東海大學餐旅管理學系碩士論文

會議餐飲服務對社交互動之影響

The Influence of Food and Beverage Service on Social Interaction in a Conference

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THE INFLUENCE OF FOOD AND BERVERAGE SERVICE ON SOCIAL INTERACTION IN A CONFERENCE

ABSTRACT

During the last several years, there has been a growing interest in the field of MICE industry. In general, most of the issues focus on location selection, the image of convention city, and decision making. Previous researches have appeared that tackle the issue of social networking in MICE industry. Moreover, there has been a considerable concern in the relationship between social interaction and food & beverage service in a conference. The aim of this research is to explore the influence of food & beverage service on social interaction in a conference.

An increasing attention has been given to the networking establishment in the related literature of MICE industry in recent years. Food and beverage service in a conference are usually presented in the forms of banquets, cocktail gatherings and coffee/ tea breaks. The food and beverage service

become relatively important for the soul to relax and enjoy the fellowship after all day of learning. This social interaction let the participants greet each other and create new chances of networking. The social interaction at the personal or academia level is an important spirit of a “face to face” meeting. The inter-relationship between food and emotion suggested that sensory experience led to an arousal psychological state. In this study, food and beverage service quality were divided into three dimensions as “food”, ”service” and “physical environment”, which were evaluated for its influence on social interaction.

A survey was conducted to identify the factors of food and beverage service quality that effect the social interaction in a conference. Two hundred and twenty seven participants who have been attended in conference were the surveyed samples in this study. The analysis was conducted with the SPSS software package. The data was analyzed by descriptive analysis, Pearson correlation analysis, ANOVA, T-test and regression analysis.

The results demonstrated that food quality, service quality and physical environment quality were significantly correlated with the social interaction. These empirical findings contributed valuable information for conference planner or the hospitality industry to arrange the food and beverage services

better in a conference.

Keywords: food and beverage service, social interaction, symbolic interactionism, conference

會議餐飲服務對社交互動之影響

中文摘要

在過去的幾年裡，會展產業之相關研究日益引起關注和研究熱潮。就目前來說，以往研究會展產業的主軸大多集中在會議地點選擇、會展城市形象關切和籌辦會議決策過程等。此外，更有相關研究提出會議在餐飲服務提供中與會者之社交互動、人際關係建立發展熱絡，此現象也受到相當的關注重視。本研究目的是探討會議餐飲服務對於會議與會者社交互動之影響。

會議餐飲服務通常提供自助百匯、雞尾酒聚會、茶會等形式。與會者在經歷會議一整天密集的會議行程、討論會以及積極學習之後，餐飲服務成為相當重要提供精神與生理上放鬆和享受的時刻；在這個特別的時刻更容易促使與者者間互相熱情問候，並創造新的互動時刻。 “面對面之交流”的特質使會議成為不可取代的溝通模式。不論是學術交流或社交互動都對與會者有極大的助益。觀察發現會議餐飲提供是與會者社交互動最為頻繁之時刻，故進而引發研究興趣，亦有研究指出食品的感官體驗會導致人們心理層面正面情緒或是興奮狀態。故在這本研究中，

將會議餐飲分為三個層面:食物、服務和環境品質，並進而評估各元素對會議與會者社交互動的影響。

為確定會議餐飲品質如何影響與會者之社交互動，總計有227研究樣本參與本研究，數據分析方法包含描述性分析、t檢驗、ANOVA、Pearson相關分析、迴歸分析以及因素分析等，深入探討影響之層面。

研究結果證明，食物品質、服務品質和實體環境品質顯著影響與會者之社交互動。其中更以實體環境品質影響最大。實體環境品質更可進一步粹取出硬體環境特質及社交特質；而硬體環境特質與社交特質對與會者感受的社交互動有顯著的交互作用。也就是說硬體環境特質與社交特質會互相影響與會者的社交感受。這些研究結果實證有助於會議規畫師或是飯店產業在於安排會議餐飲服務上，可以針對影響顯著的元素加強規劃，更能提供適切於與會者之需求。

關鍵詞：餐飲服務，社交互動，符號互動理論，會議

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CHAPTER 1 INTRODUCTION

Meeting, incentive travel, convention and event/exhibitions (MICE) industry is one of the fastest growing and most profitable areas in the global tourism industry (Fawzy & Samra, 2008; Rogers, 1998). The MICE industry can provide important sources of economic input and provides a lot of opportunities for peripheral industries in a country (Oppermann & Chon, 1997). There are many related industries working in cooperation for achieving the success of a conference including travel, food & beverage, accommodation, transportation, media, interpretation/translation, conference planning, publishing business, office supplies … etc.

Besides the positive economic impact, the destinations could earn good reputation around the world through holding conferences. The MICE industry brings no pollution to the environment and offers positive contribution to the society. The international participants who participated in MICE events were usually in better social economic status and travelled frequently. Therefore, they could bring positive social economic benefit. In this point of view, MICE related researches have become more popular and expanded in wilder scope.

According to the response from the market survey of convention / meeting planners, the average budget of meeting exceeded $2.5 million in 2009 (Russell, 2010). Following the growth of MICE industry, the market of conference planning becomes more competitive. Conference organizers tried to attract the same group of people in a certain society to attend their meetings. Participants are usually impressed with

non-traditional forms, unique venues for unforgettable memory. According to annual meetings market survey reported association and independent meeting professionals indicated that the food and beverage accounted for 28% the single largest portion of expenses at their largest 2005 event (Russell, 2006); this figure increased to 31% in 2006 (Russell, 2007). For this reason, the service of food & beverage is an important factor and should not be underestimated in the conference industry. An article in Food Management (2007) stated that there were five future trends of food and beverage service in a conference: sustainable cuisine, formal menu tastings, display cooking, smaller and more complete portions, and full-service package solutions. In line with the trend, the experienced participants start to pay more attention on refined food and beverage service and expect unique experiences in a conference.

Severt, Wang, Chen and Breiter (2006) indicated that the motivation of participating conferences were activities and opportunities, networking, convenience of attending conference, education benefits, and products and deals. Most of the international conferences will try to fulfill all these elements in the agendas during the length of 4-5 day meeting to facilitate maximum effect. Under intensive conference agenda, the participants could only take a break and interact with others during the coffee break and the dining time. Coffee break and banquet time become relatively important for the soul to relax and enjoy the fellowship after all day of learning. These social opportunities will familiarize the participants with each other and create new networking. In addition to the core agenda, conference planners usually arrange local

tours, performing program and art activities, to bring the local taste and introduce the culture to the participants. Besides the formal discussion during break-up sessions, these arrangements could enhance the social interaction among participants.

The future service quality trend of food and beverage services diffuses in conference industries including refined food presentation, atmosphere of environment, good service (Food Management, 2007). Kim, Lee and Love (2010) found that good food and beverage service was a key element to create memorable experiences in a conference. Enjoying good food and nice atmosphere could be relaxing, thus induce interaction with others easily. Social interaction was often an important benefit for participants from a serious conference. Severt, Wang, Chen and Breiter, (2006) and Whitfielda and Webberb (2010) indicated that networking was important as one of the reasons for re-attending the same conference or exhibition. Despite of the growing numbers of research on conference related topics, most of them focused on site selection, motivation of attendance and some on economic impacts. Few researches explored the in-depth effect on social interaction beside the main purpose of learning.

CHAPTER 2 LITERATURE REVIEW

Important Criteria of Evaluating Conference

There are three important parts in the convention industry: client-side (i.e., corporate, association, participants), intermediaries (i.e., non-profit planners, independent meeting planners and destination management companies), and suppliers (i.e., convention centers, hotels, convention and visitors bureaus). Severt and Palakurthi (2008) stated that the concept of "consumers" in convention could refer to participants and exhibitors (end-users) and meeting planners (intermediary consumer). Boo, Koh and Jones (2008) indicated that previous studies were conducted from the aspects of intermediaries with their decision-making or suppliers with their management strategies. There were limited studies focused on “attendees” (Breiter & Mihnan, 2006).

Meetings could be generally categorized into association and corporation meetings. The expenditure of association meetings dominate the convention and meeting market, accounting for 74 % of total meeting expenditures, and 78% of all participants (Lee & Back, 2007). Generation of registration fees from participation was the major source of revenue. Consequently, satisfaction of participants was a good indicator for the registration rate of the same conference in the coming year. Thus, participants are the key customers in the convention and meeting market. In order for a conference to successfully attract its customers, it is crucial to fulfill their demands. The important criteria of evaluating conference participation have been examined in Table 1.

Table 1 Important Criteria of Evaluating the Quality of a Conference

Authors (Year)	Criteria
Hinkin & Tracey (2003)	Security
	Staff
	Guest rooms
	Food and beverage
	Meeting rooms—physical
	Convenience
	Public areas
	Recreational amenities
Robinson & Callan (2005)	Competence
	Tangibles—other
	Service providers
	Price / Value
	Tangibles—Bedrooms
	Meeting room tangibles
	Access
	Additional services
	Leisure facilities
	Location and image
Breiter & Mtlman (2006)	Cleanness of convention center
	Well-maintained facility
	Helpfulness of guest services/personnel
	Directional signage
	Availability of high-quality
	Lodging near the convention center
	Sufficient restrooms
	Ability to get cell phone signal
Severt, Wang, Chen, & Breiter (2007)	Convenience of attending conference
	Education benefits
	Products and deals
	Networking
	Activities and opportunities
Lee & Back (2007)	Accessibility
	Hotel facilities available at the destination
	Tourist attractions
	Desirable weather
	Good food
	Safety / security
Whitfielda & Webberb (2010)	Products
	Networking
	Information
	Reputation

Hinkin and Tracey (2003) stated that food & beverage could drive meeting effectiveness; Lee and Back (2007) suggested that good food could enhance participations' image on the destination; Robinson and Callan (2005) found that additional services and service provider such as flexible menu, tea/ coffee/ soft drinks available all day, and satisfactory quality of food for the price were important selection attributes for UK conference delegates. It is suggested that food and beverage has shifted its role from a supportive actor to somewhat like a facilitator in a conference for the lubricating effect or a form of experiencing the local food culture. Breiter and Mtlman (2006) indicated that helpfulness of guest services / personnel and availability of high-quality were the one of participants' needs and service priorities in a large convention center.

Participants' basic requirement on consistent conference quality is the same no matter where the conference is held. The participants not only concern about tangible attributes (i.e., facilities, site selection) but also consider intangible attributes (i.e., service, networking, and friendly server) as a whole (Severt, Wang, Chen, & Breiter, 2007). The development of tangible attributes in convention industry is always in progress; on the other hand, intangible attributes become the competitive essential for winning the participants. Providing standardized yet impressive experience throughout the entire conference is critical to satisfy conference participants. Quality of food and beverage services was a way to create exciting and memorable events (Kim, Lee & Love, 2010). A further interpretation of the study from Oliver and Wardle (1999) about

effect of snacking behavior on perceived stress relief. This phenomenon is related to the importance of offering coffee/snack break during the conference.

Conference Food Service

Conferences are designated for discussion, fact-finding, problem solving and consultation. In contrary to a congress, a conference is normally smaller in scale and more selective in their characteristics/features to facilitate the exchange of information. Though it is not inherently limited by the duration, conferences are usually of limited duration with specific objectives (ICCA, 2010). No matter what is the purpose of attending a conference, after a solid day of meeting, the participants usually look forward to the coffee time or the meal time. In general, the dinner banquet will let participants experience local delicious cuisine; as compared with the serious conference agenda, conference food service could be offered in a more creative and interesting forms.

Adding creative idea to food service is trying to enhance the social effect among the participants and the destination image. The social effect can be categorized into two parts: mood evaluation and social interaction. In tourism industry, Nield, Kozak and Le Grys (2000) indicated that food service was an important contributor to tourist satisfaction. Quality of food, value for money, variety of dishes, attractiveness of surroundings and presentation of food were the attributes that affected the overall food

service experience in the tourist destination. Although the meal might not be the focus of the trip, it would definitely play the role of highlighting the event. Food service is a crucial part in a travel experience. It either plays a role of fulfilling the physiological need or even becomes the purpose of a trip in the gastronomy tourism. The inter-relationship between food and communicative function was explored by Salvya (2007). The components of different foods not only had the effect on the physiological function, the sensory experience also led to an arousal psychological state. In a food service setting, what has been provided is a comprehensive experience including the tangible products and the intangible service in a certain atmosphere.

The food and beverage services in a conference are usually presented in the forms of buffet or full service set meal under the environment from indoor ballrooms to outdoor country yard settings. Coffee/tea breaks remain pretty much the same form by providing caffeinated drinks with various kinds of snacks and desserts to boost up the energy level. Alcoholic drinks are usually served during the ice breaking gathering or the social hours before the dinner is served. A small amount of alcohol was recognized as a social facilitator in a gathering, Tumwesigyea, Kasiryeb and Nansubugac (2009) found the stronger the social interaction the more the likelihood of taking alcohol frequently in Uganda. In line with the functionality of the food ingredient, the selection of food and drink might influence the social effect. Robelin and Rogers (1998) found that caffeine significantly increased energetic mood and improved psychomotor performance. This further support the adequacy of providing caffeine contained

beverages such as coffee, tea and coke in the conference coffee break section. In this sense, the core characteristics of food and drink are composed of the taste and the functionality. Good experience of food service can definitely enhance satisfaction level of an activity, deliver a sense of relaxation and enhances social interaction for the participants.

There were at least four major concurrent context effects that can alter the perception of food and beverages during consumption: meal component, social interaction during consumption, the environment where food was consumed, and selection of food (King, Weber, Meiselman, & Lv, 2004). Murphy (2001) indicated that social interaction often occurred among backpackers in the eating area in the hostel. As a result, social interaction is aligned closely with food service quality. Besides food catering, the integration of the service, environment and food is the comprehensive food service experience in a conference. It could further acts as the facilitator to initiate the overall conversation or even smoothen the tension after the negotiation process.

Food and Beverage Service Quality

Ha and Jang (2010) stated that customers' judgment of the overall excellence of the service defined the service quality. Service quality is the customer's subjective evaluation formed by comparing expectations and perceived performance. Erto and Vanacore (2002) also summarized the common way of accessing customers' perception of service quality is the difference between what they received and what they expected.

Service quality management has been widely applied in many industries to improve tangible or intangible products, such as airline, restaurant, hotel, manufacturing… etc. Professional service was indicated as one of the criteria that participants would consider when making a decision of attending a conference or not (Robinson & Callan, 2005; Breiter & Mtlman, 2006). The services identified as a major convention tourism asset were overlooked by only considering the professional conference arrangement (Breiter & Milman, 2006). The comprehensive meaning of the service in a conference should include all the services provided for the overall experience of the meeting from knowledge exchange to food and drink.

