rating and a high number of reviews. One of the participants said that "I would rather choose a four-star restaurant with a high number of reviews than a five-star restaurant with a fewer number of reviews." In addition, when participants looked into the specific restaurant information, they also considered price, menu, and photos of the restaurant. One of the participants stated that photos of a restaurant definitely affect her decision-making, especially when there is a picture of an actual dish posted by the reviewer. For reviews of a specific restaurant, one of the participants stated that she would compare both negative and positive reviews before making a decision as to whether or not to visit a given restaurant.

Taking all these interview results together, the mock restaurant review website was built based upon attributes mentioned by the participants of the interviews and focus group. According to the three functions of the restaurant review website that were frequently used, the category filters included those for destination, type of meals, type of cuisine, estimated price, and type of dining occasion, which enabled users to narrow down their search (Appendix D). The second function—that of rating-ranking scales—included top-10 ranked restaurants as well as restaurant reviews with one to five stars along with positive and negative reviews in the mock restaurant review website. In addition, the necessary restaurant information, such as location, menu, prices, and photos of both the food and restaurants, were also included in the development of the mock restaurant review website.

**The Development of the Measurement Instrument**

The measurement of all variables entailed the use of scales from previous research. The restaurant review website attributes included seven variables categorized into three dimensions: performance, appearance, and content. The study measured the simplicity of the restaurant review website with five items adopted from Flavián, Guinalíu, and Gurrea (2006). Usefulness was measured by two items from Lee et al. (2011) and three items from Purnawirawan, Pelsmacker, and Dens (2012). Visual appeal was measured by four items from Lee et al. (2011) and one item from Bart et. All (2005). To measure social presence, five items were adopted from Kumar and Benbasat (2006). For informativeness, three items were adopted from Hausman and Siekpe (2009) and two items from Wolfinbarger and Gilly (2003). Two measurement items of credibility derived from Filieri et al. (2015), and the other three items were from Williams and Drolet (2005). Among these variables, scalability was a new one, for which the researcher could not find an appropriate existing scale to measure this construct; therefore it was necessary to create a new scale (Hinkin, Tracey, & Enz, 1997). To measure scalability, seven items were adapted from three sources: Parasuraman, Zeithaml, and Maholtra (2005); Khare, Labrecque, and Asare (2011); and Kim and Stoel (2004). For cognitive and affective attitudes, the study adapted items from Eroglu et al. (2003) and Crites, Fabrigar, and Petty (1994). The study applied four items from Filieri et al. (2015) to measure recommendation adoption, and five items from Loiacono et al. (2007) to measure in the intention to revisit the restaurant review website All variables were measured by using a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree). The measurement scale items for this study are presented in Table 3 and Table 4.

**Table 3**
The constructs, Number of Items, and Sources

| Category | Construct | Definition | Sources | Items |
|---|---|---|---|---|
| Website Performance | Simplicity | The degree to which a consumer believes that the navigation of the restaurant review website would be free of deliberate effort. | Purnawirawan et al. (2012). | 5 |
| | Usefulness | The degree to which a consumer evaluates the performance of the restaurant review website as being useful for his/her restaurant information search. | Flavián et al. (2006). | 5 |
| Website Appearance | Visual Appeal | A consumer's perception of restaurant review website esthetics derived from website design factors including text, graphics, layout, background and other visual elements which act to enhance overall look of a restaurant review website. | Bart et al. (2005) and Lee et al. (2011). | 5 |
| | Social Presence | The degree to which a consumer perceives the media-sharing feature as a medium that allow him or her to experience others as being physically present at the restaurant. | Kumar & Benbasat, (2006). | 5 |
| Website Content | Credibility | The degree to which a consumer perceives the believability of the information of a restaurant review website. | Filieri et al. (2015). | 5 |
| | Informativeness | The degree to which a consumer evaluates the ability of restaurant review websites in conveying and passing restaurant review information. | Hausman & Siekpe (2009) and Wolfinbarger & Gilly (2003). | 5 |
| | Scalability | The degree to which a consumer perceives the collaborative filtering tool including rating - ranking scales and restaurant category filters as a tool that help minimizing massive amounts of review content and believes that this tool will improve his/her ability to acquire restaurant review information before making a visit decision. | Khare et al. (2011), Kim & Stoel (2004), and Parasuraman et al. (2005). | 7 |
| Internal States | Cognitive Attitude | A consumer 's positive or negative cognitions about the restaurant review website. | Eroglu et al. (2003). | 4 |
| | Affective Attitude | A consumer's feelings as favorable or unfavorable toward the restaurant review website. | Crites et al. (1994). | 5 |
| Responses | Recommendation Adoption | A consumer's intention to engage in using information from the restaurant review website to support decision-making in visiting a restaurant. | Filieri et al. (2015). | 4 |
| | Revisit Intention | A consumer's intention to visit the restaurant review website in the future. | Loiacono et al.(2007). | 5 |

**Table 4**
Constructs, Adapted Scale Items, Original Scale Items, Original Cronbach's Alpha, and Sources

| Construct | Adapted Scale Items | Original Scale Items | *a* | Sources |
|---|---|---|---|---|
| Simplicity | (1) In this restaurant review website everything was easy to understand. | • In this website everything is easy to understand. | 0.79 | Flavián et al. (2006). |
| | (2) This restaurant review website was simple to use, even when using it for the first time. | • This website was simple to use, even when using it for the first time. | 0.71 | |
| | (3) It was easy to find the information I needed from this restaurant review website. | • It is easy to find the information I need from this website. | 0.85 | |
| | (4) The structure and contents of this restaurant review website were easy to understand. | • The structure and contents of this website were easy to understand. | 0.88 | |
| | (5) It was easy to move within this restaurant review website. | • It was easy to move within this website. | 0.84 | |
| Usefulness | (6) Use of this restaurant review website decreased the time needed for restaurant search. | • Use of my technology product decreases the time needed for my work/study/life tasks. | 0.52 | Purnawirawan et al. (2012). |
| | (7) Use of this restaurant review website increased my chance to find a better quality restaurant. | • Use of my product increases the quality of output for the same amount of effort. | 0.63 | |
| | (8) I found this restaurant review website useful. | • I found the reviews useful. | 0.90 | |
| | (9) This restaurant review website helped me to shape my attitude toward the restaurant. | • The reviews helped me to shape my attitude toward the hotel. | 0.90 | |
| | (10) This restaurant review website helped me to make a decision on a restaurant choice. | • The reviews helped me to make a decision regard this hotel. | 0.90 | |
| Visual Appeal | (11) The visual of this restaurant review website was attractive. | • The visual of my product is attractive. | 0.93 | Bart et al. (2005), and Lee et al. (2011). |
| | (12) This restaurant review website was esthetically appealing. | • My product is esthetically appealing. | 0.97 | |
| | (13) This restaurant review website was visually appealing. | • My technology product is visually appealing. | 0.94 | |
| | (14) This restaurant review website displayed visually appealing design. | • My technology product displays visually appealing design. | 0.92 | |
| | (15) This restaurant review website was engaging and captured my attention. | • The site is engaging and captures attention. | 0.93 | |
| Social Presence | (16) Seeing other consumer's posted photos in this restaurant review website was part of how I see others' dining experiences. | • New item. | | Kumar & Benbasat, (2006). |
| | (17) The photo-sharing feature of this restaurant review website enabled me to form a sense of sociability in the website. | • There is a sense of sociability in the website. | 0.87 | |
| | (18) There was a sense of human sensitivity in the restaurant review website. | • There is a sense of human sensitivity in the website. | 0.85 | |
| | (19) There was a sense of human contact in this restaurant review website. | • There is a sense of human contact on the website. | 0.88 | |
| | (20) There was a sense of personal touch in this website. | • There is a sense of personalness in the website. | 0.90 | |

**Table 4. Continued.**
Constructs, Adapted Scale Items, Original Scale Items, Original Cronbach's Alpha, and Sources

| Construct | Adapted Scale Items | Original Scale Items | *a* | Sources |
|---|---|---|---|---|
| Informative-ness | (21) This restaurant review website was a good source of restaurant information. | • The website is a good source of product information. | 0.85 | Hausman & Siekpe, 2009), and Wolfinbarger & Gilly, 2003. |
| | (22) This restaurant review website provided relevant restaurant information. | • The website supplies relevant information. | 0.85 | |
| | (23) This restaurant review website is informative about restaurant recommendations. | • The website is informative about the company's product | 0.87 | |
| | (24) This restaurant review website provided in-depth restaurant reviews. | • The website provides in-depth information. | 0.87 | |
| | (25) This restaurant review website helped me explore restaurant reviews. | • The site helps me research products. | 0.87 | |
| Credibility | (26) This restaurant review website was credible. | • The reviewers were credible. | 0.86 | Filieri et al. (2015), and Williams & Drolet, (2005). |
| | (27) This restaurant review website was reliable. | • The reviewers were reliable. | 0.88 | |
| | (28) This restaurant review website was trustworthy. | • The reviewers were trustworthy. | 0.89 | |
| | (29) This restaurant review website was believable. | • This advertisement is believable. | 0.92 | |
| | (30) This restaurant review website was realistic. | • This advertisement is realistic. | 0.92 | |
| Scalability | (31) The content of this restaurant review website was well-organized. | • The site is well organized. | 0.86 | Kim & Stoel (2004), Khare et al. (2011), Parasuraman et al. (2005), and Park et al. (2007) |
| | (32) The organization of the content in this restaurant review website made it easy to find what I need. | • The site makes it easy to find what I need. | 0.84 | |
| | (33) This website had collaborative filtering feature (e.g. star-rating and ranking scales), which helped me accomplish my restaurant search task. | • The website has interactive features, which help me accomplish my task. | 0.82 | |
| | (34) The star-rating scale presented in this restaurant review website made it easier for me to determine the quality of a restaurant. | • I believe all the reviews indicate unanimity of opinion about the quality of the movie. | 0.73 | |
| | (35) The star-rating scale suggested in this restaurant review website indicated unanimity of consumers' opinions about the quality of restaurants. | • I believe all the reviews indicate a consensus about the quality of a movie. | 0.73 | |

**Table 4. Continued.**
Constructs, Adapted Scale Items, Original Scale Items, Original Cronbach's Alpha, and Sources

| Construct | Adapted Scale Items | Original Scale Items | *a* | Sources |
|---|---|---|---|---|
| Scalability (Continued) | (36) The ranking scale presented in this restaurant review website made it easier for me to determine the popularity of a restaurant. | • I can interact with the website in order to get information tailored to my specific needs. | 0.85 | |
| | (37) Based on the ranking scale, I can tell if the restaurant is liked by a lot people. | • The product is liked by a lot of people. | 0.92 | |
| Cognitive Attitude | (38) I like this restaurant review website. | • Like/Dislike | 0.86 | Eroglu et al., 2003. |
| | (39) This restaurant review website was good. | • Negative/ Positive | 0.86 | |
| | (40) My attitude toward this restaurant review website was positive. | • Good/bad | 0.86 | |
| | (41) I find surfing this restaurant review website was a good way to spend time. | • I feel surfing this website is a good way to spend time. | 0.83 | |
| Affective Attitude | (42) I found this restaurant review website entertaining. | • Entertaining / not entertaining | 0.95 | Crites et al., 1994. |
| | (43) I enjoyed surfing this restaurant review website. | • Enjoyable / not enjoyable | 0.95 | |
| | (44) While navigating on this restaurant review website, I felt happy. | • Happy - Unhappy | 0.95 | |
| | (45) This restaurant review website made me feel stimulated. | • Satisfied - Unsatisfied | 0.95 | |
| | (46) I was satisfied with this restaurant review website. | • Aroused - Unaroused | 0.75 | |
| Recommen -dation Adoption | (47) This restaurant review website made it easier for me to make a decision (e.g. visit or not visit a restaurant). | • Online reviews made it easier for me to make purchase decision (e.g., purchase or not purchase). | 0.89 | Cheung et al., 2009; Filieri et al., 2015. |
| | (48) This restaurant review website has enhanced my effectiveness in making a visit decision. | • Online reviews have enhanced my effectiveness in making purchase decision. | 0.89 | |
| | (49) It is very likely that I will adopt the consumer's recommendations from this restaurant review website. | • The last time I read online reviews I adopted consumers' recommendations. | 0.89 | |
| | (50) There is a great chance that I will choose a restaurant recommended by this restaurant review website. | • Information from review contributed to my knowledge of discussed product/service. | 0.89 | |

**Table 4. Continued.**
Constructs, Adapted Scale Items, Original Scale Items, Original Cronbach's Alpha, and Sources

| Construct | Adapted Scale Items | Original Scale Items | *a* | Sources |
|---|---|---|---|---|
| Intention to revisit a restaurant review website | (51) If I needed to find restaurant reviews in the future, I would probably revisit this restaurant review website. | • If I needed this product or service in the future, I would probably revisit this Web site. | 0.94 | Loiacono et al., 2007, and Lin & Lu, 2000. |
| | (52) If I needed to find restaurant reviews in the future, this restaurant review website will be my first choice. | • If I needed this product or service in the future, I would be likely to buy it from this Web site. | 0.94 | |
| | (53) If I needed to find restaurant reviews in the future, I would probably try this website. | • If I needed this product or service in the future, I would probably try this Web site. | 0.94 | |
| | (54) I intend to continue to visit this restaurant review website in the future. | • If I needed this product or service in the future, I would probably revisit this Web site. | 0.94 | |
| | (55) I plan to bookmark this restaurant review website for future reference. | • I plan to bookmark the site for future reference. | 0.82 | |

# Procedure

## Survey Instructions

An online questionnaire was created using Qualtrics survey software and linked to the mock restaurant review website. The mock website consisted of seven parts: (1) informed consent; (2) scenario explanation; (3) exposure to the first page of the mock restaurant review website; (4) exposure to the category filters (choices of destination, types of meals, budget, types of cuisine, types of occasion); (5) exposure to a list of top-10 restaurants arranged in order based on popularity; (6) exposure to selected restaurant reviews, including restaurant information, menus, photos, and customer reviews; and (7) exposure to the questionnaire survey link. When the participants began the survey, they responded to a questionnaire about attributes of the mock restaurant review website and demographic information. Participants were asked to navigate the mock website for approximately 5–10 minutes before proceeding to the survey links on Qualtrics. The first part of the questionnaire contained questions measuring their opinions about website performance, appearance, and content. The second part of the questionnaire contained questions measuring their attitude, emotion, level of trust, and behavioral responses. The last part of survey comprised questions on demographics (see Appendix H).

## Content Validity Testing

Content validity is the extent to which a specific set of questions are relevant and representative of the construct for a particular assessment purpose (Haynes, Richard, & Kubany, 1995). Establishing content validity is a necessary task to perform before testing the scale measurement on samples. In this study, content validity was established with the help of subject-matter experts and academic professionals (two professors and three graduate students majoring

in consumer sciences and hospitality management) to ensure that all selected scale items were clear and valid.

## Preliminary Tests

### Pre-Test

A pre-test survey was conducted to check for the potential need to refine the measurement items and the appropriateness of the mock restaurant review website. An electronic invitation to participate in the research project was sent to undergraduate students within the Department of Retail, Hospitality and Tourism Management at a major southeastern U.S. university. The link to the mock restaurant review website was included in the invitation email. All participants were informed that participation was on a voluntary basis and that no compensation would be provided. The extant literature suggests that 30 participants from the population of interest is a reasonable minimum sample for a study that aims to conduct a preliminary survey or scale development (Johanson & Brooks, 2010). Therefore, the pre-test was expected to yield 30 responses. The survey was distributed to 112 students and received 32 responses. After removing responses that had incomplete data, 30 usable cases were obtained. To check the reliability of the constructs, a reliability test using Cronbach's alpha coefficients was performed. As shown in Table 5, the reliabilities of all constructs were above the cut-off level of 0.70 (Hair, Black, Babin, & Anderson, 2010).

### Pilot Test

A pilot test was further conducted to examine whether the measurement constructs and items were reliable and to ensure that those variables would be valid in the main survey. The survey design and procedure were similar to those used in the pre-test, but some questionnaire items were

refined. The Amazon Mechanical Turk (www.mturk.com) was hired to recruit participants living in the United States. Each participant was paid $0.50 after entering the correct code number generated on the last page of the survey. The survey was distributed to 238 Mturk workers and yielded 203 usable samples. Responses that failed to answer screening questions, completed the survey too quickly (less than five minutes), or provided the same answers to every question were eliminated from the data analysis. All variables in the pilot test were measured using a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree). Among the 203 responses, 54.2% were female, and 39.9% were between 30 and 40 years old. Over 43% of participants held a bachelor's degree, and only 7.9% had never used a restaurant review website (see tables 6 and 7). Once the data had been obtained, the unidimensionality of the constructs was checked by measuring the reliabilities of the constructs using Cronbach's alpha coefficients. As shown in Table 8, the reliabilities of all the constructs were above the cut-off level of 0.70, thereby all scale items could be used in the main survey.

**Table 5**
Reliability Results for Pre-Test

| Construct | Number of items | Reliability (Cronbach's alpha) |
|---|---|---|
| Simplicity | 5 | 0.94 |
| Usefulness | 5 | 0.91 |
| Visual appeal | 5 | 0.94 |
| Social presence | 5 | 0.91 |
| Informativeness | 5 | 0.89 |
| Credibility | 5 | 0.91 |
| Scalability | 7 | 0.80 |
| Cognitive attitude | 4 | 0.91 |
| Affective attitude | 5 | 0.93 |
| Recommendation adoption | 4 | 0.89 |
| Intention to revisit the restaurant review website | 5 | 0.93 |

*n* = 30

**Table 6**
Demographics of Respondents in the Pilot Test

| Demographics | | Frequency | Ratio (%) |
|---|---|---|---|
| Gender | Female | 110 | 54.2 |
| | Male | 93 | 45.8 |
| Race | African-American | 19 | 9.4 |
| | Asian or Pacific Islands | 16 | 7.9 |
| | Caucasians | 151 | 74.4 |
| | Hispanic | 13 | 13 |
| | Native American | 1 | 0.5 |
| | Other | 3 | 3 |
| Age | Under 21 | 0 | 0 |
| | Between 22 and less than 30 | 23 | 11.3 |
| | Between 30 and less than 40 | 81 | 39.9 |
| | Between 40 and less than 50 | 52 | 25.6 |
| | Between 50 and less than 60 | 32 | 15.8 |
| | Between 60 and less than 70 | 12 | 5.9 |
| | Between 70 and older | 3 | 1.5 |
| Education | Less than high school diploma | 3 | 1.5 |
| | High school diploma | 40 | 19.7 |
| | Associate degree | 41 | 20.2 |
| | Bachelor's degree | 88 | 43.3 |
| | Graduate degree | 30 | 14.8 |
| | Others | 1 | 0.5 |
| Marital status | Single, never married | 85 | 41.9 |
| | Single, living with a significant other | 15 | 7.4 |
| | Married | 92 | 45.3 |
| | Divorced | 8 | 3.9 |
| | Separated | 1 | 0.5 |
| | Widowed | 2 | 1.0 |
| Yearly income | Less than $10,000 | 14 | 6.9 |
| | $10,000 to less than $20,000 | 17 | 8.4 |
| | $20,000 to less than $30,000 | 25 | 12.3 |
| | $30,000 to less than $40,000 | 27 | 13.3 |
| | $40,000 to less than $50,000 | 21 | 10.3 |
| | $50,000 to less than $60,000 | 16 | 7.9 |
| | $60,000 to less than $70,000 | 22 | 10.8 |
| | $70,000 to less than $80,000 | 18 | 8.9 |
| | $80,000 to less than $90,000 | 9 | 4.4 |
| | $90,000 to less than $100,000 | 9 | 4.4 |
| | $10,000 to less than $150,000 | 17 | 8.4 |
| | More than $150,000 | 8 | 3.9 |
| Total | | 203 | 100 |

**Table 7**
Restaurant Review Website Usage in the Pilot Test

| Website Usage | | Frequency | Ratio (%) |
|---|---|---|---|
| How often do you use a restaurant review website? | Never | 16 | 7.9 |
| | Sometimes | 86 | 42.4 |
| | About half the time | 28 | 13.8 |
| | Most of the time | 56 | 27.6 |
| | Always | 17 | 8.3 |
| Which of the following is your most frequently used restaurant review website? | OpenTable | 14 | 6.9 |
| | TripAdvisor | 35 | 17.2 |
| | Yelp | 135 | 66.5 |
| | Zomato | 2 | 1.0 |
| | Others | 5 | 2.5 |
| | Never used a restaurant review website | 12 | 5.9 |
| Total | | 203 | 100 |

**Table 8**
Reliability Results for the Pilot Test

| Construct | Number of items | Reliability (Cronbach's alpha) |
|---|---|---|
| Simplicity | 5 | 0.94 |
| Usefulness | 5 | 0.87 |
| Visual appeal | 5 | 0.95 |
| Social presence | 5 | 0.90 |
| Informativeness | 5 | 0.85 |
| Credibility | 5 | 0.92 |
| Scalability | 7 | 0.84 |
| Cognitive attitude | 4 | 0.86 |
| Affective attitude | 5 | 0.90 |
| Recommendation adoption | 4 | 0.91 |
| Intention to revisit the restaurant review website | 5 | 0.93 |

*n* = 203

# CHAPTER IV

# RESULTS

This chapter deals with the data analysis and the results of the hypotheses testing. By following a mixed-methods design—using both qualitative and quantitative approaches, as shown in Figure 12—the main study aimed to test the hypothesized differential effects of restaurant review attributes on consumers' initial states and behaviors. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were employed to assess the construct validity during the initial development of this instruments. The study then conducted structural equation modeling (SEM) to test the research model and proposed hypotheses.

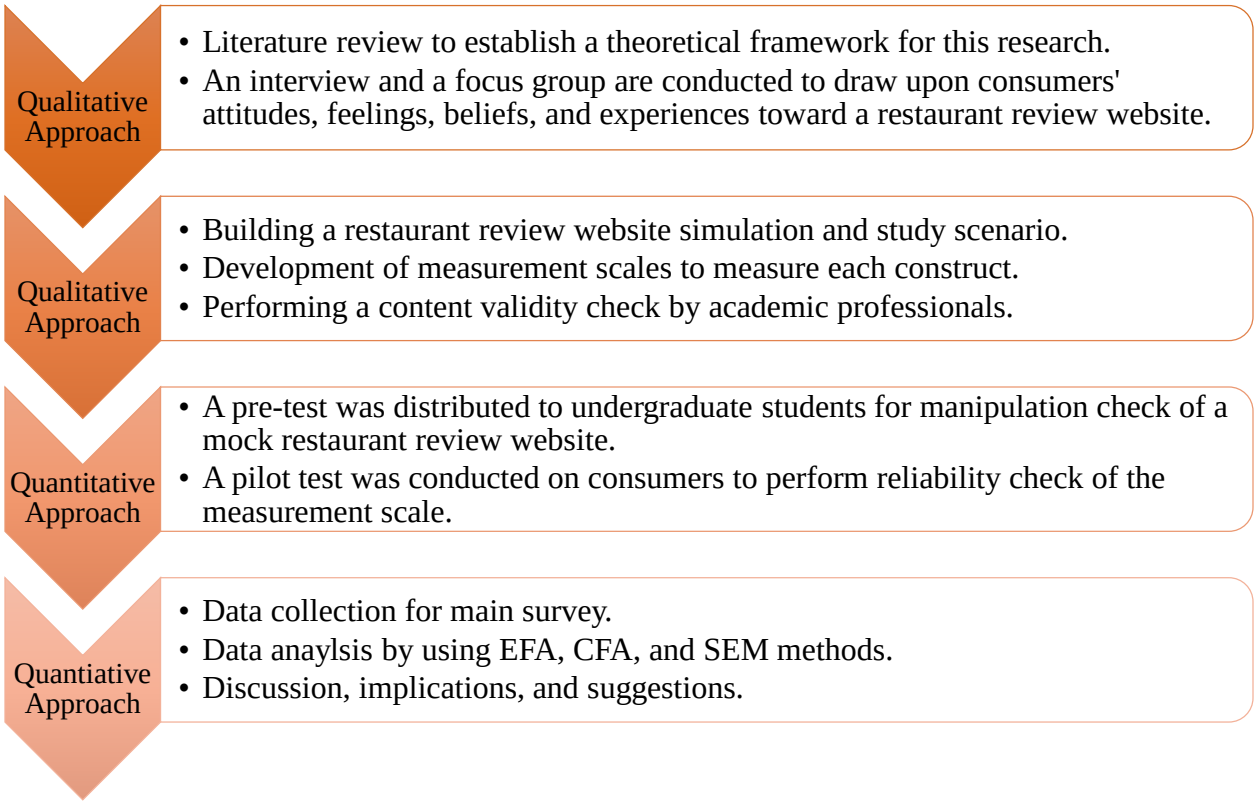


*Figure 12.* Summary of Research Procedure

The purpose of this chapter is threefold, including (a) a research overview to describe the research model, survey design, and data collection; (b) a preliminary analysis to provide an overview of the steps taken in the scale development process using descriptive statistics and EFA; and (c) a measurement model evaluation to discuss the results of the CFA and the structural effects of the restaurant review website attributes on consumers' initial states and behaviors using the SEM method.

## Research Overview

### Research Model

This study aimed to investigate a conceptual model explaining the effects of restaurant review website attributes on consumers' internal states and behaviors. The attributes of restaurant review websites were divided into three dimensions: performance, appearance, and content. Each dimension encompassed different constructs that the study aimed to investigate. The performance dimension included two constructs, simplicity and usefulness, as did the appearance dimension: visual appeal and social presence. The content dimension included three constructs: informativeness, credibility, and scalability. This study proposed that all constructs have direct influences on consumers' cognitive and affective attitudes and also have indirect influences on consumers' recommendation adoption and intention to revisit a restaurant review website (see Figure 13).

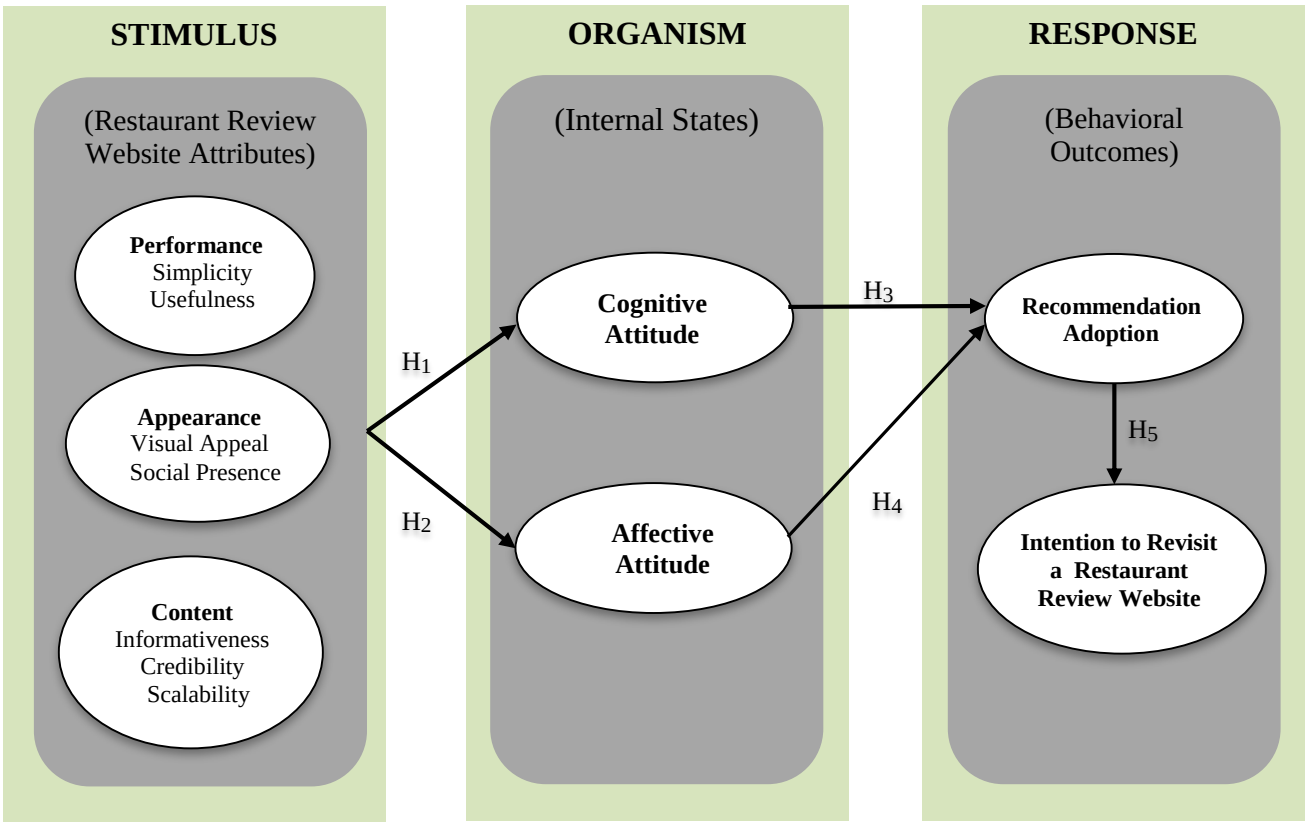


*Figure 13.* Proposed Research Model

## Survey Design

The main survey employed the same scenario, the same mock restaurant review website, and the same measurement scales as in the pilot study. All variables in the pilot test were measured using a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree). The survey consisted of four sections. At the beginning of the survey, participants were required to read the consent form, which explained the objectives of and instructions for the research. If the participants agreed to participate in the survey, they had to click on the button "I agree to participate in this research" to proceed to the next page, which explained the scenario of the study. In the third section, the participants were exposed to the mock restaurant review website to read restaurant reviews and associated information. In the last section, the participants were required to answer all questions

to receive a code number that was automatically generated after the participants had successfully completed the survey. However, since the study collected data from two different locations, Mturk and Facebook, only the Mturk workers were required to record this code to receive the payment. The data collection on Facebook was on a voluntary basis, and the participants did not receive compensation; therefore they were not required to provide the code number. The information in the consent form was also modified to inform these participants that they would not receive compensation for their participation in this study.

Three attention check questions asking about information on the mock restaurant review website were included in the survey to ensure that participants were paying close attention throughout the survey (e.g., "If the restaurant being reviewed is in Honolulu, click agree."). If the participant did not answer "agree" (in this case), the survey was terminated. The study also included a screening question to ask about the ages of the participants. Since the study targeted adult consumers aged 21 or older living in the United States, participants who marked the category, "Less than 21" were terminated from the survey.

**Data Collection**

An appropriate sample size is one of the most essential elements in providing accurate study results (Hair et al., 2010). For the SEM technique, previous researchers have suggested that a sample size less than 100 is considered to be too small (Kline, 2005), while a sample size of at least 200 will provide sufficient statistical power for data analysis. Hair et al. (2010) argued that sample size should be determined based on a set of factors, and particularly a model with a large number of constructs should have a minimum sample size of 500. Based on this recommendation, this study expected to obtain 500 usable responses from different locations.

The target sample of this study comprised consumers living in the United States with varied demographic profiles and levels of proficiency related to computer skills, and they had to be a minimum of 21 years old. The reason this study required a minimum age of 21 is because the scenario of the study targeted consumers with a high level of consumer involvement with the product (a fine-dining restaurant and an expensive "trip-of-a-life-time"). The questionnaire was distributed to the workers of Amazon Mechanical Turk (Mturk.com) and Facebook users who are members of food-lover community pages, including Knoxville Foodies (2,917 members in July 2017) and Appalachian Foods and Recipes Off-Topic Chit Chat (9,957 members in July 2017).

For data collection on Facebook, the invitation message and link to the mock restaurant review website and survey was posted on the food-lover community pages for three days, from July 14th–16th, 2017. The researcher first contacted the administrator of the page to ask for permission to post the survey link. Participants who were interested in participating in the research would click on the link and follow the instructions provided in the mock restaurant review website. After a three-day period, the study had received a total of 195 responses from the Facebook users. The study was expected to obtain at least 500 usable responses; therefore, Mturk was hired to collect the rest of the data.

Mturk was hired to recruit consumers living in the United States with a minimum age of 21. Each participant was paid $1 after they entered the correct code number generated on the last page of the survey. The survey was distributed to 380 Mturk workers during a one-week period, from July 20th–26th, 2017. When combined with the data collected from Facebook, the study eventually received 575 responses in total.

# Preliminary Analysis

## Data Screening

Forty-six responses were excluded from the total of 575 responses obtained from the two locations. These responses were eliminated due to several reasons, including quick response time (less than five minutes), incomplete responses, age under 21 years old, failure to correctly answer the screening questions, or providing the same answers to every question. By determining an interval spanning the mean plus/minus 3.29 standard deviations (Z-score values), outliers were detected and eliminated from the dataset (Van Dam, Earleywine & Borders, 2010) (see Table 9). After removing incomplete responses and outliers from the data, the survey had obtained 529 usable responses.