Table 2 Attributes of Service Quality in Hospitality Industry

Authors (Year)	Attributes
Parasuraman, Zeithaml & Berry, (1985); Kim, McCahon & Miller (2003)	Reliability Responsiveness Empathy Assurance Tangibles
Madanoglu (2004)	Physical quality Staff behavior / attitude
Juwaheer (2006)	Reliability Extra room amenities Staff communication skills and additional amenities sought Room attractiveness and décor Empathy Food and service related Hotel surroundings and environment
Chowa, Laua, Lob, Shac, & Yund (2006)	Interaction quality Physical environment quality Outcome quality
Njite, Dunn & Kim (2008)	Customer relations Employee competence Convenience Atmosphere Price
Abdullah & Rozario (2009)	Place/ ambiance Food quality Service quality
Ha & Jang (2010)	Service quality Food quality Atmosphere

Attributes of service quality in the hotel & restaurant industry are shown in Table 2. Parasuraman et al. (1988) developed the SERVQUAL as an instrument to measure service quality. SERVQUAL consists of five dimensions: reliability, responsiveness,

empathy, assurance, and tangibles. Numerous studies have applied SERVQUAL since its first development to assess service quality in service-related situations. Madanoglu (2004) categorized restaurant service quality into physical quality and staff behavior / attitude. These dimensions of service quality were used to evaluate the quality of hospitality settings. Chowa, Laua, Lob, Shac, and Yund (2006) applied Brady and Cronin's (2001) concept of service quality comprising three dimensions (i.e., interaction quality, physical environment quality, and outcome quality) to investigate the service quality in Chinese restaurant. Abdullah and Rozario (2009) categorized service quality measurements into three parts in the hotel industry: place/ ambience, food quality and service quality. Ha and Jang (2010) applied service quality, food quality and atmospherics to find effects of service quality in an ethnic restaurant. In line with the finding of these literatures, customers emphasized both the importance of the quality of the core product, the food, and the setting they were enjoying the food in. Sometimes the tangible elements are used for customers to evaluate the quality of a restaurant even before they stepped in the dinning place since the apparent parts are easier to access before they pay the money and actually try the food. And, usually a restaurant with good quality is considered to be balanced in all domains.

Therefore, total foodservice in the restaurant industry encompasses both tangible (food and physical facilities) and intangible (employee–customer interaction) components which could be well categorized into three categories: 1. food quality, 2. service quality, 3. environment. A proper balance between the tangible and intangible

aspects should result in a customer's perception of high restaurant service quality, which would lead to attaining customer satisfaction and positive purchase intention in the restaurant (Ryu & Han, 2009). The food and beverage services in a conference are usually presented in different forms; however, the participants might expect the same quality as in a restaurant. As a result, the food and beverage services quality could be measured by tangible and intangible components in conference.

The meeting planners intended to provide relaxing environment and atmospheres for participants during the break. Mehrabian and Russell (1974) indicated that according to environmental psychologists, the physical environment affected customer behavior by eliciting two forms of behavior: approach and avoidance; approach behavior included all the positive behavior that might be directed at a particular place, such as the desire to stay, explore, work, and affiliate; avoidance behaviors referred to the opposite of this behaviors. In actual service settings, the examples of environmental cues are used to change behavior are numerous, for example, it is not uncommon for bakeries in shopping malls to increase levels of fragrance (e.g., coffee) in freshly baked products to attract consumers (Njite, Dunn & Kim, 2008). Consumers' attitudes are influenced by physical setting in which they interact. Music, décor, lighting and sound can elicit consumers' emotional responses, that are stimulus to affect the emotional states of pleasure and arousal (Magnini & Thelen, 2008; King, Weber, Meiselman & Lv, 2004). It was pointed out environment setting could affect people directly; good environment could lead people to positive behavior or emotion.

Ruetzler (2008) stated the most important attributes to the cafeteria customers were food quality. Njite, Dunn and Kim (2008) summarized food attributes have been identified as the most important for restaurant customers in deciding where to dine; relative importance of service attributes in upscale restaurants, food quality took 39% of total variation for pleasure occasions. Food quality is also appeared to have an important role in tourist satisfaction (Nield et al., 2000).

The service quality is the difference between a customer's perceptions and expectations (Gil, Hudson & Quintana, 2006). Parasuraman et al. (1988) developed SERVQUAL as an instrument to measure service quality that is usually applied in the hotel not suitable for food service. Huang (2003) found that restaurant service quality has recently become a global topic of enquiry, as researchers and experts engaged in finding the best way of measuring or improving service quality for food service industry from such different aspects as customers' expectation vs. perception. Managers and service providers suggested that restaurant service quality has typically different types of attribute variables that related to the components and concepts of service (Ryu. & Han, 2009; Abdullah & Rozario, 2009; Ha & Jang, 2010). Physical environment, food and service are appropriate dimensions to investigate food quality in a conference.

Symbolic Interactionism

Symbolic interactionism was first studied in the theory of pragmatism by William James, John Dewey, and George Herbert Mead (1934), and carried forward to the "Chicago School" of sociology that included Robert Park, W. I. Thomas, Charles Cooley, and Herbert Blumer among others (Burnier, 2005). Mead (1934) contributed the most to symbolic interactionism by defining the nature of interaction as sending signs and attitude. These symbols became languages which were used in human society to construct reality. Symbolic interaction examined language and habitual behavior as it reflected the unspoken rules that govern how people are expected to "act" in various social circumstances (Manis & Meltzer, 1978). The concept of symbolic interaction suggested that human with social interaction (or conversation of gestures, manipulation of symbols, words, meaning, and diverse languages) created an image of a structure within the individual and collective cognitive framework. This frame work consisted of the norms and values of a society as a whole (Mead, 1934; Denzin, 1972). It is indicated that human social interaction is transmitted by symbols.

Social interaction was defined as the interdependence of activities through the dissemination of information (Kemper, 1978; Lamb, Suomi & Stephenson, 1979). It was the dynamic relationship happening during the process of communication, interaction among various society units with mutual influence. The human in group or organization still needed to intercourse for the common interests, who might have conflicting goals in the long run (Turner, 1998). The desire of accomplishing their

mutual interests facilitated the beginning of social behavior to generate further social interaction. Social interaction is the fundamental process in human society; all social relationship and human organization model are involved in the symbolic interaction process which is defined as any feature sending the information among people such as gesture, smile, touch, language…etc. In a conference, the participants interact with each other through sharing information or exchange opinions representing intensive interaction. They interact by conversation of gestures, manipulation of symbols, words, meaning, and diverse languages. This transmission of symbols is symbolic interactionism.

Symbolic interactionism theory focuses on how an individual intepretates specific social situation and presents personal message or to response the others' message. It is a part of social interaction theory; social interaction suggests that the process and symbolic interactionism is an intermedium of interaction (Manis & Meltzer, 1978). Symbolic interactionism represented a "relatively distinct approach to the study of human group life and human conduct" (Blumer, 1969); it concerned with the emergence of meaning in human interaction; meanings were the definitions that individuals attach to the full range of objects (i.e., physical, social, cultural, political) that comprised their life (Burnier, 2005). An individual described in symbolic interaction has to be the subject to feel or perceive the language either by oral or gesture. Interactionists viewed individuals as active interpreters of the world around them. Individuals were considered actors in situations, and they acted on the definitions

they assign to the persons, objects, and events that comprise the situation (Mead, 1934; Solomon, 1983; Hewitt, 2000; Burnier, 2005; Lynch & McConatha, 2006). The three elements are the objects, the individuals and the cognition in the process of symbolic interaction. It can be viewed as an actor playing in a situation, who will perform differently according to the definition of the role and interaction with the scene and other actors.

Denzin (1972) & Hewitt (2000) concluded that symbolic interactionism posited individuals often organizing their conduct in accordance with their expectations of others and depending upon their familiarity with the situations. Consequently, definitions and meanings attached to situations often govern individual and group behavior. Three basic premises of symbolic interactionism were: (a) human beings acted toward things/experiences on the basis meanings and granted the capacity to engage in "minded", self-reflexive behavior, and (b) the source of the meanings for things/experiences were derived from or arises out of social interaction with others; interaction was seen as an emergent, negotiated, often times unpredictable concern, and (c) the meanings of things/experiences were sensed, known and undererstood, handled in and modified through an interpretive process used by the individual in dealing with the things he/she encountered (Denzin,1972; Hewitt, 2000). Each of the basic premises and postulates of symbolic interactionism may be demonstrated social interaction experience in conference. Armstrong (2007) referred symbolic interactionism as an interactionist theory, which helped to illuminate how human beings define their

experiences and give meaning to their identities, behaviors, realities, and social interactions. Although the reality as a social production was one of the primitive assumption besides humans and interactions (Denzins, 1972), symbolic interactionism has evolved primarily at an abstract level, with relatively little emphasis on empirical validation of its propositions (Solomon, 1983). This study is to adapt the concept of symbolic interactionism theory to measure social interaction among participants in a conference. It attempts to compare the effect of social interaction in different forms of food and beverage service. These different forms of food and beverage service are the defined situation catalyzed social interaction. The environment, food and service are the symbolic objects served as the facilitators during the process of social interaction.

The frequency and impact of oral interactions between consumers (who were strangers prior to entering the service delivery system) is underestimated by academics and practitioners (Harris & Baron, 2004). Njite, Dunn & Kim (2008) indicated survey-based studies of customer satisfaction and the human interaction element of service delivery are essential to the determination of customer satisfaction. They concluded that customer relation is perceived as the most important attribute more important than any other restaurant performance attribute. In fine dining restaurant, the atmosphere of environment can also impact the quality of the social interaction between the customers and employees. Harris & Baron (2004) compiled service consumption in many on-site settings takes place in the presence of other consumers, so consumer-to-consumer (C-to-C) conversations frequently occur. Zhang, Inbakaran

& Jackson (2006) found the higher intensity of social relationship between hosts and tourists, the higher was satisfaction of these tourists with their stay and experience. Evidence in the literature on backpackers and budget tourists indicated that social interaction and meeting others is an integral part of the experience, and this plays an important role in the passing on of information (Murphy, 2001).

The fine dining restaurant industry is characterized by person to person interaction and the recognition of this encounter and its importance is especially relevant in situations where the service component of the total offering is a major element of the product (Njite, Dunn & Kim, 2008). The social interaction is also a key point to influence tourists on their choices, satisfaction and emotion in tourism. The social interaction between customers and service providers, tourists and hosts, therefore needs great attention.

Food is obviously used to satisfy the body's needs, but it can also serve a communicative function (Salvya, 2007). De Castro (1997) investigated food diary studies have shown that more food is consumed by individuals in a group than by individuals alone, the so-called social facilitation effect. Murphy (2001) interviewed backpackers found that eating and common areas were most often mentioned as the places with in hostel where they most often interacted with others. As a result, eating and food was facilitator when interaction occurred.

Gahagan (1984) who identified two levels of social interaction: co-presence and focused interaction. Co-presence is defined as the minimal level of social interaction

which occurs when two or more individuals signal (through their bodily and facial demeanor, the use of space, or any other means) their awareness of one another's presence and their accessibility to one another should the circumstances arise (e.g., people in a waiting room); intense interaction occurs when people gather together and cooperate to sustain a single focus of attention as in conversations, games, and transactions in shops (Gahagan,1984). In conference, the participants interact with each other through sharing information or exchange opinions that present focused interaction. Food and social interaction have mutual effect. Levy (2010) summed up four items to check social interaction, such as friendliness, opportunity for conversation, group cohesion and meet new people. The items measure interaction time, touching of frequency or conversation opportunity.

The aim of this study is to explore the influence of food and beverage services on social interactions among participants in a conference. Based on this purpose, the objectives of this research are stated as follows:

1. Apply symbolic interactionism theory on conference participants' social interaction
2. Provide better clue for professional convention organizer, meeting planner and owners to implement more appropriate food and beverage service setting to enhance social interaction in a conference.

CHAPTER 3 METHODOLOGY

Research Construct

The participants might expect the same quality as in a restaurant. As a result, the food and beverage services quality could be measured by tangible and intangible components in conference. Based on the related studies of Pizam and Ellis (1999) stated that material product, environment, behavior and attitude could be adapted to measure customer satisfaction in hospitality enterprises. This study evaluates the effect of social interaction in a conference by defining the different forms of food and beverage service. These different forms of food and beverage service were the defined situation catalyzed social interaction. The hypotheses were proposed in Fig. 1:

Hypothesis 1: Food quality has a significant influence on social interaction.

Hypothesis 2: Service quality has a significant influence on social interaction.

Hypothesis 3: Environment quality has a significant influence on social interaction.

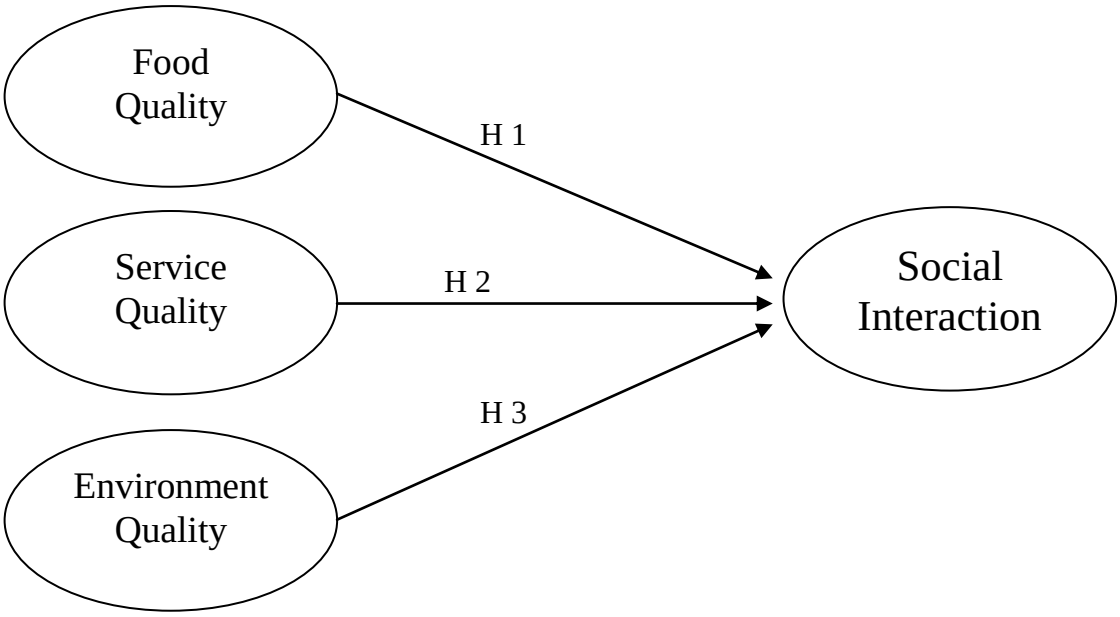

Figure 1 Proposed Research Construct of the Influence of Food and Beverage Service on Social Interaction

Sample

To empirically test the exploratory research, this study collected data through a survey conducted by convenience sampling. There were two major methods of data collection. The participants were collected from those who attended conference before or collected during a conference right after the delegates experiencing the food and beverage service. A total of 259 questionnaires were distributed, 32 questionnaires were eliminated from the data collection because the questionnaires were either not completed or marked the same rating on consecutive questions. The response rate was 87.64 %. The subjects included the participants from "Taiwan-Florida Higher

Education Conference (July 23, 2010)", "3rd Asia- Euro Tourism, Hospitality and Gastronomy Conference (November 25, 2010)" and "9th Resource and Environment Management Conference (May 27, 2011)" and corporate meetings. "Taiwan-Florida Higher Education Conference" was an education administration conference to exchange information of educational management; "Asia- Euro Tourism, Hospitality and Gastronomy Conference" and "Resource and Environment Management Conference" were academic conferences. The data were collected on site of these three conferences after participants experience the coffee break, lunch or dinner. Participants were asked to answer the self-administrative questions according to their true experience in the conference. The rest of the data was collected from participants of company meetings and other association meetings through e-mail. The majority of the questionnaires were collected from the participants who have attended a conference within a period of three months and still kept the memory of the meeting.

Questionnaire

A self-administered questionnaire was developed for testing the proposed construct consisting of four sections with total of 42 items. The first section measures three dimensions of food and beverage service quality including food quality, service quality and environmental quality. These dimensions were adapted from the measurement of service quality in restaurant industry (Pizam & Ellis, 1999; Ryu & Han, 2009; Kim, Lee & Love, 2010). The second section measures social interaction

perception including the items: friendliness, opportunity for conversation, group cohesion and meeting new people (Kenny, 1996; Harris & Baron, 2004; Levy, 2010). The third section contains the items accessing social interaction in an alternative quantitative measure with a more open format e.g. the most appropriate time for interacting with others, the number of new friends and the form of dining. The last section is the demographic information, such as gender, age, education, annual income (USD), marital status, occupation and nationality. The instrument was accessed by five- point Likert scale with rating of 1,2,3,4 and 5 referring to the level of agreement on the item : 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly, respectively. A preliminary test of 34 samples is conducted for modifying the items and establishing the reliability of the instrument.

Statistic Analysis

Descriptive statistics were used to describe the basic profiles of the sampling in this study. Descriptive analysis demonstrates the confirmation of samples representing the pool.

T test was conducted to examine whether there was a significant difference in social interaction perception between international and non- international conference.

A one-way analysis of variance (ANOVA) was used to determine which criterion of the meal type was perceived more social interaction satisfaction by the participants.

Homogeneity of variances was tested using Levene statistic before conducting a Post Hoc test to examine which group differed significantly from others.

Pearson correlation analysis is a technique for investigating the relationship between two quantitative, continuous variables. Pearson's correlation coefficient is a measure of the strength of the association between the variables of food and beverage service quality and social interaction.

Regression analysis was conducted to understand how the change of the dependent variables influence the independent variables. The regression analysis was applied to explore the most significant dimensions of food and beverage service for social interaction.

Factor analysis was adopted to extract the common factors for the environment quality dimension. Principal component analysis (PCA) was applied for concentrating a large number of initial variables into a possibly small number of common factors (Parasuraman et al., 2006, Jolliffe, 2002). This study used PCA for categorization of diverse and obscure information at an exploratory stage. It was one of multivariate analyses based on eigenvectors of a covariance matrix and used as data extraction method for factor analysis.

Pilot Test

The reliability of the items of food and beverage service quality and social interaction is shown in Table 3. The total of 34 participants who attended conference within a three-month period, were surveyed and completed the e-mail questionnaire by convenience sampling. The reliability of the instrument and increase content validity was assessed in the pilot test. Reliability test measured by Cronbach's alpha value was conducted to assess the internal consistency of the generated items. The acceptable Cronbach's alpha value above 0.7 is recommended for proper reliability (Nunnally & Bernstein, 1994).

Table 3 Pilot Test: Reliability of the Dimensions

Dimensions	Items	Cronbach's α	α If Item Deleted	Cronbach's α after item deleted
Food quality (9 items)	The variety of foods	.58	.497	.60
	Freshness of ingredients → (Attractive food)		.585	
	The taste of the food		.539	
	The portion of the food		.523	
	The beverage		.533	
	Hot coffee/tea → (The quality of hot coffee/tea)		.604	
	Clean cups and saucers → (Deleted)		.604	
	Available utensils		.472	
	Proper food temperature		.571	
Service quality (7 items)	Friendly servers	.77	.732	.77
	Efficiency		.730	
	Responsiveness to requests		.736	
	Helpful attitude of servers		.728	
	Responsiveness to complaints		.712	
	Promptness of starting the food and beverage service		.778	
	Accurate service was provided		.778	
Physical environment quality (14 items)	The sensory stimulation	.80	.799	.80
	Cleanliness		.801	
	Size and shape of the room		.780	
	Furniture and fittings		.798	
	Lighting		.786	
	Temperature and ventilation		.782	
	Background music		.787	
	Proper control of noise level		.790	
	Good atmosphere and ambiance		.770	
	Proper seating space		.771	
	Help networking		.792	
	Facilitate sociable conversation		.796	
	Active entertainment		.789	
	Benefit interpersonal relationship		.788	

Table 3 (continued) Pilot Test: Reliability of the Dimensions

Dimensions	Items	Cronbach's α	α If Item Deleted	Cronbach's α after item deleted
Social interaction (10 items)	Feel friendliness of others	.79	.774	.82
	Make me talk to others easily		.763	
	Connection with other members of the conference during this food and beverage service		.759	
	Meet new people easily		.749	
	The frequency of meeting people		.762	
	The time interacting with people was sufficient		.773	
	Active entertainments make me interact with others easily → (Deleted)		.818	
	Make new friends		.776	
	Exchange Opinions about the conference		.776	
	Share new information with others		.772	

The Cronbach's alpha values for each dimension are: 0.58 for food quality, 0.77 for service quality, 0.80 for physical environment quality and 0.79 for social interaction. This indicates that some items require modification in the instrument. After modifying some items listed in Table 3, the Cronbach's alpha scores for four constructs range from 0.60 to 0.82. First, the item in food quality dimension "*Clean cups and saucers*" was deleted, the Cronbach's alpha increased to 0.60. Second, "Freshness of ingredients" was corrected into "Attractive food" and the item "Hot coffee/tea" was remained. Finally, in the social interaction dimension, the item "*Active entertainments make me interact with others easily*" was deleted to make the Cronbach's alpha increase to 0.82.

The following reasons explain the low value of Cronbach's alpha of food quality dimension. The description such as "Freshness of ingredients" and "Hot coffee/tea" might be the component that customers would concern more when they dine in a restaurant. Usually, the service with food and beverage in a conference has achieved certain standard, the participant no longer criticizing the innate character of the food.

The item of "Hot coffee/tea" is an important factor in food and beverage service in a conference. Participants need "caffeine" to boost up their energy after a full day of learning. "Caffeine" could affect the human's reaction of physiology and psychology. For instance, Robelin and Rogers (1998) and Rogers et al. (2003) found that caffeine significantly increased energetic mood and improved psychomotor performance. Smith (2002) stated the levels of caffeine consumed by most people have largely positive effects on consumption behavior. Haskell et al. (2005) found that a typical cup of coffee could improve mood and cognitive performance in caffeine consumers and non-consumers alike. All of these pieces of evidence pointed to caffeine as the main determinant of the behavioral effects of caffeinated beverages. Thus, the item "Hot coffee/tea" was remained even though it caused the low value of Cronbach's alpha. The item of food quality dimension" *Clean cups and saucers*" has low value of Cronbach's alpha. There might be some ambiguity on the perception of "Clean cups and saucers" as part of food quality or part of the restaurant environment.

According to Kim, Lee and Love (2010), the four factors of food and beverage service responsible for participants' satisfaction were service delivery, food content

quality, recognition of personal preference and menu selection. They found the satisfaction with food function has a strong positive relationship to participants' return intention (Kim, Lee & Love, 2010). In line with the suggestion, the items related to food content quality and menu selection were added to food quality dimension with some modification of the original questionnaire. Thus, "Freshness of ingredients" is corrected into "Attractive food" and to keep the item of "Hot coffee/tea". At last, the item "Clean cups and saucers" was deleted. Finally, "Active entertainments make me interact with others easily" was deleted because active entertainments did not have internal consistency with the rest of the items in the social interaction dimension among participants.

CHAPTER 4 FINDINGS AND DISCUSSION

Descriptive Statistic

A total of 259 questionnaires were collected with 227 valid ones. The survey was conducted through four major sources (Table 4).

Some respondents did not answer demographic questions because they felt the question was too personal, the demographic profile of respondents was shown in Table 5. The participants included of 45.1% female and 54.9% male. The age groups 20~30 accounted for more than 70% of the participants. Almost 50% of participants have college education. Most of the participants have annual income less than USD 10,000 (56.1%). Eighty five percent of the respondents were not married and most of their occupations were students and public employees were (50%). Most of the respondents were from Taiwan accounted for 88.4%. Table 5 provides the demographic characteristic of the sample population.

According to ICCA (2010), they defined international conference as those that have participants coming from 3 or more countries, 50 or more participants in this conference, and the conference should held regularly. Data was mainly collected from the following four sources indicated in Table 4.

Table 4 Number and the Source of Valid Data Collection

Subjects	Numbers	Valid
Taiwan-Florida Higher Education Conference on July 23, 2010.	41	34
3rd Asia- Euro Tourism, Hospitality and Gastronomy Conference on November 24~26, 2010.	31	19
9th Resource and Environment Management Conference on May 27, 2011.	30	23
Participants whom attended conference during three months recently	157	151
Total	259	227

International conference accounted for 49.3% and educational conference (60.8%) was the most common one for participation. Learning is found to be the major reason for attending a conference for more than 50% of the participants. The profile of participants of this study is shown in Table 6.

Table 5 Demographic Profile of Respondents

(n=224)		Frequency (%)
Gender (n=224)		
	Female	101 (45.1%)
	Male	123 (54.9%)
Age (n=224)		
	＜ 20	11 (4.9%)
	20~30	178 (79.5%)
	31~40	13 (5.8%)
	41~50	13 (5.8%)
	51~60	9 (4.0%)
Education (n=224)		
	High school	3 (1.3%)
	College / University	123 (54.9%)
	Master degree	88 (39.3%)
	Ph. D. degree	10 (4.5%)
Annual Income (n=223)		
	＜ USD10,000	125 (56.1%)
	USD 10,000~20,000	47 (21.1%)
	USD 20,001~30,000	30 (13.5%)
	USD 30,001~40,000	12 (5.4%)
	USD 40,001~50,000	3 (1.3%)
	＞ USD 50,000	6 (2.7%)
	Missing Data	1
Marital Status (n=224)		
	Married	33 (14.7%)
	Not Married	191 (85.3%)
Occupation (n=223)		
	Student	96 (42.9%)
	Public Employees	26 (11.6%)
	Retail & Service	23 (10.3%)
	Business & Industries	35 (15.6%)
	Health Care	19 (8.5%)
	Technology	11 (4.9%)
	Retiree	1 (0.4%)
	Others	13 (5.8%)
	Missing Data	1

Table 5 (continued) Demographic Profile of Respondents

		Frequency (%)
Nationality (n=224)		
	Taiwan	199 (88.4%)
	Malaysia	16 (7.1%)
	China	5 (2.2%)
	Philipine	3 (1.3%)
	USA	1 (0.4%)
	Thailand	1 (0.4%)

Table 6 Profile of Participants in This Study

		Frequency (%)
Did you attend the International Conference? (n=224)		
	International Conference	112 (49.3%)
	Non-International Conference	115 (50.7%)
	Missing Data	3
What type of conference did you attend? (n=227)		
	Educational	138 (60.8%)
	Business / Trade	36 (15.9%)
	Medical / Health Care	23 (10.1%)
	Religious	4 (1.8%)
	Others	26 (11.5%)
Why did you attend the conference? (n=227)		
	Networking Opportunities	19 (8.4%)
	Educational Purpose	129 (56.8%)
	Business Activities	21 (9.3%)
	Product Launch	5 (2.2%)
	Presentation	42 (18.5%)
	Others	11 (4.8%)

The Social Profile of Participants in the Conference

According to the participants' responses to the open-end questions, such as " Which form was the meal provided? ", " How many people did you talk to? ", " How many new friends did you make ? ", and " Which period of time did you feel more comfortable to interact with others ? ". The social profile of participants is illustrated below from Figure 2 to Figure 12.

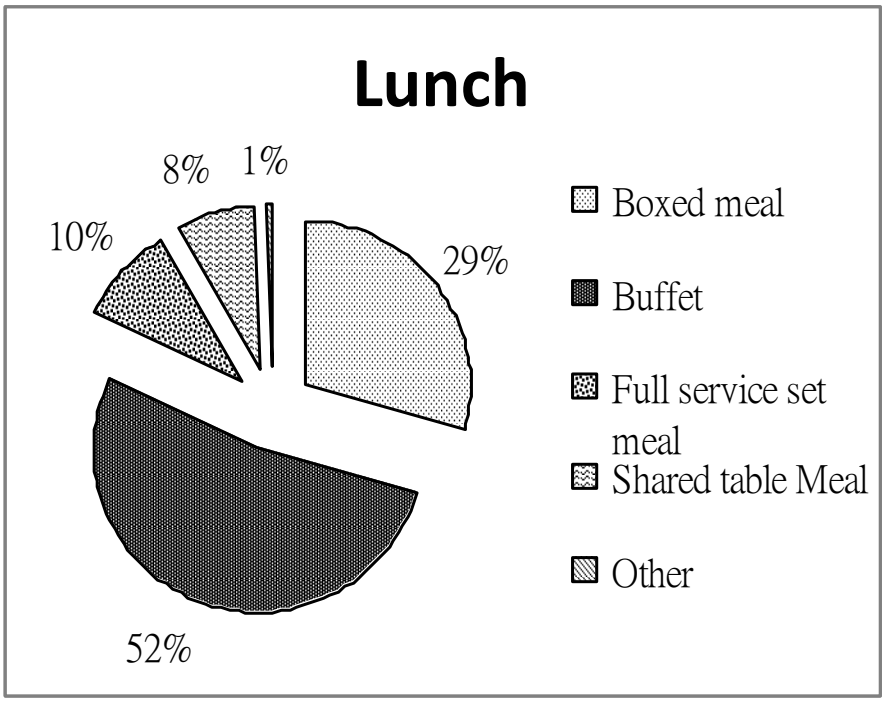

Figure 2 The Form of Meal Provided during Lunch

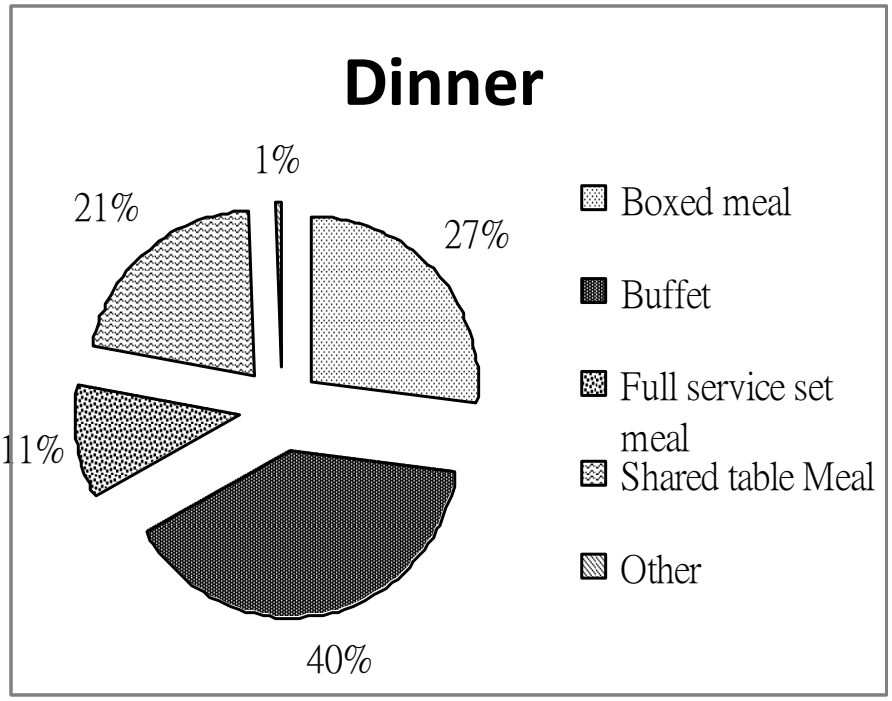

Figure 3 The Form of Meal Provided during Dinner

Buffet is the most popular form of food and beverage service in a conference, followed by boxed meal regardless the time of the meal (Figure 2 and 3).