**Table 9**
Univariate Outlier (Z-score)

| Construct | N | Minimum | Maximum | Mean<br>Std. Error | Std.<br>Deviation |
|---|---|---|---|---|---|
| Simplicity | 529 | -3.22363 | 1.05102 | .031 | .702 |
| Usefulness | 529 | -3.16288 | 1.39353 | .036 | .834 |
| Visual Appeal | 529 | -3.24174 | 1.19874 | .051 | 1.171 |
| Social Presence | 529 | -3.11836 | 1.55914 | .041 | .942 |
| Informativeness | 529 | -3.22672 | 1.32368 | .032 | .747 |
| Credibility | 529 | -2.76702 | 1.36857 | .036 | .822 |
| Scalability | 529 | -3.07442 | 1.66907 | .029 | .663 |
| Cognitive Attitude | 529 | -3.06206 | 1.33646 | .037 | .853 |
| Affective Attitude | 529 | -3.18871 | 1.50265 | .046 | 1.066 |
| Recommendation Adoption | 529 | -3.10091 | 1.46162 | .036 | .822 |
| Intention to Revisit the Restaurant Review Website | 529 | -2.84798 | 1.48080 | .052 | 1.201 |
| Valid N (listwise) | 529 | | | | |

**Sample Characteristics**

The last section of the questionnaire contained the demographic information of the respondents, including gender, race, age, education, marital status, and income. As shown in Table 10, the data revealed that 50.1% were female and 49.9% were male. The majority of the respondents were Caucasian (80%). Out of the 529 respondents, 302 were between 30–50 years old. In terms of the highest educational level achieved, the majority of the respondents had a bachelor's degree (41.8%), while the other half had either a high school diploma (22.5%), an associate's degree (20.4%), or a graduate degree (14%). As for annual income, the respondents' income distributed to each level equally. Participants who had annual incomes between $10,000 and $59,999 accounted for 58.5% of the sample, while participants who had incomes from $60,000 to more than $150,000 accounted for 41.5%.

Participants were also asked how often they used a restaurant review website and which websites they have used. The results found that 40% of the respondents used restaurant review websites sometimes, 26.3% use restaurant review websites most of the time, and about 7.8% never use restaurant review websites. Yelp is the most popular restaurant review website (65.6%), so it was selected as the main source for restaurant reviews and information. TripAdvisor was ranked second (16.1%), OpenTable was ranked third (6.2%), and Zomato was the least popular source for restaurant reviews (1.5%). Interestingly, about 4% of the total respondents indicated that they use other sources, such as Google, to find restaurant reviews and information (see Table 11).

**Table 10**
Demographics of the Respondents

| Demographics | | Frequency | Ratio (%) |
|---|---|---|---|
| Gender | Female | 265 | 50.1 |
| | Male | 264 | 49.9 |
| Race | African-American | 37 | 7.0 |
| | Asian or Pacific Islands | 35 | 6.6 |
| | Caucasians | 423 | 80.0 |
| | Hispanic | 20 | 3.8 |
| | Native American | 4 | 0.8 |
| | Other (e.g. biracial) | 10 | 1.9 |
| Age | Under 21 | 0 | 0 |
| | Between 22 and less than 30 | 98 | 18.5 |
| | Between 30 and less than 40 | 183 | 34.6 |
| | Between 40 and less than 50 | 119 | 22.5 |
| | Between 50 and less than 60 | 91 | 17.2 |
| | Between 60 and less than 70 | 26 | 4.9 |
| | Between 70 and older | 12 | 2.3 |
| Education | Less than high school diploma | 4 | 0.8 |
| | High school diploma | 119 | 22.5 |
| | Associate degree | 108 | 20.4 |
| | Bachelor's degree | 221 | 41.8 |
| | Graduate degree | 74 | 14.0 |
| | Others | 3 | 0.6 |
| Marital status | Single, never married | 177 | 33.5 |
| | Single, living with a significant other | 60 | 11.3 |
| | Married | 238 | 45.0 |
| | Divorced | 45 | 8.5 |
| | Separated | 6 | 1.1 |
| | Widowed | 3 | 0.6 |
| Yearly income | Less than $10,000 | 24 | 4.5 |
| | $10,000 to less than $20,000 | 53 | 10.0 |
| | $20,000 to less than $30,000 | 58 | 11.0 |
| | $30,000 to less than $40,000 | 62 | 11.7 |
| | $40,000 to less than $50,000 | 60 | 11.3 |
| | $50,000 to less than $60,000 | 53 | 10.0 |
| | $60,000 to less than $70,000 | 43 | 8.1 |
| | $70,000 to less than $80,000 | 34 | 6.4 |
| | $80,000 to less than $90,000 | 30 | 5.7 |
| | $90,000 to less than $100,000 | 25 | 4.7 |
| | $100,000 to less than $150,000 | 47 | 8.9 |
| | More than $150,000 | 40 | 7.6 |
| Total | | 529 | 100 |

**Table 11**
Restaurant Review Website Usage

| Website Usage | | Frequency | Ratio (%) |
|---|---|---|---|
| How often do you use a restaurant review website? | Never | 41 | 7.8 |
| | Sometimes | 244 | 46.1 |
| | About half the time | 67 | 12.6 |
| | Most of the time | 139 | 26.3 |
| | Always | 38 | 7.2 |
| Which of the following is your most frequently used restaurant review website? | OpenTable | 33 | 6.2 |
| | TripAdvisor | 85 | 16.1 |
| | Yelp | 347 | 65.6 |
| | Zomato | 8 | 1.5 |
| | Google | 21 | 4.0 |
| | Never used a restaurant review website | 35 | 6.6 |
| Total | | 529 | 100 |

## Descriptive Statistics

The measurement scales employed in this study were adopted from the literature, and some items were modified to be tailored to the restaurant review website context. The measurement items and the survey procedure in the main study were the same as those in the pilot test, as shown in tables 3 and 4. The next step of the preliminary analysis was to provide descriptive statistics of measurement items. As shown in Table 12, the minimum–maximum values, means, and standard deviations of each measurement item are presented along with the absolute values of skewness and kurtosis. The mean values ranged from 4.80 to 6.29, and the standard deviation ranged from 0.71 to 1.57. The absolute values of skewness ranged from –1.72 to –0.41, while the absolute values of kurtosis ranged from –0.49 to 5.73. It was found that the absolute kurtosis values of two items, SCA1 (3.22) and SCA7 (5.73), were greater than 3.0, which indicated that these two scale items were not normally distributed (Bollen, 1991).

**Table 12**
Descriptive Statistics

| Scale Items | Min. | Max. | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| SIM1: In this restaurant review website everything was easy to understand. | 4 | 7 | 6.28 | 0.71 | -0.71 | 0.17 |
| SIM2: This restaurant review website was simple to use, even when using it for the first time. | 3 | 7 | 6.29 | 0.81 | -1.36 | 2.46 |
| SIM3: It was easy to find the information I needed from this restaurant review website. | 3 | 7 | 6.25 | 0.82 | -1.16 | 1.54 |
| SIM4: The structure and contents of this restaurant review website were easy to understand. | 3 | 7 | 6.26 | 0.78 | -0.91 | 0.74 |
| SIM1: It was easy to move within this restaurant review website. | 2 | 7 | 6.24 | 0.83 | -1.27 | 2.38 |
| USE1: Use of this restaurant review website decreased the time needed for restaurant search. | 1 | 7 | 5.47 | 1.26 | -0.99 | 0.99 |
| USE2: Use of this restaurant review website increased my chance to find a better quality restaurant. | 2 | 7 | 5.78 | 1.08 | -0.99 | 0.88 |
| USE3: I found this restaurant review website useful. | 2 | 7 | 6.05 | 0.89 | -1.01 | 1.34 |
| USE4: This restaurant review website helped me to shape my attitude toward the restaurant. | 1 | 7 | 5.95 | 0.91 | -1.09 | 2.98 |
| USE5: This restaurant review website helped me to make a decision on a restaurant choice. | 1 | 7 | 5.93 | 0.93 | -1.00 | 1.85 |
| VIS1: The visual of this restaurant review website was attractive. | 2 | 7 | 5.57 | 1.26 | -0.94 | 0.47 |
| VIS2: This restaurant review website was esthetically appealing. | 1 | 7 | 5.59 | 1.28 | -1.07 | 0.93 |
| VIS3: This restaurant review website was visually appealing. | 1 | 7 | 5.59 | 1.27 | -1.00 | 0.67 |
| VIS4: This restaurant review website displayed visually appealing design. | 1 | 7 | 5.56 | 1.28 | -0.95 | 0.43 |
| VIS5: This restaurant review website was engaging and captured my attention. | 2 | 7 | 5.67 | 1.21 | -0.97 | 0.56 |
| SOC1: Seeing other consumer's posted photos in this restaurant review website was part of how I see others' dining experiences. | 1 | 7 | 5.73 | 1.15 | -1.20 | 1.96 |
| SOC2: The photo-sharing feature of this restaurant review website enabled me to form a sense of sociability in the website. | 1 | 7 | 5.49 | 1.20 | -0.79 | 0.50 |
| SOC3: There was a sense of human sensitivity in the restaurant review website. | 1 | 7 | 5.45 | 1.09 | -0.81 | 1.10 |
| SOC4: There was a sense of human contact in this restaurant review website. | 1 | 7 | 5.49 | 1.16 | -0.83 | 0.99 |
| SOC5: There was a sense of personal touch in this website. | 1 | 7 | 5.50 | 1.18 | -0.84 | 0.53 |

**Table 12. Continued.**
Descriptive Statistics

| Scale Items | Min. | Max. | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| INF1: This restaurant review website was a good source of restaurant information. | 3 | 7 | 6.05 | 0.84 | -0.95 | 1.32 |
| INF2: This restaurant review website provided relevant restaurant information. | 2 | 7 | 6.15 | 0.85 | -1.16 | 2.04 |
| INF3: This restaurant review website is informative about restaurant recommendations. | 2 | 7 | 6.03 | 0.87 | -1.04 | 1.66 |
| INF4: This restaurant review website provided in-depth restaurant reviews. | 1 | 7 | 5.73 | 1.11 | -1.01 | 1.25 |
| INF5: This restaurant review website helped me explore restaurant reviews. | 3 | 7 | 6.09 | 0.84 | -0.95 | 1.13 |
| CRE1: This restaurant review website was credible. | 2 | 7 | 5.82 | 0.94 | -0.72 | 0.25 |
| CRE2: This restaurant review website was reliable. | 3 | 7 | 5.73 | 0.99 | -0.54 | -0.42 |
| CRE3: This restaurant review website was trustworthy. | 1 | 7 | 5.73 | 1.02 | -0.61 | 0.27 |
| CRE4: This restaurant review website was believable. | 3 | 7 | 6.04 | 0.87 | -0.76 | 0.22 |
| CRE5: This restaurant review website was realistic. | 3 | 7 | 6.06 | 0.87 | -0.87 | 0.60 |
| SCA1: The content of this restaurant review website was well-organized. | 1 | 7 | 5.83 | 0.93 | -1.36 | 3.22 |
| SCA2: The organization of the content in this restaurant review website made it easy to find what I need. | 2 | 7 | 5.91 | 0.91 | -1.34 | 2.92 |
| SCA3: This website had collaborative filtering feature (e.g. star-rating and ranking scales), which helped me accomplish my restaurant search task. | 3 | 7 | 6.06 | 0.96 | -0.88 | 0.19 |
| SCA4: The star-rating scale presented in this restaurant review website made it easier for me to determine the quality of a restaurant. | 2 | 7 | 6.05 | 0.89 | -0.95 | 1.49 |
| SCA5: The star-rating scale suggested in this restaurant review website indicated unanimity of consumers' opinions about the quality of restaurants. | 1 | 7 | 5.44 | 1.21 | -0.91 | 1.08 |
| SCA6: The ranking scale presented in this restaurant review website made it easier for me to determine the popularity of a restaurant. | 2 | 7 | 5.96 | 0.99 | -1.15 | 1.70 |
| SCA7: Based on the ranking scale, I can tell if the restaurant is liked by a lot people. | 1 | 7 | 5.99 | 0.92 | -1.72 | 5.73 |
| COG1: I like this restaurant review website. | 3 | 7 | 5.94 | 0.91 | -0.76 | 0.41 |
| COG2: This restaurant review website was good. | 3 | 7 | 6.03 | 0.84 | -0.71 | 0.28 |

**Table 12. Continued.**
Descriptive Statistics

| Scale Items | Min. | Max. | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| COG2: This restaurant review website was good. | 3 | 7 | 6.03 | 0.84 | -0.71 | 0.28 |
| COG3: My attitude toward this restaurant review website was positive. | 1 | 7 | 6.01 | 0.92 | -0.95 | 1.44 |
| COG4: I find surfing this restaurant review website was a good way to spend time. | 1 | 7 | 5.46 | 1.22 | -0.65 | 0.17 |
| AFF1: I found this restaurant review website entertaining. | 1 | 7 | 5.25 | 1.26 | -0.51 | -0.14 |
| AFF2: I enjoyed surfing this restaurant review website. | 1 | 7 | 5.49 | 1.18 | -0.73 | 0.40 |
| AFF3: While navigating on this restaurant review website, I felt happy. | 1 | 7 | 5.22 | 1.27 | -0.41 | -0.18 |
| AFF4: This restaurant review website made me feel stimulated. | 1 | 7 | 5.16 | 1.36 | -0.56 | -0.32 |
| AFF5: I was satisfied with this restaurant review website. | 1 | 7 | 5.88 | 1.03 | -1.24 | 2.18 |
| ADO1: This restaurant review website made it easier for me to make a decision (e.g. visit or not visit a restaurant). | 2 | 7 | 5.89 | 0.91 | -0.91 | 1.25 |
| ADO2: This restaurant review website has enhanced my effectiveness in making a visit decision. | 2 | 7 | 5.83 | 0.95 | -0.93 | 1.32 |
| ADO3: It is very likely that I will adopt the consumer's recommendations from this restaurant review website. | 2 | 7 | 5.66 | 0.99 | -0.65 | 0.43 |
| ADO4: There is a great chance that I will choose a restaurant recommended by this restaurant review website. | 2 | 7 | 5.81 | 0.98 | -0.79 | 0.56 |
| REV1: If I needed to find restaurant reviews in the future, I would probably revisit this restaurant review website. | 1 | 7 | 5.53 | 1.21 | -0.87 | 0.40 |
| REV2: If I needed to find restaurant reviews in the future, this restaurant review website will be my first choice. | 1 | 7 | 4.97 | 1.41 | -0.56 | -0.35 |
| REV3: If I needed to find restaurant reviews in the future, I would probably try this website. | 2 | 7 | 5.58 | 1.22 | -0.89 | 0.48 |
| REV4: I intend to continue to visit this restaurant review website in the future. | 1 | 7 | 5.22 | 1.38 | -0.73 | 0.19 |
| REV5: I plan to bookmark this restaurant review website for future reference. | 1 | 7 | 4.80 | 1.57 | -0.49 | -0.49 |

**Exploratory Factor Analysis**

EFA is a technique used to identify a smaller number of factors or latent constructs from a large number of observed variables (or items) (Worthington & Whittaker, 2006). Previous researchers have used EFA to assess the construct validity during the initial development of an instrument, especially newly developed scales. The application of EFA can examine the underlying dimensionality of the item and can group a large item set into a smaller subset that measures different factors (Worthington & Whittaker, 2006). The process of EFA has three basic steps: (1) estimation of the factor matrix to compute factor loadings for each variable, (2) factor rotation to achieve simpler and theoretically more meaningful factor solutions, and (3) factor interpretation and respecification to evaluate the rotated factor loadings in order to determine which factors should be grouped together or deleted from the analysis (Hair et al., 2010).

For this study, the EFA method with maximum likelihood extraction and varimax rotation was applied to examine the dimensions of the constructs that underlie the set of items to measure restaurant review website attributes. The results of communality analysis found one item having a loading lower than 0.30 (SCA5: "The star-rating scale suggested in this restaurant review website indicated unanimity of consumers' opinions about the quality of restaurants," $a = 0.17$). A factor loading value less than 0.30 denotes that only approximately 10% of the variance is accounted for by the factor; therefore there is the possibility to drop the item from further analysis (Hair et al., 2010). Measurements for all factors showed unidimensionality and adequate internal reliability ($a > 0.75$). For the next step, the researcher analyzed whether the 37 items loaded on the seven attributes of restaurant review websites as anticipated. Using maximum likelihood extraction and varimax rotation, the results generated seven restaurant review website attributes as predicted (see Table 13).

**Table 13**
Results of Exploratory Factor Analysis (EFA)

| Factors/items | Communality | | Variance % | Cumulative % | Reliability *a* |
|---|---|---|---|---|---|
| | Initial | Extraction | | | |
| **Factor 1: Simplicity** | | | 44.30 | 44.30 | 0.93 |
| SIM1: In this restaurant review website, everything was easy to understand. | 0.74 | 0.73 | | | |
| SIM2: This restaurant review website was simple to use, even when using it for the first time. | 0.75 | 0.76 | | | |
| SIM3: It was easy to find the information I needed from this restaurant review website. | 0.76 | 0.79 | | | |
| SIM4: The structure and contents of this restaurant review website were easy to understand. | 0.76 | 0.77 | | | |
| SIM5: It was easy to move within this restaurant review website. | 0.67 | 0.66 | | | |
| **Factor 2: Usefulness** | | | 6.19 | 50.50 | 0.87 |
| USE1: Use of this restaurant review website decreased the time needed for restaurant search. | 0.55 | 0.47 | | | |
| USE2: Use of this restaurant review website increased my chance to find a better quality restaurant. | 0.62 | 0.55 | | | |
| USE3: I found this restaurant review website useful. | 0.72 | 0.70 | | | |
| USE4: This restaurant review website helped me to shape my attitude toward the restaurant. | 0.61 | 0.59 | | | |
| USE5: This restaurant review website helped me to make a decision on a restaurant choice. | 0.70 | 0.73 | | | |
| **Factor 3: Visual appeal** | | | 4.59 | 55.08 | 0.96 |
| VIS1: The visual of this restaurant review website was attractive. | 0.88 | 0.90 | | | |
| VIS2: This restaurant review website was esthetically appealing. | 0.87 | 0.88 | | | |
| VIS3: This restaurant review website was visually appealing. | 0.89 | 0.91 | | | |
| VIS4: This restaurant review website displayed visually appealing design. | 0.87 | 0.87 | | | |
| VIS5: This restaurant review website was engaging and captured my attention. | 0.71 | 0.69 | | | |
| **Factor 4: Social Presence** | | | 3.53 | 58.61 | 0.87 |
| SOC1: Seeing other consumer's posted photos in this restaurant review website was part of how I see others' dining experiences. | 0.47 | 0.38 | | | |
| SOC2: The photo-sharing feature of this restaurant review website enabled me to form a sense of sociability in the website. | 0.60 | 0.58 | | | |
| SOC3: There was a sense of human sensitivity in the restaurant review website. | 0.68 | 0.70 | | | |
| SOC4: There was a sense of human contact in this restaurant review website. | 0.71 | 0.79 | | | |
| SOC5: There was a sense of personal touch in this website. | 0.65 | 0.67 | | | |
| **Factor 5: Informativeness** | | | 3.31 | 61.92 | 0.88 |
| INF1: This restaurant review website was a good source of restaurant information. | 0.69 | 0.68 | | | |
| INF2: This restaurant review website provided relevant restaurant information. | 0.67 | 0.68 | | | |
| INF3: This restaurant review website is informative about restaurant recommendations. | 0.71 | 0.69 | | | |
| INF4: This restaurant review website provided in-depth restaurant reviews. | 0.59 | 0.48 | | | |
| INF5: This restaurant review website helped me explore restaurant reviews. | 0.69 | 0.66 | | | |

**Table 13. Continued.**
Results of Exploratory Factor Analysis (EFA)

| Factors/items | Communality | | Variance % | Cumulative % | Reliability *a* |
|---|---|---|---|---|---|
| | Initial | Extraction | | | |
| | | | 2.94 | 64.86 | 0.92 |
| **Factor 6: Credibility** | | | | | |
| CRE1: This restaurant review website was credible. | 0.77 | 0.75 | | | |
| CRE2: This restaurant review website was reliable. | 0.81 | 0.85 | | | |
| CRE3: This restaurant review website was trustworthy. | 0.78 | 0.77 | | | |
| CRE4: This restaurant review website was believable. | 0.73 | 0.68 | | | |
| CRE5: This restaurant review website was realistic. | 0.71 | 0.66 | | | |
| **Factor 7: Scalability** | | | 2.53 | 67.39 | 0.80 |
| SCA1: The content of this restaurant review website was well-organized. | 0.65 | 0.51 | | | |
| SCA2: The organization of the content in this restaurant review website made it easy to find what I need. | 0.68 | 0.55 | | | |
| SCA3: This website had collaborative filtering feature (e.g. star-rating and ranking scales), which helped me accomplish my restaurant search task. | 0.45 | 0.39 | | | |
| SCA4: The star-rating scale presented in this restaurant review website made it easier for me to determine the quality of a restaurant. | 0.58 | 0.57 | | | |
| SCA5: The star-rating scale suggested in this restaurant review website indicated unanimity of consumers' opinions about the quality of restaurants. | 0.24 | 0.17 | | | |
| SCA6: The ranking scale presented in this restaurant review website made it easier for me to determine the popularity of a restaurant. | 0.62 | 0.64 | | | |
| SCA7: Based on the ranking scale, I can tell if the restaurant is liked by a lot people. | 0.51 | 0.47 | | | |

Extraction Method: Maximum Likelihood
Rotation Method: Varimax with Kaiser Normalization

However, cross-loadings on items SCA1 ("The content of this restaurant review website was well-organized," $a = 0.40$) and SCA2 ("The organization of the content in this restaurant review website made it easy to find what I need," $a = 0.38$) were flagged, as they may cause measurement error and a convergent validity problem (see Table 14). Therefore, there was the possibility to drop these two items from the CFA to improve convergent validity.

## Measurement Model Evaluation

This section explains the results of the hypotheses testing using the two-step approach proposed by Anderson and Gerbing (1988). The first step of this approach is to employ CFA to determine (1) how many factors are present in an instrument, (2) which items are related to each factor, and (3) whether the factors are correlated or uncorrelated (Worthington & Whittaker, 2006). The second step is to apply SEM to examine the causal relationships among the latent variables. Both the CFA and SEM methods were tested using the AMOS 24.0 program with a maximum likelihood method. Additional analyses including the validity test and fit statistics are also presented in this section.

### Confirmatory Factor Analysis

CFA is the next step after EFA to test how well the measured variables represent the number of constructs. In this study, CFA was used to identify whether the measurement variables of restaurant review website attributes reflected the hypothesized latent variables (simplicity, usefulness, visual appeal, social presence, informativeness, credibility, scalability, cognitive attitude, affective attitude, recommendation adoption, and intention to revisit the restaurant review website). The measurement model was evaluated by calculating the chi-square ($\chi^2$), the ratio of

**Table 14**
Rotated Components Matrix of the Factorial Analysis

| Denomination of factors | Components | Factor | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Simplicity | SIM1 | 0.76 | | | | | | |
| | SIM2 | 0.82 | | | | | | |
| | SIM3 | 0.82 | | | | | | |
| | SIM4 | 0.76 | | | | | | |
| | SIM5 | 0.72 | | | | | | |
| Usefulness | USE1 | | 0.60 | | | | | |
| | USE2 | | 0.70 | | | | | |
| | USE3 | | 0.73 | | | | | |
| | USE4 | | 0.60 | | | | | |
| | USE5 | | 0.72 | | | | | |
| Visual Appeal | VIS1 | | | 0.93 | | | | |
| | VIS2 | | | 0.92 | | | | |
| | VIS3 | | | 0.93 | | | | |
| | VIS4 | | | 0.90 | | | | |
| | VIS5 | | | 0.72 | | | | |
| Sociability | SOC1 | | | | 0.42 | | | |
| | SOC2 | | | | 0.72 | | | |
| | SOC3 | | | | 0.84 | | | |
| | SOC4 | | | | 0.92 | | | |
| | SOC5 | | | | 0.77 | | | |
| Informativeness | INF1 | | | | | 0.61 | | |
| | INF2 | | | | | 0.75 | | |
| | INF3 | | | | | 0.72 | | |
| | INF4 | | | | | 0.30 | | |
| | INF5 | | | | | 0.48 | | |
| Credibility | CRE1 | | | | | | 0.81 | |
| | CRE2 | | | | | | 0.89 | |
| | CRE3 | | | | | | 0.87 | |
| | CRE4 | | | | | | 0.64 | |
| | CRE5 | | | | | | 0.60 | |
| Scalability | SCA1 | 0.40 | | | | | | 0.30 |
| | SCA2 | 0.38 | | | | | | 0.31 |
| | SCA3 | | | | | | | 0.51 |
| | SCA4 | | | | | | | 0.70 |
| | SCA5 | | | | | | | 0.39 |
| | SCA6 | | | | | | | 0.73 |
| | SCA7 | | | | | | | 0.49 |

Extraction Method: Maximum Likelihood
Rotation Method: Oblimin with Kaiser Normalization

chi-square to degrees of freedom ($\chi^2$/DF), the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the Tucker-Lewis index (TLI). Hair et al. (2010) suggested that using three to four fit indices provides adequate evidence of model fit. As shown in Table 15, previous researchers and statisticians suggested the guidelines for index cut-off values based on model characteristics, sample sizes, and number of observed variables (Byrne, 2010; Hair et al., 2010). For the current study, before deleting the lower loading measurement item, the goodness-of-fit showed that the initial model had poor fit: $\chi^2 = 4024.43$, $\chi^2/DF = 2.925$, $p < 0.001$, CFI = 0.897, TLI = 0.889, and RMSEA = 0.060.

**Table 15**
Characteristics of Fit Indices Demonstrating Goodness-of-Fit

| **Measure** | ***n* > 250, *m* < 12** |
|---|---|
| $\chi^2$ | Insignificant *p*-values even with good fit |
| $\chi^2/df$ | < 3 good fit; < 5 sometimes permissible |
| CFI | > .95 good fit; > .92 acceptable; > .90 traditional |
| GFI | > .95 good fit |
| NFI | > .95 good fit; > .92 acceptable; > .90 traditional |
| PCLOSE | > .05 |
| RMSEA | < .05 good fit; .05 - .10 moderate; > .10 bad |
| TLI | > .95 good fit; > .92 acceptable; > .90 traditional |

*Note*. *m* = number of observed variables, *n* = number of observation

To improve the measurement model, the researcher first considered eliminating low factor loading items. In CFA analysis, a factor loading value less than 0.40 is recommended to be eliminated from further data analysis (Hair et al., 2010). Therefore, item SCA5 (“The star-rating

scale suggested in this restaurant review website indicated unanimity of consumers' opinions about the quality of restaurants," $a = 0.37$) was eliminated to improve the model fit.

In the second step, the large modification indices (MI) were flagged to allow covariance between error terms to help improve model fit. Jöreskog and Sörbom (1989) suggested that large MI can negatively influence model fit. Therefore, modifications for seven error terms were made by allowing covariance based on conceptual and theoretical considerations: CRE4_e29 and CRE_e30 (MI = 84.424); SCA1_e31 and SCA2_e32 (MI = 137.785); SCA6_e36 and SCA7_e37 (MI = 63.015); AFF1_e42 and AFF5_e46 (MI = 31.650); AFF3_e44 and AFF44_e45 (MI = 41.281); ADO3_e49 and ADO4_e50 (MI = 26.935); and REV4_e54 and REV5_e55 (MI = 64.057).

In the third step, the correlation matrix of the variables was analyzed to identify the presence of highly correlated variables. As shown in Table 16, high correlations were flagged on the pair of usefulness and adoption of recommendation (r = 0.864). However, because the scenario in this study is a simulation of a restaurant review website, it is possible that the perception of the consumers could be slightly different from that when exposed to a real restaurant review website. Based on this justification, no measures were taken to rectify the issue.

The last step was to investigate the standardized residual covariance values greater than 2.5, which may indicate a problem in predicting the observed covariance (Hair et al., 2010). It was found that the largest residual was 3.501 for the covariance between SOC1 and REV1. The variable SOC1 has a loading of 0.55, while the variable REV1 has a loading of 0.90; therefore the variable that has the lower loading was eliminated (SOC1: "Seeing other consumer's posted photos in this restaurant review website was part of how I see others' dining experiences," $a = 0.55$). The other two problematic residuals were the covariance between COG4 and ADO3 (3.109) and the covariance

**Table 16**
Correlation Matrix

| | SIM | USE | VIS | SOC | INF | CRE | SCA | COG | AFF | ADO | REV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Simplicity (SIM) | 1 | | | | | | | | | | |
| Usefulness (USE) | .735 | 1 | | | | | | | | | |
| Visual appeal (VIS) | .490 | .556 | 1 | | | | | | | | |
| Social presence (SOC) | .440 | .576 | .502 | 1 | | | | | | | |
| Informativeness (INF) | .719 | .825 | .547 | .618 | 1 | | | | | | |
| Credibility (CRE) | .606 | .686 | .520 | .561 | .761 | 1 | | | | | |
| Scalability (SCA) | .754 | .778 | .599 | .576 | .810 | .640 | 1 | | | | |
| Cognitive attitude (COG) | .633 | .744 | .708 | .613 | .799 | .681 | .730 | 1 | | | |
| Affective attitude (AFF) | .576 | .715 | .734 | .595 | .731 | .720 | .694 | .814 | 1 | | |
| Recommendation adoption (ADO) | .651 | **.864** | .579 | .602 | .839 | .755 | .817 | .795 | .767 | 1 | |
| Revisit intention (REV) | .539 | .687 | .655 | .556 | .660 | .638 | .685 | .768 | .760 | .772 | 1 |

between AFF5 and REV3 (3.026). After considering the context of the study, the variables that were removed were AFF5 ("I was satisfied with this restaurant review website," $a$ = 0.86) and COG4 ("I find surfing this restaurant review website was a good way to spend time," $a$ = 0.73). After removing the low loading item and large modification indices, the model was improved and had acceptable fit: $\chi^2$ = 2686.507, $\chi^2$/DF = 2.324, $p$ < 0.001, CFI = 0.937, TLI = 0.930, and RMSEA = 0.050. The results of the factor loading, the composite reliability, and the average variance extracted for the measurement scale is shown in Table 17.

**Reliability and Validity**

Reliability is the degree to which a set of scale items are consistent in terms of what they intended to measure, while validity is the degree to which a set of scale items accurately represents what is supposed to be measured (Hair et al., 2010). One of the most important goals of research is to reduce measurement error in a study. The tests of reliability and validity are efficient tools that can help researchers achieve their goals. Upon confirming the overall fit of the final measurement model, the study further tested the composite reliability of each construct. As shown in Table 18, the results revealed the composite reliability to be acceptable, with values ranging from 0.81 to 0.97, above the cut-off value of 0.70 (Hair et al., 2010).

Construct validity in this study was evaluated by calculating the average variance extracted (AVE) to examine whether convergent validity had been achieved. Convergent validity is the extent to which the measures of the constructs were correlated with other measures that theoretically should be related (Byrne, 2010). The value of AVE should be 0.5 or greater to indicate adequate convergent validity (Hair et al., 2010).

**Table 17**
Results of Confirmatory Factor Analysis (CFA)

| Factors/items | Standardized Estimate | CR[a] | AVE[b] |
|---|---|---|---|
| **Factor 1: Simplicity** | | 0.94 | 0.75 |
| SIM1: In this restaurant review website everything was easy to understand. | 0.87 | | |
| SIM2: This restaurant review website was simple to use, even when using it for the first time. | 0.87 | | |
| SIM3: It was easy to find the information I needed from this restaurant review website. | 0.89 | | |
| SIM4: The structure and contents of this restaurant review website were easy to understand. | 0.89 | | |
| SIM5: It was easy to move within this restaurant review website. | 0.81 | | |
| **Factor 2: Usefulness** | | 0.90 | 0.64 |
| USE1: Use of this restaurant review website decreased the time needed for restaurant search. | 0.71 | | |
| USE2: Use of this restaurant review website increased my chance to find a better quality restaurant. | 0.80 | | |
| USE3: I found this restaurant review website useful. | 0.89 | | |
| USE4: This restaurant review website helped me to shape my attitude toward the restaurant. | 0.75 | | |
| USE5: This restaurant review website helped me to make a decision on a restaurant choice. | 0.83 | | |
| **Factor 3: Visual appeal** | | 0.97 | 0.85 |
| VIS1: The visual of this restaurant review website was attractive. | 0.95 | | |
| VIS2: This restaurant review website was esthetically appealing. | 0.94 | | |
| VIS3: This restaurant review website was visually appealing. | 0.95 | | |
| VIS4: This restaurant review website displayed visually appealing design. | 0.94 | | |
| VIS5: This restaurant review website was engaging and captured my attention. | 0.82 | | |
| **Factor 4: Social Presence** | | 0.89 | 0.60 |
| SOC1: Seeing other consumer's posted photos in this restaurant review website was part of how I see others' dining experiences.* | 0.54 | | |
| SOC2: The photo-sharing feature of this restaurant review website enabled me to form a sense of sociability in the website. | 0.76 | | |
| SOC3: There was a sense of human sensitivity in the restaurant review website. | 0.85 | | |
| SOC4: There was a sense of human contact in this restaurant review website. | 0.87 | | |
| SOC5: There was a sense of personal touch in this website. | 0.82 | | |
| **Factor 5: Informativeness** | | 0.90 | 0.65 |
| INF1: This restaurant review website was a good source of restaurant information. | 0.85 | | |
| INF2: This restaurant review website provided relevant restaurant information. | 0.78 | | |
| INF3: This restaurant review website is informative about restaurant recommendations. | 0.84 | | |
| INF4: This restaurant review website provided in-depth restaurant reviews. | 0.74 | | |
| INF5: This restaurant review website helped me explore restaurant reviews. | 0.82 | | |

[a] Composite reliability
[b] Average variance extracted
*Note*: *These items were later removed from analysis.