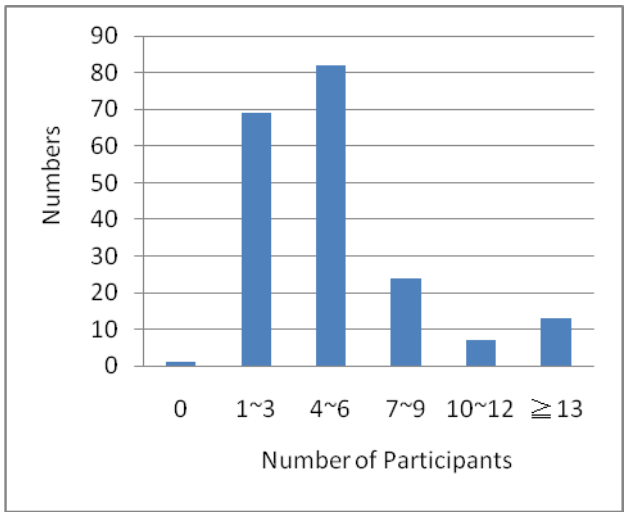

Figure 4 The Number of People Talked to during Coffee Break

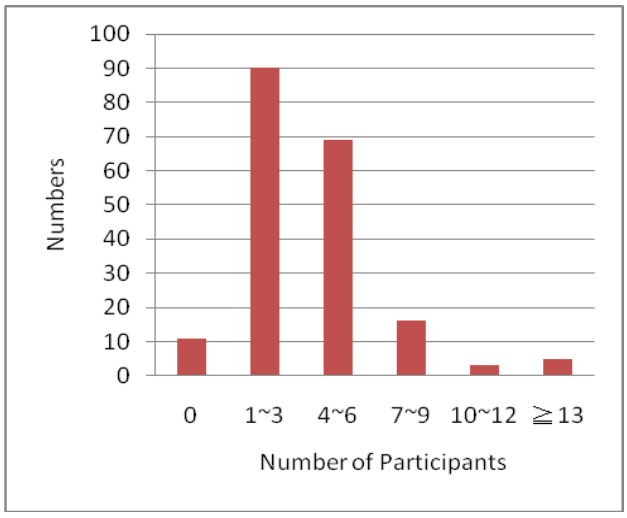

Figure 5 The Number of People Talked to during Lunch

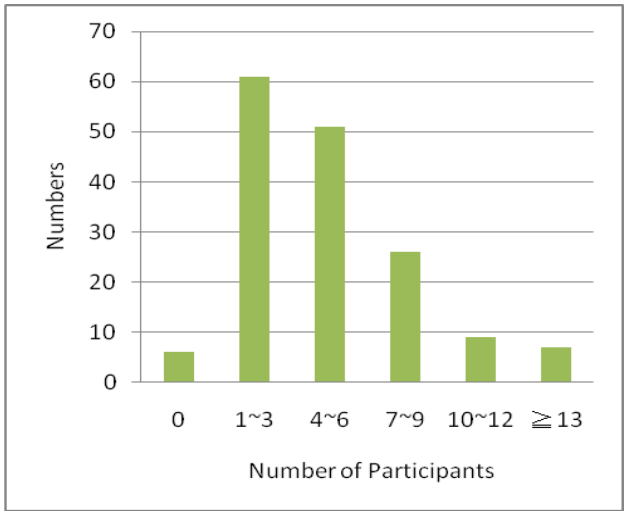

Figure 6 The Number of People Talked to during Dinner

There are about 50% of the participants talked to 1~3 people and 4~6 people during the each meal time (Figure 4, 5 and 6). The tendency also revealed that participants seem to be more active in interacting with others in lunch time.

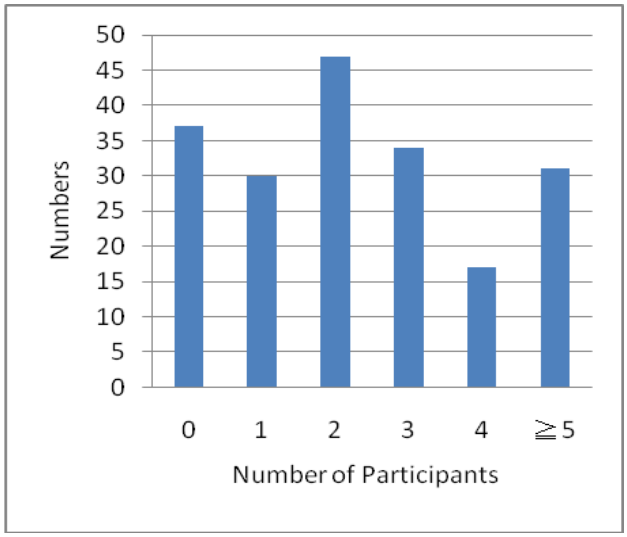

Figure 7 The Number of Friends Made during Coffee Break

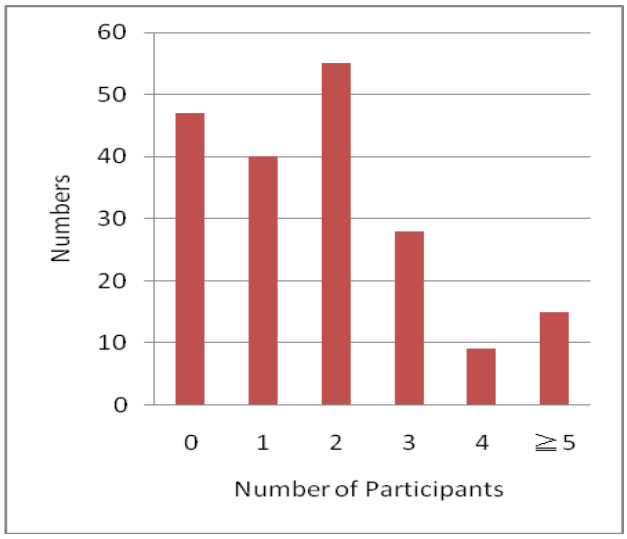

Figure 8 The Number of Friends Made during Lunch

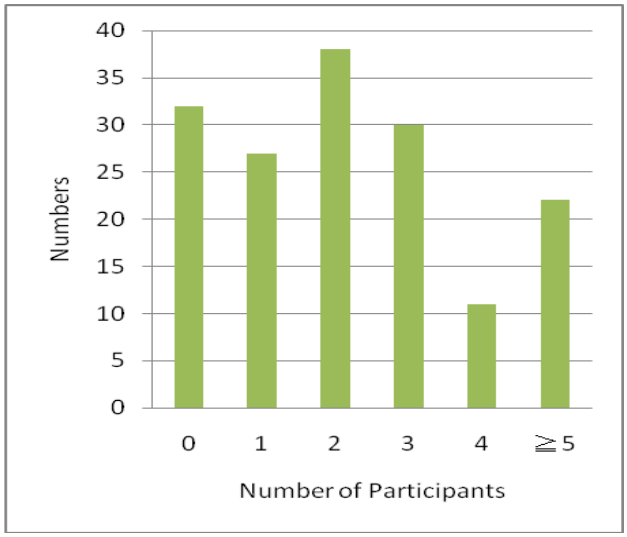

Figure 9 The Number of Friends Made during Dinner

In an in-depth aspect of evaluating the social interaction, the numbers of friendship establishment are lower than the people talked to in average (Figure 7 to 9). However, dinner time is shown to be the better time that participants feel comfortable of establishing further relationship. It suggests that participants are more relaxed and have more time to interact with others in order to build in-depth interaction. In another way, the setting for dinner is more elaborate and the food is usually better than the other food services. It brought up the intention of further investigation of the influence of different food service quality components on the perception of social interaction.

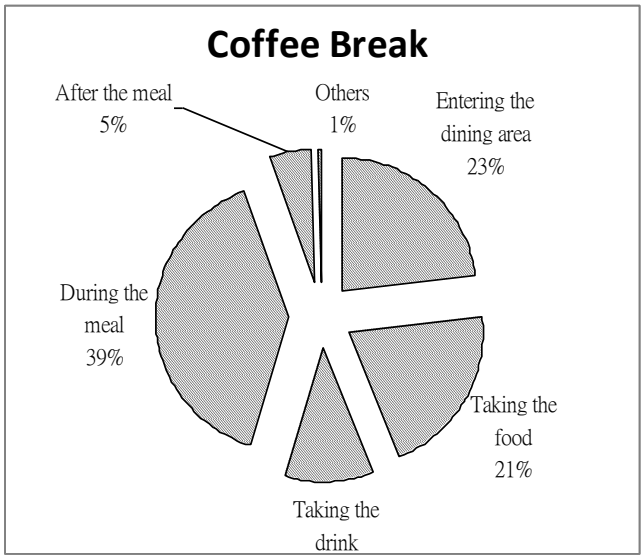

Figure 10 The Period of Comfortable Interaction during Coffee Break

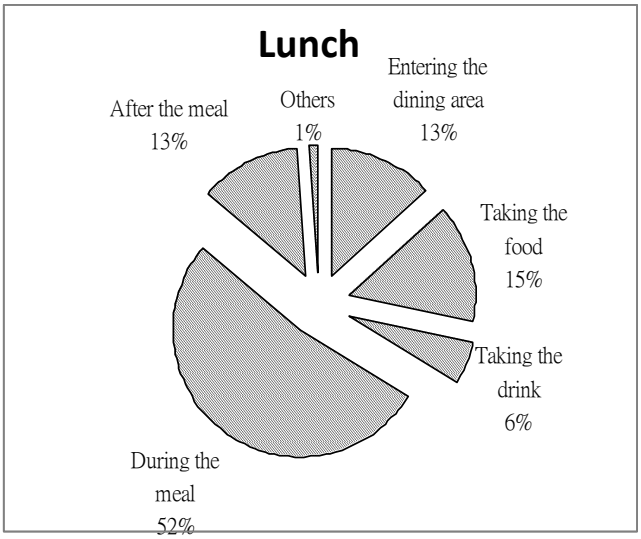

Figure 11 The Period of Comfortable Interaction during Lunch

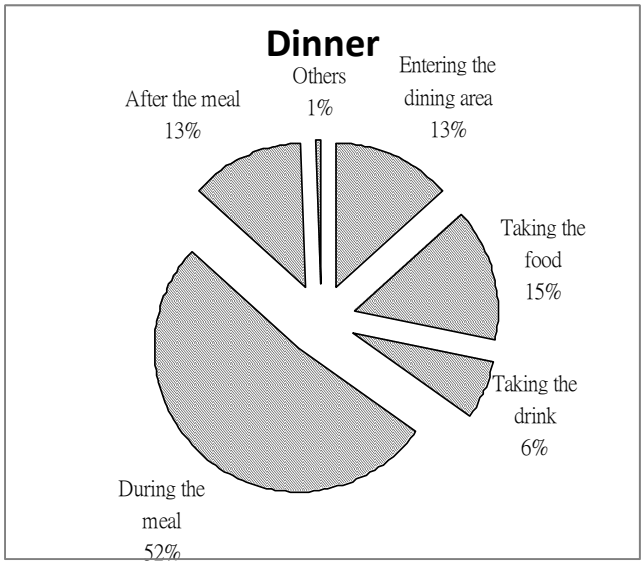

Figure 12 The Period of Comfortable Interaction during Dinner

“During the meal” is the most conformable time for the participants to interact with others (Figure 10 to 12). There is similar distribution of interaction for lunch and dinner time.

As the result, buffet is most form of meal serviced. Most people made 2 new friends during the meal time. Coffee break is the time that the participants talk to the most people. It suggests that the coffee break could provide more chance for participants to interact. In addition, the result agrees with the study from Robelin and Rogers (1998) stated that caffeine significantly increased energetic mood and improved psychomotor performance. As consequence, participants become more actively interacting with others.

Reliability

Reliability is one of the major criteria for evaluating research instruments. Reliability coefficients of the four dimensions were analyzed to evaluate the internal consistency of the dimensions (Table 7).

Table 7 Reliability of the Dimensions

Dimensions	Items	Perception	Coffee Break	Lunch	Dinner
		α	α	α	α
Food quality (8 items)	The variety of foods Attractive food The taste of the food The portion of the food The beverage The quality of hot coffee/tea Available utensils Proper food temperature	.72	.87	.86	.91
Service quality (7 items)	Friendly servers Efficiency Responsiveness to requests Helpful attitude of servers Responsiveness to complaints Promptness of starting the food and beverage Service Accurate service was provided	.90	.92	.92	.81

Table 7 (continued) Reliability of the Dimensions

Dimensions	Items	Perception	Coffee Break	Lunch	Dinner
		α	α	α	α
Physical environment quality (14 items)	The sensory stimulation Cleanliness Size and shape of the room Furniture and fittings Lighting Temperature and ventilation Background music Proper control of noise level Good atmosphere and ambiance Proper seating space Help networking Facilitate sociable conversation Active entertainment Benefit interpersonal relationship	.83	.87	.89	.95
Social interaction (9 items)	Feel friendliness of others Make me talk to others easily Connection with other members of the conference during this food and beverage Service Meet new people easily The frequency of meeting people The time interacting with people was sufficient Make new friends Exchange Opinions about the conference Share new information with others	.91	.81	.94	.94
Total Cronbach's α		.94	.94	.96	.97

The results of the reliability analysis indicate that the four dimensions have good internal consistency (The Cronbach's alpha scores for four constructs ranged from 0.72 to 0.91 for the dimensions of perception; alpha values range from 0.81 to 0.92 for the dimensions during coffee break; alpha values range from 0.86 to 0.94 for the dimensions during lunch time; alpha values range from 0.81 to 0.95 for the dimensions during dinner time). The alpha coefficients for perception, coffee break, lunch and dinner are 0.94, 0.94, 0.96, and 0.97, respectively, suggesting acceptable internal reliability.

T test-The Influence of International and Non-International Conference on Social Interaction Perception

The mean scores for social interaction perception between international and non-international conference participants were compared by T test. The comparison of international and non-international conference shows the significant differences between the two groups. The results in Table 8 show that social interaction perception is significant effect on international and non-international conference at $p = .034 < .05$. Participants in international conference ($M=4.04$) shows higher perception of social interaction than those in non-international conference ($M=3.84$). In general, international conference participants would perceive higher social interaction perception significantly. It suggests that international conference can provide more diverse information or opinion because the participants come from different countries

with various culture backgrounds. In this pluralistic environment, the diverse background yet with the similar research or business interest can facilitate interaction.

Table 8 T test of Comparing International and Non- International Conference on Social Interaction Perception

Conference	N	Mean	Std.
International Conference	110	4.04	.62
Non- International Conference	113	3.84	.75
n=223			
Levene s' value = 2.393 (p=.123>.05)			
t-value = 2.139* (p = .034< .05)			

Note, * p< .05

ANOVA-The Influence of Meal Type on Social Interaction Satisfaction

In Table 9, The homogeneity of variance test shows no significant difference within group (Levene's p=.875>.05), which indicates the appropriateness of ANOVA test. There are significantly different influences of the meal types on social interaction satisfaction during lunch time. The social interaction satisfaction is significant different with various meal service type at p =.097.

The LSD post hoc multiple comparisons were adopted to compare the mean difference between each meal type. It shows that "Buffet" has significantly stringer influence on social interaction than boxed meal. In general, conference participants dining in the food and beverage service in the forms of "buffet" would perceive higher

social interaction satisfaction than “boxed meal” during lunch time. It is suggested that “buffet” can provide more opportunities for interaction because of participants would touch more when take meal around the table. However, there are no significantly different influences of the meal types on social interaction satisfaction during dinner time.

Table 9 ANOVA Analysis of the Influence of Types of Meal on Social Interaction Satisfaction during Lunch

Types of Meal	N	Mean	Std.	LSD Post Hoc Comparison
Boxed meal	57	3.31	.77	**(2 >1)****
Buffet	101	3.61	.76	
Full service set meal	19	3.63	.81	
Shared table Meal	15	3.42	.70	
N=192				
Levene s’ value = .289 (p=.834)				
F-value = 2.139* (p = .097)				

Note, (1) Boxed meal, (2) Buffet, (3) Full service set meal, (4) Shared table Meal;
* p<0.1; ** p<0.05

Pearson Correlation Analysis- Relationship between Food and Beverage Service Quality and Social Interaction

Results in Table 10 indicate that “*Physical Environment Quality*”, “*Food Quality*” and “*Service Quality*” correlated significantly with the variables of “Social Interaction Perception”. Salvya (2007) stated food and communicative function has inter-relationship, it proves that food and beverage service quality could facilitate social interaction. The correlation coefficient of “*Food Quality*” and “*Service Quality*”

are lower than "*Physical Environment Quality*". Compare to the common cognition of the importance of service quality (Parasuraman et al., 1988; Madanoglu, 2004), there is higher significant correlation between "*Physical Environment Quality*" and social interaction perception. Njite, Dunn & Kim (2008) indicated customer satisfaction also suggest that the human interaction element of service delivery is essential to the determination of customer satisfaction; they also concluded customer relations is perceived as the most important attribute more important than any other restaurant performance attribute. It demonstrates the importance of interaction between physical environment and social interaction among attendants.

Table 10 Pearson Correlation Analysis- Relationship between the Perception of Food and Beverage Service Quality and Social Interaction Perception

Social Interaction Perception	M	SD	Food Quality	Service Quality	Physical Environment Quality
Feel friendliness of others	4.08	.83	.260**	.327**	.471**
Make me talk to others easily	4.00	.90	.309**	.230**	.434**
Connection with other members of the conference during this Food and Beverage Service	4.07	.84	.381**	.365**	.455**
Meet new people easily	3.96	.91	.380**	.392**	.505**
The frequency of meeting people	3.83	.88	.413**	.440**	.491**
The time interacting with people was sufficient	3.82	.98	.431**	.480**	.504**
Make new friends	3.82	1.03	.365**	.347**	.476**
Exchange Opinions about the conference	3.96	.91	.390**	.446**	.501**
Share new information with others	3.94	.94	.382**	.448**	.479**

* Correlation is significant at 0.05 level (tow-tailed test). ** at 0.01 level (tow-tailed test).

Table 11 reveals that "*Physical Environment Quality*", "*Food Quality*" and "*Service Quality*" correlate significantly with the variables of "Social Interaction satisfaction" during coffee break. De Castro (1997) investigated food diary studies have shown that more food was consumed by individuals in a group than by individuals alone, the so-called social facilitation effect. It supports the concept that food and beverage service quality enhances social interaction among people. However, the correlation coefficient of "*Physical Environment Quality*" to social interaction satisfaction is higher than "*Food Quality*" and "*Service Quality*". To further explore the effect of 3 quality dimensions on certain interaction, physical environment quality has distinct influence on making friends related items, such as "Feel friendliness of others" or "Make new friends". The social interaction variables of" Make new friends", "*Food Quality*" and "*Service Quality*" have lower correlation coefficient than others; nevertheless, "*Physical Environment Quality*" has higher correlation coefficient with the social interaction variables of" Make new friends". Literally, the good setting of "*Physical Environment Quality*" could enhance the opportunities of making friends.

Table 11 Pearson Correlation Analysis- Relationship between Food and Beverage Service Quality and Social Interaction Satisfaction during Coffee Break

Social Interaction Variables	M	SD	Food Quality	Service Quality	Physical Environment Quality
Feel friendliness of others	3.75	.99	.488**	.451**	.619**
Make me talk to others easily	3.67	.96	.447**	.458**	.599**
Connection with other members of the conference during this Food and Beverage Service	3.73	.96	.512**	.469**	.614**
Meet new people easily	3.63	1.03	.501**	.417**	.566**
The frequency of meeting people	3.53	1.00	.487**	.479**	.592**
The time interacting with people was sufficient	3.38	1.04	.480**	.410**	.542**
Make new friends	3.67	2.86	.169*	.146*	.224**
Exchange Opinions about the conference	3.50	1.00	.438**	.442**	.584**
Share new information with others	3.60	1.25	.423**	.352**	.471**

* Correlation is significant at 0.05 level (tow-tailed test).** at 0.01 level (tow-tailed test).

Table 12 indicates that "*Physical Environment Quality*", "*Food Quality*" and "*Service Quality*" correlate significantly with the variables of "Social Interaction satisfaction" during lunch time. Murphy (2001) interviewed backpackers found that eating and common areas e.g. kitchen were most often mentioned as the places with in hostel where they most often interacted with others. Thus, eating and food was facilitator when interaction occurred. It is evident food and beverage service quality could facilitate social interaction to each other. However, the correlation coefficient of "*Physical Environment Quality*" is higher than "*Food Quality*" and "*Service Quality*". Donovan and Rossiter's (1982) found that retail environmental is influenced by the

establishment of the relationship between store environments, emotional states, and behavioral intentions. This represents environmental setting effect emotion and behavior.

Table 12 Pearson Correlation Analysis- Relationship between Food and Beverage Service Quality and Social Interaction Satisfaction during Lunch

Social Interaction Variables	M	SD	Food Quality	Service Quality	Physical Environment Quality
Feel friendliness of others	3.67	.91	.556**	.554**	.619**
Make me talk to others easily	3.58	.94	.502**	.477**	.614**
Connection with other members of the conference during this Food and Beverage Service	3.61	.94	.466**	.464**	.592**
Meet new people easily	3.49	.93	.558**	.457**	.667**
The frequency of meeting people	3.31	.98	.566**	.516**	.708**
The time interacting with people was sufficient	3.45	1.04	.498**	.471**	.599**
Make new friends	3.40	1.05	.504**	.481**	.601**
Exchange Opinions about the conference	3.42	1.05	.587**	.517**	.697**
Share new information with others	3.48	1.00	.493**	.470**	.656**

* Correlation is significant at 0.05 level (tow-tailed test).** at 0.01 level (tow-tailed test).

Table 13 demonstrates that “Physical Environment Quality”, “Food Quality” and “Service Quality” correlate significantly with the variables of “Social Interaction satisfaction” during dinner time. Results suggest in that good food and beverage service quality could improve social interaction to each other. Furthermore, the correlation coefficient of “Physical Environment Quality” is higher than “Food Quality” and “Service Quality”. Baker, Levy and Grewal (1992) indicated that the ambient cues interact with the social cues to influence respondents’ pleasure and the

social cues influence arousal in the store environment. This implies that the setting of environment is the main factor leading to social interaction among participants.

Table 13 Pearson Correlation Analysis- Relationship between Food and Beverage Service Quality and Social Interaction Satisfaction during Dinner

Social Interaction Variables	M	SD	Food Quality	Service Quality	Physical Environment Quality
Feel friendliness of others	3.73	.99	.655**	.540**	.683**
Make me talk to others easily	3.64	.97	.535**	.518**	.641**
Connection with other members of the conference during this Food and Beverage Service	3.62	.94	.571**	.502**	.643**
Meet new people easily	3.60	.99	.542**	.439**	.640**
The frequency of meeting people	3.43	.99	.521**	.469**	.598**
The time interacting with people was sufficient	3.52	1.03	.519**	.463**	.603**
Make new friends	3.50	1.08	.547**	.499**	.631**
Exchange Opinions about the conference	3.43	1.08	.588**	.522**	.670**
Share new information with others	3.50	.992	.560**	.391**	.618**

* Correlation is significant at 0.05 level (tow-tailed test).** at 0.01 level (tow-tailed test).

From this point of review, the difference between regular diners and the conference participants might be the reason for the contradictions. Regular diners expect to be treated well for all five dimension of SERVQUAL including reliability, responsiveness, assurance, empathy and tangibles. Service is usually the value added part for them to be willing to pay more in an upscale restaurant where they have the time to enjoy the delicacy. Participants' attitudes are influenced by physical setting in which they interact; sensory stimulation, background music, good atmosphere and ambiance can elicit participants' emotional responses that are stimulus to affect the

emotional states of pleasure and arousal (Magnini & Thelen, 2008; King, Weber, Meiselman, & Lv, 2004).

Conference planners usually focus on the setting of dining arrangement and the complexity from the fine service might just occupy the interaction time among the participants. Participants attend the banquet or the meal after or during the whole-day a conference day. The relaxing or welcoming atmosphere of the environment setting is the first and most direct expression they can sense during the dining time. It is reasonable to find “Physical Environment Quality” of food and beverage service as the most significant predictor for the main factor to facilitate social interaction among participants.

Regression Analysis-Estimating the Perception and Satisfaction of Social Interaction

The regression analysis was applied to access the influence of dimensions of food and beverage service on social interaction. In order to avoid a multicollinearity problem in the regression models, at first, the covariance values of variance-covariance matrix of independent variables (food quality, service quality and environment quality) between each dimensions have to be less than ｜± .8｜ (Hair et al., 1998). To access the established validity of the measures, the covariance matrixes between the four dimensions were analyzed and shown in Table 14. The covariance values is smaller than ｜± .8｜ with good validity.

Second, the problem of multi-collinearity should be avoided by conducting collinearity statistics(Dielman, 1996; Hair et al., 2006): the DW's value (Durbin-Watso test) is approximate to 2, VIF (Variance Inflation Factor)＜10 ， 30＜CI＜100 represents moderate collinearity，CI＞100 represents highly collinearity. Table 15 indicates DW= 1.557 ≦ 2, all the VIF's values ＜10, all the CI's statistics ＜30. It suggests the model does not exist multicollinearity problem in the model. Thus, the following regression analysis models have been evaluated multicollinearity problem by these collinearity statistics.

Table 14 Variance-Covariance Matrix between the Variables of Social Interaction Perception and Food and Beverage Service Quality

	M	SD	Social Interaction	Food Quality	Service Quality	Environment Quality
Social Interaction	3.94	.699	1.000			
Food Quality	3.95	.65	.533***	1.000		
Service Quality	4.23	.70	.558***	.651***	1.000	
Environment Quality	3.90	.66	.669***	.619***	.700***	1.000

Note: *Significant at the 0.1 level; **Significant at the 0.05 level; *** Significant at the 0.001 level.

Table 15 Multiple Regression – Analysis on the Perception of Social Interaction

Variables	**Social Interaction Perception**						
	Un-standardized Coefficients		Standardized Coefficient			Collinearity Statistics	
	B	Std. Error	Beta	t Score	p	VIF	CI
Constant	.782	.237		3.303	.001		1.000
Food Quality	.166	.073	.155	2.290*	.023	2.494	15.846
Service Quality	.109	.075	.109	1.468	.144	2.397	19.491
Environment Quality	.524	.076	.496	6.902***	.000	2.028	22.333
Durbin-Watson = 1.557							
R^2 = .475 Adj R^2 = .468							
($F_{3,219}$) = 66.127*** (P<.00)							

Note: *Significant at the 0.1 level; **Significant at the 0.05 level; *** Significant at the 0.001 level.

In order to determine the most significant predictors of food and beverage service for social interaction perception, simultaneous regression analysis is employed. The dependent variable is social interaction perception. The independent variables are: food

quality, service quality and environment quality. Table15 shows the regression model that explains social interaction perception. The analysis results in Table15 support the social interaction perception model (p<.00) with 46.8 % explained variance. Not all the independent variables are significant in the model; the food quality and environment quality have a positive influence on social interaction perception. The service quality is not significant in predicting the model of social interaction perception. According to the standardized beta coefficient, food quality (β=.155), service quality (β=.109) and environment quality (β=.496), the environment quality is found to be the most important variables in predicting social interaction perception.

Table 16 Variance-Covariance Matrix between the Variables of Social Interaction Satisfaction and Food and Beverage Service Quality during Coffee Break

	M	SD	Social Interaction	Food Quality	Service Quality	Environment Quality
Social Interaction	3.61	.85	1.000			
Food Quality	3.52	.71	.567***	1.000		
Service Quality	3.70	.85	.517***	.731***	1.000	
Environment Quality	3.63	.69	.694***	.670***	.654***	1.000

Note: *Significant at the 0.1 level; **Significant at the 0.05 level; *** Significant at the 0.001 level.

Table 17 Multiple Regression – Analysis on the Satisfaction of Social Interaction during Coffee Break

Variables	Social Interaction						
	Un-standardized Coefficients		Standardized Coefficient			Collinearity Statistics	
	B	Std. Error	Beta	t Score	p	VIF	CI
Constant	.246	.248		.989	.324		1.000
Food Quality	.210	.097	.174	2.164*	.032	2.494	12.172
Service Quality	.022	.079	.022	.275	.784	2.397	17.385
Environment Quality	.701	.090	.564	7.789***	.000	2.028	18.883
Durbin-Watson = 2.025 R^2 = .501 Adj R^2 = .494 ($F_{3,193}$) = 64.659*** (P<.00)							

Note: *Significant at the 0.1 level; **Significant at the 0.05 level; *** Significant at the 0.001 level.

Table 16 and Table17 indicate the model did not have multicollinearity problem. The results in Table17, the satisfaction of social interaction model has significant effect (p<.00) with 49.4 % explained variance. The food quality and environment quality have a positive influence on the satisfaction of social interaction during coffee break. The service quality is not significant in predicting the model. Resulted in the standardized beta coefficient, food quality (β=.174), service quality (β=.022) and environment quality (β=.564), the environment quality is found to be the most significant variables in predicting satisfaction of social interaction during coffee break.

Table 18 Variance-Covariance Matrix between the Variables of Social Interaction Satisfaction and Food and Beverage Service Quality during Lunch

	M	SD	Social Interaction	Food Quality	Service Quality	Environment Quality
Social Interaction	3.49	.80	1.000			
Food Quality	3.54	.69	.644***	1.000		
Service Quality	3.80	.80	.599***	.686***	1.000	
Environment Quality	3.62	.72	.783***	.797***	.750***	1.000

Note: *Significant at the 0.1 level; **Significant at the 0.05 level; *** Significant at the 0.001 level.