**Table 17. Continued.**
Results of Confirmatory Factor Analysis (CFA)

| Factors/items | Standardized Estimate | CR[a] | AVE[b] |
|---|---|---|---|
| **Factor 6: Credibility** | | 0.94 | 0.75 |
| CRE1: This restaurant review website was credible. | 0.92 | | |
| CRE2: This restaurant review website was reliable. | 0.91 | | |
| CRE3: This restaurant review website was trustworthy. | 0.86 | | |
| CRE4: This restaurant review website was believable. | 0.82 | | |
| CRE5: This restaurant review website was realistic. | 0.81 | | |
| **Factor 7: Scalability** | | 0.81 | 0.41 |
| SCA1: The content of this restaurant review website was well-organized.* | 0.68 | | |
| SCA2: The organization of the content in this restaurant review website made it easy to find what I need.* | 0.72 | | |
| SCA3: This website had collaborative filtering feature (e.g. star-rating and ranking scales), which helped me accomplish my restaurant search task. | 0.58 | | |
| SCA4: The star-rating scale presented in this restaurant review website made it easier for me to determine the quality of a restaurant. | 0.65 | | |
| SCA5: The star-rating scale suggested in this restaurant review website indicated unanimity of consumers' opinions about the quality of restaurants.* | 0.37 | | |
| SCA6: The ranking scale presented in this restaurant review website made it easier for me to determine the popularity of a restaurant. | 0.66 | | |
| SCA7: Based on the ranking scale, I can tell if the restaurant is liked by a lot people.* | 0.54 | | |
| **Factor 8: Cognitive Attitude** | | 0.92 | 0.75 |
| COG1: I like this restaurant review website. | 0.93 | | |
| COG2: This restaurant review website was good. | 0.91 | | |
| COG3: My attitude toward this restaurant review website was positive. | 0.87 | | |
| COG4: I find surfing this restaurant review website was a good way to spend time.* | 0.73 | | |
| **Factor 9: Affective Attitude** | | 0.93 | 0.73 |
| AFF1: I found this restaurant review website entertaining. | 0.87 | | |
| AFF2: I enjoyed surfing this restaurant review website. | 0.90 | | |
| AFF3: While navigating on this restaurant review website, I felt happy. | 0.82 | | |
| AFF4: This restaurant review website made me feel stimulated. | 0.81 | | |
| AFF5: I was satisfied with this restaurant review website.* | 0.86 | | |

[a] Composite reliability
[b] Average variance extracted
*Note*: *These items were later removed from analysis.

**Table 17. Continued.**
Results of Confirmatory Factor Analysis (CFA)

| Factors/items | Standardized Estimate | CR[a] | AVE[b] |
|---|---|---|---|
| **Factor 10: Recommendation Adoption** | | 0.89 | 0.67 |
| ADO1: This restaurant review website made it easier for me to make a decision (e.g. visit or not visit a restaurant). | 0.86 | | |
| ADO2: This restaurant review website has enhanced my effectiveness in making a visit decision. | 0.86 | | |
| ADO3: It is very likely that I will adopt the consumer's recommendations from this restaurant review website. | 0.72 | | |
| ADO4: There is a great chance that I will choose a restaurant recommended by this restaurant review website. | 0.82 | | |
| **Factor 11: Revisit Intention** | | 0.94 | 0.76 |
| REV1: If I needed to find restaurant reviews in the future, I would probably revisit this restaurant review website. | 0.90 | | |
| REV2: If I needed to find restaurant reviews in the future, this restaurant review website will be my first choice. | 0.88 | | |
| REV3: If I needed to find restaurant reviews in the future, I would probably try this website. | 0.89 | | |
| REV4: I intend to continue to visit this restaurant review website in the future. | 0.88 | | |
| REV5: I plan to bookmark this restaurant review website for future reference. | 0.80 | | |

[a] Composite reliability
[b] Average variance extracted
*Note*: *These items were later removed from analysis.

Previous researchers have suggested that AVE can be improved by dropping the item with the largest measurement error variance (Anderson & Gerbing, 1988). Considering the six items in the scalability construct, item SCA7 ("Based on the ranking scale, I can tell if the restaurant is liked by a lot people," $a = 0.54$) was the first to be eliminated due to this item having the lowest factor loading. The researcher then considered the results of the EFA to explore items with cross-loadings and found two items in this construct to have cross-loadings: SCA1 ("The content of this restaurant review website was well-organized," $a = 0.68$) and SCA2 ("The organization of the content in this restaurant review website made it easy to find what I need," $a = 0.72$). After removing all problematic items, the AVE for the scalability construct improved from 0.41 to 0.45, whereas the composite reliability fell from 0.81 to 0.71. However, the AVE of scalability is still below the cut-off value of 0.50, therefore this construct has been dropped from further structural model analysis. The final measurement scale was composed of 10 constructs measured by 45 measurement items. The results of the final measurement model have a good fit: $\chi^2 = 2319.870$, $\chi^2/DF = 2.288$, $p < 0.001$, CFI = 0.943, TLI = 0.937, and RMSEA = 0.052. The results of the factor loading, the composite reliability, and the AVE for the final measurement scale are shown in Table 18.

Discriminant validity refers to measurements that are not supposed to be related and are, in fact, not related (Hair et al., 2010). Discriminant validity in this study was evaluated by comparing the square roots of AVE to the squared correlation coefficients among the constructs. As shown in Table 19, all of the square roots of AVE exceeded the squared correlation coefficients in the measurement model, confirming that the final model had good discriminant validity. However, it must be noted that the construct scalability was inadequate to be included in further structural model analysis.

**Table 18**
Final Measurement Model: Factor Loadings, Composite Reliability, Average Variance Extracted

| Factors/items | Standardized Estimate | CR[a] | AVE[b] |
|---|---|---|---|
| **Factor 1: Simplicity** | | 0.93 | 0.73 |
| SIM1: In this restaurant review website everything was easy to understand. | 0.85 | | |
| SIM2: This restaurant review website was simple to use, even when using it for the first time. | 0.86 | | |
| SIM3: It was easy to find the information I needed from this restaurant review website. | 0.88 | | |
| SIM4: The structure and contents of this restaurant review website were easy to understand. | 0.89 | | |
| SIM5: It was easy to move within this restaurant review website. | 0.80 | | |
| **Factor 2: Usefulness** | | 0.88 | 0.60 |
| USE1: Use of this restaurant review website decreased the time needed for restaurant search. | 0.68 | | |
| USE2: Use of this restaurant review website increased my chance to find a better quality restaurant. | 0.78 | | |
| USE3: I found this restaurant review website useful. | 0.86 | | |
| USE4: This restaurant review website helped me to shape my attitude toward the restaurant. | 0.72 | | |
| USE5: This restaurant review website helped me to make a decision on a restaurant choice. | 0.80 | | |
| **Factor 3: Visual appeal** | | 0.96 | 0.83 |
| VIS1: The visual of this restaurant review website was attractive. | 0.94 | | |
| VIS2: This restaurant review website was esthetically appealing. | 0.93 | | |
| VIS3: This restaurant review website was visually appealing. | 0.94 | | |
| VIS4: This restaurant review website displayed visually appealing design. | 0.93 | | |
| VIS5: This restaurant review website was engaging and captured my attention. | 0.80 | | |
| **Factor 4: Social Presence** | | 0.89 | 0.66 |
| SOC2: The photo-sharing feature of this restaurant review website enabled me to form a sense of sociability in the website. | 0.75 | | |
| SOC3: There was a sense of human sensitivity in the restaurant review website. | 0.84 | | |
| SOC4: There was a sense of human contact in this restaurant review website. | 0.86 | | |
| SOC5: There was a sense of personal touch in this website. | 0.80 | | |
| **Factor 5: Informativeness** | | 0.82 | 0.63 |
| INF1: This restaurant review website was a good source of restaurant information. | 0.83 | | |
| INF2: This restaurant review website provided relevant restaurant information. | 0.77 | | |
| INF3: This restaurant review website is informative about restaurant recommendations. | 0.84 | | |
| INF4: This restaurant review website provided in-depth restaurant reviews. | 0.71 | | |
| INF5: This restaurant review website helped me explore restaurant reviews. | 0.80 | | |

[a] Composite reliability
[b] Average variance extracted

**Table 18. Continued.**
Final Measurement Model: Factor Loadings, Composite Reliability, Average Variance Extracted

| Factors/items | Standardized Estimate | CR[a] | AVE[b] |
|---|---|---|---|
| **Factor 6: Credibility** | | 0.92 | 0.70 |
| CRE1: This restaurant review website was credible. | 0.88 | | |
| CRE2: This restaurant review website was reliable. | 0.89 | | |
| CRE3: This restaurant review website was trustworthy. | 0.83 | | |
| CRE4: This restaurant review website was believable. | 0.78 | | |
| CRE5: This restaurant review website was realistic. | 0.78 | | |
| **Factor 7: Cognitive Attitude** | | 0.92 | 0.80 |
| COG1: I like this restaurant review website. | 0.92 | | |
| COG2: This restaurant review website was good. | 0.90 | | |
| COG3: My attitude toward this restaurant review website was positive. | 0.85 | | |
| **Factor 8: Affective Attitude** | | 0.91 | 0.71 |
| AFF1: I found this restaurant review website entertaining. | 0.85 | | |
| AFF2: I enjoyed surfing this restaurant review website. | 0.90 | | |
| AFF3: While navigating on this restaurant review website, I felt happy. | 0.82 | | |
| AFF4: This restaurant review website made me feel stimulated. | 0.80 | | |
| **Factor 9: Recommendation Adoption** | | 0.87 | 0.63 |
| ADO1: This restaurant review website made it easier for me to make a decision (e.g. visit or not visit a restaurant). | 0.84 | | |
| ADO2: This restaurant review website has enhanced my effectiveness in making a visit decision. | 0.84 | | |
| ADO3: It is very likely that I will adopt the consumer's recommendations from this restaurant review website. | 0.69 | | |
| ADO4: There is a great chance that I will choose a restaurant recommended by this restaurant review website. | 0.79 | | |
| **Factor 10: Revisit Intention** | | 0.93 | 0.72 |
| REV1: If I needed to find restaurant reviews in the future, I would probably revisit this restaurant review website. | 0.86 | | |
| REV2: If I needed to find restaurant reviews in the future, this restaurant review website will be my first choice. | 0.88 | | |
| REV3: If I needed to find restaurant reviews in the future, I would probably try this website. | 0.85 | | |
| REV4: I intend to continue to visit this restaurant review website in the future. | 0.87 | | |
| REV5: I plan to bookmark this restaurant review website for future reference. | 0.78 | | |

[a] Composite reliability
[b] Average variance extracted

**Table 19**
Measurement Model Assessment

| | SIM | USE | VIS | SOC | INF | CRE | SCA | COG | AFF | ADO | REV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Simplicity (SIM) | **0.85** | 0.49 | 0.20 | 0.14 | 0.46 | 0.30 | 0.31 | 0.35 | 0.22 | 0.37 | 0.22 |
| Usefulness (USE) | | **0.77** | 0.26 | 0.27 | 0.61 | 0.39 | 0.41 | 0.49 | 0.39 | 0.68 | 0.41 |
| Visual appeal (VIS) | | | **0.91** | 0.21 | 0.24 | 0.21 | 0.20 | 0.46 | 0.48 | 0.28 | 0.38 |
| Social presence (SOC) | | | | **0.81** | 0.31 | 0.50 | 0.25 | 0.31 | 0.30 | 0.30 | 0.26 |
| Informativeness (INF) | | | | | **0.79** | 0.50 | 0.49 | 0.58 | 0.58 | 0.65 | 0.35 |
| Credibility (CRE) | | | | | | **0.83** | 0.32 | 0.38 | 0.42 | 0.50 | 0.33 |
| Scalability (SCA)* | | | | | | | **0.67** | 0.33 | 0.55 | 0.27 | 0.52 |
| Cognitive attitude (COG) | | | | | | | | **0.89** | 0.56 | 0.51 | 0.48 |
| Affective attitude (AFF) | | | | | | | | | **0.84** | 0.48 | 0.49 |
| Recommendation adoption (ADO) | | | | | | | | | | **0.87** | 0.53 |
| Revisit intention (REV) | | | | | | | | | | | **0.85** |

*Note*. The numbers in diagonal are the square-root of average variance extracted by each variable. The numbers above diagonal are the squared correlation coefficients between the variables.
* This construct did not show adequate convergent validity and has been dropped from further analysis.

**Structural Effects of Restaurant Review Website Attributes**

SEM is a statistical method used to analyze the structural relationships among variables in a model aiming to explain a phenomenon (Byrne, 2010). The goodness-of-fit indicator is an essential element of this method to help explain whether the model is adequate or inadequate for the plausibility of the postulated relations among variables. For the current study, the two-step approach proposed by Anderson and Gerbin (1988) was adopted. The CFA method was first conducted to identify and confirm the number of factors and relationships among the constructs in the scale instrument. The second step was to apply SEM to examine causal relationships among the latent variables in the hypothesized model. The result of the SEM analyses is presented in this section.

The full structural model was evaluated using the AMOS 24.0 program with a maximum likelihood method. The fit indices of the model were $\chi^2 = 2209.016$, $\chi^2/DF = 2.460$, $p < 0.001$, CFI = 0.941, TLI = 0.935, and RMSEA = 0.053, indicating that the proposed model has a good fit with the data. In Table 20, the result of the hypotheses and mediation testings are explained by the standardized regression estimates of variables in the hypothesized relationships and the significance of the path weights.

*H1: Consumer perceptions of restaurant review website attributes significantly influence cognitive attitude toward the restaurant review website.*

Among six sub-hypotheses, all the path weights of H1 were significant except for three paths, including simplicity ($\beta = 0.015$, $p = 0.722$), social presence ($\beta = 0.071$, $p = 0.054$), and credibility ($\beta = 0.068$, $p = 0.139$). The other four paths—including usefulness ($\beta = 0.143$, $p = < 0.05$), visual appeal ($\beta = 0.340$, $p = < 0.001$), and informativeness ($\beta = 0.400$, $p = < 0.001$)

**Table 20**
Results of Hypotheses Testing

| Fit statistics | | Structural path | Std. estimate | C.R. | Test results |
|---|---|---|---|---|---|
| *df* | 898 | H1a. Simplicity → Cognitive Attitude | 0.015 | 0.356 | Not Supported |
| Chi-sq. | 2209.016 | H1b. Usefulness → Cognitive Attitude | 0.143 | 2.384* | Supported |
| $\chi^2/df$ | 2.460 | H1c. Visual Appeal → Cognitive Attitude | 0.340 | 10.088*** | Supported |
| CFI | 0.941 | H1d. Social Presence → Cognitive Attitude | 0.071 | 1.931 | Not Supported |
| TLI | 0.935 | H1e. Informativeness → Cognitive Attitude | 0.400 | 6.000*** | Supported |
| RMSEA | 0.053 | H1f. Credibility → Cognitive Attitude | 0.068 | 1.478 | Not Supported |
| | | H2a. Simplicity → Affective Attitude | – 0.115 | – 2.386* | Supported |
| | | H2b. Usefulness → Affective Attitude | 0.210 | 3.137** | Supported |
| | | H2c. Visual Appeal → Affective Attitude | 0.403 | 10.489*** | Supported |
| | | H2d. Social Presence → Affective Attitude | 0.115 | 2.792** | Supported |
| | | H2e. Informativeness → Affective Attitude | 0.057 | 0.788 | Not Supported |
| | | H2f. Credibility → Affective Attitude | 0.320 | 6.096*** | Supported |
| | | H3. Cognitive Attitude → Recommendation Adoption | 0.525 | 11.102*** | Supported |
| | | H4. Affective Attitude → Recommendation Adoption | 0.367 | 8.095*** | Supported |
| | | H5. Recommendation Adoption → Revisit Intention | 0.944 | 16.956*** | Supported |

* $p$ <0.05
** $p$ <0.01
*** $p$ <0.001

—had significant effects on cognitive attitude. Hence, we conclude that H1 are partially accepted as the three from six sub-hypotheses including H1b, H1c, and H1e were accepted, whereas H1a, H1d, H1f were rejected.

*H2: Consumer perceptions of restaurant review website attributes significantly influence affective attitude toward the restaurant review website.*

H2 also included six sub-hypotheses to evaluate whether each dimension of restaurant review website attributes impacted consumers' affective attitude. The path weights of all sub-hypotheses of H2 were significant except for the path informativeness ($\beta = 0.057$, $p = 0.430$). The other five paths—including simplicity ($\beta = -0.115$, $p = < 0.05$), usefulness ($\beta = 0.210$, $p = < 0.01$), visual appeal ($\beta = 0.403$, $p = < 0.001$), social presence ($\beta = 0.115$, $p = < 0.01$), and credibility ($\beta = 0.320$, $p = < 0.001$)—had significant effects on affective attitude. Hence, we conclude that H2 are partially accepted as the five from six hypotheses including H2a, H2b, H2c, H2d and H2f were accepted.

*H3: Cognitive attitude towards a restaurant review website has a positive influence on consumer recommendation adoption.*

The path weights between cognitive attitude toward a restaurant review website and consumer recommendation adoption are significant ($\beta = 0.525$, $p = < 0.001$). Therefore, H3 was accepted. This indicated that a cognitive attitude influenced consumers to adopt the information gained from the restaurant review website for decision-making purposes.

*H4: Affective attitude towards a restaurant review website has a positive influence on consumer recommendation adoption.*

The path weights between affective attitude toward a restaurant review website and consumer recommendation adoption are significant (β = 0.367, $p$ = < 0.001). Therefore, H4 was accepted. This indicated that an affective attitude also influenced consumers to adopt the information gained from the restaurant review website for decision-making purposes.

*H5: Recommendation adoption has a positive influence on consumer intention to revisit a restaurant review website.*

The last hypothesis entails the path weights between recommendation adoption and consumer intention to revisit a restaurant review website. This path was also significant (β = 0.944, $p$ = < 0.001), hence H5 was accepted. This indicated that recommendation adoption has a positive influence on consumer intention to revisit a restaurant review website.

**Mediation Analysis**

The current study also investigated whether the relationship between restaurant review website attributes and recommendation adoption was mediated by either cognitive or affective attitudes toward a restaurant review website. According to the SEM analysis, the finding that scalability has no impact on cognitive-affective attitudes raises a question as to whether this variable affects consumer behavior through another effect dimension. By applying the bootstrapping method, the result of mediation effects found that scalability has only direct effects on cognitive-affective attitudes and recommendation adoption (see Table 21). It can be concluded that there was no mediation in this path (95%, $\beta$ = –0.010, $p$ = 0.635; CI = –0.079 to 0.047). In addition, based on Baron and Kenny's (1986) causal mediation testing, simplicity has a direct

**Table 21**
Test of Mediation

| | *Baron & Kenny's Approach* | | *Bootstrapping Approach* | |
|---|---|---|---|---|
| Structural path | Direct Effect without mediator *Std. Estimate* | Indirect Effect with 1 mediator *Std. Estimate* | Indirect Effect* with 2 mediators *Std. Estimate* | 95% CI |
| SIM → COG → ADO | –0.093 (<0.05) | –0.101 (<0.05) | –0.033 (0.407) | [–0.112, 0.042] |
| SIM → AFF → ADO | | –0.070 (0.087) | | |
| USE → COG → ADO | 0.427 (<0.001) | 0.388 (<0.001) | 0.153 (<0.01) | [0.046, 0.261] |
| USE → AFF→ ADO | | 0.379 (<0.001) | | |
| VIS → COG → ADO | 0.154 (<0.001) | 0.061 (0.092) | 0.327 (<0.01) | [0.270, 0.385] |
| VIS → AFF →ADO | | 0.069 (0.63) | | |
| SOC → COG → ADO | 0.046 (0.200) | 0.029 (0.397) | 0.080 (<0.05) | [0.019, 0.154] |
| SOC → AFF → ADO | | 0.024 (0.487) | | |
| INF → COG → ADO | 0.171 (<0.05) | 0.047 (<0.487) | 0.235 (<0.01) | [0.106, 0.367] |
| INF → AFF→ ADO | | 0.150 (<0.05) | | |
| CRE → COG → ADO | 0.211 (<0.001) | 0.195 (<0.001) | 0.153 (<0.01) | [0.067, 0.239] |
| CRE → AFF → ADO | | 0.143 (<0.05) | | |
| SCA → COG → ADO | 0.151 (<0.001) | 0.155 (<0.001) | –0.010 (0.635) | [–0.079, 0.047] |
| SCA → AFF → ADO | | 0.152 (<0.001) | | |

effect on cognitive attitude but not on affective attitude, which indicated there was a partial mediation in this path. Nevertheless, the bootstrapping result shows that there was no mediation in this path (95%, $\beta = -0.033$, $p = 0.407$; CI = –0.112 to 0.042).

**Additional Analyses**

*Comparing Two Groups of Population*

When considering the 529 samples in the main survey, the results found that over 244 (46.1%) respondents used restaurant review websites sometimes, while the rest of the sample used restaurant review websites about half the time (12.6%), most of the time (26.3%), and always use restaurant review websites (7.2%). The difference in the population between the two groups of participants that occasionally versus frequently use restaurant review websites raises a question as to whether these two sample groups perceive restaurant review website attributes differently.

The comparison of the two sample groups was conducted by using multigroup analyses method on the AMOS 24.0 program. Estimation for each analysis was performed using maximum likelihood and based on a covariance matrix. The measurement-weights models were firstly analyzed to ensure that the measurement scales are appropriate for both sample groups. Consequently, the structural weights (path loadings) were compared to identify the differences across two sample groups. The goodness-of-fit statistics of the measurement-weights models shows that the measurement scales fit well with data: $\chi^2 = 3739.226$, $\chi^2/DF = 2.042$, $p < 0.001$, CFI = 0.911, TLI = 0.903, and RMSEA = 0.046. With measurement weights constrained as equal, the critical ratio for structural weights was significant ($p < 0.001$) indicating two sample groups are different in perceiving restaurant review website attributes (Table 22).

**Table 22**
Summary of Multigroup Analysis: A Comparison between Two Sample Groups

| Unconstrained Model | $\Delta\chi^2$ | $\Delta$DF | *p* |
|---|---|---|---|
| Measurement intercepts | 98.318 | 80 | 0.080 |
| Measurement weights | 44.435 | 35 | 0.132 |
| Structural weights | 87.055 | 50 | 0.001 |

Subsequent analyses were conducted to investigate the invariance of the model across two sample groups. The results of multigroup analysis suggested that the influence of usefulness on affective attitude are different across the two sample groups (CR = 9.132, $p < 0.01$). The hypotheses testing was also conducted in order to compare whether the two sample groups, those that occasionally versus frequently use restaurant review websites, perceive restaurant review website attributes differently. The results found that both of the two sample groups have the same perceptions toward the restaurant review website, except in the path from usefulness to affective attitude. This path was significant on the sample group that frequently uses restaurant review websites but it was insignificant on the sample group that occasionally uses restaurant review websites. This implies that the context of restaurant review websites is out of the scope of their interests and this sample group does not think that restaurant review websites are useful to them. This result also suggested that the influence of restaurant review website attributes on affective attitude is significantly higher for a group that frequently use restaurant review websites than a group that occasionally use restaurant review websites. In other words, people who use restaurant review websites frequently seems to have more favorable attitude toward a mock restaurant review website. The results of the multigroup analyses and hypotheses testing are shown in Table 23.

**Table 23**
Results of Hypotheses Testing and Multigroup Analysis: A Comparison Between Two Sample Groups (After Deleting Scalability)

| Structural path | Std. Estimate | | C.R. | | Test results | | Chi-Square Difference |
|---|---|---|---|---|---|---|---|
| | *Group 1* | *Group 2* | *Group 1* | *Group 2* | *Group 1* | *Group 2* | ΔDF = 1 |
| H1a. Simplicity → Cognitive Attitude | 0.128 | 0.141 | 2.333* | 2.072* | Supported | Supported | 0.589 |
| H1b. Usefulness → Cognitive Attitude | 0.151 | 0.172 | 1.983* | 1.896* | Supported | Supported | 0.060 |
| H1c. Visual Appeal → Cognitive Attitude | 0.315 | 0.394 | 7.336*** | 7.129*** | Supported | Supported | 0.320 |
| H1d. Social Presence → Cognitive Attitude | 0.066 | 0.041 | 1.237 | 0.879 | Not Supported | Not Supported | 0.181 |
| H1e. Informativeness → Cognitive Attitude | 0.366 | 0.452 | 4.334*** | 4.287*** | Supported | Supported | 0.844 |
| H1f. Credibility → Cognitive Attitude | 0.088 | 0.053 | 1.401 | 0.755 | Not Supported | Not Supported | 0.094 |
| H2a. Simplicity → Affective Attitude | – 0.138 | – 0.067 | – 1.880 | – 1.026 | Not Supported | Not Supported | 0.454 |
| H2b. Usefulness → Affective Attitude | 0.122 | 0.238 | 1.204 | 2.650** | Not Supported | Supported | 9.132** |
| H2c. Visual Appeal → Affective Attitude | 0.371 | 0.415 | 6.416*** | 7.411*** | Supported | Supported | 0.267 |
| H2d. Social Presence → Affective Attitude | 0.208 | 0.203 | 2.869** | 2.747** | Supported | Supported | 1.884 |
| H2e. Informativeness → Affective Attitude | 0.155 | 0.148 | 1.415 | 1.482 | Not Supported | Not Supported | 1.853 |
| H2f. Credibility → Affective Attitude | 0.223 | 0.399 | 4.599** | 5.554*** | Supported | Supported | 2.092 |
| H3. Cognitive Attitude → Recommendation Adoption | 0.724 | 0.457 | 9.559*** | 7.130*** | Supported | Supported | 9.036* |
| H4. Affective Attitude → Recommendation Adoption | 0.207 | 0.417 | 3.187*** | 6.438*** | Supported | Supported | 5.256* |
| H5. Recommendation Adoption → Revisit Intention | 0.867 | 0.986 | 11.425*** | 11.569*** | Supported | Supported | 1.946 |

*Note.* Group 1 includes a sample of participants who occasionally use restaurant review websites.
Group 2 includes a sample of participants who frequently use restaurant review websites.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

## Summary

This chapter describes an overview of the research design and provided the results of hypotheses testing and data analysis. The survey obtained 529 usable responses. The data were analyzed by multivariate statistical methods including descriptive statistics, EFA, CFA, SEM, validity testing, and bootstrapping. The results found that 11 out of 15 hypothesized structural paths were significant. The scalability construct appeared to have an inadequate convergent validity, therefore this construct and two hypotheses addressing scalability have been dropped from the structural model analysis. All other constructs had Cronbach's alpha and composite reliability greater than 0.70. The full structural model was evaluated by the maximum likelihood method. The fit indices of the model were$\chi^2$ = 2209.016, $\chi^2$/DF = 2.460, $p < 0.001$, CFI = 0.941, TLI = 0.935, and RMSEA = 0.053, indicating that the proposed model has a good fit with the data (see Figure 14). When the research population was separated into two groups: a group of participants that occasionally use restaurant review websites and a group the frequently use restaurant review websites. The result of multigroup analysis shows that the critical ratio for structural weights was insignificant ($p < 0.001$) indicating two sample group are different in perceiving restaurant review website attributes.

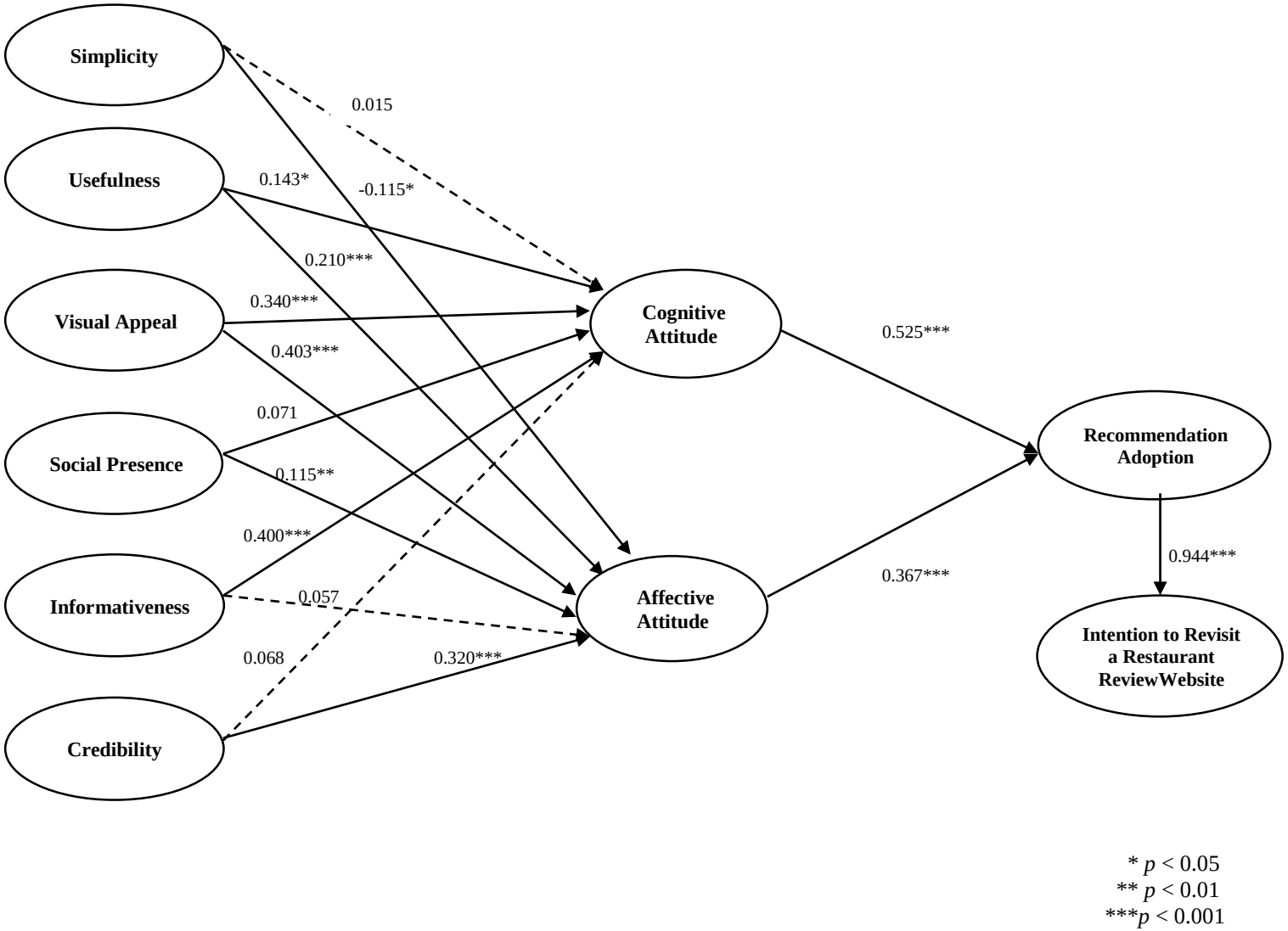


*Figure 14.* Standardized Parameter Estimates of the Structural Model

# CHAPTER V

# DISCUSSION AND IMPLICATIONS

This chapter explains the findings and implications of this study. The study's limitations and suggestions for future research are also discussed.

## Discussion of Findings and Implications

The research model developed in this study aims to understand consumer perceptions and behaviors toward a restaurant review website. The causal model explored the relationships among three dimensions of the restaurant review website attributes (performance, appearance, and content), cognitive attitude, affective attitude, recommendation adoption, and intention to revisit the restaurant review website. Drawing on Stimulus-Organism-Response theory (S-O-R) (Mehrabian & Russell, 1974), this study proposed that consumers perceive a stimulus of the restaurant review website and form their internal states before generating behavioral responses. To test this causal relationship, a mock restaurant review website and online survey were created. The attributes of the mock restaurant review website were drawn from two sources of information: the previous literature and the results of in-depth interviews and a focus group discussion. The previous literature—including the Technology Acceptance Model (TAM) (Davis, 1989) and the Social Presence Theory (Short et al., 1976)—were adopted to develop the simplicity, usefulness, visual appearance, social presence, and informativeness constructs. The results of the in-depth interviews and the focus group discussion delineated the other two constructs—credibility and scalability—and generated different functions in the mock restaurant review website. The measurements for each construct were also adapted from the previous literature in accordance with

the attributes of the mock restaurant review website. Overall, the results of the survey generally indicated that the attributes of restaurant review websites primarily show influences on consumers' cognitive-affective attitudes, recommendation adoption, and intention to revisit the restaurant review website. The hypothesized path of scalability was insignificant in the confirmatory factor analysis and it has been dropped from structural model analysis. Since this was a first-time study for the measurement of this construct, there is a need for future research in order to build a comprehensive understanding of decision-making process driven by scalability attribute of the restaurant review website.

This study also compared two groups of population. One is the group that participants occasionally use restaurant review website, another group are participants who frequently use restaurant review website. The result found that the two sample groups perceived attributes of restaurant review website similarly, except for the path from usefulness to affective attitude. It is possible to imply that samples in this group did not perceive that the restaurant review websites were useful to them.