Table 19 Multiple Regression – Analysis on the Satisfaction of Social Interaction during Lunch

Variables	**Social Interaction**						
	Un-standardized Coefficients		Standardized Coefficient			Collinearity Statistics	
	B	Std. Error	Beta	t Score	p	VIF	CI
Constant	.283	.200		1.417	.158		1.000
Food Quality	.058	.088	.050	.651	.516	2.880	12.681
Service Quality	.017	.070	.017	.243	.809	2.403	17.626
Environment Quality	.810	.093	.731	8.718***	.000	3.481	23.417
Durbin-Watson = 2.064 R^2 = .614 Adj R^2 = .608 ($F_{3,191}$) = 101.433*** (P<.00)							

Note: *Significant at the 0.1 level; **Significant at the 0.05 level; *** Significant at the 0.001 level.

Table 18 and Table19 indicate that there is no multicollinearity problem for the model. Table19 finds the significant effect on satisfaction of social interaction model

(p<.00) with adjusted explained variance 60.8 %. Only environment quality has significant influence on the satisfaction of social interaction during lunch time. The food quality and service quality are not significant in predicting the effect of social interaction. The standardized beta coefficients for food quality (β=.050) and service quality (β=.017) are not significant; nevertheless, environment quality (β=.731) is a significant predictor for social interaction during lunch time.

Table 20 Variance-Covariance Matrix between the Variables of Social Interaction Satisfaction and Food and Beverage Service Quality during Dinner

	M	SD	Social Interaction	Food Quality	Service Quality	Environment Quality
Social Interaction	3.55	.83	1.000			
Food Quality	3.63	.80	.683***	1.000		
Service Quality	3.86	.90	.589***	.719***	1.000	
Environment Quality	3.73	.78	.776***	.803***	.789***	1.000

Note: *Significant at the 0.1 level; **Significant at the 0.05 level; *** Significant at the 0.001 level.

Table 21 Multiple Regressions - Analysis on the Satisfaction of Social Interaction during Dinner

Variables	Social Interaction						
	Un-standardized Coefficients		Standardized Coefficient			Collinearity Statistics	
	B	Std. Error	Beta	t Score	p	VIF	CI
Constant	.428	.207		2.061	.041		1.000
Food Quality	.198	.089	.192	2.235*	.027	2.982	11.462
Service Quality	-.096	.076	-.105	-1.257	.211	2.798	16.950
Environment Quality	.745	.103	.704	7.247***	.000	3.813	22.602
Durbin-Watson = 1.991 R^2 = .616 Adj R^2 = .609 ($F_{3,155}$) = 82.895*** (P<.00)							

Note: *Significant at the 0.1 level; **Significant at the 0.05 level; *** Significant at the 0.001 level.

Table 20 and Table21 propose the model does not have multicollinearity problem. Table21 results in the significant effect on satisfaction of social interaction model (p<.00) with 60.9 % explained variance. The food quality and environment quality have significant influences on the satisfaction of social interaction during dinner time. Only service quality is not significant in predicting the model. Resulted in the standardized beta coefficient, food quality (β=.192), service quality (β=-.105) and environment quality (β=.704).

Table 22 Hypotheses Verification

Hypotheses	Path	Results
$\mathbf{H_1}$	Food quality →Social interaction	Partially Supported
$\mathbf{H_2}$	Service quality →Social interaction	Rejected
$\mathbf{H_3}$	Environment quality →Social interaction	Supported

The environment quality is found to be the most important variable in predicting perception and satisfaction of social interaction during any meal time. The food quality is the second most important variable in predicting perception and satisfaction of social interaction beside lunch time. Lastly, the service quality has no significant effect on perception and satisfaction of social interaction. According to the results of regression analysis that H_1 was partially supported; H_3 hypothesis was statistically supported and H_2 was rejected (Table 22). Surprisingly, service quality is usually as an important factor in food service. However, providing good service quality would not influence social interaction among participants in a conference. For participants, maybe they want to take a break and relax after intensive conference programs; therefore, their state of emotion would be affected directly by atmosphere of environment.

Physical environment affects the degree of customer emotions, satisfaction, the perception of the service quality and subsequent behavior (Ryu & Jang, 2008; Bitner, 1990; Mehrabian & Russell, 1974; Wakefield & Blodgett, 1999). Kim and Moon (2009) suggested the relationship between the servicescape and emotional states could examine the servicescape and regard its effect as a kind of stimulus eliciting emotion

that affects behavioral intentions (e.g., approach, avoidance). Baker, Levy and Grewal (1992) indicated that the interaction between ambient cues and the social cues can influence respondents' perception of pleasure and the social cues influence arousal level in the store environment. It suggests that physical environment, mood and social interaction are mutually interactive. Environmental psychologists suggest that human's feelings or emotions determine what they do and how they do it (Donovan & Rossiter, 1982; Mehrabian & Russell, 1974). If a meeting planner can properly arrange the physical environment accordingly during each meal time, the participants would feel pleased or comfortable to talk to others. Consequently, providing good environment could facilitate the social interaction in a conference that influence participants' satisfaction, and even the follow up return intention (Bitner, 1990; Kim, Lee & Love, 2010).

Exploratory Factor Analysis of Environment Quality

Table 23 First Stage Exploratory Factor Analysis of Environment Quality

Attributes (n=226)	Factor 1	Factor 2	Factor 3	Corrected Item-Total Correlation
Furniture and fittings.	.797	.134	.133	.617
Size and shape of the room.	.721	.233	-.064	.538
Good atmosphere and ambiance.	.718	.221	.286	.664
Proper seating space.	.701	.065	.477	.654
Temperature and ventilation.	.663	.287	.077	.578
Proper control of noise level.	.642	.113	.435	.639
Cleanliness.	.614	.294	-.016	.519
Lighting.	.552	.486	-.074	.545
The sensory experience.	.499	.286	.343	.569
Facilitate sociable conversation.	.184	.877	.112	.560
Benefit interpersonal relationship.	.253	.786	.177	.583
Help networking.	.302	.686	.269	.604
Background music.	.024	.053	.748	.262
Active entertainment.	.147	.384	.623	.480
Cronbach's α	.89	.83	.27	
Eigenvalue	4.156	2.634	1.713	
Variance explained (%)	29.684	18.816	12.238	
			Total Cronbach's α	.831
			Cumulative variance explained (%)	60.783
			Kaiser–Meyer–Olkin measure of sampling adequacy	.877
			Bartlett's test of sphericity (significance level)	.000

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Table 24 Second Stage Exploratory Factor Analysis of Environment Quality

Attributes (n=226)	Physical Features	Social Features	Corrected Item-Total Correlation
Furniture and fittings.	.795	.169	.665
Proper seating space.	.786	.186	.675
Good atmosphere and ambiance.	.749	.291	.710
Proper control of noise level.	.718	.214	.630
Size and shape of the room.	.670	.214	.585
Temperature and ventilation.	.644	.302	.624
Cleanliness.	.575	.281	.551
The sensory experience.	.545	.366	.589
Lighting.	.488	.457	.593
Facilitate sociable conversation.	.150	.879	.588
Benefit interpersonal relationship.	.237	.809	.615
Help networking.	.312	.734	.627
Active entertainment.	.262	.527	.460
Cronbach's α	.89	.79	
Eigenvalue	4.301	2.998	
Variance explained (%)	33.086	23.059	

Total Cronbach's α	.90
Cumulative variance explained (%)	56.15
Kaiser–Meyer–Olkin measure of sampling adequacy	.88
Bartlett's test of sphericity (significance level)	.00

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

The environment quality is confirmed to be the key element to influence social interaction in a conference. Furthermore, exploratory factor analysis (EFA) was

employed in this study to extract the latent factors of environment quality. The data underwent a number of preliminary evaluation procedures to investigate which special factor in environment quality affects social interaction more. EFA was conducted via principal components factor analysis using varimax rotation and factors with the eigenvalue greater than 1. EFA was performed to identify and confirm the underlying structure of the items for further purification. That the purification of a measurement instrument should begin with the computation of the coefficient. Item with corrected item-to-total correlation coefficient lower than .30 was discarded (Churchill, 1979; Hair et al., 1998), as they were not considered strong enough to be appropriate for factor analysis.

The result of the first factor analysis is shown in Table 23. The value of the item-to-total correlation coefficient range from .262 to .664 for the three factors which suggests that further purification of the factors is needed. Thus, the item "Background music" was deleted because of item-to-total correlation coefficient lower than .30. The factor analysis was rerun and coefficient was recomputed after each item was deleted to ensure the result was achieved. A total of 13 items were retained after the purification with values ranging from .480 to .664 for the second stage extraction.

The Kaiser-Mever-Olkin (KMO) measure and Bartlett's test of sphericity were used to check the appropriateness to perform EFA. The KMO index was 0.80 and Bartlett's test of sphericity was significant at a level of .00 which justified the use of factor analysis. The second factor analysis results in two factors in Table 24, the value

of KMO is .88 and Bartlett's test of sphericity is significant at a level of .00. After a series of deletions reduced the number of items to 13, a clear two-factor structure emerged. The process of EFA in this second stage reduced the number of items from 14 to 13 with the deletion of item "Background music". Two factors were extracted from these 13 items with cumulative 57% of explained variance. As a result, one factor is defined as "Physical Features"; and the other factor is defined as "Social Features".

Reliability is one of the major criteria for evaluating measurement instrument. Reliability coefficients were accessed to examine if a good consistency of Cronbach's alpha value above 0.70. The results of the reliability analysis indicated that the two factors exhibit good internal consistcncy (= .89 for the physical features factor, = .79 for the social features factor). It demonstrates an internal homogeneity among the items scale in this study. All factor loadings and reliability estimates are presented in Table 24.

Table 25 Correlation Matrix of the Environment Quality Variables

Variables	Furniture and fittings.	Proper seating space.	Good atmosphere and ambiance.	Proper control of noise level.	Size and shape of the room.	Temperature and ventilation.	Cleanliness.	The sensory experience.	Lighting.	Facilitate sociable conversation.	Benefit interpersonal relationship.	Help networking.	Active entertainment.
Furniture and fittings.	1												
Proper seating space.	.603**	1											
Good atmosphere and ambiance.	.516**	.679**	1										
Proper control of noise level.	.519**	.574**	.591**	1									
Size and shape of the room.	.621**	.434**	.474**	.389**	1								
Temperature and ventilation.	.512**	.466**	.479**	.493**	.395**	1							
Cleanliness.	.381**	.376**	.524**	.431**	.458**	.406**	1						
The sensory experience.	.475**	.514**	.428**	.403**	.363**	.362**	.339**	1					
Lighting.	.477**	.331**	.429**	.325**	.423**	.569**	.378**	.419**	1				
Facilitate sociable conversation.	.315**	.269**	.347**	.339**	.364**	.317**	.356**	.346**	.459**	1			
Benefit interpersonal relationship.	.359**	.333**	.450**	.324**	.340**	.352**	.418**	.419**	.413**	.670**	1		
Help networking.	.357**	.436**	.471**	.417**	.361**	.461**	.301**	.358**	.378**	.657**	.522**	1	
Active entertainment.	.282**	.425**	.336**	.324**	.195**	.281**	.169*	.380**	.274**	.347**	.411**	.377**	1

** $p < .01$ (two-tailed).

Convergent and discriminate validity, subcategories or subtypes of construct validity, were sued to assess if a measurement represents the logical connections (McDaniel & Gates, 1993). In this study, the purpose of the correlation analysis was to assess the convergent and discriminate validity of indices representing the variables of environment quality.

According to Taylor and Baker's (1994) suggestion, if the correlation patterns within constructs differ from the correlation patterns between constructs, discriminate validity exists. If the within-construct item correlations are generally greater than the between-construct item correlations, convergent validity exists. The correction matrixes among the items from the two factors demonstrate good discriminate and convergent validity of the factor extraction in Table 25.

Table 26 Multiple Regressions - Analysis on the Social Interaction Perception

Variables	**Social Interaction Perception**						
	Un-standardized Coefficients		Standardized Coefficient			Collinearity Statistics	
	B	Std. Error	Beta	t Score	p	VIF	CI
Constant	3.948	.034		117.535	.000		1.000
Physical Features	.321	.034	.456	9.479***	.000	1.000	1.007
Social Features	.371	.034	.530	11.016***	.000	1.000	1.015
Durbin-Watson = 1.686							
R^2 = .494 Adj R^2 = .489							
($F_{2,219}$) = 106.746*** (P<.00)							

Note: *Significant at the 0.1 level; **Significant at the 0.05 level; *** Significant at the 0.01 level.

Table 27 Two way ANOVA analysis of Physical Features and Social Features on Social Interaction Perception

Source	Sum of Squares	df	Mean Square	F	P
Corrected Model	87.350[a]	114	.766	3.901	.000
Intercept	923.717	1	923.717	4702.624	.000
Physical Features	11.054	24	.461	2.345	.002
Social Features	9.723	12	.810	4.125	.000
Physical Features * Social Features	23.773	75	.317	1.614	.011

a. R Squared = .805 (Adjusted R Squared = .598); b. Computed using alpha = .05; c. Dependent Variable: Social Interaction Perception.

The two factors, physical features and social features were extracted from the environment quality dimension (Table 24) are identified to have a good prediction power for social interaction perception model during food service in a conference. Table 26 shows that the regression of "Physical features" and "Social features" explaining social interaction is significant (p=0.000) with the explained variance 48.9% (adjusted R^2). The standardized beta coefficient for "Physical features" is 0.46 (p=0.000) and the beta coefficient for "Social features" is 0.53 (p=0.000) with no collinearity. Both with significant beta coefficient, "social features" is even a better predictor than "physical features" when the social interaction is to be explained. It suggests that the "social features" such as the active entertainment and components in the environment facilitating the initiation of conversation will enhance the social interaction for the conference participants. Moreover, the two way ANOVA analysis for "Physical features" and "Social features" indicates there is a significant (p=0.011) interaction between these two factors in Table 27. In terms of social interaction, the

physical features such as the light, atmosphere, and the settings in the food service area will influence how the conference participants perceive the “social features” and vice versa. If the conference planner could spend more effort in these two eras, the benefits of food service will not just be the fulfillment of physiological demand of providing meals and beverages in a conference but in a higher level of providing a sense of belongingness and network establishment.

The results presented in this article suggest several important considerations for meeting planner or managers related hospitality industry. First, to set different form of providing meal would create various interactions between participants and environment. The buffet could facilitate more social interaction because of many chances to contact such as the frequencies of taking meal and leaving seats. These opportunities of touching could depend on the setting and atmosphere of environment.

Second, the environment quality is a main factor to facilitate social interaction in a conference. The influence of physical environment setting of psychology originated from environmental psychology, an effective approach has been used to study store environments (Donovan & Rossiter 1982). This approach explained an individual’s perceptions and behavior in a given environment were the results of emotional state created by that environment (Baker, Levy & Grewal, 1992). The effect of environmental psychology was implicated in retail industry, marketing and architecture on human psychology and behavior (Donovan & Rossiter. 1982; Turley & Milliman, 2000; Kim & Moon, 2009). The customer reactions to the physical environment were

related to their emotional states, moreover, the relationship between the servicescape and emotional states have examined the servicescape as a single environmental parameter and regarded its effect as a kind of stimulus eliciting emotion that affected behavioral intentions (Kim & Mood, 2009). For instance, Erog1ua, Machleit and Davis (2001) suggested that retail environmental stimuli impact consumers' emotional states. Kim and Moon (2009) stated that customer reactions to the physical environment were related to their emotional states, particularly in the hedonic consumption situation. The application of environmental psychology has been extended to various areas to facilitate purchase intention via positive mood.