**Theoretical Implications**

A major theoretical contribution of this study was the application of Mehrabian and Russell's (1974) S-O-R framework in retailing, in which empirical research has not applied this framework in restaurant review website use. Unlike previous research using the S-O-R framework, which employed pleasure, arousal, and dominance as the emotional states, this study employed both cognition (cognitive attitude) and emotion (affective attitude) to represent consumers' internal states. The research model also enhanced the S-O-R framework by emphasizing that the attributes of a restaurant review website stimulated consumers' cognitive and affective attitudes and

influenced consumers' responses, for example, to adopt recommendations from the restaurant review website and to revisit the restaurant review website. Future researchers can adopt and extend this model into other contexts, such as a product review website, to examine whether the attributes of review websites show influence on consumer attitudes, satisfaction, loyalty, or behavior.

Previous studies have primarily focused on the influence of consumer reviews on consumers' purchasing behavior, whereas this study extended the literature by incorporating the attributes of restaurant review websites and their impacts on consumer attitudes and behaviors. Specifically, the findings suggested that users of restaurant review websites were not only influenced by restaurant reviews but also by three dimensions of restaurant review website attributes, including performance, appearance, and content. Furthermore, among the seven sub-dimensions of restaurant review website attributes, three constructs—usefulness, visual appeal, and social presence—play vital roles in influencing two psychological states, cognitive and affective attitudes, leading to consumer behavioral responses. The attributes of simplicity and credibility influence only affective attitude, whereas informativeness influences only cognitive attitude. However, the findings demonstrate that scalability has a negative effect on both cognitive and affective attitudes, contrary to the hypotheses. This may be due to the nature of scalability, which includes three different functions of a restaurant review website—consisting of a collaborative filter and ranking and rating scales—which help consumers by minimizing the massive amount of restaurant reviews and enables them to process information more efficiently. As the scenario of this study was a mock restaurant review website with limited restaurant review information, it is possible that the effect of scalability is more sensitive in the mock restaurant

review website scenario than in the real restaurant review website context, calling for further research.

## Managerial Implications

The findings of this study provide managerial implications for website developers and marketers with respect to how to create a restaurant review website that appeals to and engages internet users to revisit the website. By understanding consumers' perceptions in this study's context, the website developer can design platforms that support consumers in obtaining restaurant information and reviews. A well-designed restaurant review website will benefit both website developers and website users. When the restaurant review website increases in number of visitors, the chances for restaurant owners to promote their restaurants to the public and to generate more customers will increase. Website developers, in turn, can make more profits from advertising and commercials paid for by food-related companies that target online consumers. Further, the use of a restaurant review website as a communication channel can facilitate restaurant owners and consumers in providing feedback to one another. Whenever either a failure or a success occurs during a service interaction, customers can provide direct feedback to the restaurant owners. This would enable the restaurant owners to build a relationship with their customers that may lead to customer loyalty.

The strong influence of the visual appeal and social presence of website attributes on consumer attitudes and behaviors, for instance, suggests that the website developer or marketer cannot ignore the website appearance factor, as it enhances the consumer's adoption of recommendations and intention to revisit the restaurant review website. The visual appeal of a website was found in previous literature to have impacts on consumer attitudes and behaviors in

different dimensions. Phillips and Chaparro (2009), for instance, found that the first impressions of consumers are influenced by the visual appeal of a website. If the website is appealing, consumers are more likely to spend more time on the website (Sillence, Briggs, Harris, & Fishwick, 2006), and if they enjoy the navigation on the appealing website, they are likely to extend their trust (Karvonen, 2000; Lindgaard, Dudek, Sen, Sumegi & Noonan, 2011) or to make a purchase from the website (Lindgaard & Dudek, 2002; Lindgard et al., 2011). For the social presence construct, which refers to the degree to which a website provides a function that allows an individual to experience others as being physically present, the functions of the restaurant review website such as a photo-sharing feature contributed to consumers' cognitive and affective attitudes and, in turn, influenced consumer responses in regard to the adoption of recommendations from the restaurant review website. This finding was consistent with the previous literature, which stated that when consumers perceive social presence on the web interface, they are found to increase their levels of trust in the online vendor (Dash & Saji, 2008; Cyr, Hassanein, Head, & Ivanov, 2007) and have a more favorable attitude toward online shopping (Hassanein & Head, 2007).

In terms of restaurant review website performance, usefulness and simplicity were also found to have an indirect influence on consumers' recommendation adoption. This finding is consistent with previous research stating that the quality of a website is based on the usefulness and the appropriateness of the navigation structure and presentation style (Huizingh, 2000). If the design of a website is too complex, users' attention can be easily distracted (Wang et al., 2014), concern and anxiety can increase (Thatcher & Perrewe, 2002), and trustworthiness toward the website can decrease (Belanger et al., 2002; Bart et al., 2005), resulting in negative impacts on

sales (Bellman et al., 1999). A recommendation from this research would be to keep the website simple and useful in its design, including just the information that is valuable to the consumer.

The content of the restaurant review website was also found to be a critical component. Although the paths of informativeness and credibility were mediated by only one mediator, either cognitive attitude or affective attitude, and the path scalability was not fully mediated by both cognitive and affective attitudes, the results of this study did indicate the importance of these constructs in the restaurant review website. Informativeness refers to the degree to which a consumer evaluates the ability of restaurant review websites in conveying and passing on restaurant reviews and restaurant information. This study found the informativeness construct to have an indirect impact on consumers' recommendation adoption through one's cognitive attitude. The finding is consistent with the previous literature, which stated that the quality of information on the website influences information adoption (Filieri & McLeay, 2014) and purchase intentions (Park et al., 2007) and also represents the website's relevancy, sufficiency, accuracy, currency (Cheung et al., 2008), value, (Filieri & McLeay, 2014), credibility, and usefulness (Cheung et al., 2009). In terms of the credibility construct, this study found a significant relationship between credibility, affective attitude, and consumers' responses, including recommendation adoption and intention to revisit the restaurant review website. As source credibility has become a major concern for social media platforms (Ayeh et al., 2013), the results of this study confirmed that the credibility of the restaurant review website has a strong impact on consumer attitudes and behaviors. Therefore, functions such as reviewer verification and/or an information accuracy evaluation and screening system should be added on to the restaurant review website to enhance its credibility.

The construct of scalability refers to the degree to which a consumer perceives rating and ranking scales and restaurant category filters as a collaborative filtering tool that minimizes massive amounts of restaurant reviews and facilitates his/her ability in making a restaurant visit decision (Koren & Bell, 2015). Although the hypothesized paths from scalability to cognitive and affective attitudes were insignificant, the influential role of this construct was mentioned by many participants in the interviews and the focus group. The scalable function, such as rating and ranking scales, is a function which the participants stated played a pivotal role in their decision-making. The previous literature has stated that when a consumer is faced with a dilemma of purchasing a product that involves the risk of suffering some type of loss, the consumer seeks information from a variety of sources to support their decision-making (Perry & Hamm, 1969), and, especially for service products, consumers tend to seek information from other individuals who have experienced the service either directly or indirectly (Murray, 1991). The majority of users of restaurant review websites need to gather restaurant reviews and information to support their decisions. In light of this, the restaurant review website should include a function that helps users to scale down the extensive amount of data, allowing them to process the information more efficiently.

## Limitations and Future Research

This study is only the first step toward understanding the influence of restaurant review website attributes on consumers' initial states and behaviors. Though the predictive power of the model presented here is deemed sufficient, the percentage of explained variance of 63% for recommendation adoption indicates that there are possibly other potential variables that may be critical in determining consumers' initial states and responses toward the restaurant review website. It is hoped that future studies will explore additional factors to better explain the complex

relationships among variables in this study's pursuit to understand why consumers rely on word-of-mouth in the review website context.

Second, this study did not measure any specific cognitive attitudes (e.g., perceived restaurant review website quality) or affective attitudes (e.g., pleasure, arousal, dominance). Instead, this study addressed broad concepts of cognition and affection. Future research should employ a more specific concept of consumers' cognition and affection to gain a better explanation of consumers' initial states and behavioral responses.

Third, the scenario in this study is the other limitation of this research. Because the scenario was a mock restaurant review website that had limited information, it is possible that the predictive power of the research model may be more accurate when applied to restaurant review websites in the real-world, as they provide more information than the mock website does. Also, the research participants were possibly not as emotionally invested as they would have been if they were researching a restaurant for a dining experience in real life. Future research may apply this study's research model and the measurement scale to test different restaurant review websites in the real-world setting. Also, the research just examined on dining experience, fine dining. Other types of dining, such as sit-down casual may provide different results.

Finally, the current study focused only on consumer evaluations of a restaurant review website. Future research can also explore how the interaction effects of website attributes might vary in different types of review websites (e.g., products, books, or movie review websites). Other innovative characteristics and/or functions of review websites, such as video-sharing, mobile application, or online delivery, can also be explored.

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# APPENDICES

# APPENDIX A

## Human Subject Exemption Approval Form

THE UNIVERSITY OF TENNESSEE KNOXVILLE

July 07, 2017

Cherry Brewer,
UTK - Coll of Education, Hlth, & Human - Retail, Hospitality, and Tourism Mgmt

Re: UTK IRB-17-03754-XP
Study Title: The impact of restaurant review website attributes on consumer internal states and behavioral responses

Dear Cherry Brewer:

The UTK Institutional Review Board (IRB) reviewed your application for the above referenced project. It determined that your application is eligible for expedited review under 45 CFR 46.110(b)(1), categories (6) and (7). The IRB has reviewed these materials and determined that they do comply with proper consideration for the rights and welfare of human subjects and the regulatory requirements for the protection of human subjects.

Therefore, this letter constitutes full approval by the IRB of your application (version 1.4) as submitted, including Interview Consent (Revised July5) v1.0, Focus Group Consent (Revised July 5) v3.0, Pre Test Consent (Revised July5) v1.0, Pilot Test Consent (Revised July5) v1.0, Main Survey Consent (Revised July5) v1.0, Recruitment Letter (Interview) July 5 v1.0, A Recruitment Letter (Focus Group) July 5 v1.0, Recruitment Letter (Pre-Test) Revised v2.1, Recruitment Letter (Pilot-Test) Revised v2.1, Recruitment Letter (Main Survey) Revised v2.1, Interview Questionnaire Revised v1.1, Focus group questions (Revised) v1.1, Pre-test questionnaire Revised v1.1, Pilot test questionnaire revised v1.1, Main Survey Questionnaire v1.1. The listed documents have been dated and stamped IRB approved. Approval of this study will be valid from July 07, 2017 to July 06, 2018.

In accord with 45 CFR 46.116(d), informed consent is waived for signed consent for Pre-Test, Pilot and Main surveys. The requirement to secure a signed consent form is waived under 45 CFR 46.117(c)(2). Willingness of the subject to participate will constitute adequate documentation of consent.

Institutional Review Board | Office of Research & Engagement
1534 White Avenue Knoxville, TN 37996-1529
865-974-7697 865-974-7400 fax irb.utk.edu

BIG ORANGE. BIG IDEAS.
Flagship Campus of the University of Tennessee System

In the event that subjects are to be recruited using solicitation materials, such as brochures, posters, web-based advertisements, etc., these materials must receive prior approval of the IRB. Any revisions in the approved application must also be submitted to and approved by the IRB prior to implementation. In addition, you are responsible for reporting any unanticipated serious adverse events or other problems involving risks to subjects or others in the manner required by the local IRB policy.

Finally, re-approval of your project is required by the IRB in accord with the conditions specified above. You may not continue the research study beyond the time or other limits specified unless you obtain prior written approval of the IRB.

Sincerely,

Colleen P. Gilrane

Colleen P. Gilrane, Ph.D.
Chair

Institutional Review Board | Office of Research & Engagement
1534 White Avenue Knoxville, TN 37996-1529
865-974-7697 865-974-7400 fax irb.utk.edu

BIG ORANGE. BIG IDEAS.
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# APPENDIX B

## Recruitment Letters and Consent Forms

(Interview, Focus Group, Pre-test, Pilot Test, Main Survey)

(Interview)

# Recruitment Letter

Dear Sir or Madam:

My name is Prawannarat Brewer and I am a Ph.D. candidate and teaching assistant from the Department of Retail, Hospitality, and Tourism Management at the University of Tennessee, Knoxville. I am writing to invite you to participate in an interview for a research project about consumer responses to a restaurant review website.

The interview will be held on Friday 14th July 2017, from 10:00-10:40 a.m. on Skype conference. During this interview, you will be asked to share your experiences and thoughts about restaurant review websites you have previously used. A researcher will make an audio call to you in order to ensure you are secured in a casual environment with complete confidentiality. As a participant in this research study, your views and experiences are extremely valuable in helping academic researchers better understand how attributes of a restaurant review website influence consumer behavioral responses.

To compensate you for your time, I will send a $20 online Starbucks Gift Card to your email after the completion of this discussion. If you decide to participate in this study, please read the attached consent form, sign, scan, and send it back to me via this email. Also, please let me know your Skype account information.

Please note that participation in this research is completely voluntary, and you may refuse to participate from the study without penalty or loss of benefits to which you may otherwise be entitled. If you would like to get additional information about this study, please email me at psuntith@vols.utk.edu.

Thank you very much.

*Prawannarat Brewer*

***Prawannarat Brewer***
Ph.D. Candidate & Graduate Teaching Assistant
Hospitality and Tourism Management
Department of Retail, Hospitality, and Tourism Management
The University of Tennessee, Knoxville

(Interview)

# Consent to Participate in Research

***The impact of restaurant review website attributes on consumer internal states and behavioral responses***

Please read this information carefully before deciding whether or not to participate in this research.

**Introduction and Purpose**
You are being asked to take part in a research study of how restaurant review website attributes impact consumer attitudes, emotions, and behavioral responses. The main goal of this study is to explore why consumers rely on restaurant reviews written by strangers on a restaurant review website and whether restaurant review website attributes influence consumers to engage in using the information that is provided. Additional goals are to provide insight into research related to online word-of-mouth influences and information processing which will help web developers to improve the restaurant review website quality.

**Procedures**
If you agree to participate in this research, you will be interviewed about your experiences in using online restaurant review websites. Questions include your opinion and process of using a restaurant review website that you have frequently visited. You will also be asked how to improve the restaurant review website. The interview will take approximately 30-40 minutes on a Skype audio call. An audio recording of the interview and subsequent dialogue will be made. The purpose of the recording is to accurately record the information you provide, and will be used for transcription purposes only. If you choose not to be recorded, notes will be taken during the interview. Please note that if you do not wish to continue, you can stop the interview at any time.

**Risks/Discomforts**
The possible risk related to this research is the loss of confidentiality as this research will obtain an audio recording that may reveal confidential identifiable information, however, a researcher is taking precautions to minimize this risk. If you feel some discomfort at responding to any of the questions, please feel free to ask to skip the question.

**Benefits to Subjects and/or to Society**
There are no anticipated direct benefits to you resulting from your participation in this research.

**Confidentiality**
Your response to interview questions will be kept confidential. At no time will your actual identity be revealed. To minimize the risks to confidentiality, only the principal researcher and the Faculty Advisor will have access to the study data. When the research is completed, your data will be destroyed within 3 years.

**Compensation**
You will receive a $20 online gift card emailed to you immediately upon the completion of this interview. You will need to provide your name and email address to the principal researcher, however, your contact information will not be shared to anyone.

**Participation and Withdrawal**
Participation in this research is completely voluntary, and you may refuse to participate or withdraw from the study without penalty or loss of benefits to which you may otherwise be entitled. You can also decline to answer any question and are free to stop taking part in the research at any time.

**To Contact the Researcher**
If you have any questions or concerns about this research, please contact: Prawannarat Brewer (psuntith@vols.utk.edu), or my Faculty Advisor, Dr. Ann E. Fairhurst (fairhurs@utk.edu).

If you have any questions, concerns, or complaints about your rights as a research participant in this study, please contact the University of Tennessee' Institutional Review Board at 1534 White Ave., Knoxville, TN 37996-1529. Email: utkirb@utk.edu. Phone: 865-974-7697.

**Agreement**

The nature and purpose of this research have been sufficiently explained and I agree to participate in this study. I understand that I am free to withdraw at any time without incurring any penalty.

Signature: _____Date: _____

Name (print): _____

(Focus Group)

# Recruitment Letter

Dear Sir or Madam:

My name is Prawannarat Brewer and I am a Ph.D. candidate and teaching assistant from the Department of Retail, Hospitality, and Tourism Management at the University of Tennessee, Knoxville. I am writing to invite you to participate in a focus group discussion of research about consumer responses to a restaurant review website.

The focus group will be held on Friday 14th July 2017, from 1-2 p.m. on Skype conference. During this discussion, you will have the opportunity to share your opinion regarding your dream travel destination and your dining preferences. Questions will also include your opinion and process of using a restaurant review website that you have recently visited. A researcher will make an audio call to each of the participants to ensure that participants are secured in a casual environment with complete confidentiality. As a participant in this research study, your views and experiences are extremely valuable in helping academic researchers better understand how attributes of a restaurant review website influence consumer behavioral responses.

To compensate you for your time, I will send a $10 online Starbucks Gift Card to your email after the completion of this discussion. If you decide to participate in this study, please read the attached consent form, sign, scan, and send it back to me via this email. Also, please let me know what name you would prefer to be called and your Skype account information.

Please note that the participation in this research is completely voluntary, and you may refuse to participate in the study without penalty or loss of benefits to which you may otherwise be entitled. If you would like to get additional information about this study, please email me at psuntith@vols.utk.edu.

Thank you very much.

*Prawannarat Brewer*

***Prawannarat Brewer***
Ph.D. Candidate & Graduate Teaching Assistant
Hospitality and Tourism Management
Department of Retail, Hospitality, and Tourism Management
The University of Tennessee, Knoxville

(Focus Group)

# Consent to Participate in Research

***The impact of restaurant review website attributes on consumer internal states and behavioral responses***

Please read this information carefully before deciding whether or not to participate in this research.

**Introduction and Purpose**
You are being asked to take part in a research study of how restaurant review website attributes impact consumer attitudes, emotions, and behavioral responses. The main goal of this study is to explore why consumers rely on restaurant reviews written by strangers on a restaurant review website and whether restaurant review website attributes influence consumers to engage in using the information that is provided. Additional goals are to provide insight into research related to online word-of-mouth influences and information processing which will help web developers to improve the restaurant review website quality.

**Procedures**
If you agree to participate in this research, you will be asked to share your opinion regarding your dream travel destination and your dining preferences to a group discussion. Questions will also include your opinion and process of using a restaurant review website that you have recently visited. The focus group will take approximately 1 hour on a Skype audio call to ensure your privacy and confidentiality. An audio recording of the discussion and subsequent dialogue will be made. The purpose of the recording is to accurately record the information you provide, and will be used for transcription purposes only. If you choose not to be recorded, notes will be taken during the interview. Please note that if you do not wish to continue, you can leave the group discussion at any time.

**Risks/Discomforts**
The possible risk related to this research is the loss of confidentiality as this research will obtain an audio recording that may reveal confidential identifiable information, however, a researcher is taking precautions to minimize this risk. The researcher cannot guarantee that other study participants will maintain your confidentiality outside of this focus group. If you feel some discomfort at responding some questions, please feel free to ask to skip the question.

**Benefits to Subjects and/or to Society**
There are no anticipated direct benefits to you resulting from your participation in this research.

**Confidentiality**
Your response to the focus group discussion will be kept confidential. At no time will your actual identity be revealed. To minimize the risks to confidentiality, only the principal researcher and the Faculty Advisor will have access to the study data. When the research is completed, your data will be destroyed within 3 years.

**Compensation**
You will receive a $10 online gift card emailed to you immediately upon the completion of this focus group discussion. You will need to provide your name and email address to the principal researcher, however, your contact information will not be shared to anyone.

**Participation and Withdrawal**
Participation in this research is completely voluntary, and you may refuse to participate or withdraw from the study without penalty or loss of benefits to which you may otherwise be entitled. You can also decline to answer any question and are free to stop taking part in the research at any time.

**To Contact the Researcher**
If you have any questions or concerns about this research, please contact: Prawannarat Brewer (psuntith@vols.utk.edu), or my Faculty Advisor, Dr. Ann E. Fairhurst (fairhurs@utk.edu).

If you have any questions, concerns, or complaints about your rights as a research participant in this study, please contact the University of Tennessee' Institutional Review Board at 1534 White Ave., Knoxville, TN 37996-1529. Email: utkirb@utk.edu. Phone: 865-974-7697.

**Agreement**

The nature and purpose of this research have been sufficiently explained and I agree to participate in this study. I understand that I am free to withdraw at any time without incurring any penalty.

Signature: _____Date: _____

Name (print): _____

(Pre-Test)

## Recruitment Letter

REQUIREMENTS:
In order to participate in this study, you must be 21 years old of age or older AND live in the United States.

Dear participants,

My name is Prawannarat Brewer and I am a Ph.D. candidate and teaching assistant from the Department of Retail, Hospitality, and Tourism Management at the University of Tennessee, Knoxville. I am writing to invite you to participate in my research study about how consumers evaluate a restaurant review website.

If you decide to participate in this study, please click on the link below of the restaurant review website simulation. When you click on the link, you will be required to read the consent form and the study scenario before proceeding to the mock restaurant review website. After that, you are required to read information on the mock website, and then you will answer an online questionnaire. The total participation time will take approximately 20-25 minutes. If you would like to get additional information about this study, please email me at *psuntith@vols.utk.edu.*

Please click on the link below to be directed to the restaurant review website simulation:
www.thefoodie-review.xyz

I appreciate your time and effort in taking part in this study.

Respectfully,

*Prawannarat Brewer*

*Prawannarat Brewer*
Ph.D. Candidate & Graduate Teaching Assistant
Hospitality and Tourism Management
Department of Retail, Hospitality, and Tourism Management
The University of Tennessee, Knoxville

(Pre-Test)

# Consent to Participate in Research

***The impact of restaurant review website attributes on consumer internal states***

***and behavioral responses***

Please read this information carefully before deciding whether or not to participate in this research.

**Introduction and Purpose**
You are being asked to take part in a research study of how restaurant review website attributes impact consumer attitudes, emotions, and behavioral responses. The main specific goal of this study is to explore why consumers rely on restaurant reviews written by strangers on a restaurant review website and whether restaurant review website attributes influence consumer to engage in using information that is provided. Additional goals are to provide insight into research related to online word-of-mouth influences and information processing which will help web developers to improve the restaurant review website quality.

**Procedures**
If you agree to participate in this research, you will proceed to the link of a restaurant website simulation. Firstly, you will be asked to read a scenario about traveling on a trip before proceeding to a restaurant review website simulation. Secondly, you will navigate and read information on the restaurant review website simulation and then you will click on the link to proceed to an online survey. Lastly, you will answer the questionnaire which include questions about your attitudes, emotions, and behavioral intentions towards a restaurant review website simulation. You will also be asked to provide your demographic information. The survey will take approximately 10-15 minutes. Please note that if you don't wish to continue, you can stop the survey at any time.

**Risks/Discomforts**
No risks are anticipated in this research but some of the research questions may cause discomfort. If you feel some discomfort at responding some questions, please feel free to ask to skip the question.

**Benefits to Subjects and/or to Society**
There are no anticipated direct benefits to you resulting from your participation in this research.

**Confidentiality**
Your response to survey questions will be kept confidential. At no time will your actual identity be revealed. To minimize the risks to confidentiality, only the principal researcher and the Faculty Advisor will have access to the study data. When the research is completed, your data will be destroyed within 3 years.

**Compensation**
You will not be paid for taking part in this study.

**Participation and Withdrawal**
Participation in research is completely voluntary, and you may refuse to participate or withdraw from the study without penalty or loss of benefits to which you may otherwise be entitled. You can also decline to answer any question and are free to stop taking part in the research at any time.

**To Contact the Researcher**
If you have any questions or concerns about this research, please contact: Prawannarat Brewer (psuntith@vols.utk.edu), or my Faculty Advisor, Dr. Ann E. Fairhurst (fairhurs@utk.edu).

If you have any questions, concerns, or complaints about your rights as a research participant in this study, please contact the University of Tennessee' Institutional Review Board at 1534 White Ave., Knoxville, TN 37996-1529. Email: utkirb@utk.edu. Phone: 865-974-7697.

**Agreement**

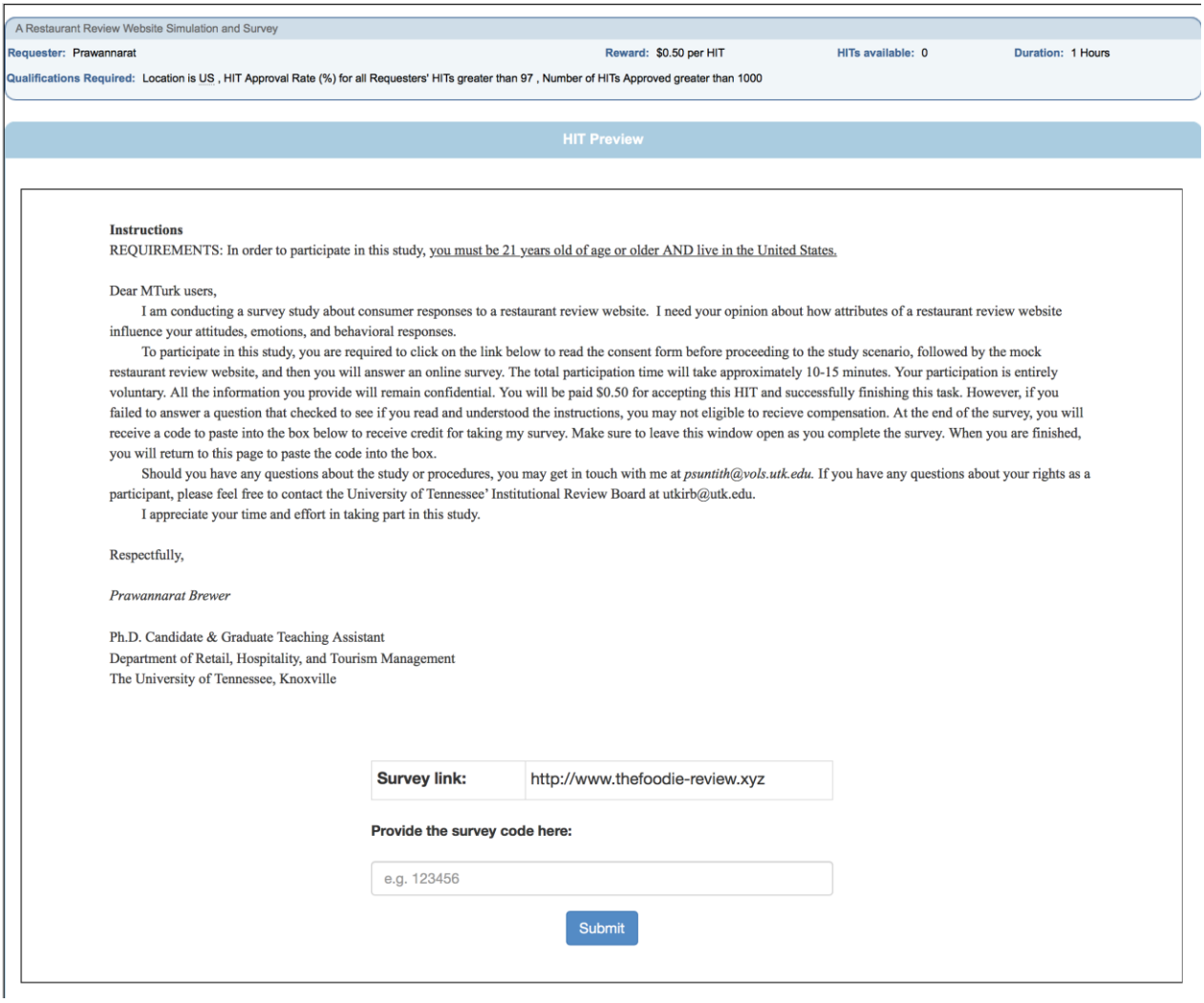
**Click below to indicate that you have read and agree to the consent agreement.**

The nature and purpose of this research have been sufficiently explained and
**I agree to participate in this study.**
I understand that I am free to withdraw at any time without incurring any penalty.

**If you disagree to participate in this study, please close the window.**

(Pilot Test)

# Recruitment Letter



A Restaurant Review Website Simulation and Survey

**Requester:** Prawannarat **Reward:** $0.50 per HIT **HITs available:** 0 **Duration:** 1 Hours

**Qualifications Required:** Location is US , HIT Approval Rate (%) for all Requesters' HITs greater than 97 , Number of HITs Approved greater than 1000

HIT Preview

**Instructions**

REQUIREMENTS: In order to participate in this study, you must be 21 years old of age or older AND live in the United States.

Dear MTurk users,

I am conducting a survey study about consumer responses to a restaurant review website. I need your opinion about how attributes of a restaurant review website influence your attitudes, emotions, and behavioral responses.

To participate in this study, you are required to click on the link below to read the consent form before proceeding to the study scenario, followed by the mock restaurant review website, and then you will answer an online survey. The total participation time will take approximately 10-15 minutes. Your participation is entirely voluntary. All the information you provide will remain confidential. You will be paid $0.50 for accepting this HIT and successfully finishing this task. However, if you failed to answer a question that checked to see if you read and understood the instructions, you may not eligible to recieve compensation. At the end of the survey, you will receive a code to paste into the box below to receive credit for taking my survey. Make sure to leave this window open as you complete the survey. When you are finished, you will return to this page to paste the code into the box.

Should you have any questions about the study or procedures, you may get in touch with me at *psuntith@vols.utk.edu.* If you have any questions about your rights as a participant, please feel free to contact the University of Tennessee' Institutional Review Board at utkirb@utk.edu.

I appreciate your time and effort in taking part in this study.

Respectfully,

*Prawannarat Brewer*

Ph.D. Candidate & Graduate Teaching Assistant
Department of Retail, Hospitality, and Tourism Management
The University of Tennessee, Knoxville

**Survey link:** http://www.thefoodie-review.xyz

**Provide the survey code here:**

e.g. 123456

Submit

(Pilot Test)

# Consent to Participate in Research

***The impact of restaurant review website attributes on consumer internal states and behavioral responses***

Please read this information carefully before deciding whether or not to participate in this research.

**Introduction and Purpose**
You are being asked to take part in a research study of how restaurant review website attributes impact consumer attitudes, emotions, and behavioral responses. The main goal of this study is to explore why consumers rely on restaurant reviews written by strangers on a restaurant review website and whether restaurant review website attributes influence consumers to engage in using the information that is provided. Additional goals are to provide insight into research related to online word-of-mouth influences and information processing which will help web developers to improve the restaurant review website quality.

**Procedures**
If you agree to participate in this research, you will proceed to the link of a restaurant website simulation. First, you will be asked to read a scenario about traveling on a trip before proceeding to a restaurant review website simulation. Second, you will navigate and read information on the restaurant review website simulation and then you will click on the link to proceed to an online survey. Last, you will answer the questionnaire which includes questions about your attitudes, emotions, and behavioral intentions towards the restaurant review website simulation. You will also be asked to provide your demographic information. The total participation time will take approximately 10-15 minutes. Please note that if you do not wish to continue, you can stop the survey at any time.

**Risks/Discomforts**
No risks are anticipated in this research but some of the research questions may cause discomfort. If you feel some discomfort at responding some questions, please feel free to skip the question.

**Benefits to Subjects and/or to Society**
There are no anticipated direct benefits to you resulting from your participation in this research.

**Confidentiality**
Your response to survey questions will be kept confidential. At no time will your Amazon Mechanical Turk Worker ID be linked to survey responses. To minimize the risks to confidentiality, only the principal researcher and the Faculty Advisor will have access to the study data. When the research is completed, your data will be destroyed within 3 years.

**Compensation**
You will receive $0.50 transferred to your Amazon Mechanical Turk account immediately after the completion of this survey.

**Participation and withdrawal**
Participation in this research is completely voluntary, and you may refuse to participate or withdraw from the study without penalty or loss of benefits to which you may otherwise be entitled. You can also decline to answer any question and are free to stop taking part in the research at any time.

**To contact the researcher**
If you have any questions or concerns about this research, please contact: Prawannarat Brewer (psuntith@vols.utk.edu), or my Faculty Advisor, Dr. Ann E. Fairhurst (fairhurs@utk.edu).

If you have any questions, concerns, or complaints about your rights as a research participant in this study, please contact the University of Tennessee' Institutional Review Board at 1534 White Ave., Knoxville, TN 37996-1529. Email: utkirb@utk.edu. Phone: 865-974-7697.

**Agreement**

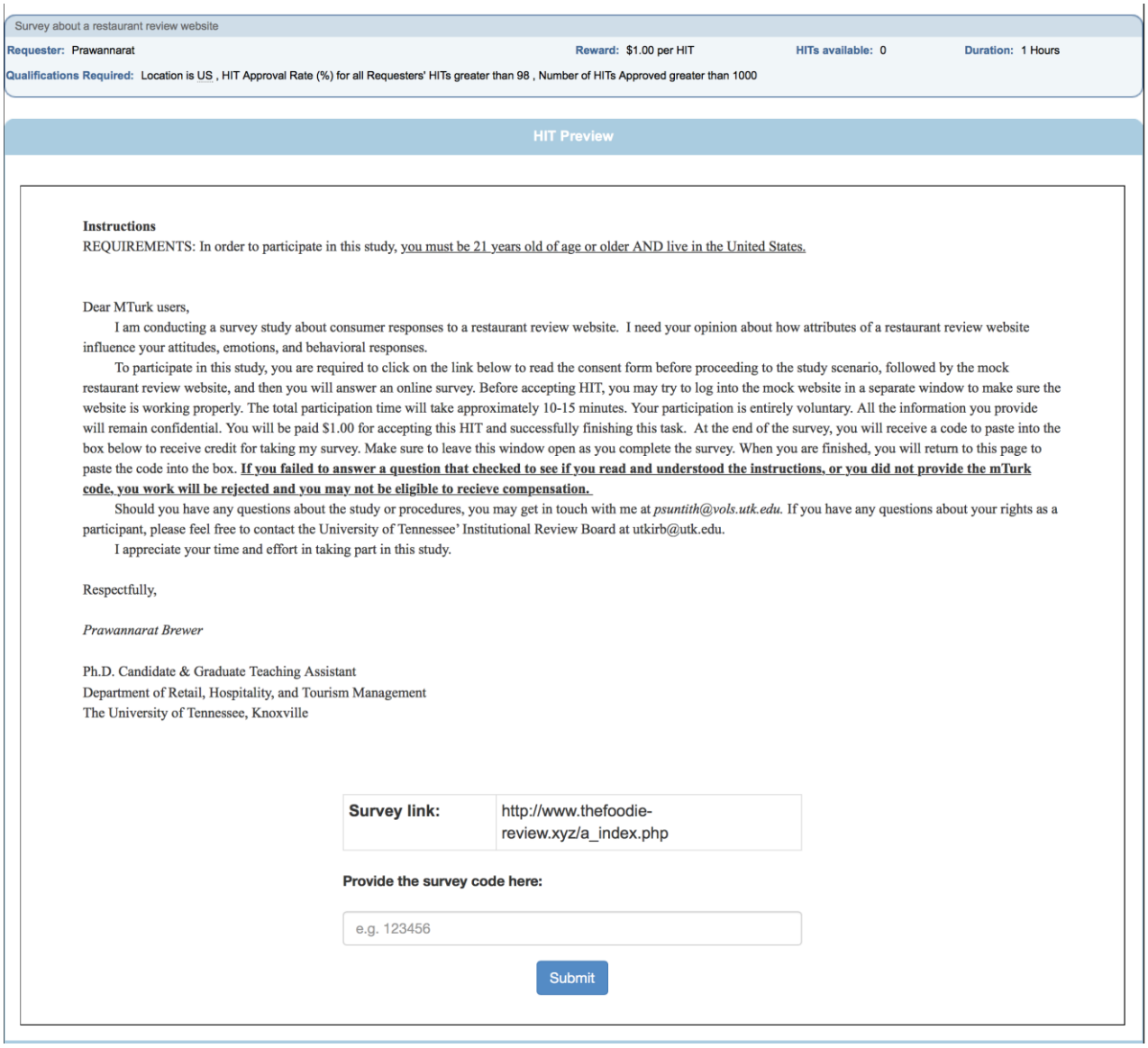
**Click below to indicate that you have read and agree to the consent agreement.**

The nature and purpose of this research have been sufficiently explained and
**I agree to participate in this study.**
I understand that I am free to withdraw at any time without incurring any penalty.

**If you disagree to participate in this study, please close the window.**

(Main Survey)

# Recruitment Letter



Survey about a restaurant review website

**Requester:** Prawannarat **Reward:** $1.00 per HIT **HITs available:** 0 **Duration:** 1 Hours

**Qualifications Required:** Location is US , HIT Approval Rate (%) for all Requesters' HITs greater than 98 , Number of HITs Approved greater than 1000

HIT Preview

**Instructions**

REQUIREMENTS: In order to participate in this study, you must be 21 years old of age or older AND live in the United States.

Dear MTurk users,

I am conducting a survey study about consumer responses to a restaurant review website. I need your opinion about how attributes of a restaurant review website influence your attitudes, emotions, and behavioral responses.

To participate in this study, you are required to click on the link below to read the consent form before proceeding to the study scenario, followed by the mock restaurant review website, and then you will answer an online survey. Before accepting HIT, you may try to log into the mock website in a separate window to make sure the website is working properly. The total participation time will take approximately 10-15 minutes. Your participation is entirely voluntary. All the information you provide will remain confidential. You will be paid $1.00 for accepting this HIT and successfully finishing this task. At the end of the survey, you will receive a code to paste into the box below to receive credit for taking my survey. Make sure to leave this window open as you complete the survey. When you are finished, you will return to this page to paste the code into the box. **If you failed to answer a question that checked to see if you read and understood the instructions, or you did not provide the mTurk code, you work will be rejected and you may not be eligible to recieve compensation.**

Should you have any questions about the study or procedures, you may get in touch with me at *psuntith@vols.utk.edu.* If you have any questions about your rights as a participant, please feel free to contact the University of Tennessee' Institutional Review Board at utkirb@utk.edu.

I appreciate your time and effort in taking part in this study.

Respectfully,

*Prawannarat Brewer*

Ph.D. Candidate & Graduate Teaching Assistant
Department of Retail, Hospitality, and Tourism Management
The University of Tennessee, Knoxville

| **Survey link:** | http://www.thefoodie-review.xyz/a_index.php |
|---|---|

**Provide the survey code here:**

e.g. 123456

Submit

(Main Survey)

# Consent to Participate in Research

***The impact of restaurant review website attributes on consumer internal states***

***and behavioral responses***

Please read this information carefully before deciding whether or not to participate in this research.

**Introduction and Purpose**
You are being asked to take part in a research study of how restaurant review website attributes impact consumer attitudes, emotions, and behavioral responses. The main goal of this study is to explore why consumers rely on restaurant reviews written by strangers on a restaurant review website and whether restaurant review website attributes influence consumers to engage in using the information that is provided. Additional goals are to provide insight into research related to online word-of-mouth influences and information processing which will help web developers to improve the restaurant review website quality.

**Procedures**
If you agree to participate in this research, you will proceed to the link of a restaurant website simulation. First, you will be asked to read a scenario about traveling on a trip before proceeding to a restaurant review website simulation. Second, you will navigate and read information on the restaurant review website simulation and then you will click on the link to proceed to an online survey. Last, you will answer the questionnaire which includes questions about your attitudes, emotions, and behavioral intentions towards the restaurant review website simulation. You will also be asked to provide your demographic information. The total participation time will take approximately 20-25 minutes. Please note that if you do not wish to continue, you can stop the survey at any time.

**Risks/Discomforts**
No risks are anticipated in this research but some of the research questions may cause discomfort. If you feel some discomfort at responding some questions, please feel free to skip the question.

**Benefits to Subjects and/or to Society**
There are no anticipated direct benefits to you resulting from your participation in this research.

**Confidentiality**
Your response to survey questions will be kept confidential. At no time will your Amazon Mechanical Turk Worker ID be linked to survey responses. To minimize the risks to confidentiality, only the principal researcher and the Faculty Advisor will have access to the study data. When the research is completed, your data will be destroyed within 3 years.

**Compensation**
You will receive $1 transferred to your Amazon Mechanical Turk account immediately after the completion of this survey.

**Participation and withdrawal**
Participation in research is completely voluntary, and you may refuse to participate or withdraw from the study without penalty or loss of benefits to which you may otherwise be entitled. You can also decline to answer any question and are free to stop taking part in the research at any time.

**To contact the researcher**
If you have any questions or concerns about this research, please contact: Prawannarat Brewer (psuntith@vols.utk.edu), or my Faculty Advisor, Dr. Ann E. Fairhurst (fairhurs@utk.edu).

If you have any questions, concerns, or complaints about your rights as a research participant in this study, please contact the University of Tennessee' Institutional Review Board at 1534 White Ave., Knoxville, TN 37996-1529. Email: utkirb@utk.edu. Phone: 865-974-7697.

**Agreement**

**Click below to indicate that you have read and agree to the consent agreement.**

The nature and purpose of this research have been sufficiently explained and
**I agree to participate in this study.**
I understand that I am free to withdraw at any time without incurring any penalty.

**If you disagree to participate in this study, please close the window.**

# APPENDIX C

## Copyright Permission Request & Approval Letters

# Letter to Request for Permission to Use Copyrighted Media in a Research

April 20, 2017

The Hoppers Company
taro@thehoppersdrink.com

To Whom It May Concern:

I am a Ph.D. candidate and teaching assistant from the Department of Retail, Hospitality, and Tourism Management at the University of Tennessee, Knoxville. I am in the process of preparing a dissertation on the topic *"The impact of restaurant review website attributes on consumer internal states and behavioral responses."*

I am writing in order to request your permission to include the front page of your website and three LINE graphics of 'Taro' in my research study. The character of Taro will be used as the brand mascot of the restaurant review website simulation named "The Foodie." The character of Taro will appear in the first, second, third, fourth, and last page of the restaurant review website simulation. Taro will play an important role in communicating and helping participants to complete my research. The yellow background color will also stimulate consumer response and enhance the mock website visual appearance which is the focus of this study. A copy of how I will use this graphic character is enclosed.

This study is being conducted by a researcher as a part of university academic research, and no person affiliated in any business organization is involved in any way in the research. I verified that the Taro character will not be used for any commercial purpose in this research and will not be used for any purpose that will be harmful to the Hoppers company.

I would greatly appreciate your consent to my request. Please indicate your approval of this request by responding to my email. If there is a fee for this use, please also let me know.

If you require any additional information, please do not hesitate to contact me. I can be reached at *psuntith@vols.utk.edu,* or 1215 W Cumberland Avenue, JHB 223B, University of Tennessee. If you have any questions or concerns regarding the purpose of this research, please contact my major advisor, Professor Dr. Ann E. Fairhurst and Head of Retail, Hospitality, and Tourism Management Department at *fairhurs@utk.edu*.

Very truly yours,

*Prawannarat Brewer*

***Prawannarat Brewer***
Ph.D. Candidate & Graduate Teaching Assistant
Department of Retail, Hospitality, and Tourism Management
The University of Tennessee, Knoxville

# Letter of Approval to Use Copyrighted Media in a Research

I, Olivia Meisye Jufri, as creator of Taro and owner of The Hoppers Drink Company, hereby authorize Cherry Brewer permission to use my character, Taro (The Hoppers Drink) in her research study.

The work will be used in the following manner as per written on the permission letter :

*The front page of your website and three LINE graphics of 'Taro'.*
*The character of Taro will be used as the brand mascot of the restaurant review website simulation named "The Foodie."*
*The character of Taro will appear in the first, second, third, fourth, and last page of the restaurant review website simulation.*
*Taro will play an important role in communicating and helping participants to complete the research.*
*The yellow background color will also stimulate consumer response and enhance the mock website visual appearance which is the focus of this study.*

Taro and The Hoppers Drink is protected under copyright law and may not be used for any other purpose besides this research.
I acknowledge this permission without any fee compensation. Additionally, I waive the right to get the summarize of the final research.

Dated : May 19, 2017

Signature :

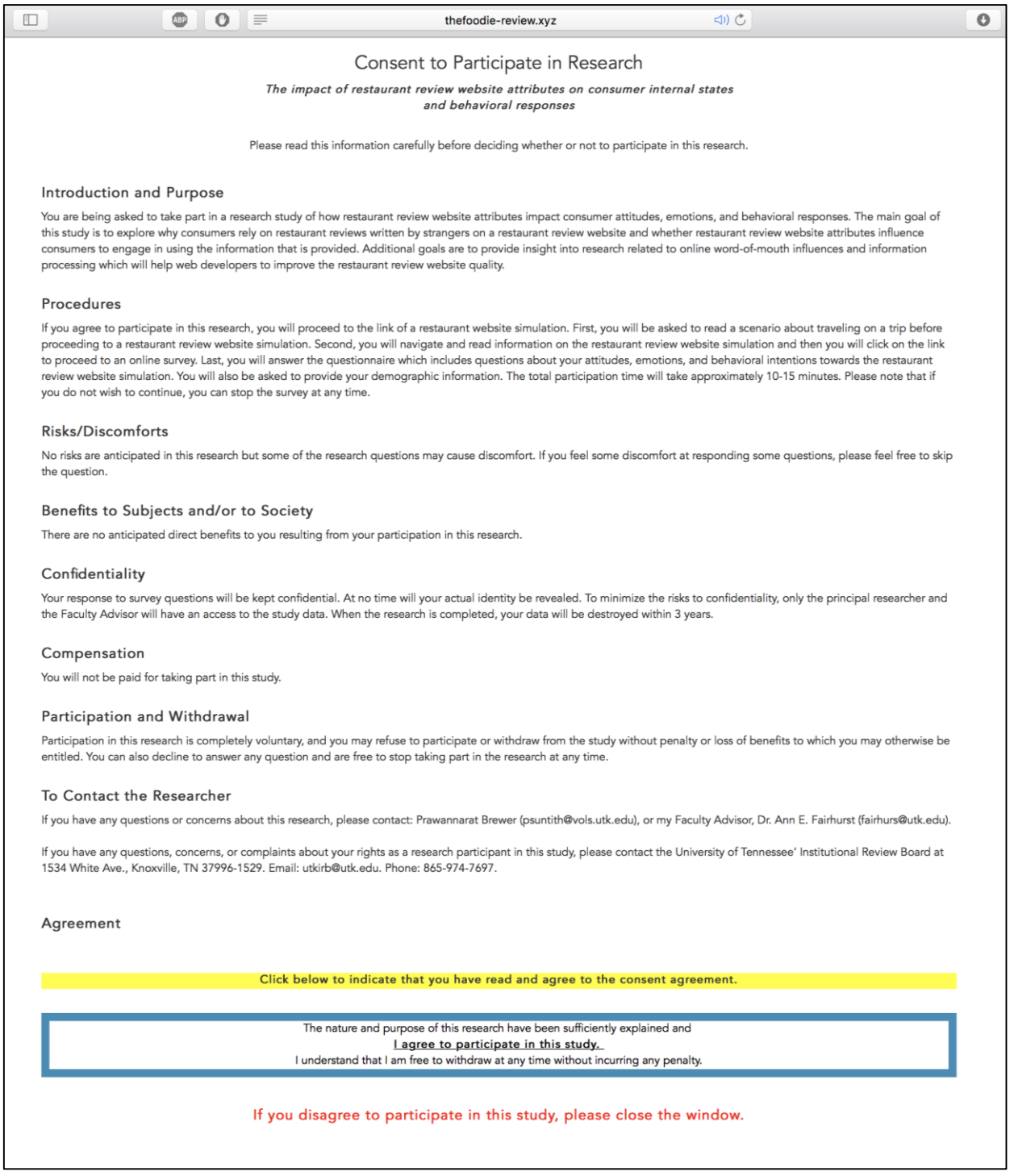
Olivia Meisye Jufri
The Hoppers Drink Company

# APPENDIX D

## Stimuli and the Mock Restaurant Review Website

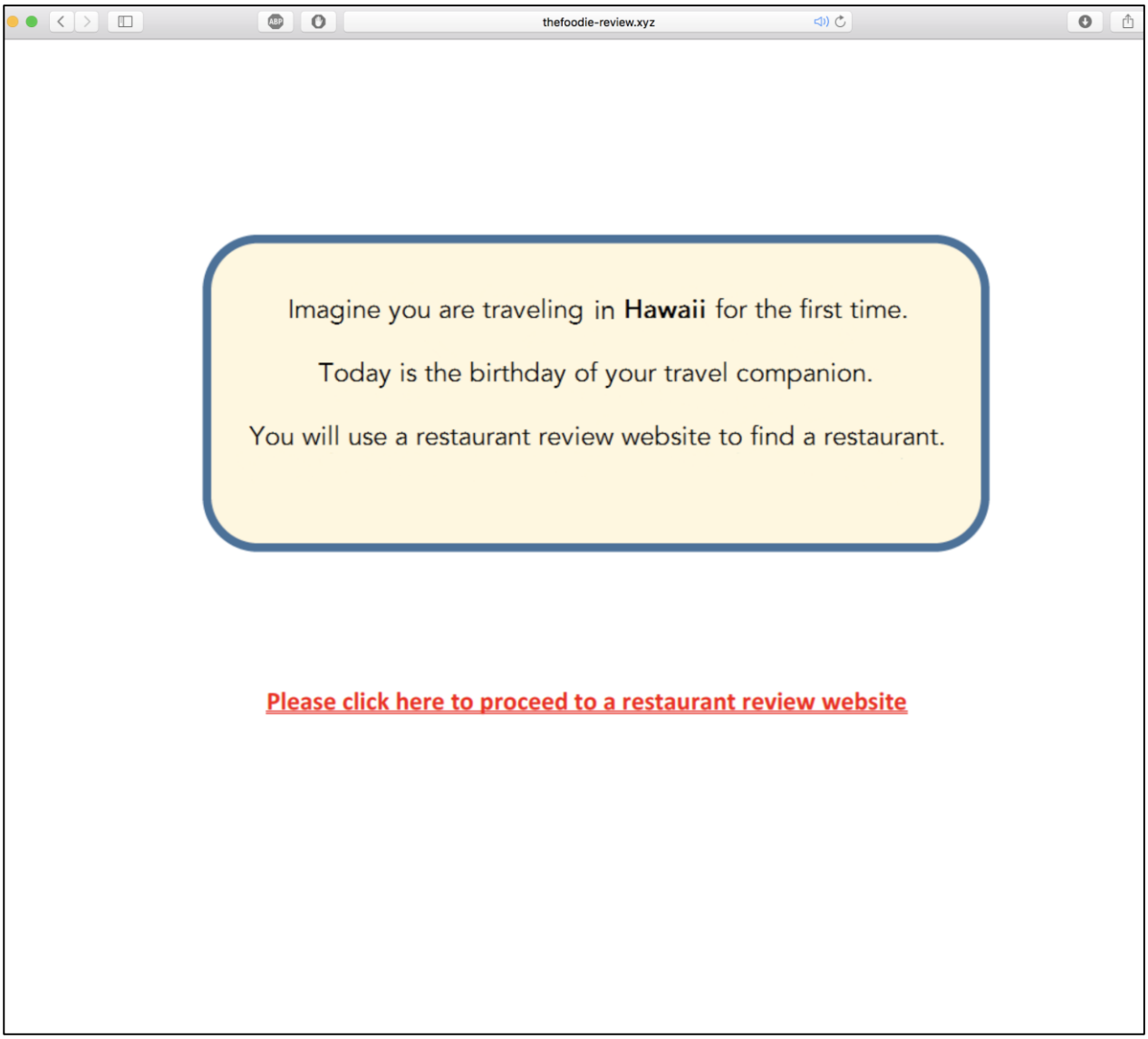
(The First Page of the Mock Restaurant Review Website)

# Consent Form



(The Second Page of the Mock Restaurant Review Website)

## Stimuli



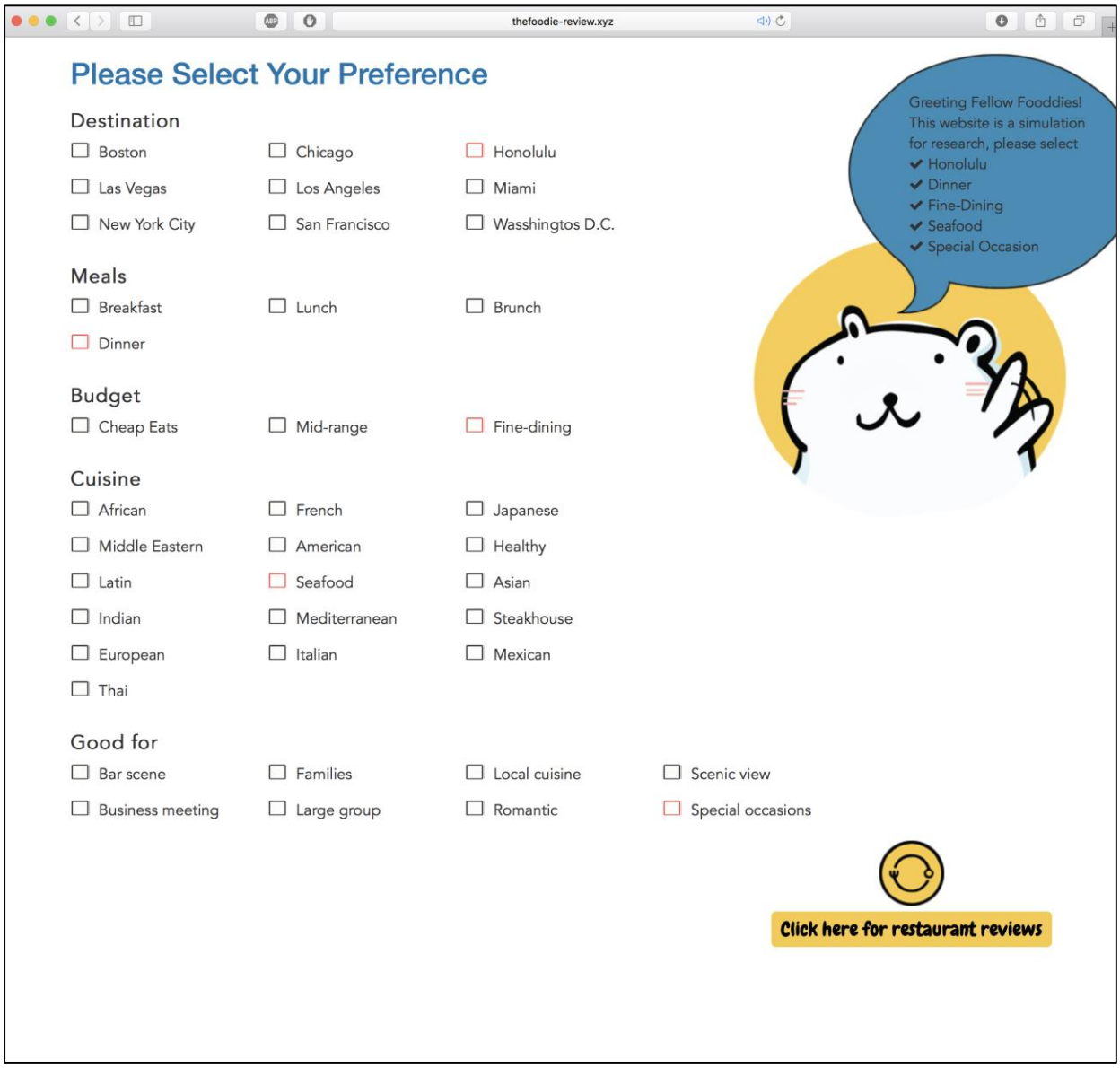
(The Third Page of the Mock Restaurant Review Website)

## The Website Front Page



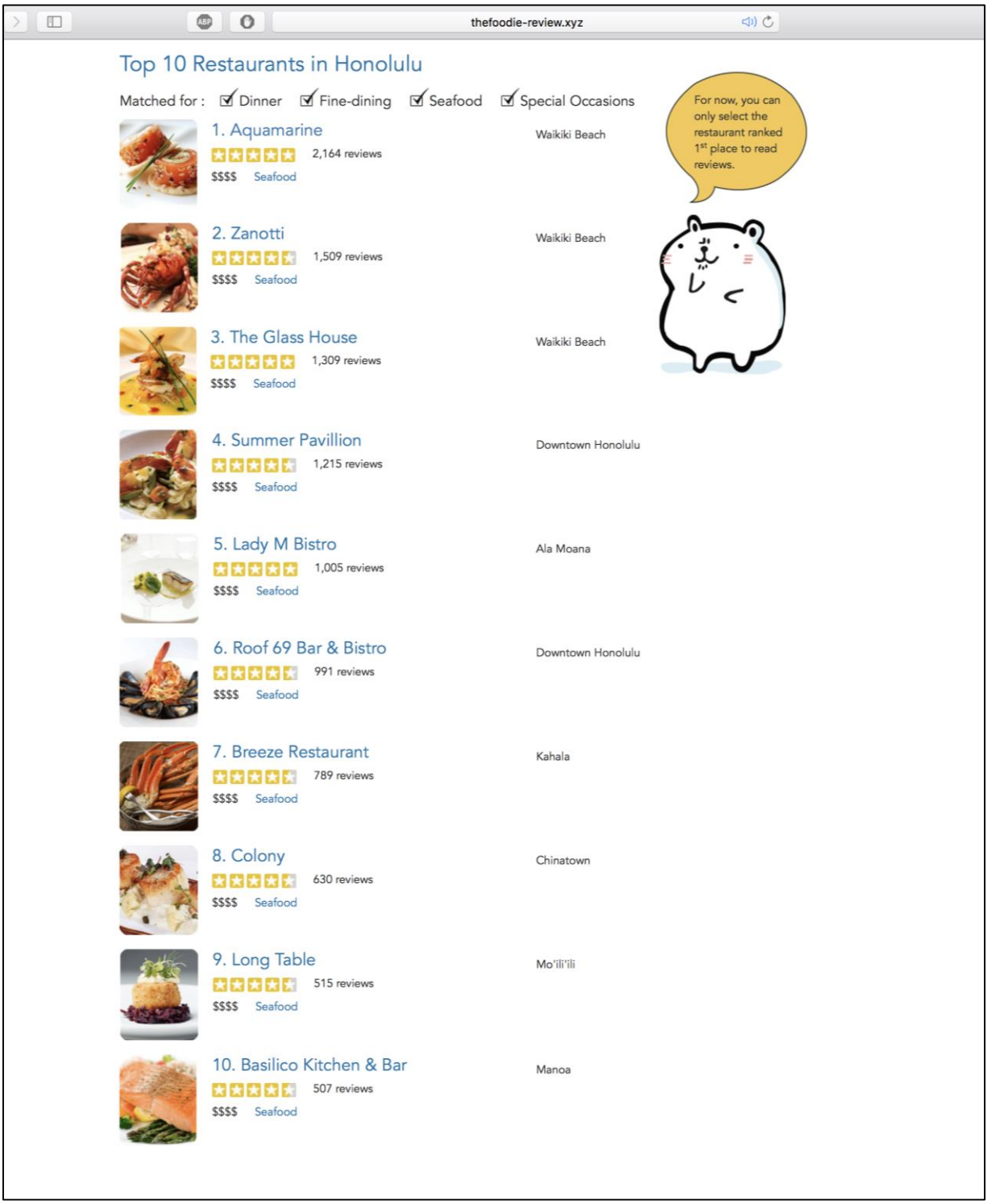
(The Fourth Page of the Mock Restaurant Review Website)

## Collaborative Filters



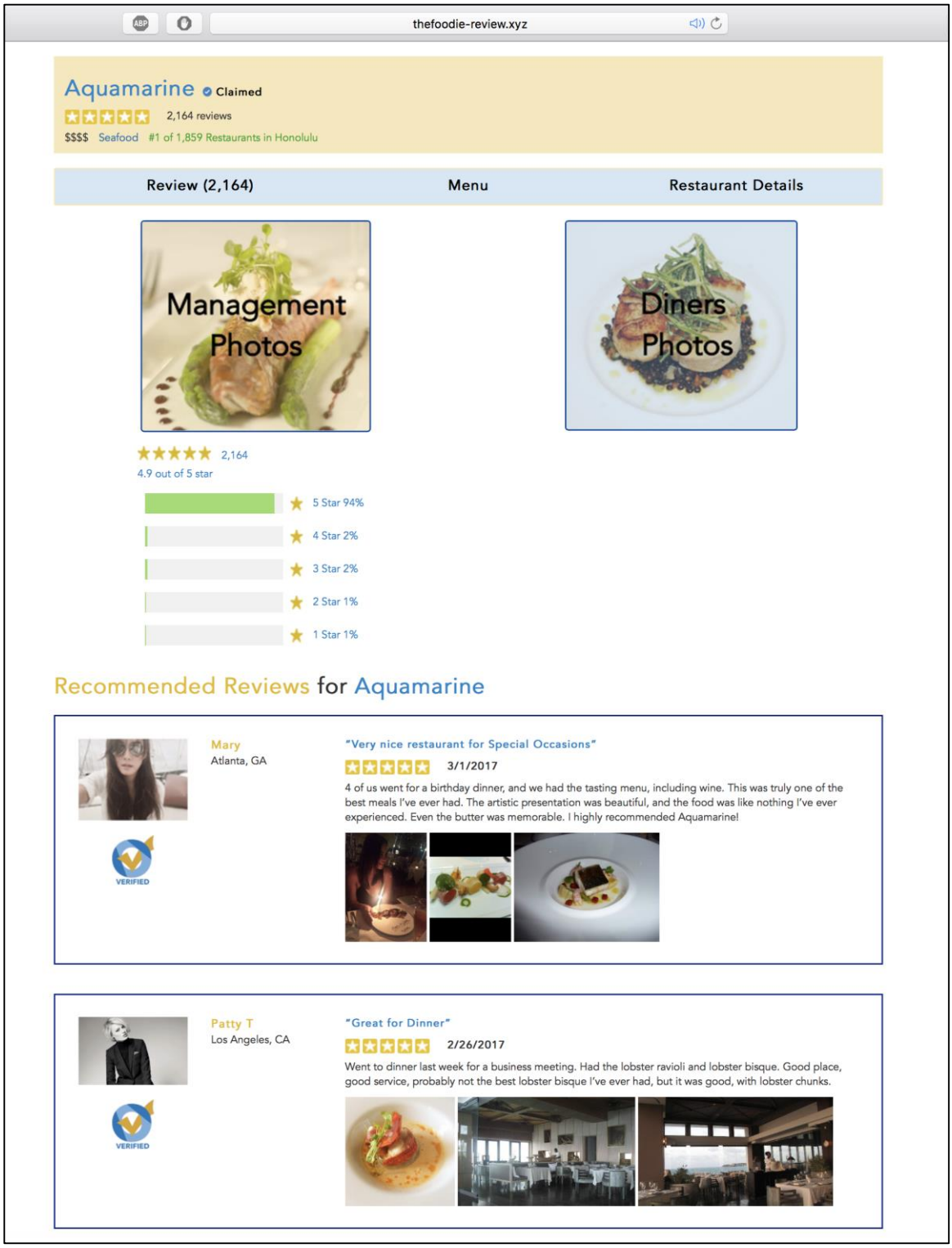
(The Fifth Page of the Mock Restaurant Review Website)

## List of Top Ten Restaurants in Honolulu



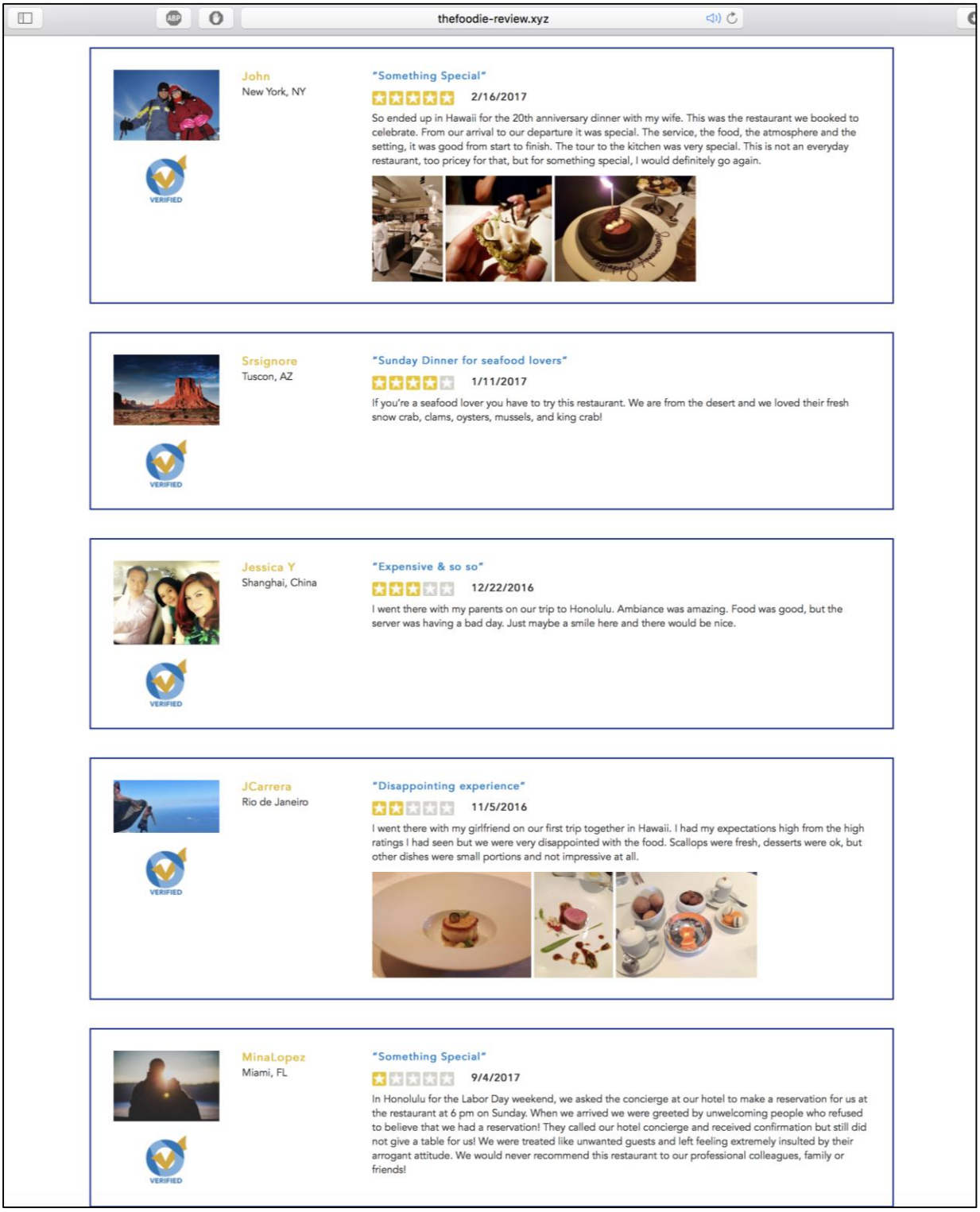
(The Sixth Page of the Mock Restaurant Review Website)