Finally, physical features and social features were extracted from the environment quality dimension. Significantly, environmental stimuli were recognized to affect the emotional states of pleasure and arousal (Mebrabianand & Russell, 1974; Russell & Pratt, 1980; Donovan & Rossiter, 1982). Pleasure represents the extent to which a person feels good in the environment, and arousal referred to the extent to which a person feels excited or stimulated (Baker, Levy & Grewal, 1992). Arousal and pleasure mediate the effects of the environmental stimuli (ambient and social) on subjects' willingness to purchase (Baron & Kenny, 1986; Hastak & Olson, 1989): the model of predictors for the social factor on subjects' arousal was supported. The highly designed store social environment (more employees on the floor, friendly employees) initiated greater feelings of arousal in respondents than did the lowly designed store social environment (one employee, ignoring customers). Thus, the environmental stimulus

factors in the retail store environment included some physical features such as color, store decoration, lighting, etc., and the other social features including employee characteristics, friendly employees, customer characteristics and crowd would influence the purchase intention. Social factors often represented the characteristics of employees and interaction with the customers in the service setting (Ryu & Jang, 2008). The results of this study as particularly in a conference comply with the concept that dining environment being divided into two parts to explore: physical features and social features. Physical features are atmosphere, lighting, furniture, and sensory experience. Social features are to facilitate sociable conversation, benefit interpersonal relationship, help networking and active entertainment. Moreover, the physical features are the predominant elements to further influence the social features in the conference dinning environment.

Laaksonen et al. (2010) demonstrated that the environmental cues in a store could be classified into three classes: ambient cues, design cues, and social cues (Bitner, 1992). Ambient cues and design cues are tangible parts. Social cues are intangible that refer to the number and characteristics of other customers and personnel. It explains that environmental setting would include tangible and intangible elements to delivery and influence the social interaction among participants. Actually, the interaction between human and environment involve the dynamic, social, and symbolic aspects. The interaction represents human are not isolated individuals but social beings that sought social-identity experiences and relations with other persons in the environments.

These interaction concepts come from the symbolic interaction. Symbolic interaction examine language and habitual behavior as it reflect the unspoken rules that govern how people were expected to "act" in various social circumstances (Mead, 1934; Burnier, 2005). As like as participants used the physical features and social features to explain the symbolic aspects of the dining environments. The participants' environment interaction is symbolic, since participants exist in a symbolic environment where they assign for instance culturally share meanings to situations by interpreting the various symbols (Lee, 1990; Mead, 1934; Denzin, 1972). Moreover, the process of delivering symbols in dining environment would be affected by physical features and social features. Another interesting application is suggested. Laaksonen et al. (2010) stated the multitude of environmental cues and some degree of disorganization (as in flea markets and antique shops) could increase customers' interest towards the place and activate a consumer at the level of thinking, behavior and emotions. The "degree of disorganization" in environmental psychology was meaning for "atmosphere perceptions" (Machliet, Eroglu & Mantel, 2000; Turley & Mihiman 2000). However, there were situations, especially in the hospitality industry, tourism and events management, where crowding was viewed as very desirable (Tombs & Kennedy, 2003). For example, a sports event with many spectators was a much more enjoyable experience than one with few spectators. The enjoyment of the event and the experience of being there were related to the interaction with other spectators. The same situation could be happened in bars, cafes, concerts, street markets or nightclubs. As like as the concept of "atmospheric perceptions", the event planner should know

how to arrange well the atmosphere of meal time was to stimuli participants' social interaction and how physical environment influences their participants' future return intentions.

CHAPTER 5 CONCLUSION, IMPLICATIONS, LIMITATION AND FURTHER RESEARCH

Conclusion and Implications

This study has touched base on applying social science theory to explain the social interaction in a conference. It has established some fundamental knowledge about food and beverage service and social interaction in conference. The questionnaire could be modified for further confirmatory test; however, some suggestive conclusion could be drawn. It was found that "Physical Environment Quality" correlated significantly with most of the variables for "Social Interaction". Food and beverage service was the occasion when social interaction was enhanced; the period during the meal was the moment that most participants felt comfortable interacting. Obviously, good physical environmental setting in food and beverage service would enhance participants' satisfaction on social interaction.

In a conference, the participants interact with each other through sharing information or exchange opinions presenting intensive interaction. Interaction with pleasure would definitely reduce the stress of meeting new people and enhance the communication with joy. The participants interact to each other by conversation of gestures, manipulation of symbols, words, meaning, and diverse languages. Baker, Levy and Grewal (1992) indicated that the ambient cues interacted with the social cues to influence respondents' pleasure and the social cues influenced arousal in the store environment, they also stated that the high social store environment enhances subjects'

arousal. According to the result of this study “Physical Environment Quality” significantly affected the social interaction. In this line, it discovered the physical environment and social interaction facilitated to each other and to arouse human emotion. The interaction of participants usually happened during meal time e.g. coffee break, lunch, and dinner. The meeting planner should concentrates on the setting of physical environment during meal time and to know how to facilitate the contagion of positive emotions among participants in a conference.

“Buffet” has significantly positive effect on social interaction satisfaction in a conference. The form of buffet enables participants to spend more time to interact together instead of eating along with a boxed meal. More opportunities of conversation would occur when taking meal with the longer time to exchange opinions about the conference, to make new friends and easily interact with neighbor participants. It suggests that buffet meal should provide more chances of interaction.

Finally, there is no significant difference between different genders on their perceptions of social interaction with average score greater than 4. The high satisfaction level for both genders explains the similar expectation could be fulfilled in younger age group who tend to have less experience on conference. The meeting planner should focus on physical environmental setting of food and beverage service in order to facilitate better social interaction. For example, the table setting, light, and meal service type could be designed by meeting planner. The round table setting could interact with others more easily than the long table setting among participants.

Limitation and Further Research Opportunities

The sample was limited to participants in younger age, mainly students. The younger participants' expectation might be different from experienced participants. Maybe experienced participants hold different view in food and beverage service and expect more in depth social interaction during food service time.

Future research should collect data from one certain conference to practically investigate the satisfaction of food and service on the quality of how to effect social interaction. Another direction of research could adapt these environmental setting variables to evaluate more detailed the physical environment which can enhance social interaction during meal time in a conference.

REFERENCES

Abdullah, D. N. M. A., & Rozario, F. (2009). Influence of service and product quality towards customer satisfaction: A case study at the staff cafeteria in the hotel industry. *Proceedings of World Academy of Science, Engineering and Technology*, 41, 185-190.

Armstrong, K. L. (2007). Self, situations, and sport consumption: An exploratory study of symbolic interactionism. *Journal of Sport Behavior*, 30 (2), 111-129.

Boo, S., Koh, Y., & Jones, D. (2008). An exploration of attractiveness of convention cities based on visit behavior. *Journal of Convention & Event Tourism*, 9 (4), 239-257.

Brady, M. K., & Cronin, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*, 65, 34–49.

Burnier, D. (2005). Making it meaning full: postmodern public administration and symbolic interactionism. *Administrative Theory & Praxis*, 27 (3), 498–516.

Blumer, H. (1969). *Symbolic interactionism.* Englewood Cliffs, NJ: Prentice-Hall.

Baker, J., Levy, M., & Grewal, D. (1992). An experimental approach to making retail store environmental decisions. *Journal of Retailing*, 68 (4), 445-460.

Bitner, M. J. (1990). Evaluating service encounters: The effects of physical surroundings and employee responses. *Journal of Marketing*, 54, 69-82.

Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56, 57-71.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 56 (6), 1173-1182.

Convention Industry Council. (2007). *2007 certified meeting professional report.* Retrieved on 11. 1. 2008, from http://www.conventionindustry.org/cmp/Documents/CIC%202007%20CMP%20Report.pdf .

Chowa, I. H.-s., Laua, V. P., Lob, T.W.-c., Shac, Z., & Yund, H. (2006). Service quality in restaurant operations in China: Decision and experiential-oriented perspectives. *Hospitality Management*, 26, 698–710.

Churchill, G. A., Jr. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16, 64-73.

de Castro, J. M. (1997). Inheritance of social influences on eating and drinking in humans. *Nutrition Research*, 17 (4), 631-648.

Denzin, N. K. (1972, June). The methodological implications of symbolic interactionism for the study of deviance. Symposium conducted at the First International Conference on Ethnomethodlogy, Labelling Theory and Deviance, University of Edinburgh, School of Criminology and Forensic Studies, Edinburgh,

Scotland.

Dielman, T. E. (1996). *Applied regression analysis for business and economic* (2nd ed.). CA,Belmont: Wadsworth Publishing Company.

Donovan, R. J., & Rossiter, J. R. (1982). Store atmosphere: an environmental psychology approach. *Journal of Retailing*, 58, 34-57.

Erto, P., & Vanacore, A. (2002). A probabilistic approach to measure hotel service quality. *Total Quality Management*, 13 (2), 165- 174.

Erog1ua, S. A., Machleit, K. A., & Davis, L. M. (2001). Atmospheric qualities of online retailing: A conceptual model and implications. *Journal of Business Research*, 54, 177-184.

Food Management (2007). Convention center catering trends, Jun 1, 2007 12:00 PM, FM Staff. Retrieved on 9, 11, 2010, from: http://food-management.com/mag/fm_imp_17227/ .

Fawzy, A., & Samra, Y. A. (2008). A conceptual model for understanding associations' site selection processes: An organizational buyer behavior perspective. *Journal of Convention & Event Tourism*, 9 (2), 119-136.

Gil, S. M., Hudson, S., & Quintana, T. A. (2006). The influence of service recovery and loyalty on perceived service quality: A study of hotel customers in Spain. *Journal of Hospitality & Leisure Marketing*, 14 (2), 47-68.

Gahagan, J. (1984). *Social interaction and its management*. London: Methuen.

Hinkin, T. R., & Tracey, J. B. (2003). The service imperative: Factors driving meeting effectiveness. *Cornell Hotel and Restaurant Administration Quarterly,* 44 (5/6), 17- 26.

Harris, K., & Baron, S. (2004). Consumer-to-consumer conversations in service settings. *Journal of Service Research*, 6 (3), 287-303.

Ha, J., & Jang, S.C. (2010). Effects of service quality and food quality: The moderating role of atmospherics in an ethnic restaurant segment. *International Journal of Hospitality Management*, 29, 520–529.

Huang, C.-H. (2003). A comparison of the service quality perspectives between restaurant customers and restaurateurs in Taiwan. *Journal of Foodservice Business Research*, 6 (2), 87-104.

Hewitt, J. R. (2000). *Self and society: A symbolic interactionist social psychology* (*8th ed.)*. Needham Heights, MA: Allyn and Bacon.

Haskell, C.F., Kennedy, D.O., Wesnes, K. A., & Scholey, A. B. (2005). Cognitive and mood improvements of caffeine in habitual consumers and habitual non-consumers of caffeine. *Psychopharmacology*, 179, 813–825.

Hair, J. F. J., Anderson, R. E., Tatham, R. L., & Black, W. C., (1998). *Multivariate data analysis* (5th edit.). London: Prentice Hall.

Hair, J. F., Black, B., Babin, B., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis.* Upper Saddle River, NJ: Pearson Education.

Hastak, M., & Olson, J. C. (1989). Assessing the role of brand-related cognitive responses as mediators of communication effects on cognitive structure. *Journal of Consumer Research*, 15, 444-456.

International Congress & Convention Association (2010). Statistics report 1999-2008: the international association meetings market. Retrieved on 9, 15 , 2010 from http://www.iccaworld.com/dcps/doc.cfm?docid=876 .

Jung, M. (2005). Determinants of exhibition service quality as perceived by attendees. *Journal of Convention & Event Tourism*, 7 (3/4), 85-98.

Juwaheer, T.D. (2006). Using service quality expectations as a criterion to segment international tourists in the hospitality industry: An outlook of hotels of Mauritius. *Journal of Travel & Tourism Marketing*, 21 (2/3), 1-18.

Jolliffe, I. T. (2002). *Principal component analysis*. Springer series in statistics (2nd ed.). New York: Springer.

Kim, H. J., McCahon, C., & Miller, J. (2003). Assessing service quality in Korean casual-dining restaurants. *Journal of Foodservice Business Research*, 6 (1), 67-86.

Kim, W.G., & Moon, Y. J. (2009). Customers'cognitive, emotional, and actionable response to the service space: A test of the moderating effect of the restaurant type.

International Journal of Hospitality Management, 28, 144-156.

Kim, Y.S., Lee, Y.S., & Love, C. (2010). A case study examining the influence of conference food and beverage service on attendee satisfaction and return Intention at a corporate conference. *Journal of Convention & Event Tourism*, 10, 211–230.

King, S.C., Weber, A. J., & Meiselman, H. L. (2004). Effects of social interaction, physical environment and food choice freedomon consumption in a meal-testing environment. *Appetite*, 42, 115–118.

King, S. C., Weber, A. J., Meiselman, H. L., & Lv, N. (2004). The effect of meal situation, social interaction, physical environment and choice on food acceptability. *Food Quality and Preference*, 15, 645–653.

Kenny, D. A. (1996). The design and analysis of social interaction research. *Annual Revue of Psychology*, 47, 59–86.

Kemper, T. D. (1978). *A social interactional theory of emotions.* John Wiley & Sons, Inc. St. John's University, New York.

Levy, S. E. (2010). The hospitality of the host: across-cultural examination of managerially facilitated consumer-to-consumer interactions. *International Journal of Hospitality Management*, 29, 319–327.

Lee, M. J., & Back, K. J. (2007). Effects of destination image on meeting participation intentions: Empirical findings from a professional association and its annual

convention. *The Service Industries Journal*, 27 (1), 59–73.

Lynch, M., & McConatha, D. (2006). Hyper-symbolic interactionism: Prelude to a refurbished theory of symbolic interaction or just old wine? *Sociological Viewpoints,* 87-96.

Laaksonen, P., Laaksonen, M., Huuhka, C. A., & Santos, R. (2010). Consumers' first consumption environments: a cultural perspective. *Pecvnia, Monografico*, 69-90.

Lee, D. H. (1990). Symbolic interactionism: some implications for consumer self concept and product symbolism research. *Advances in Consumer Research*, 7, 386-393.

Lamb, M. E., Suomi, S. j., & Stephenson, G. R. (1979). *Social interaction analysis.* The University of Wisconsin Press, Ltd. London, England.

Murphy, L. (2001). Exploring social interaction of backpackers. *Annals of Tourism Research*, 28, (1), 50-67.

Madanoglu, M. (2004). Validating restaurant service quality dimensions. *Journal of Foodservice Business Research*, 7 (4), 127-147.

Mehrabian , A., & Russell J. A. (1974). *An Approach to Environmental Psychology*. Cmbridge, MA: MIT Press.

Magnini, V. P., & Thelen, S. T. (2008). The Influence of music on perceptions of brand personality, décor, and service quality: The case of classical music in fine-dining

restaurant. *Journal of Hospitality & Leisure Marketing*, 16 (3), 286-300.

Mead, G. H. (1934). *Mind, Self, and Society*. Chicago: University of Chicago Press.

Manis, J. G., & Meltzer, B. N. (1978). *Symbolic interaction.* Allyn and Bacon, INC. Boston, London, Sydney, Toronto.