## Restaurant Information, Reviews, and Photos



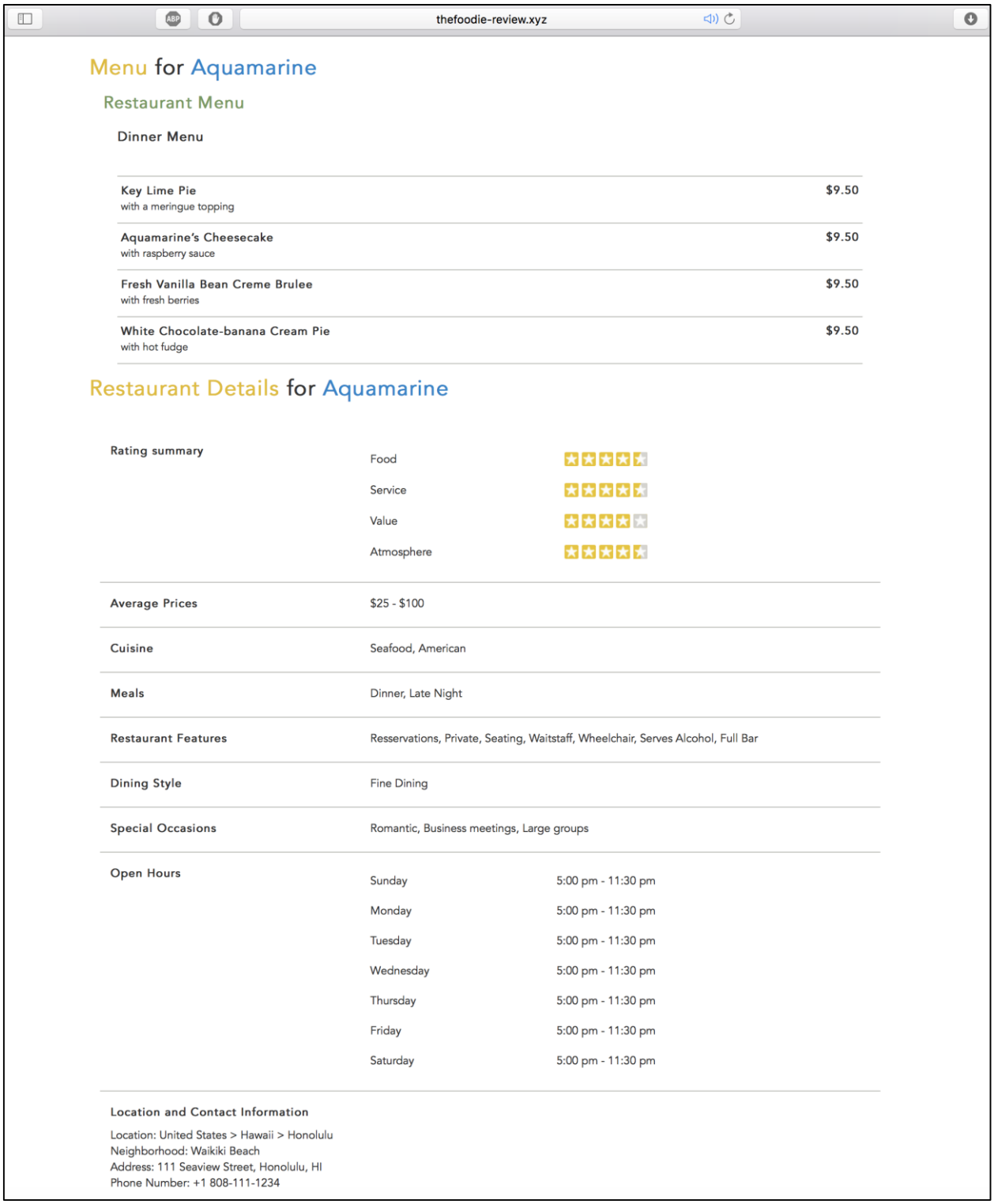
(The Seventh Page of the Mock Restaurant Review Website)

## Restaurant Reviews, Photos, Menu, and Location (Continued)



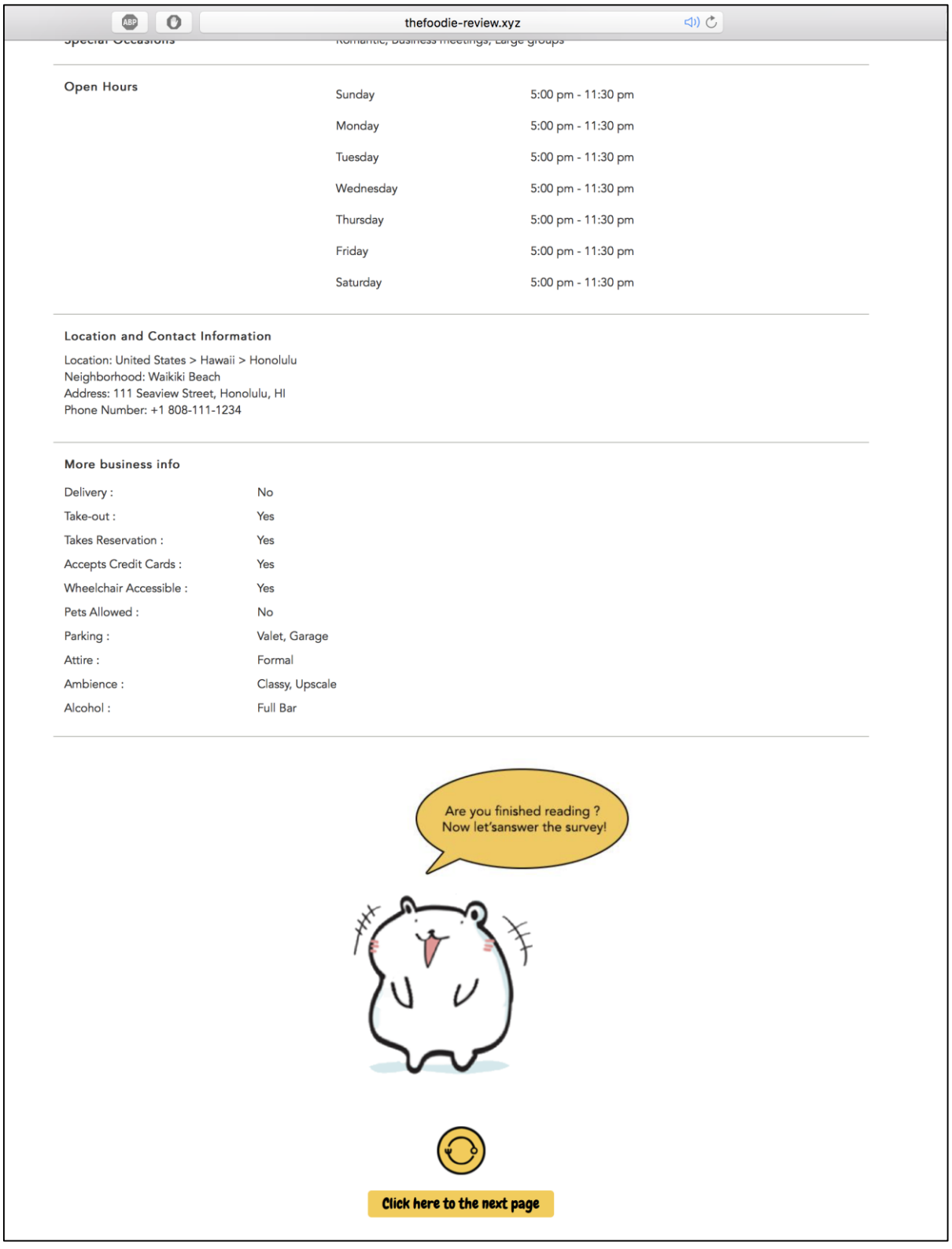
(The Eighth Page of the Mock Restaurant Review Website)

## Restaurant Reviews, Photos, Menu, and Location (Continued)



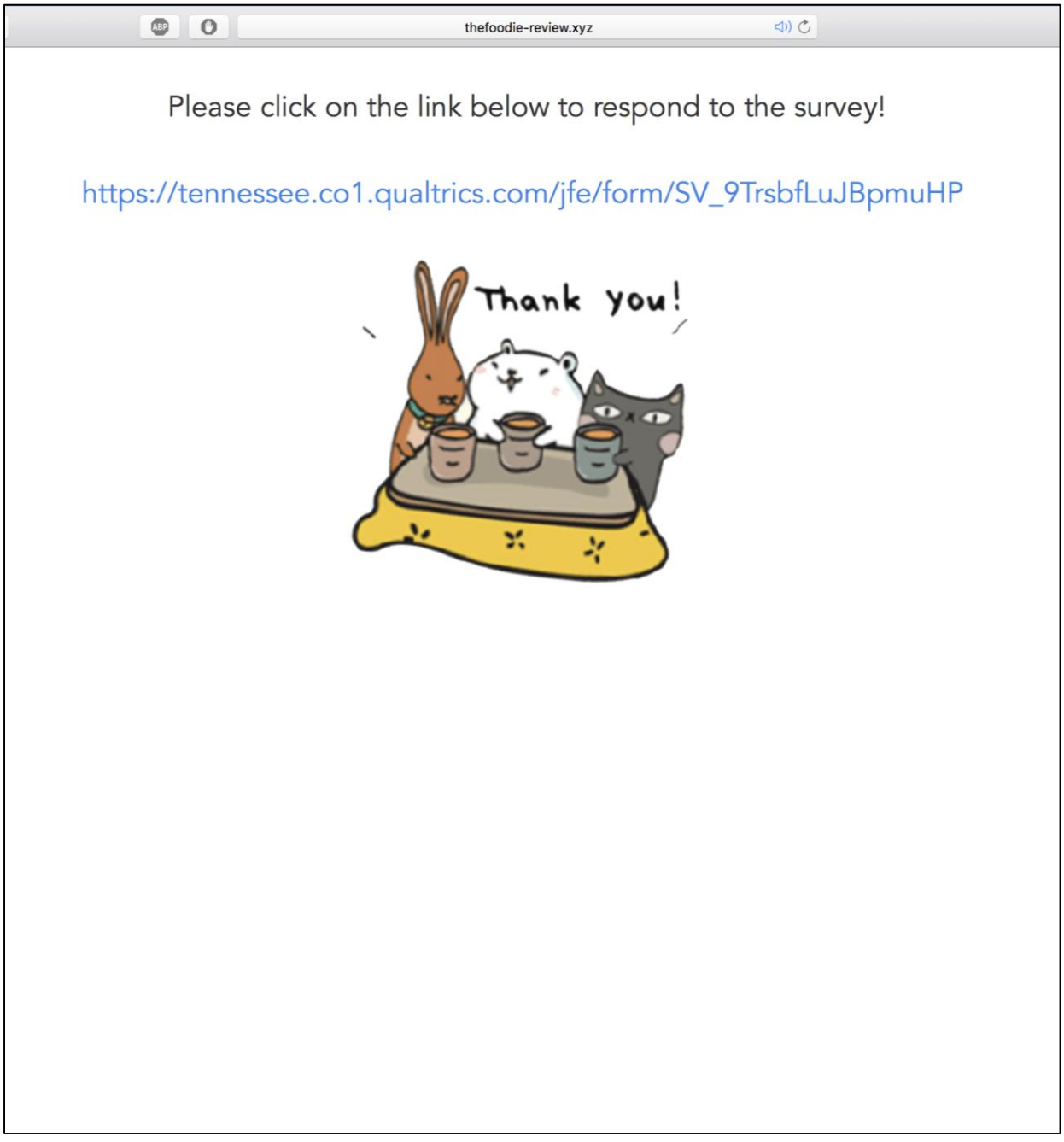
(The Ninth Page of the Mock Restaurant Review Website)

## Restaurant Reviews, Photos, Menu, and Location (Continued)



(The Tenth Page of the Mock Restaurant Review Website)

## A Link to the Survey



# APPENDIX E

## In-Depth Interview & Focus Group Questions

# In-Depth Interview Questions

| | |
|---|---|
| Number of Participant: | 1 |
| Target Participant: | • Man/Woman<br>• Minimum age 21 years-old.<br>• Must be a regular restaurant review website user. |
| Time Allocation: | 30-40 minutes |
| Location: | Skype Interview Audio Call |

*Questions:*

1. Could you tell me when and how often do you use restaurant review website?
2. Could you explain why you use a restaurant review website?
3. What is your favorite restaurant review website and what features do you like the most about this website?
4. You mentioned about ……. website. Could you describe in as much detail as possible about how you access and navigate that restaurant review website?
5. How do you feel when you navigate on …… website?
6. How many restaurant reviews do you usually read and compare before making a decision?
7. Have you ever used any other restaurant review website? Why do you keep revisiting this website?
8. What new features should be included in the restaurant review website?
9. Is there anything else you would like to say about why you trust consumer reviews in restaurant review website?

# Focus Group Interview Questions

| | |
|---|---|
| Number of Participant: | 4 |
| Target Participant: | • Minimum age 21 years-old.<br>• Must be familiar with restaurant review websites. |
| Time Allocation: | 60 minutes |
| Location: | Skype Audio Conference Call |

*Questions:*

1. What is your dream tourist destination in the United States?

2. When you travel, what type of restaurant/food you like?

3. On a special occasion, how much do you usually spend?

4. Can you describe what information you need to know before you decide to visit a restaurant?

5. How do you obtain this information? Do you use a restaurant review website?

6. What is your favorite restaurant review website?

7. What features do you like the most about this website?

8. How long does it take for you to navigate the restaurant review website each time?

9. How many restaurant reviews do you usually read and compare before making a decision?

10. Which part of the restaurant review content influences on your decision, e.g. reviewer verification, rating, ranking, photos, positive/negative word-of-mouth, or number of reviews?

11. What is your reason to revisit the restaurant review website?

12. Are there any new features you would like to see on the restaurant review website?

# APPENDIX F

## Pre-Test Questionnaire

**Scenario**

Imagine you are traveling to Honolulu for the first time. Today is the birthday of your travel companion and you will use a restaurant review website to find information on a restaurant.

***(Participants Visit a Mock Restaurant Review Website)***

Please answer all of following questions based on
the **restaurant review website** you have recently visited.

SECTION A

The following section is to understand your navigation experience with the restaurant review website you have recently visited. Please click the appropriate answer.

| | Strongly disagree | Disagree | Somewhat Disagree | Neither Agree nor Disagree | Somewhat Agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| 1. I found this restaurant review website useful. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I found this restaurant review website decreased the time needed for restaurant search. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I found this restaurant review website increased my chance to find a better quality restaurant. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. This restaurant review website was simple to use, even when using it for the first time. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. It was easy to find the information I needed from this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. The structure and contents of this restaurant review website were easy to understand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. The text on this restaurant review website was easy to read. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. Downloading pages from this restaurant review website was quick. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. This restaurant review website is visually appealing. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10. The visual appearance of this restaurant website looks professional (not amateur looking). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. This restaurant review website is engaging and capturing attention. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. Seeing photos posted in this restaurant review website is part of how I see other consumers' personal experiences. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. The photo-sharing feature of this restaurant review website enabled me to form a sense of sociability in the website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14.There is a sense of human contact in this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. There is a sense of personal touch in this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. At this restaurant review website, I have the full information at hand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. This restaurant review website provide in-depth restaurant reviews. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. The restaurant review website has comprehensive restaurant information. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. This restaurant review website is a very good source of restaurant information. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. This restaurant review website helps me research restaurant reviews. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. Restaurant reviews generated by other consumers on this restaurant review website were credible. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. Other consumers generated each restaurant review on this restaurant review website because they have experienced its food and service. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. Reviewers' name and profile photos presented in this restaurant review website made the restaurant reviews more reliable. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. The verified user symbol made the restaurant reviews more reliable. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. The star-rating scale presented in this restaurant review website indicates quality of restaurants. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. The star-rating scale suggested in this restaurant review website indicates unanimity of opinions about the quality of restaurants. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. The ranking scale presented in this restaurant review website indicated the popularity of restaurants. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 28. Based on the ranking scale, I can tell if a restaurant is liked by a lot of people. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. The rating and ranking scales offered by this restaurant review website save my time in acquiring information. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. The rating and ranking scales offered by this restaurant review website increase my chance to find a restaurant choice. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

SECTION B

The following section is to understand your perceptions toward the restaurant review website you have recently visited. Please click the appropriate answer.

| | Strongly disagree | Disagree | Somewhat Disagree | Neither Agree nor Disagree | Somewhat Agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| 31. This restaurant review website made me feel pleasant. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. This restaurant review website made me feel excited. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 33. This restaurant review website made me feel stimulated. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34. I find this restaurant review website is good. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35. I like this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 36. My attitude toward this restaurant review website is positive. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

SECTION C

The following section is to understand the outcome of your navigation experience after you have visited the restaurant review website. Please click the appropriate answer.

| | Strongly disagree | Disagree | Somewhat Disagree | Neither Agree nor Disagree | Somewhat Agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| 37. This restaurant review website made it easier for me to make a decision (e.g. visit or not visit a restaurant). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 38. This restaurant review website has enhanced my effectiveness in making a visit decision. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 39. It is very likely that I will adopt consumer's recommendations from this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 40. There is a great chance that I will choose a restaurant recommended by this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 41. If I needed to find restaurant information in the future, I would be likely to revisit this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 42. When I needed to find restaurant information in the future, this restaurant review website will be my first choice. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 43. I intend to continue to visit this restaurant review website is the future. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 44. I plan to bookmark this restaurant review website for future reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

SECTION D

For the last section, please provide your demographic information. All responses are confidential and will only be used for data analysis in this study.

1. What is your gender? [ ] Male [ ] Female

2. Which of the following best describes your racial or ethnic identification?

[ ] African-American [ ] Asian or Pacific Islanders

[ ] Caucasians [ ] Hispanic

[ ] Native American [ ] Other (please specify) _____

3. What is your age?

[ ] Under 21 [ ] 22-29 [ ] 30-39 [ ] 40-49

[ ] 50-59 [ ] 60-69 [ ] 70 or older

4. What is the highest level of education that you have completed?

[ ] Less than high school diploma

[ ] High school diploma

[ ] Associate degree (i.e. community college, technical school, two-year college)

[ ] Bachelor's degree

[ ] Graduate degree (i.e., Master's or doctoral degree)

[ ] Other (please specify) _____

5. What is your marital status?

[ ] Single, never married [ ] Single, living with a significant other

[ ] Married [ ] Separated

[ ] Divorced [ ] Widowed

6. What was your approximated TOTAL HOUSEHOLD INCOME last year (before tax)?

[ ] Less than $10,000 [ ] $10,000 - 19,999

[ ] $20,000 - 29,999 [ ] $30,000 - 39,999

[ ] $40,000 - 49,999 [ ] $50,000 - 59,999

[ ] $60,000 - 69,999 [ ] $70,000 - 79,999

[ ] $80,000 – 89,999 [ ] $90,000 – 99,999

[ ] $100,000 – 149,999 [ ] $150,000 or more

7. How often do you use a restaurant review website to search for restaurant reviews?

[ ] Never [ ] Most of time [ ] Sometimes

[ ] Always [ ] About half the time

8. Which of the following is your most frequently used restaurant review website?

[ ] OpenTable [ ] TripAdvisor [ ] Yelp [ ] Zomato

[ ] Others (please specify) _____

[ ] Never used a restaurant review website

# APPENDIX G

## Pilot Test Questionnaire

**Scenario**

Imagine you are traveling to Honolulu for the first time. Today is the birthday of your travel companion and you will use a restaurant review website to find information on a restaurant.

***(Participants Visit a Mock Restaurant Review Website)***

SECTION A

The following section is to understand your navigation experience with the restaurant review website you have recently visited. Please click the appropriate answer.

Please answer all of following questions based on the **restaurant review website** you have recently visited.

| | Strongly disagree | Disagree | Somewhat Disagree | Neither Agree nor Disagree | Somewhat Agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| 1. In this restaurant review website, everything was easy to understand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. This restaurant review website was simple to use, even when using it for the first time. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. It was easy to find the information I needed from this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. The structure and contents of this restaurant review website were easy to understand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. It was easy to move within this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. Use of this restaurant review website decreased the time needed for restaurant search. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. Use of this restaurant review website increased my chance to find a better quality restaurant. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I found this restaurant review website useful. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. This restaurant review website helped me to shape my attitude toward the restaurant. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. This restaurant review website helped me to make a decision on a restaurant choice. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11. The visual of this restaurant review website was attractive. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. This restaurant review website was aesthetically appealing. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. This restaurant review website was visually appealing. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. This restaurant review website displayed visually appealing design. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. This restaurant review website was engaging and captured my attention. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. Seeing photos posted in this restaurant review website is part of how I see other consumers' personal experiences. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. The photo-sharing feature of this restaurant review website enabled me to form a sense of sociability in the website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18.There was a sense of sociability in the website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. There is a sense of human contact in this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. There was a sense of personal touch in this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. This restaurant review website is a very good source of restaurant information. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. This restaurant review website provided relevant restaurant reviews. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. The restaurant review website has comprehensive restaurant information. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. This restaurant review website provide in-depth restaurant reviews. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. This restaurant review website helped me explore restaurant reviews. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. This restaurant reviews website was credible. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. This restaurant reviews website was reliable. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. This restaurant reviews website was trustworthy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. This restaurant reviews website was believable. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. This restaurant reviews website was realistic. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. The content of this restaurant review website was well-organized. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. The organization of the content on this restaurant review website made it easy to find what I need. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 33. This website had collaborative filtering features (e.g. star-rating and ranking scales), which helped me accomplish my restaurant search task. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34. The star-rating scale presented in this restaurant review website indicates quality of restaurants. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35. The star-rating scale suggested in this restaurant review website indicates unanimity of opinions about the quality of restaurants. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 36. The ranking scale presented in this restaurant review website made it easier for me to determine the popularity of the restaurant. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 37. Based on the ranking scale, I can tell if a restaurant is liked by a lot of people. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

SECTION B

The following section is to understand your perceptions toward the restaurant review website you have recently visited. Please click the appropriate answer.

| | Strongly disagree | Disagree | Somewhat Disagree | Neither Agree nor Disagree | Somewhat Agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| 38. I like this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 39. This restaurant review website was good. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 40. My attitude toward this restaurant review website was positive. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 41. I find surfing this restaurant review website was a good way to spend time. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 42. I found this restaurant review website entertaining. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 43. I enjoyed surfing this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 44. While navigating on this restaurant review website, I felt happy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 45. This restaurant review website made me feel stimulated. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 46. I was satisfied with this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

SECTION C

The following section is to understand the outcome of your navigation experience after you have visited the restaurant review website. Please click the appropriate answer.

| | Strongly disagree | Disagree | Somewhat Disagree | Neither Agree nor Disagree | Somewhat Agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| 47. This restaurant review website made it easier for me to make a decision (e.g. visit or not visit a restaurant). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 48. This restaurant review website has enhanced my effectiveness in making a visit decision. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 49. It is very likely that I will adopt consumer's recommendations from this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 50. There is a great chance that I will choose a restaurant recommended by this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 51. If I needed to find restaurant information in the future, I would be likely to revisit this restaurant review website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 52. When I needed to find restaurant information in the future, this restaurant review website will be my first choice. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 53. If needed to find restaurant reviews in the future, I would probably try this website. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 54. I intend to continue to visit this restaurant review website is the future. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 55. I plan to bookmark this restaurant review website for future reference. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

SECTION D

For the last section, please provide your demographic information. All responses are confidential and will only be used for data analysis in this study.

1. What is your gender? [ ] Male [ ] Female

2. Which of the following best describes your racial or ethnic identification?

[ ] African-American [ ] Asian or Pacific Islanders

[ ] Caucasians [ ] Hispanic

[ ] Native American [ ] Other (please specify) _____

3. What is your age?

[ ] Under 21 [ ] 22-29 [ ] 30-39 [ ] 40-49

[ ] 50-59 [ ] 60-69 [ ] 70 or older

4. What is the highest level of education that you have completed?

[ ] Less than high school diploma

[ ] High school diploma

[ ] Associate degree (i.e. community college, technical school, two-year college)

[ ] Bachelor's degree

[ ] Graduate degree (i.e., Master's or doctoral degree)

[ ] Other (please specify) _____

5. What is your marital status?

[ ] Single, never married [ ] Single, living with a significant other

[ ] Married [ ] Separated

[ ] Divorced [ ] Widowed

6. What was your approximated TOTAL HOUSEHOLD INCOME last year (before tax)?

[ ] Less than $10,000 [ ] $10,000 - 19,999

[ ] $20,000 - 29,999 [ ] $30,000 - 39,999

[ ] $40,000 - 49,999 [ ] $50,000 - 59,999

[ ] $60,000 - 69,999 [ ] $70,000 - 79,999

[ ] $80,000 – 89,999 [ ] $90,000 – 99,999

[ ] $100,000 – 149,999 [ ] $150,000 or more

7. How often do you use a restaurant review website to search for restaurant reviews?

[ ] Never [ ] Most of time [ ] Sometimes

[ ] Always [ ] About half the time

8. Which of the following is your most frequently used restaurant review website?

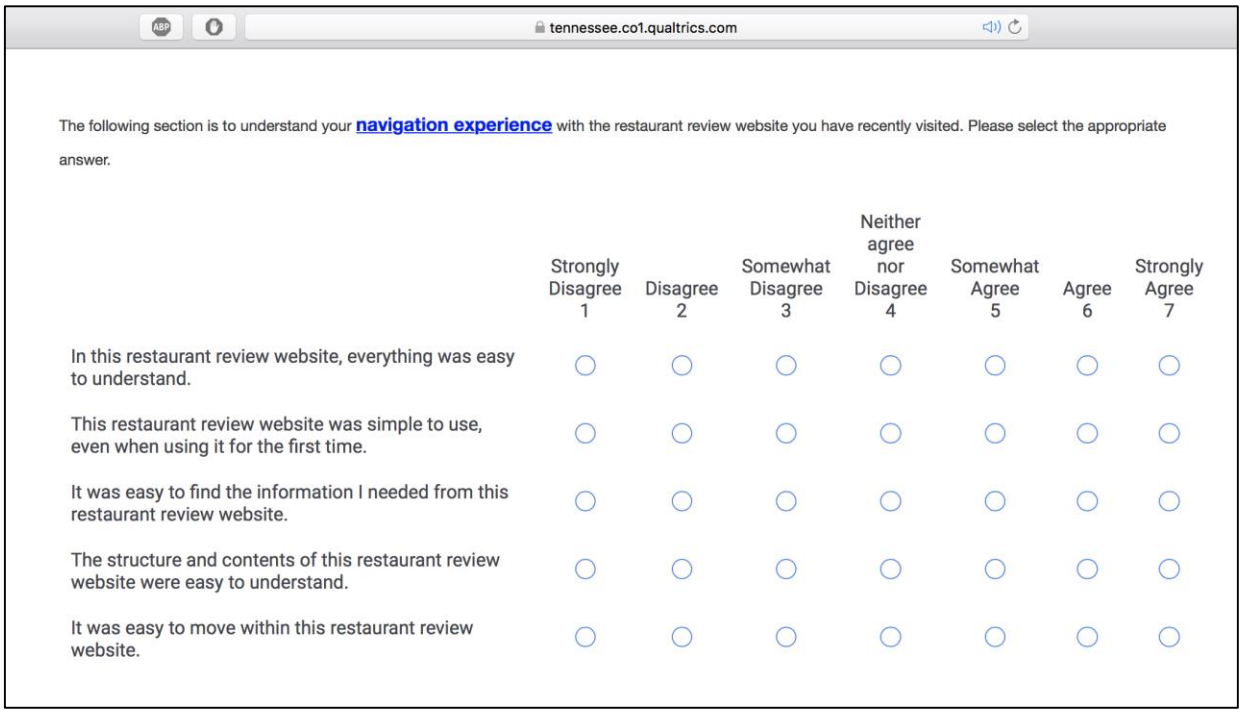
[ ] OpenTable [ ] TripAdvisor [ ] Yelp [ ] Zomato

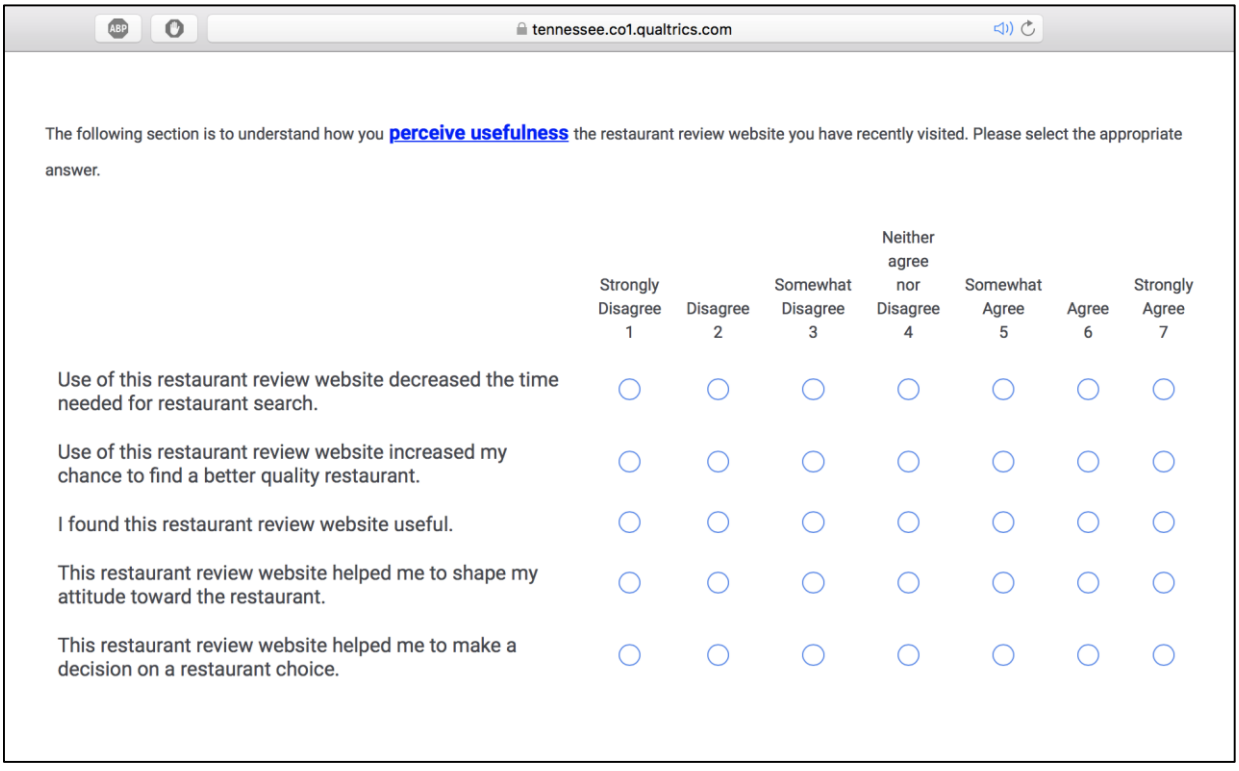
[ ] Others (please specify) _____

[ ] Never used a restaurant review website

# APPENDIX H

## Main Study Questionnaire


tennessee.co1.qualtrics.com
The following section is to understand your navigation experience with the restaurant review website you have recently visited. Please select the appropriate answer.
Strongly Disagree 1
Disagree 2
Somewhat Disagree 3
Neither agree nor Disagree 4
Somewhat Agree 5
Agree 6
Strongly Agree 7
In this restaurant review website, everything was easy to understand.
This restaurant review website was simple to use, even when using it for the first time.
It was easy to find the information I needed from this restaurant review website.
The structure and contents of this restaurant review website were easy to understand.
It was easy to move within this restaurant review website.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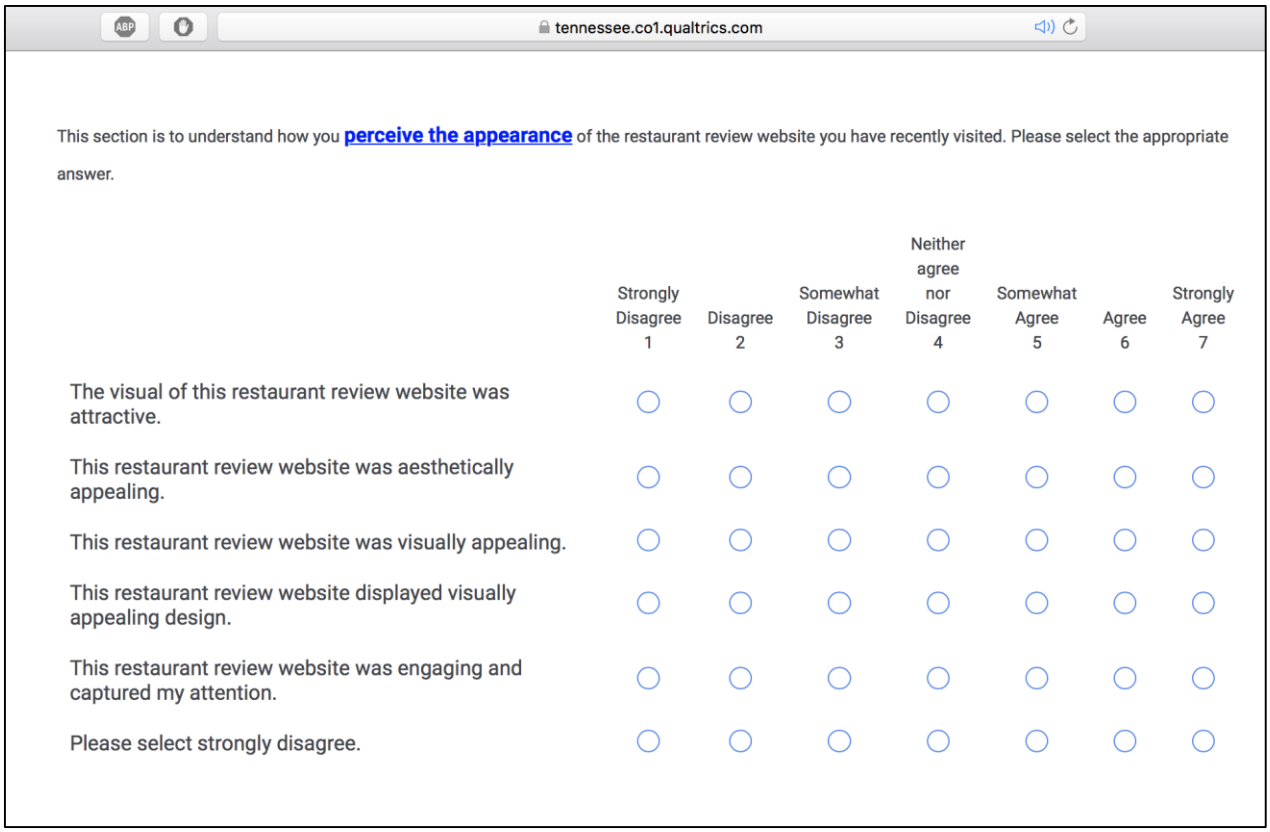
The following section is to understand how you perceive usefulness the restaurant review website you have recently visited. Please select the appropriate answer.
Strongly Disagree 1
Disagree 2
Somewhat Disagree 3
Neither agree nor Disagree 4
Somewhat Agree 5
Agree 6
Strongly Agree 7
Use of this restaurant review website decreased the time needed for restaurant search.
Use of this restaurant review website increased my chance to find a better quality restaurant.
I found this restaurant review website useful.
This restaurant review website helped me to shape my attitude toward the restaurant.
This restaurant review website helped me to make a decision on a restaurant choice.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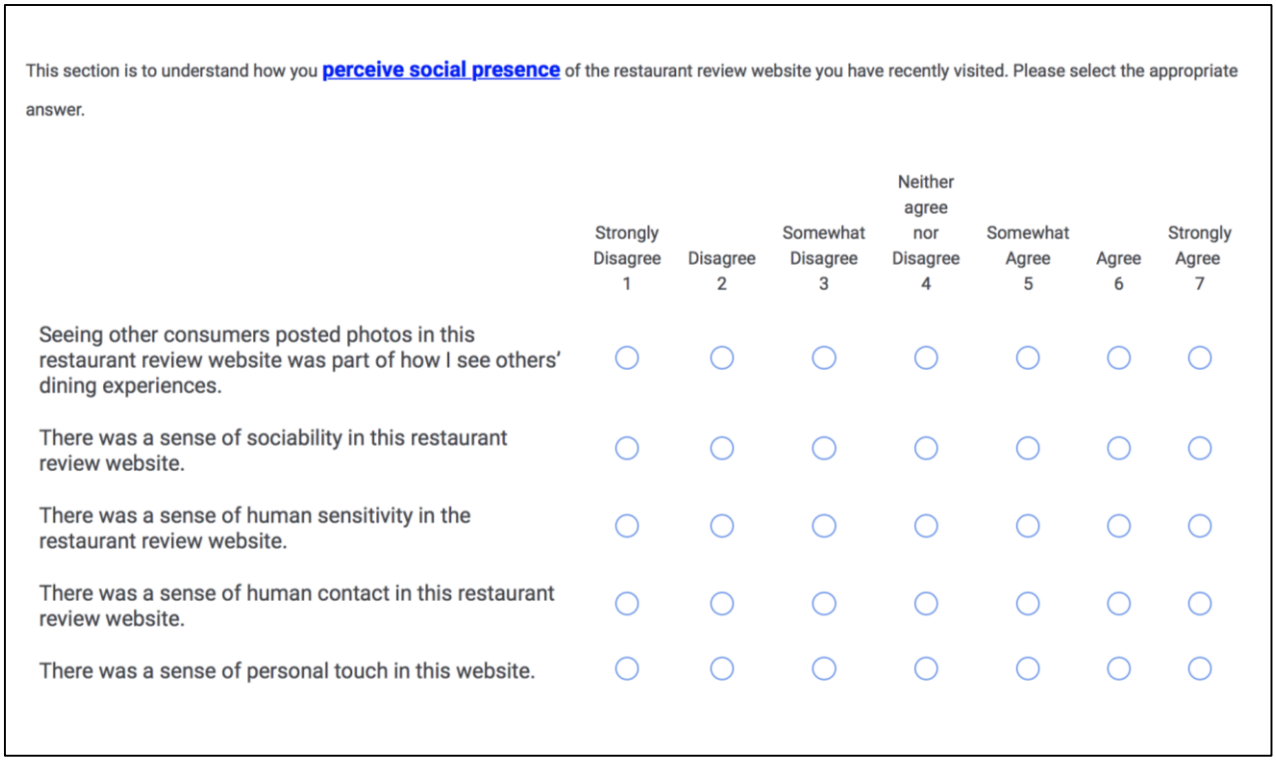
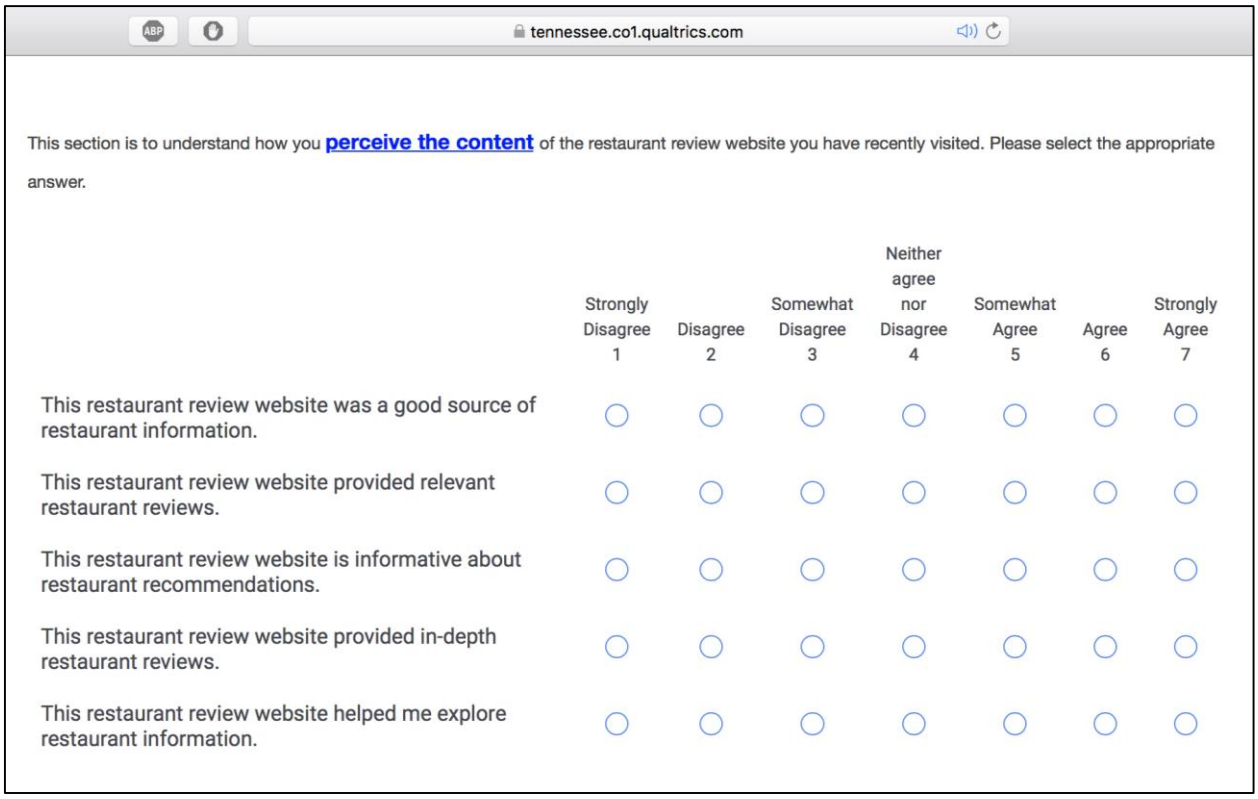
This section is to understand how you perceive the appearance of the restaurant review website you have recently visited. Please select the appropriate answer.
Strongly Disagree 1
Disagree 2
Somewhat Disagree 3
Neither agree nor Disagree 4
Somewhat Agree 5
Agree 6
Strongly Agree 7
The visual of this restaurant review website was attractive.
This restaurant review website was aesthetically appealing.
This restaurant review website was visually appealing.
This restaurant review website displayed visually appealing design.
This restaurant review website was engaging and captured my attention.
Please select strongly disagree.


This section is to understand how you perceive social presence of the restaurant review website you have recently visited. Please select the appropriate answer.
Strongly Disagree 1
Disagree 2
Somewhat Disagree 3
Neither agree nor Disagree 4
Somewhat Agree 5
Agree 6
Strongly Agree 7
Seeing other consumers posted photos in this restaurant review website was part of how I see others' dining experiences.
There was a sense of sociability in this restaurant review website.
There was a sense of human sensitivity in the restaurant review website.
There was a sense of human contact in this restaurant review website.
There was a sense of personal touch in this website.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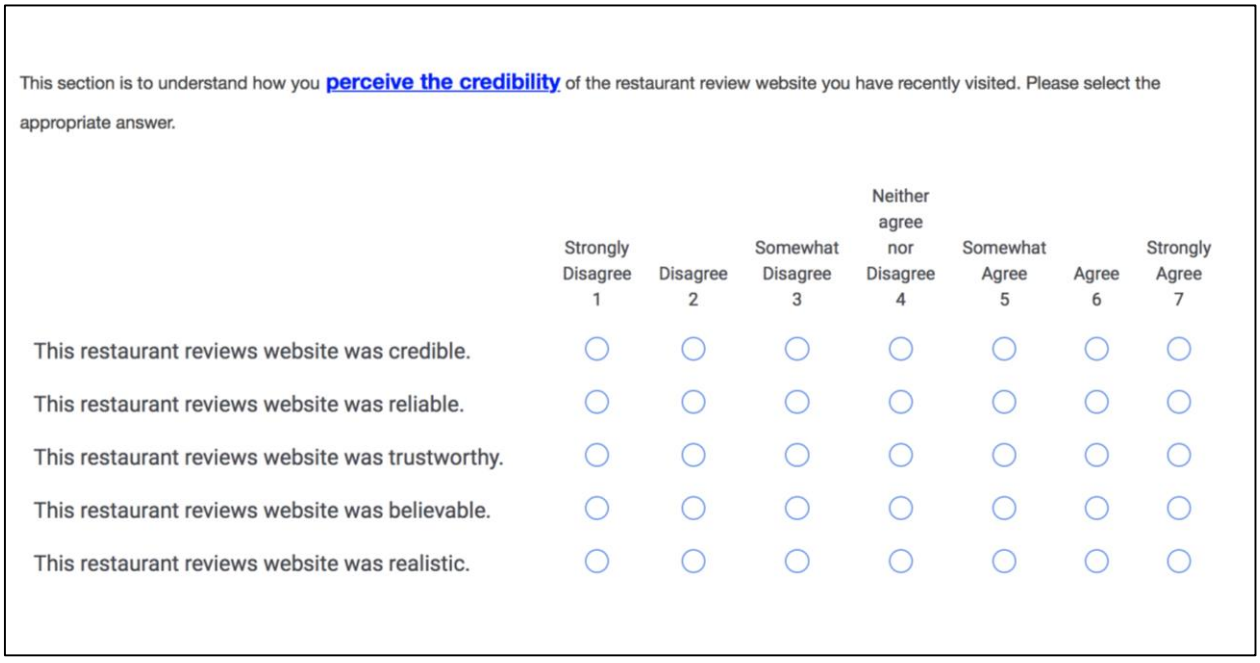
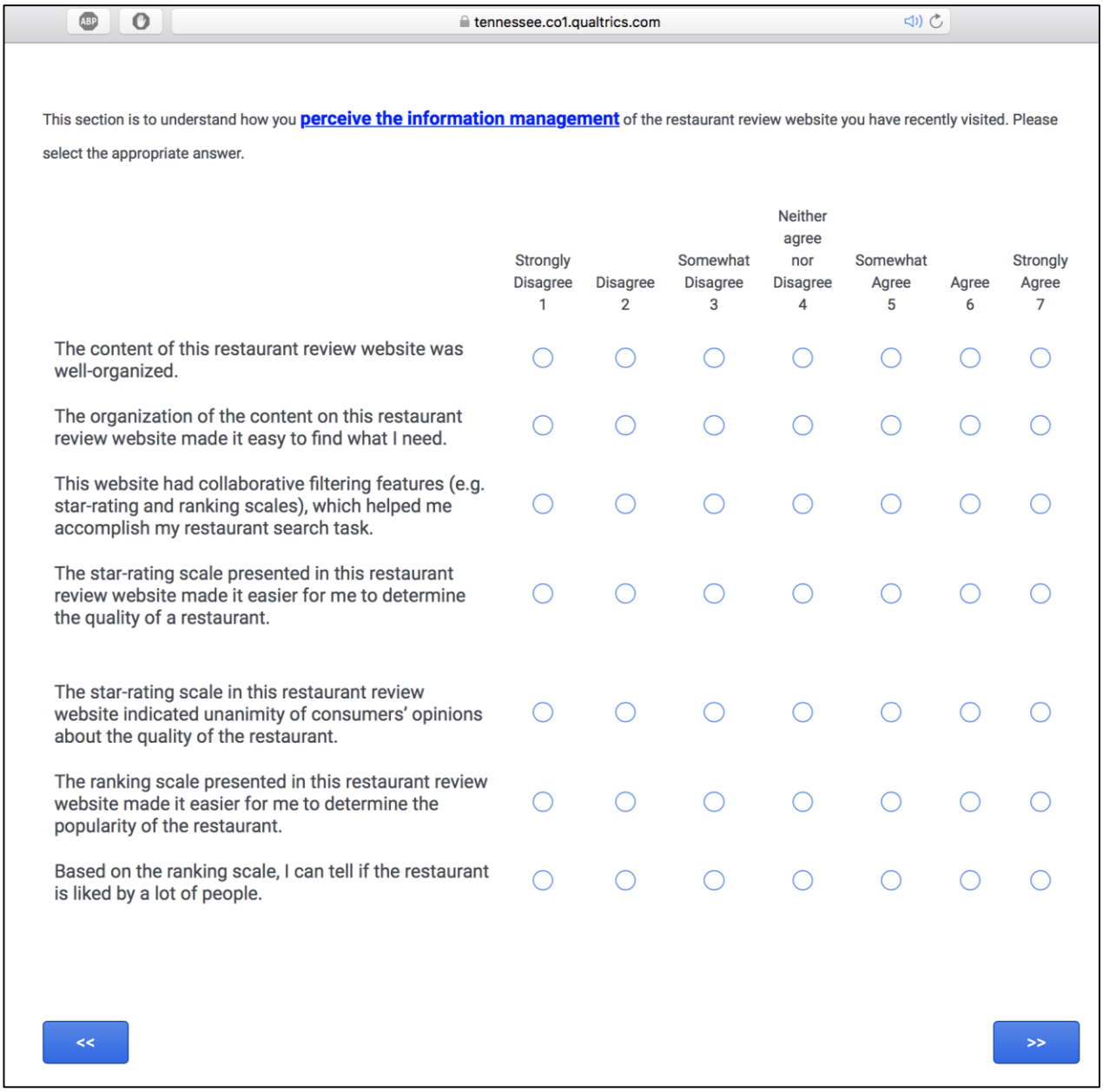
This section is to understand how you perceive the content of the restaurant review website you have recently visited. Please select the appropriate answer.
Strongly Disagree 1
Disagree 2
Somewhat Disagree 3
Neither agree nor Disagree 4
Somewhat Agree 5
Agree 6
Strongly Agree 7
This restaurant review website was a good source of restaurant information.
This restaurant review website provided relevant restaurant reviews.
This restaurant review website is informative about restaurant recommendations.
This restaurant review website provided in-depth restaurant reviews.
This restaurant review website helped me explore restaurant information.


This section is to understand how you perceive the credibility of the restaurant review website you have recently visited. Please select the appropriate answer.
Strongly Disagree 1
Disagree 2
Somewhat Disagree 3
Neither agree nor Disagree 4
Somewhat Agree 5
Agree 6
Strongly Agree 7
This restaurant reviews website was credible.
This restaurant reviews website was reliable.
This restaurant reviews website was trustworthy.
This restaurant reviews website was believable.
This restaurant reviews website was realistic.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This section is to understand how you perceive the information management of the restaurant review website you have recently visited. Please select the appropriate answer.
Strongly Disagree 1
Disagree 2
Somewhat Disagree 3
Neither agree nor Disagree 4
Somewhat Agree 5
Agree 6
Strongly Agree 7
The content of this restaurant review website was well-organized.
The organization of the content on this restaurant review website made it easy to find what I need.
This website had collaborative filtering features (e.g. star-rating and ranking scales), which helped me accomplish my restaurant search task.
The star-rating scale presented in this restaurant review website made it easier for me to determine the quality of a restaurant.
The star-rating scale in this restaurant review website indicated unanimity of consumers' opinions about the quality of the restaurant.
The ranking scale presented in this restaurant review website made it easier for me to determine the popularity of the restaurant.
Based on the ranking scale, I can tell if the restaurant is liked by a lot of people.
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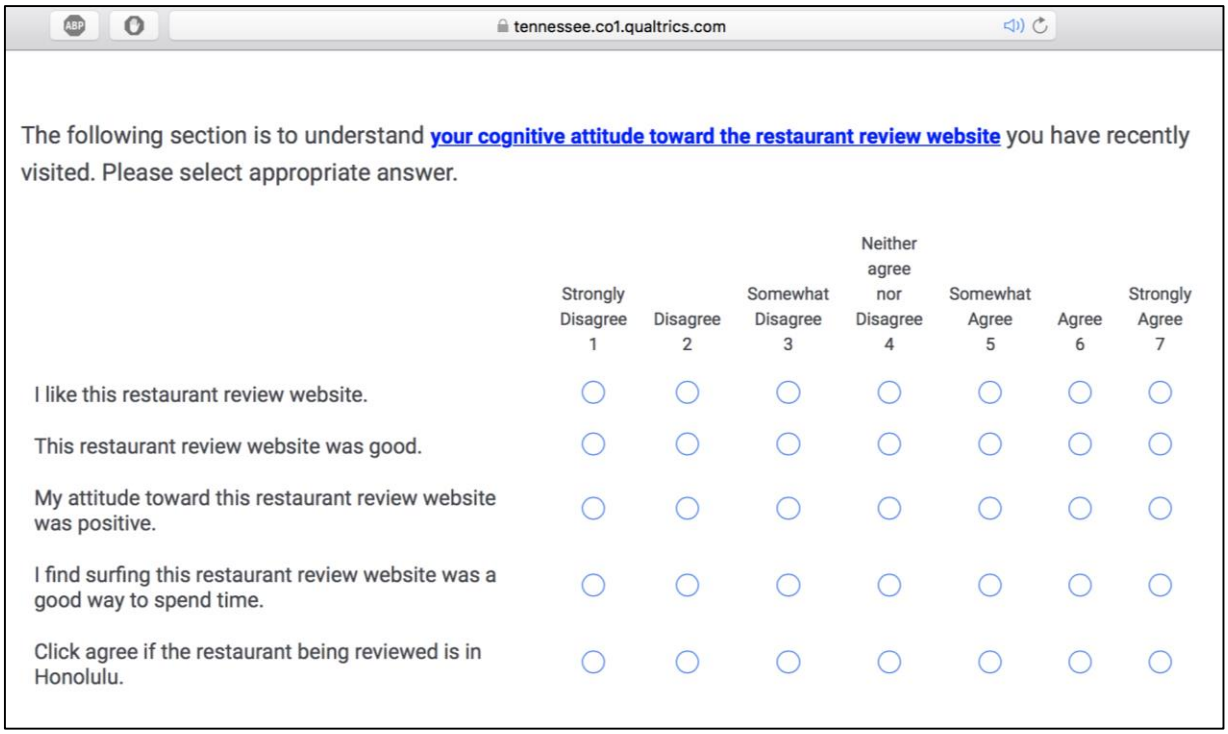
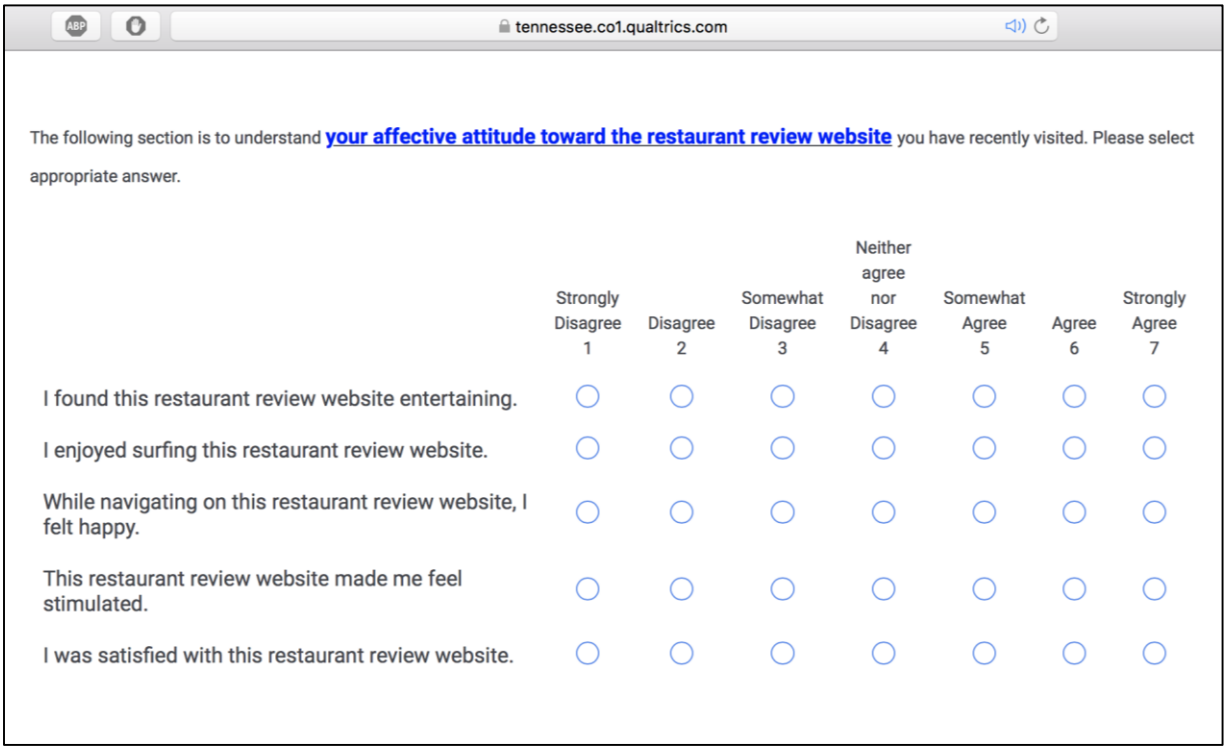
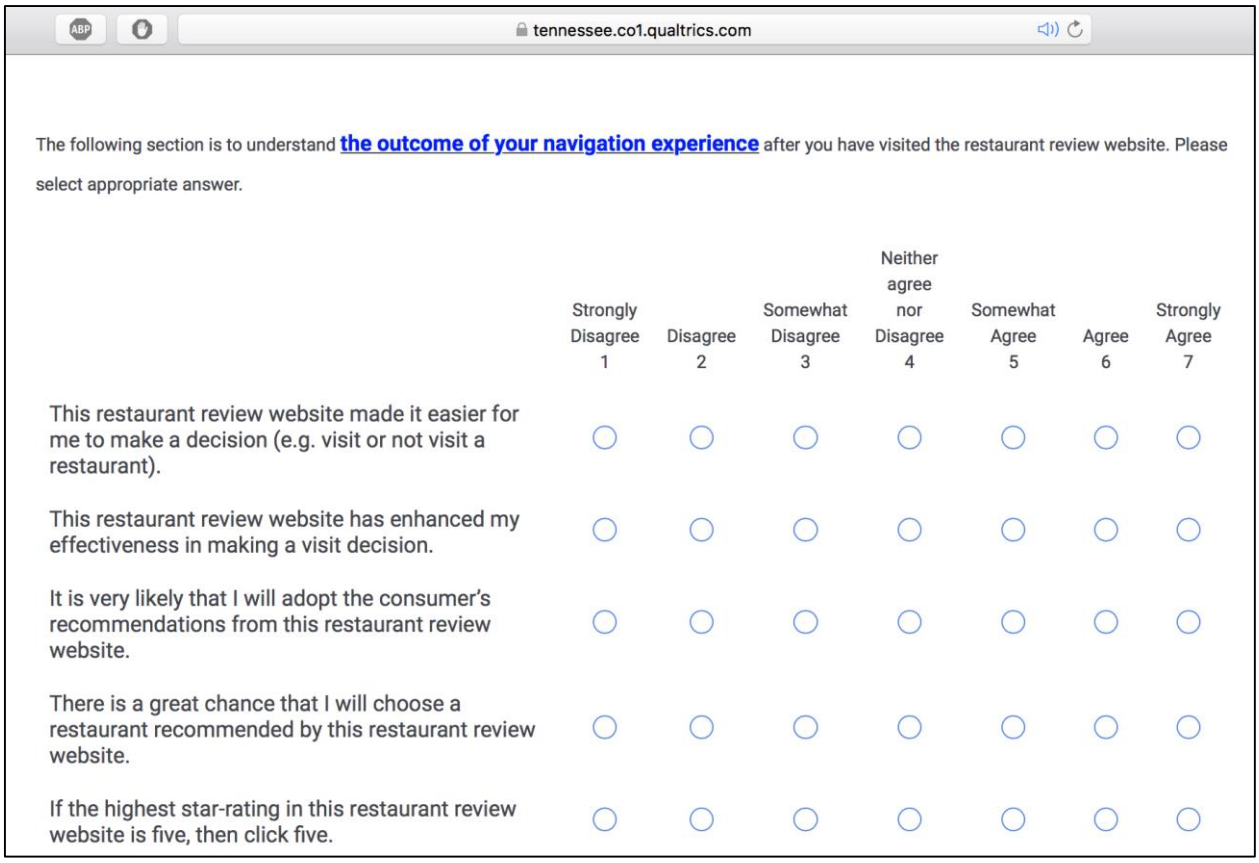

tennessee.co1.qualtrics.com
The following section is to understand your cognitive attitude toward the restaurant review website you have recently visited. Please select appropriate answer.
Strongly Disagree 1
Disagree 2
Somewhat Disagree 3
Neither agree nor Disagree 4
Somewhat Agree 5
Agree 6
Strongly Agree 7
I like this restaurant review website.
This restaurant review website was good.
My attitude toward this restaurant review website was positive.
I find surfing this restaurant review website was a good way to spend time.
Click agree if the restaurant being reviewed is in Honolulu.


tennessee.co1.qualtrics.com
The following section is to understand your affective attitude toward the restaurant review website you have recently visited. Please select appropriate answer.
Strongly Disagree 1
Disagree 2
Somewhat Disagree 3
Neither agree nor Disagree 4
Somewhat Agree 5
Agree 6
Strongly Agree 7
I found this restaurant review website entertaining.
I enjoyed surfing this restaurant review website.
While navigating on this restaurant review website, I felt happy.
This restaurant review website made me feel stimulated.
I was satisfied with this restaurant review website.



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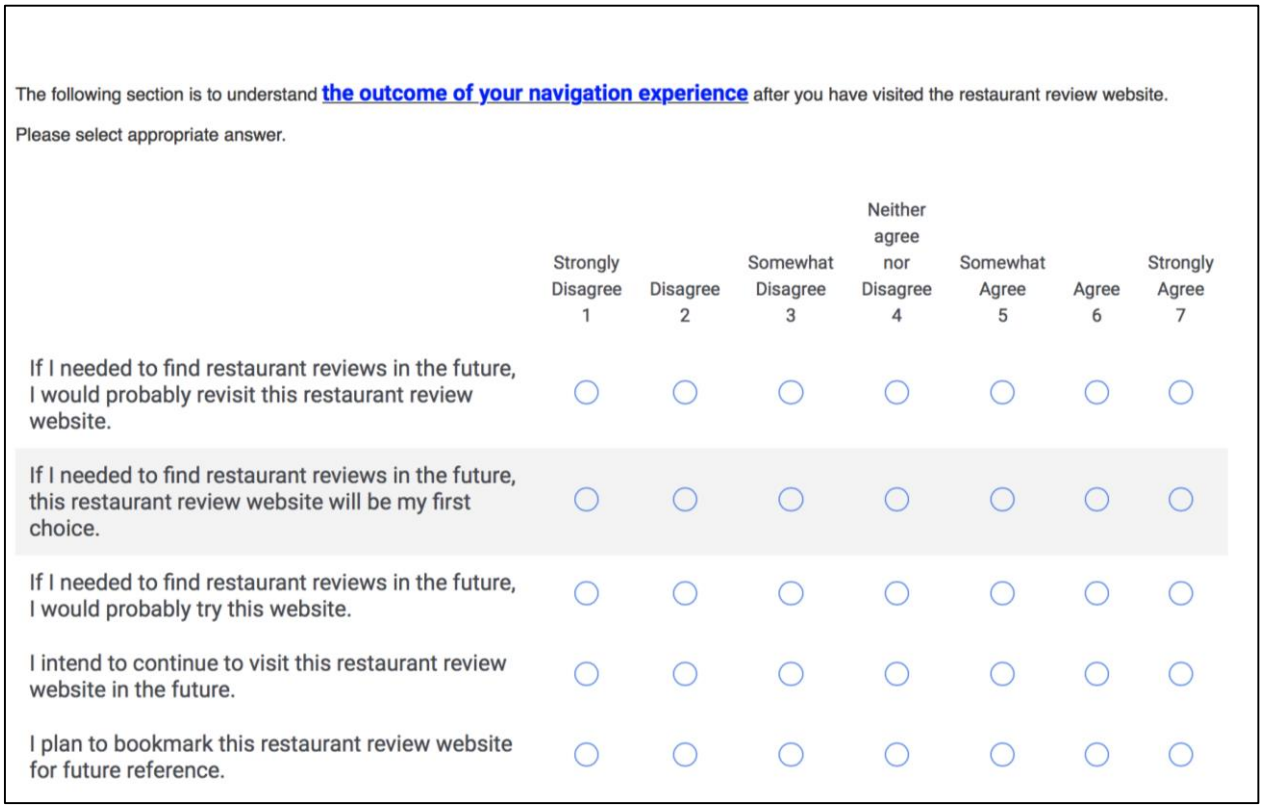
The following section is to understand **the outcome of your navigation experience** after you have visited the restaurant review website. Please select appropriate answer.

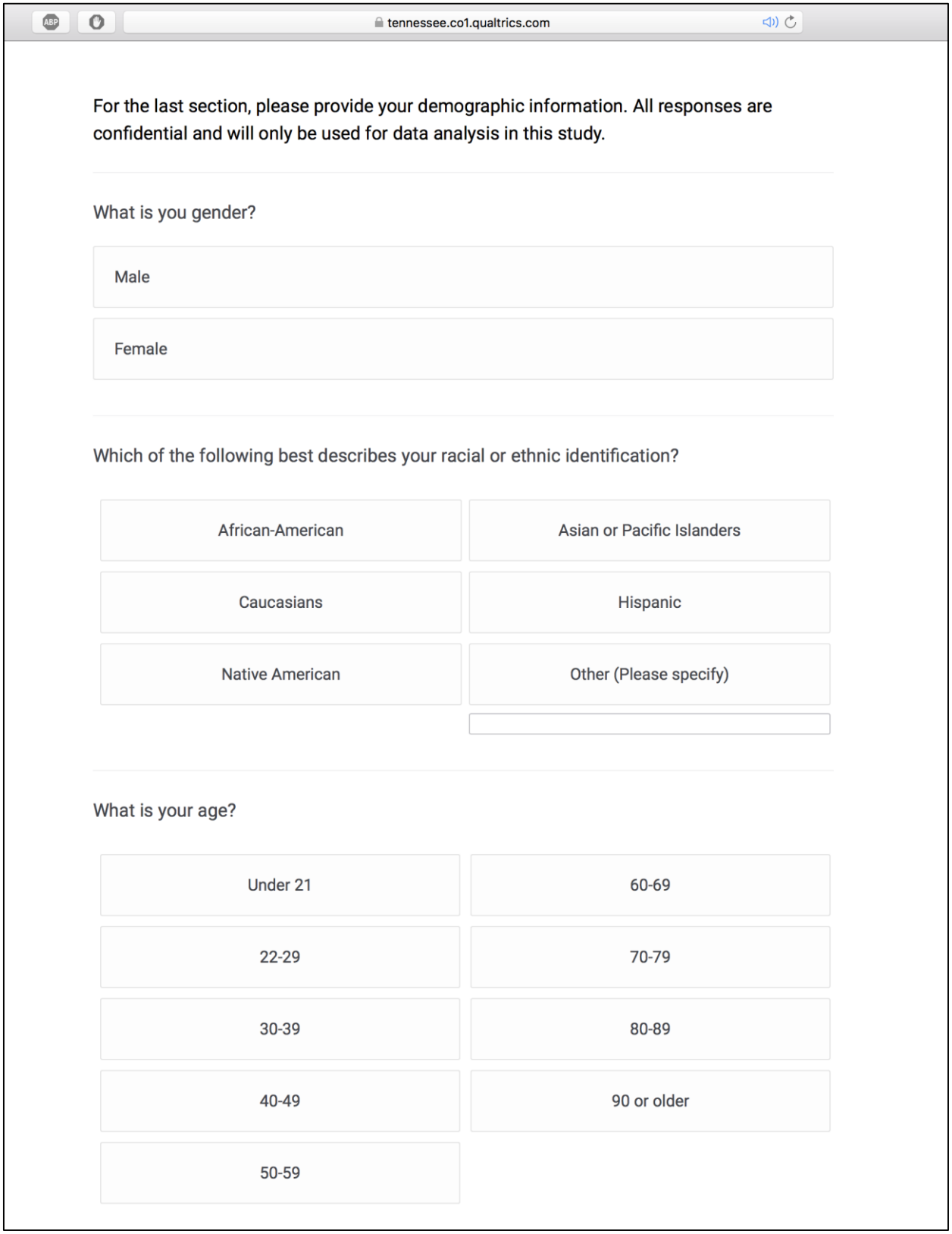
| | Strongly Disagree 1 | Disagree 2 | Somewhat Disagree 3 | Neither agree nor Disagree 4 | Somewhat Agree 5 | Agree 6 | Strongly Agree 7 |
|---|---|---|---|---|---|---|---|
| This restaurant review website made it easier for me to make a decision (e.g. visit or not visit a restaurant). | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| This restaurant review website has enhanced my effectiveness in making a visit decision. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is very likely that I will adopt the consumer's recommendations from this restaurant review website. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| There is a great chance that I will choose a restaurant recommended by this restaurant review website. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| If the highest star-rating in this restaurant review website is five, then click five. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |



The following section is to understand **the outcome of your navigation experience** after you have visited the restaurant review website.

Please select appropriate answer.

| | Strongly Disagree 1 | Disagree 2 | Somewhat Disagree 3 | Neither agree nor Disagree 4 | Somewhat Agree 5 | Agree 6 | Strongly Agree 7 |
|---|---|---|---|---|---|---|---|
| If I needed to find restaurant reviews in the future, I would probably revisit this restaurant review website. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| If I needed to find restaurant reviews in the future, this restaurant review website will be my first choice. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| If I needed to find restaurant reviews in the future, I would probably try this website. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I intend to continue to visit this restaurant review website in the future. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I plan to bookmark this restaurant review website for future reference. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |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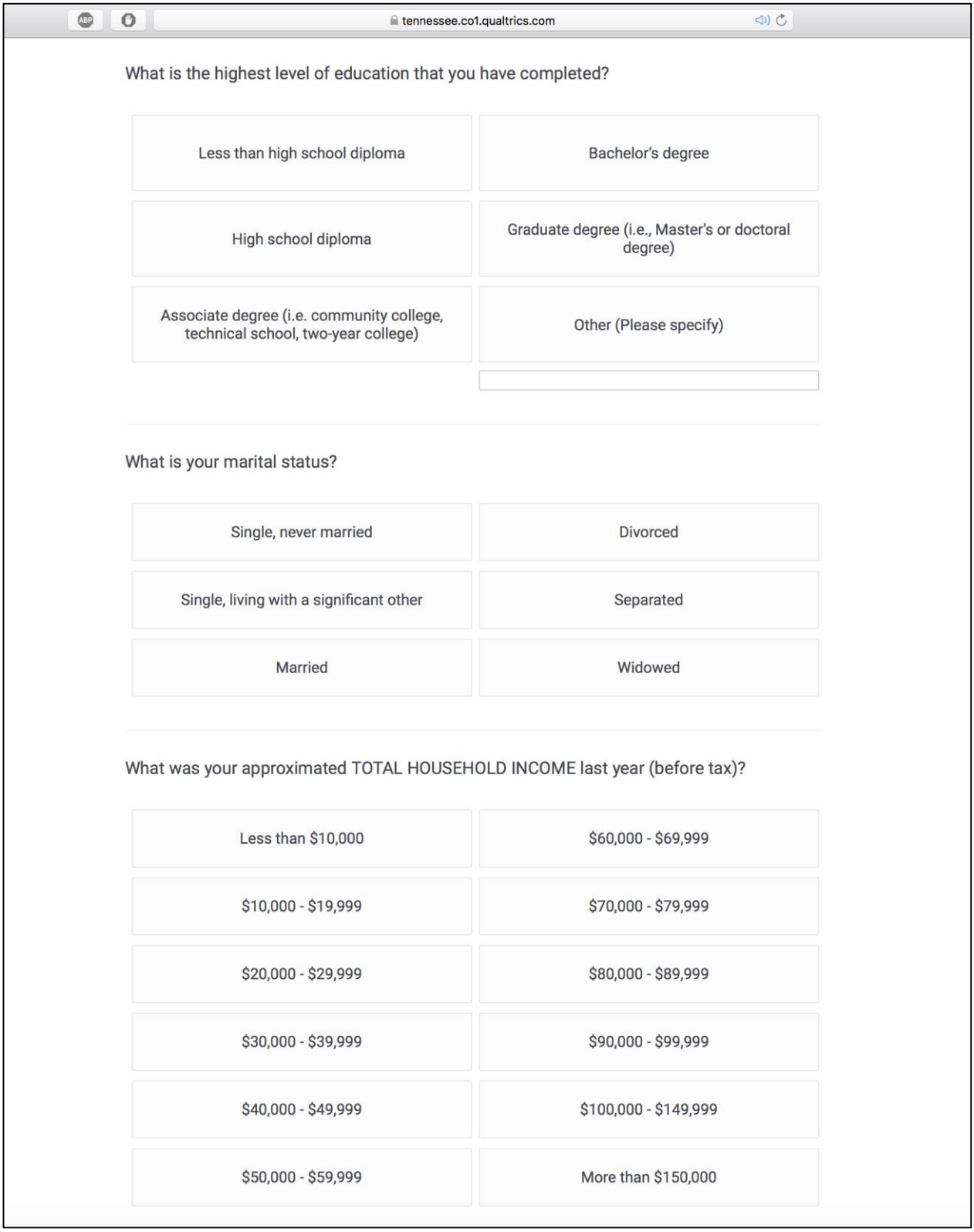
For the last section, please provide your demographic information. All responses are confidential and will only be used for data analysis in this study.
What is you gender?
Male
Female
Which of the following best describes your racial or ethnic identification?
African-American
Asian or Pacific Islanders
Caucasians
Hispanic
Native American
Other (Please specify)
What is your age?
Under 21
60-69
22-29
70-79
30-39
80-89
40-49
90 or older
50-59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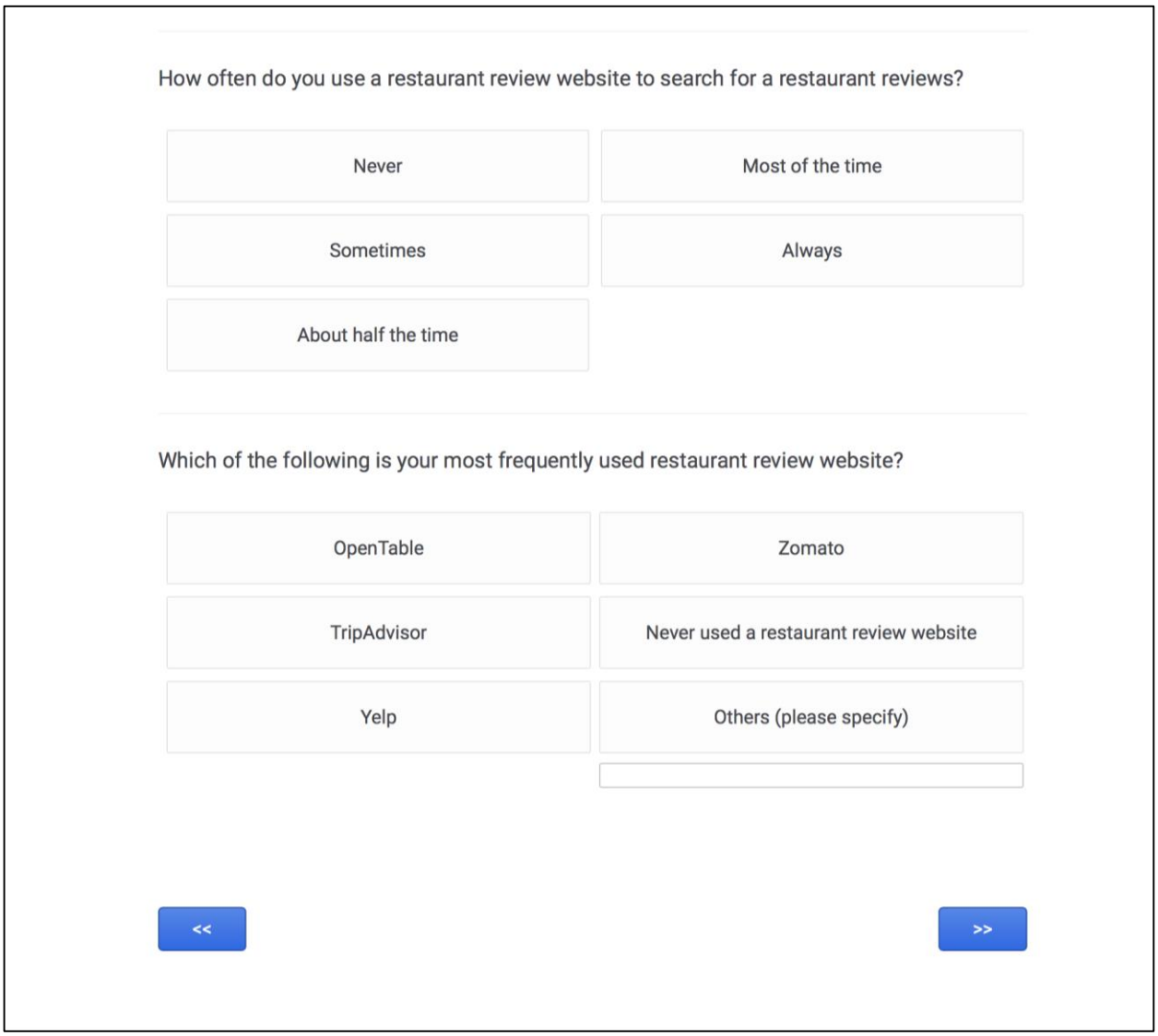
What is the highest level of education that you have completed?
Less than high school diploma
High school diploma
Associate degree (i.e. community college, technical school, two-year college)
Bachelor's degree
Graduate degree (i.e., Master's or doctoral degree)
Other (Please specify)
What is your marital status?
Single, never married
Single, living with a significant other
Married
Divorced
Separated
Widowed
What was your approximated TOTAL HOUSEHOLD INCOME last year (before tax)?
Less than $10,000
$10,000 - $19,999
$20,000 - $29,999
$30,000 - $39,999
$40,000 - $49,999
$50,000 - $59,999
$60,000 - $69,999
$70,000 - $79,999
$80,000 - $89,999
$90,000 - $99,999
$100,000 - $149,999
More than $150,000


How often do you use a restaurant review website to search for a restaurant reviews?
Never
Most of the time
Sometimes
Always
About half the time
Which of the following is your most frequently used restaurant review website?
OpenTable
Zomato
TripAdvisor
Never used a restaurant review website
Yelp
Others (please specify)
<<
>>

# APPENDIX I

## Interview & Focus Group Transcriptions

# In-depth Interview Transcription

*Interview Date & Time:* Friday 14th July 2017, from 10:00 a.m. to 10:40 a.m.

*Transcription Date & Time:* Sunday 15th July 2017, from 9:00 a.m. to 11:55 a.m.

[00:01:04.09] Interviewer: First of all, could you please tell me when and how often you use a restaurant review website?

[00:05:09.01] Speaker: I use those anytime that I'm going to go to a new restaurant. Most of the time I will use Yelp when I look up a new website. But I also use TripAdvisor, especially if I am going to a new area, like Nashville, or something. But I never go to a new restaurant unless I look up a review.

[00:05:10.03] Interviewer: Can you explain why you have to use a review website?

[00:05:41.07] Speaker: Well, you know, you spend a lot of money to go to a nice restaurant. If your meal is $20 or $30 dollars, and there have been times in the past before I used Yelp, I would go to a restaurant and it would not be very good or it wasn't clean, and you feel like you are wasting your money. When I started using Yelp I could look and see that all these people like it lately. And if they like it and it's that good then I don't feel like I'm going to be wasting my money going there. But if they give me bad reviews, then I'm like, well, that would be a waste of my money. I'm going to find something else that would be better.

[00:06:17.22] Interviewer: So you mentioned Yelp, what was the function in Yelp that you like?

[00:06:25.01] Speaker: My favorite thing is that I can look it up in a certain area. And then I can click what type of restaurant one, I could choose either restaurant or bar so that would be second, but I like location first. Then what I'm going to use what kind, maybe I'm looking for barbeque, or

maybe I'm looking for Asian food and I can click on that. And then I love to see the reviews that would be the next thing. But it's just very easy to use I can use it on my cell phone. And it's just quick and easy I can pull up the app, and boom boom, I'm done.

[00:07:07.17] Interviewer: So when you log onto Yelp and you search for a restaurant can you tell me in details as much as possible on how you access Yelp and navigate the website?

[00:07:28.15] Speaker: Yes, I go into I have the app. Before I didn't have the app and I just went onto the website. But now I have the app on my phone. So I go into it, let me pull it up and I can walk you through what I like to do. So I pull it up and I go into the app, the actual Yelp app and then the next thing I do is I click on the location. I don't do the part that says find what you will eat I just click on the "near" so if I'm in Asheville NC I will type in Asheville and then I hit the search button and everything pops up. So that's the first thing that I'll do. Everything will pop up in that area. Then I like to go in and narrow it down a little bit if I know exactly what I want to eat. If I don't know what I want to eat I let it pop everything up and then I just start to glazing because it will pop up the best reviews and then I'll start looking at those. It really depends on if I know what I want to eat or if I don't know what I want to eat. Sometimes when I go to a new city I don't really know what I want to eat and I'll just let it pop up and it will have the stars. Now when I look at the stars I like four stars and up and then when I'm looking at the money part, sometimes I click on the money I'll look at two dollars signs. I really don't eat three dollars signs and four dollars signs and I really never look at one dollar signs. Then when I look at the reviews say there's one that pops up here that has four stars but it only has eighteen reviews, and I'm like you know what that's not enough reviews. But then I can go on down, and oh here's another one that's four stars and they have 164 reviews. So I'm thinking that that is a much better place a lot of people go there,

there's a lot of good reviews, they got four and a half stars it has two dollars signs I think that I would like to go eat there.

[00:10:11.06] Speaker: So that's how I proceed through it. Unless again I'm going somewhere and it's known for barbeque then I will click on barbeque under restaurants. Because it's like if you go to Memphis you're supposed to eat barbeque therefore I want to find the best barbeque spot there is in Memphis.

[00:10:32.14] Interviewer: Next I have two questions. The first question is how many restaurants do you review and compare before you make a decision, and the second question is once you click on a restaurant how many reviews of that restaurant do you read before you make a decision?

[00:10:59.03] Speaker: When I click on one, usually like if I click on, so I'm clicking on one now that is a local restaurant that has 164 reviews. When I read it I will go down about 10 reviews, now I also look at the dates of the reviews, so if the last review was a year ago and it was a good or bad place then I'm like you know what things can happen in a year I don't think I'm going to go there because it was a year ago. But if there was one that popped up and it was like oh that just happened last week ok that's a good one and I'll look at the next one, ok that one happened the next week. I'll keep going down about 10 reviews but if there's a bad review then I'll say when did that one happen? Oh that happened a year ago? Its fixed because there's so many good reviews that was a long time ago, they fixed it. Now if a bad review is at the very beginning then I won't go to that restaurant. I will just click out of it and not even go to that restaurant. So about 10 but it really depends if there is a bad review at the beginning I will not even go. If there is not a bad review in ten spots then I'm going to go to that restaurant.

[00:12:31.18] Interviewer: So usually when we search for a restaurant, the website will provide a ranking for the restaurant from 1 to 10 to 20 to 100. What I want to ask you is do you just prefer the restaurants in the top 10 or do you read the reviews for the restaurants from 11 to 20 as well?

[00:13:06.25] Speaker: Well, it depends. If its showing a top 10 and they all have stars then I'm going to look at it. However, if I'm looking at a top ten and four of them don't have any stars then I'm going to go to the next ten. Because I want to see at least ten places with good stars in it. As I'm looking down through here and I'm like ok that place has four stars and it's in my price range but it has hamburgers and I'm not interested in a hamburger. The next place doesn't have any stars well I'm not going to look at it. The next one has a lot of stars, it's good but it doesn't tell me what food it is and I'll just keep looking down. But if the top ten shows up and its missing stars then I will just go onto the next ten. I will not go past normally two pages. Sometimes there are like hundreds of them but I will not go past twenty because most of the time I'm ready to go eat and I'm not going to waste my time sifting through 30, 40, 50. So 20 tops but only go to 20 if we are missing some stars on the first page in the top 10.

[00:14:35.14] Interviewer: Are the restaurants that you usually select in the top 5?

[00:14:48.27] Speaker: Yes. Usually the top 5 if they have some good ones in the top 5 but I might have to read all the way down through the 10 to see what do I really want to eat, how many stars do they have, how many dollars do they have? But sometimes if something pops up in the top 5 that sounds really fantastic and it got great reviews and it got a lot of reviews then I'm going to use it.

[00:15:22.18] Interviewer: So let me ask you in-depth about when you read the review. When you click on the restaurant there will different type of reviews: good reviews, bad reviews and

sometimes they have a review with photos. Does the photo have any influences on your decision or your feeling?

[00:15:44.25] Speaker: The photos do effect somewhat, I will probably click on a restaurant with four and a half stars that has a beautiful plated meal over a restaurant with four and a half stars that has a picture of the inside of the location. So I prefer to have a picture of the actual food that looks really good instead of what it looks like inside the restaurant. I definitely prefer to click on restaurants with food pictures over restaurants with outside or people or anything like that. I like to look at the actual food.

[00:16:32.10] Interviewer: When you navigate Yelp or any other restaurant review website how do you feel when you surf on the net?

[00:17:10.19] Speaker: When I'm searching for a restaurant review I'm feeling excited because I get to go out to eat that's not a fast food restaurant. It's more than just eating food it's an experience. So I feel excited that I get a brand new experience somewhere that I've never been before. Then I look at pictures of their food and I'm like oh that is amazing and I'd like to go there and experience that food and people have talked about it and we've had a great time or the service was fantastic or the food was great. So to me just going on Yelp and looking for something is basically for me, looking for a brand new experience in my life a brand new culinary experience.

[00:18:06.11] Interviewer: Since you have been using restaurant review websites, do you feel that there are any features of the restaurant review websites that TripAdvisor or Yelp don't have right now and you want them to add to their websites?

[00:18:32.25] Speaker: I guess if there was anything that I would want them to add to the website is, if this was ever featured on a food network show, or if a professional writer went in and wrote about this restaurant I would like to see that. For instance, there's a show on Food Network called

"Drive-Ins and Dives" and it's Guy Ferera. He has a TV show and he goes to all these restaurants all over the United States and he'll go in and he'll talk about the food and you can watch him on TV.

[00:19:17.25] Speaker: I wish that there was if I were looking at this restaurant I wish there was something that would say that this was mentioned on Food Network on so and so's show. Or so and so writer came in and did this show. Because if I knew that I would go there definitely. Because if it was on Food Network and someone said it was great I'm going to go. I would like to see professional reviews on it.

[00:19:53.07] Interviewer: So it could be for example a link to a video?

[00:19:59.19] Speaker: That would be fantastic. I was just thinking the same thing if there was a link then I would go watch that segment. And it's like well what did Guy eat while he was there? And then I would go watch it and oh that looks really good I think that I would like to go there and eat that. But that would help me in my decision too in my decision process. But I think that would be the biggest thing is if somebody has written about it in a magazine or somebody who is on TV has talked about it. I would love to see a link on there.

[00:20:33.14] Interviewer: Is there anything on a restaurant review website that you think is not necessary, or it shouldn't be included on the website or anything that you think it’s disadvantageous to the review website. Anything that you don't like?

[00:20:54.06] Speaker: Yes, what's interesting is sometimes when I pull up Yelp it will list a company and I click on restaurants and something will show up like a resort or a flooring company, or a self-storage, and I don't know what’s going wrong. I don't know what’s wrong on that. But I clicked on restaurants, I don't want to see some other type of business on there but I don't know why it shows up as a restaurant.

[00:21:28.06] Speaker: So that and I do like the maps though. But it would be cool if you went on and it would be like "can we access your location"? And you say yes and when you click on it would have "this is 1.4 miles away from you, this is 2 miles away from you, this is 3 miles away from you" it would be nice if they had that also.

[00:22:03.20] Interviewer: Ok last question, is there anything else that you would like to say about why you trust the reviews on Yelp over other websites, that can be Zagat, TripAdvisor but why do you trust the customer reviews on Yelp?

[00:22:26.18] Speaker: It seems like a lot of people have used Yelp, they have a lot of reviews. Everything is quick and easy to use. It just seems to be the standard in restaurant reviews. When I think of restaurant reviews my first thought is Yelp. Everybody's used it, everybody's familiar with it, my friends told me to use it to begin with and I just stick with it I don't change and go use anything else. I guess it really started with my sister-in-law saying "you need to go on Yelp and use Yelp" and I said OK and I just always use it. They've been in the news and stuff and I just seemed to trust that everyone's going in here, it's quick and easy for them to use and there it is. And they also had that app which is really nice and really quick and convenient. But the app makes it so much easier when you have your cell phone to use. But I guess that initially it was from that a close family member told me to use it and therefore I used it. And then other people said you've got to use it and I kept using it and I haven't wanted to change because it supplies all the needs that I have.

# Focus Group Transcription

*Interview Date & Time:* Friday 14th July 2017, from 1:00 p.m. to 1:40 p.m.

*Transcription Date & Time:* Sunday 15th July 2017, from 1:00 p.m. to 5:00 p.m.

[00:03:04.08] Interviewer: Speaker1, would you mind sharing your opinion when you think back to the past before you first traveled out of your hometown what was your dream tourist destination in the United States, and why?

[00:03:25.20] Speaker1: My dream destination when I first traveled outside of my city was Atlanta, Georgia.

[00:03:47.17] Interviewer: So what was the reason for that?

[00:03:51.01] Speaker 1: Because it was relatively close to my hometown but it was a huge city. It was a multicultural city that really drove me there. And plus it had a great nightlife.

[00:04:06.05] Interviewer: Speaker2, what about you?

[00:04:09.20] Speaker 2: My dream destination so far is Alaska. Because I just want to explore. Alaska is a mystery and I want to explore the nature.

[00:04:28.11] Speaker 3: What was the question again?

[00:04:32.11] Interviewer: So think back to your past before you first traveled out of your hometown. What was your dream tourist destination in the USA and why?

[00:04:47.13] Speaker 3: Seattle. I always wanted to go there as a destination first time I came to the US. I also like the movie and it was a dream city for my destination.

[00:05:05.05] Interviewer: And Speaker 4, what about you?

[00:05:08.15] Speaker 4: Mine would probably be the Hawaiian Islands because they still practice their culture and their very strong about it. And they still love their families and they are very close knit. I think that's cool and its gorgeous too.

[00:05:27.10] Interviewer: Ok thank you everybody let's move on to section two. I would like to ask about your personal dining preference when you travel somewhere in the USA for the first time would you please describe whether you spend some time to find information about restaurants before you decide to make a visit. What type of restaurant and food do you like and how much do you usually spend? Speaker 1, would you like to go first?

[00:06:22.16] Speaker 1: For me I love Thai and Vietnamese food. So I looked for a very good Vietnamese restaurant in Atlanta. In order to do that I actually asked some locals in the area as to what their favorite Vietnamese restaurant was. That's what I did. I selected a restaurant from word of mouth based on suggestions from other people. On average I probably frequented that restaurant for lunch probably two or three days a week so I'm going to say about $50 a week is what I spent there on average.

[00:07:06.20] Interviewer: So how do you usually obtain this information? Do ask people for their opinion?

[00:07:15.26] Speaker 1: Yes, I always ask people who are local to the area what their favorite places are to eat. And then if I have a type of restaurant or brand of restaurant that I'm looking for I'll ask specifically about that. And then I'll take what recommendations they give me or I usually look to see if they are really excited about it or if they would recommend it that kind or thing and then I'll go and visit.

[00:07:42.22] Interviewer: And Speaker 3, how about you?

[00:07:44.25] Speaker 3: For me, I like to search on Yelp. For example, if I'm staying in Seattle and I don't know where I'm going to eat I just search on Yelp first. So like for me, I like Asian food and I like American foods as well. If I know someone in Seattle, then I can ask someone can you recommend some food for me they are going to recommend some Asian food restaurant. But if I want to try some American food then Yelp will be the best choice for me. So if I look at Yelp then a photo will be my first major point for me to look at and also the ranking from the stars and of course dollars. So would like to spend roughly around $50 but for a normal meal $20-$30.

[00:08:42.21] Interviewer: Speaker 4, what about you?

[00:08:46.09] Speaker 4: So, we usually try to get whatever we can't get at home. So I'll just google whatever we're feeling. If we are at the beach, I'll just google seafood places. And then whatever will pop up so it's usually Yelp is what we'll get. And because Yelp also has pictures and I like to visually see what they serve and then kind of see the atmosphere as well. I'll spend around $25-30 when we go to eat.

[00:09:17.10] Interviewer: Speaker 2, could you explain about the restaurants that you like?

[00:09:44.16] Speaker 2: So, when I travel I always look for the Asian restaurant. If they don't have an Asian restaurant I may try a local restaurant. I always search on google to see if they have a decent number of google reviews. If a restaurant with a high 5-star review only has been reviewed by 10 people, then I may not go. I will always search for a restaurant with many reviews and at least 4 to 5 stars.

[00:10:27.22] Interviewer: So how much do you usually spend per meal?

[00:10:32.20] Speaker 2: So for lunch I may spend $20 and for dinner $30.

[00:10:40.26] Interviewer: Some of you have mentioned about a restaurant review website, could you share your opinions of your favorite restaurant review websites, and what features of the

website do you like most? Speaker would you start? You mentioned Google, what feature of Google do you like most?

[00:11:14.17] Speaker 4: I like how it just pops up automatically, you don't have to click around ads. When you get on Yelp if you don't have the app you can only go so far before they want to download the app. With Google you can just look at what you need to know and you don't have to download anything extra.

[00:11:31.10] Interviewer: Is there anything that you would like to add in the future that you want Google to have this function for you?

[00:11:39.21] Speaker 4: Most of them if you go on the restaurant you can look at their information like their hours and their prices and it pops up and some it doesn't say that at all once I clicked on it. I like how if they were more consistent to add everyone hours and things without having to actually go to their website or search around for it.

[00:12:03.04] Interviewer: Speaker 2, you also mentioned that you like Google. Can you tell me the features that you like about Google?

[00:12:11.11] Speaker 2: I think that Google has very simple features. It helps you to navigate the review very well. They have the feature to allow the user to upload the photos and they also provide the basic information about the restaurant

[00:12:35.20] Interviewer: Speaker 3, you mentioned Yelp. Can you tell us about what functions you like about Yelp?

[00:12:44.04] Speaker 3: There are more options, where you can choose what kind of cuisine you like and the nearby function is very useful. I recently just realized when you look at the website, it can locate your space and it can show you how to go the restaurant and show you what's nearby a function I really like.

[00:13:05.29] Interviewer: Speaker 1, since you didn't mention a restaurant review website I would like to ask if you have ever used this type of website to help you find information for a restaurant?

[00:13:12.12] Speaker 1: Can you repeat the question please?

[00:13:29.11] I: My question is since you mention normally when you travel you ask local people about a good place to eat I would like to know whether you have ever used a restaurant review website like Google or Yelp?

[00:13:50.10] Speaker 1: Yes. I've used Google and I find the website on TripAdvisor very useful for reviews. It lets you be interactive with the website and it talks about popular cuisines near me. I like that feature.

[00:14:10.23] Interviewer: Let's move on the last section of my focus group. I would like you to tell me, before you make a decision to visit a restaurant, and you use a restaurant review website, I would like to know how many reviews do you usually read and compare before making a decision. And which part of the review influences your decision the most? That could be rating, ranking, photos of food, positive or negative word of mouth or number of reviews. Could you please describe your opinions? Speaker 4, would you please start?

[00:15:02.25] Speaker 4: I usually look at the top negative reviews more so obviously you are going to look for the more positive reviews that outweigh the negative. Photos also help me so I can visually see enough. So if there are a lot of reviews like if a restaurant has 100 reviews I'll read about 10 to get the feel of it. If they don't have that many reviews, then I don't really worry about the restaurant because a lot of people review nowadays. And with their reviews I can also get tips maybe they specialize in a certain dish that I may want to try.

[00:15:48.19] Interviewer: You mention photos. Could you be more specific about what type of photo that you look for on the review that might influence your decision?

[00:15:59.07] Speaker 4: Any photos of the food. If there is something that looks good on the menu like fettuccini I'm going to want to look at a picture of fettuccini rather than pictures of the restaurant. I'd rather see pictures of the food than the restaurant.

[00:16:15.08] Interviewer: Ok, thank you. Speaker 1, how about you?

[00:16:19.19] Speaker 1: When I look at these websites the thing that strikes me the thing that I look at the most would be negative reviews. The negative reviews actually have maybe commentary under the negative review where people have actually experienced the same thing almost like a reply. And if the reviewer actually posts a photo of themselves I think that many times people will complain about stuff they do it because of anonymity. If they have a picture of themselves up there that it good. As far as the number of reviews anywhere from 7 to 10 is the number that I would read out of any of the websites.

[00:17:14.29] Interviewer: Ok. Speaker 3, could you explain your opinion?

[00:17:20.18] Speaker 3: Yes, so for me for example on Yelp I would read the reviews and read the highest reviews. I would also read the one star and two star reviews to see why they were given such low reviews. Also for the photos I would look at the photos and the menus and meals. I would also look at the food, what type of food they have and see if some people are going to post a picture of the kitchen. I want to see what kind of the environment is very important for me. Also the condition of the restaurant is another option for me to read the reviews and look at the pictures. For the ratings, so example if 100 people give four stars on Yelp, of course, it will be a good restaurant. If you have 10 people review and give it 2 stars or 5 stars either it is not popular or there is something wrong with it. This is what I use the reviews on Yelp for.

[00:18:36.29] Interviewer: OK. The last person, Speaker 2, could you tell me about your opinion?

[00:18:42.12] Speaker 2: Yes, I may check for 5 reviews for one restaurant. I always check the positive and the negative. For the negative, I especially pay attention to whether or not the negative review is about the food, is about food quality or something. I also check the photos of the food. If the review is good but the photo doesn't look good, then I may not go.

[00:19:18.19] Interviewer: (Interviewer's closing remarks).

# VITA

Prawannarat Suntithammasoot Brewer was born in Nakhon Pathom, Thailand. She graduated with a Bachelor of Arts in Art History from Silpakorn University, Thailand in 2004. She also received a Master of Business Administration in Hotel and Tourism Management from Silpakorn University, Thailand, and a Master Economié et Management du Tourisme from Université de Perpignan via Domitia, Perpignan, France.

She completed her Ph.D. in Hotel and Tourism Management at the University of Tennessee, Knoxville in 2017. During her doctoral program, she served as a Graduate Student Advisory Board Representative of College of Education, Health, and Human Sciences. She volunteered in numerous food and beverage events for the RHTM Department and the University of Tennessee, and she was also a guest chef-instructor for a collaborative program of the UT Hospitality Program and the Culinary Institute of Pellissippi Community College.

Prawannarat was awarded with the RHTM doctoral research scholarship, graduate teaching assistantship, ESPN scholarships, Ida A. Anders scholarships, Julius McEroy scholarship, and Helen Sharp Hakala award. In summer 2016, she applied for an internship at the UT Center for Sports, Peace, and Society which later has become her current full-time job. She assists the team in running the U.S. Department of State Global Sports Mentoring Program that committed to empowering underserved communities worldwide through sports by building an international network of leaders, athletes, coaches, educators, and advocates promoting equality and inclusion.