Mc Daniel, C. Jr., & Gates, R. (1993). *Marketing research essentials.* Wadsworth, WA:West.

Nield, K., Kozak, M., & LeGrys G. (2000). The role of food service in tourist satisfaction. *Hospitality Management,* 19, 375-384.

Njite, D., Dunn, G., & Kim, L. H. (2008). Beyond good food: what other attributes influence consumer preference and selection of fine dining restaurants? *Journal of Foodservice Business Research*, 11 (2), 237-266.

Nunnally, J.C. (1967). *Psychometric theory*. McGraw-Hall Inc., New York.

Nunnally, J. (1978). *Psychometric theory* (2nd Ed.). New York: McGraw-Hill.

Oppermann, M., & Chon, K. S. (1997). Convention participation decision-making process. *Annals of Tourism Research*, 24, 178-191.

Oliver, G., & Wardle, J. (199). Perceived effects of stress on food choice. *Physiology & Behavior,* 66 (3), 511-515.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49 (4),

31-42.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). Executive summaries: SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing.* 64 (1), 5-6.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing.* 64 (1), 12-40.

Parasuraman, A., Grewal, D., & Krishnan, R. (2006). *Marketing research*. Boston, New York: Houghton Muffin Company.

Pizam, A., & Ellis, T. (1999). Customer satisfaction and its measurement in hospitality enterprises. *International Journal of Contemporary Hospitality Management*, 11 (7), 326-339.

Robelin, M., & Rogers, P. J. (1998). Mood and psychomotor performance effects of the first, but not of subsequent, cup-of-coffee equivalent doses of caffeine consumed after overnight caffeine abstinence. *Behavioral Pharmacology*, 9 (7), 477-653.

Rogers, P. J., Martin, J., Smith, C., Heatherley, S.V., & Smit, H. J. (2003). Absence of reinforcing, mood and psychomotor performance effects of caffeine in habitual non-consumers of caffeine. *Psychopharmacology*, 167, 54–62.

Robinson, L. S., & Callan, R. J. (2005). UK conference delegates' cognizance of the

importance of venue selection attributes. *Journal of Convention & Event Tourism,* 7 (1), 77-95.

Rogers, T. (1998). *Conferences: A Twenty-First Century Industry*. Harlow: Addison Wesley Longman.

Ryu, K., & Han, H. (2009). Influence of the quality of foodservice, and physical environment on customer satisfaction and behavioral intention in quick-casual restaurants: moderating role of perceived price. J*ournal of Hospitality & Tourism Research,* Online First, published on 10, 27, 2009 as doi:10.1177/1096348009350624.

Ryu, K., & Jang, S. C. (S.) (2008). DINESCAPE: A scale for customers' perception of dining environments. *Journal of Foodservice Business Research*, 11 (1), 2-22.

Ruetzler, T. (2008). Food, beverage, and service quality: Does culture impact satisfaction with university food services? *Journal of Culinary Science & Technology*, 6 (4), 308-324.

Russell, M. (2006). 15th Annual meetings market survey. Convene, 2006 March, 32–45. Retrieved November, 2010 from http://www.pcma.org/Documents/15%20mms.pdf

Russell, M. (2007), 16th Annual meetings market survey. Convene, 2007 March, 31–59. Retrieved November, 2010 from http://www.pcma.org/Documents/16%20mms.pdf

Russell, M. (2010), 19th Annual meetings market survey. Convene, 2010 April, 09–12.

Retrieved June, 2011 from http://www.pcma.org/Documents/March10_MMSa.pdf

Severt , K. S., & Palakurthi, R. (2008). Applying customer equity to the convention industry. *International Journal of Contemporary Hospitality Management*, 20 (6), 631. Retrieved on 9,15, 2010 from http://proquest.umi.com/pqdweb?did=1554387141&Fmt=7&clientId=65345&RQT=309&VName=PQD .

Severt, D., Wang, Y., Chen,P.-J., & Breiter, D. (2006). Examining the motivation, perceived performance, and behavioral intentions of convention attendees: Evidence from a regional conference. *Tourism Management*, 28, 399-408.

Salvya, S. J., Jarrinb, D., Palucha, R., Irfanc, N., & Pliner P. (2007). Effects of social influence on eating couples friends and strangers. *Appetite*, 49, 92-99.

Solomon, M. R. (1983). The Role of products as social stimuli: A symbolic interactionism perspective. *Journal of Consumer Research*, 10, 319-329.

Smith, A. (2002). Effects of caffeine on human behavior. *Food and Chemical Toxicology*, 40, 1243–1255.

Tumwesigyea, N. M., Kasiryeb, R., & Nansubugac, E. (2009). Is social interaction associated with alcohol consumption in Uganda? *Drug and Alcohol Dependence*, 103, 9–15.

Turley, L. W., & Milliman, R. E. (2000). Atmospheric effects on shopping behavior: A

review of the experimental evidence. *Journal of Business Research*, 49, 193–211.

Tombs, A., & Kennedy, J. R. M.C. (2003). The social servicescape: a conceptual model. EMAC Conference, 1-7.

Turner, J. H. (1988). *A theory of social interaction*. Stanford University Press, Stanford, California.

Taylor, S. A., & Baker, T. L. (1994). An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions. *Journal of Retailing*, 70, 163-1 78.

Whitfielda, J., & Webberb, D. J. (2010) Which exhibition attributes create repeat visitation? *International Journal of Hospitality Management.* Retrieved 9, 11, 2010, from journal homepage: www.elsevier.com/locate/ijhosman .

Wakefield, K. L., & Blodgett, J. G. (1994). The importance of servicescapes in leisure service Settings. *Journal of Services Marketing*, 8, 66-76.

Wakefield, K. L., & Blodgett, J. G. (1996). The effects of the servicescape on customers' behavioral intentions in leisure service setting. *Journal of Services Marketing*, 10, 45-61.

Wakefield, K. L., & Blodgeu, J. G. (1999). Customer response to intangible and tangible service Factors. *Psychology & Marketing*, 16, 51-68.

Zhang, J., Inbakaran R. J., & Jackson, M. S. (2006). Understanding community

attitudes towards tourism and host-guest interaction in urban-rural border region. *Tourism Geographies*, 8 (2), 182-204.

APPENDIX A – QUESTIONNAIRE OF PILOT TEST

您好:

這份問卷主要探討會議餐飲品質如何影響與會者之間的社交互動。本問卷中所有的資料僅用於學術研究分析，敬請放心填寫，請根據您最近三個月內參加會議的體驗回答下列問題。非常感謝您的合作與協助！！

敬祝　順心平安

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◆ 請根據您最近三個月內參加會議之用餐體驗回答問題：請勾選對於會議中**食物供應**和**社交互動**的感受並分別回答問題之重要性和滿意度。

1. 請問這次會議用餐經驗是：

☐ Coffee Break　☐ 午餐　☐ 晚餐

重要性						滿意度				
非常不重要	不重要	沒有意見	重要	非常重要	**食物供應**	非常不滿意	不滿意	沒有意見	滿意	非常滿意
1	2	3	4	5	食物種類多樣	1	2	3	4	5
1	2	3	4	5	食材新鮮	1	2	3	4	5
1	2	3	4	5	食物口味	1	2	3	4	5
1	2	3	4	5	食物份量	1	2	3	4	5
1	2	3	4	5	飲料	1	2	3	4	5
1	2	3	4	5	熱咖啡/茶品質	1	2	3	4	5
1	2	3	4	5	感官的體驗	1	2	3	4	5
1	2	3	4	5	友善的服務人員	1	2	3	4	5
1	2	3	4	5	有效率地供餐	1	2	3	4	5
1	2	3	4	5	適時回應需求	1	2	3	4	5
1	2	3	4	5	樂於助人的服務人員	1	2	3	4	5
1	2	3	4	5	積極回應抱怨	1	2	3	4	5
1	2	3	4	5	準時供餐	1	2	3	4	5
1	2	3	4	5	提供正確的服務	1	2	3	4	5
1	2	3	4	5	用餐環境清潔	1	2	3	4	5

1	2	3	4	5	用餐空間大小	1	2	3	4	5
1	2	3	4	5	用餐桌椅舒適度	1	2	3	4	5
1	2	3	4	5	乾淨的杯子和餐具	1	2	3	4	5
1	2	3	4	5	光線照明	1	2	3	4	5
1	2	3	4	5	合適的溫度和通風	1	2	3	4	5
1	2	3	4	5	背景音樂	1	2	3	4	5
1	2	3	4	5	適當控制環境音量	1	2	3	4	5
1	2	3	4	5	好的用餐氣氛	1	2	3	4	5
1	2	3	4	5	舒適的座位空間	1	2	3	4	5
1	2	3	4	5	各種餐具的取得	1	2	3	4	5
1	2	3	4	5	適切的食物溫度	1	2	3	4	5
1	2	3	4	5	用餐有助建立關係	1	2	3	4	5
1	2	3	4	5	用餐時促進社交談話	1	2	3	4	5
1	2	3	4	5	娛樂/表演活動	1	2	3	4	5
1	2	3	4	5	用餐時有利人際關係互動	1	2	3	4	5

重要性						滿意度				
非常不重要	不重要	沒有意見	重要	非常重要	**社交互動**	非常不滿意	不滿意	沒有意見	滿意	非常滿意
1	2	3	4	5	用餐時容易感受他人的友善	1	2	3	4	5
1	2	3	4	5	用餐時讓我容易與他人交談	1	2	3	4	5
1	2	3	4	5	用餐時讓我容易與會議成員取得聯繫和溝通	1	2	3	4	5
1	2	3	4	5	用餐時讓我容易接觸到不同的與會者	1	2	3	4	5
1	2	3	4	5	與其他與會者接觸的頻率	1	2	3	4	5
1	2	3	4	5	與他人互動時間是充足的	1	2	3	4	5
1	2	3	4	5	娛樂活動可以使我更容易與他人互動	1	2	3	4	5
1	2	3	4	5	結交新朋友	1	2	3	4	5
1	2	3	4	5	互相交流對於會議的意見和看法	1	2	3	4	5
1	2	3	4	5	與他人分享和會議相關之新資訊	1	2	3	4	5

◆ 請根據您於會議用餐中實際情況分別回答下列問題。

1. 請問餐點提供的形式下列是哪一種？

☐ 個人餐盒　☐ 自助式供餐　☐ 個人套餐

☐ 桌菜　☐ 其他：_____

2. 請問在用餐期間您大約與多少人交談？

☐ 0 人 ☐ 1~3 人 ☐ 4~6 人
☐ 7~9 人 ☐ 10~12 人 ☐ 13 人以上

3. 請問用餐期間您認識多少新朋友？

☐ 0 人 ☐ 1 人 ☐ 2 人
☐ 3 人 ☐ 4 人 ☐ 5 人以上

4. 請問您認為用餐中最容易與他人互動的時機是下列哪一個？

☐ 進入用餐空間時 ☐ 取用餐點時 ☐ 取用飲料時
☐ 用餐中 ☐ 用餐結束後 ☐ 其他：_____

◆ 個人基本資料

1. 性別：

☐ 女 ☐ 男

2. 年齡：

☐ ＜ 20 ☐ 20~30 ☐ 31~40
☐ 41~50 ☐ 51~60 ☐ ＞60

3. 教育程度:

☐ 高中(職) ☐ 大學(專) ☐ 碩士
☐ 博士

4. 年收入(美元)：

☐ ＜ 10,000 ☐ 10,000~20,000 ☐ 20,000~30,000
☐ 30,000~40,000 ☐ 40,000~50,000 ☐ ＞ 50,000

5. 婚姻狀況：

☐ 已婚 ☐ 單身

6. 職業：

☐ 學生 ☐ 軍公教人員 ☐ 服務業
☐ 工商業 ☐ 醫護業 ☐ 電子科技業
☐ 退休 ☐ 其他：_____

7. 國籍：_____

問卷到此結束，謝謝您的填答！！

APPENDIX B – CHINESE QUESTIONNAIRE

親愛的受訪者您好：

這份問卷主要探討會議餐飲品質如何影響與會者之間的社交互動。本問卷中所有的資料僅用於學術研究分析，敬請放心填寫，請根據您近三個月內參加之某一會議的體驗回答下列問題。填答完畢且回傳至 **threasky@hotmail.com**，非常感謝您的合作與協助！！

敬祝　順心平安

東海大學餐旅管理學系研究所
指導教授：汪淑台 博士
研究生：謝維珊
E-mail：threasky@hotmail.com

Ⅰ. 請根據您過去參加某一會議之經驗回答下問題：

1. 您參與的會議種類是：

□ 教育相關　□ 商業貿易相關　□ 健康醫療相關
□ 宗教相關　□ 其他 _____

2. 您參加會議的目的是：

□ 社交機會　□ 教育目的　□ 商業活動
□ 新產品發佈　□ 著作發表　□ 其他 _____

3. 是否有三個以上不同國家之與會者參加會議：

□ 是　□ 否

4. 是否有 50 個以上之與會者參加會議：

□ 是　□ 否

5. 是否會議定期舉辦?

□ 是　□ 否

Ⅱ. 請根據您個人對於此會議的餐飲服務和社交互動之重要性和滿意度分別給予評分；重要性部分請就個人認知面填入分數(5 分-非常重要→1 分-非常不重要)；滿意度部分請就個人實際感受不同時段之會議餐飲(茶會、午餐、晚餐)的滿意程度分別填入分數(5 分-非常滿意→1 分-非常不滿意)。

範例：

餐飲服務	重要性分數	滿意度分數		
	認知面	茶會	午餐	晚餐
食物種類多樣	4	4	3	5

■ **餐飲服務**

餐飲服務		重要性分數	滿意度分數		
		認知面	茶會	午餐	晚餐
食物品質	食物種類多樣				
	食材新鮮				
	食物口味				
	食物份量				
	飲料				
	熱咖啡/茶品質				
	各種餐具的取得				
	適切的食物溫度				
服務品質	友善的服務人員				
	有效率地供餐				
	適時回應需求				
	樂於助人的服務人員				
	積極回應抱怨				
	準時供餐				
	提供正確的服務				
環境品質	感官的體驗				
	用餐環境清潔				
	用餐空間大小				
	用餐桌椅舒適度				
	光線照明				
	合適的溫度和通風				
	背景音樂				
	適當控制環境音量				
	好的用餐氣氛				
	舒適的座位空間				
	用餐有助建立關係				
	用餐時促進社交談話				
	娛樂/表演活動				
	用餐時有利人際關係互動				

■ 社交互動

社交互動	重要性分數	滿意度分數		
	認知面	茶會	午餐	晚餐
用餐時容易感受他人的友善				
用餐時讓我容易與他人交談				
用餐時讓我容易與會議成員聯繫和溝通				
用餐時讓我容易接觸到不同的與會者				
與其他與會者接觸的頻率				
與他人互動時間是充足的				
結交新朋友				
互相交流對於會議的意見和看法				
與他人分享和會議相關之新資訊				

Ⅲ. 請根據您於會議茶會中實際體驗之情況分別回答下列問題。

1. 請問在茶會期間您大約與多少人交談？

□ 0 □ 1~3 □ 4~6
□ 7~9 □ 10~12 □ ≧13

2. 請問茶會期間您認識多少新朋友？

□ 0 □ 1 □ 2
□ 3 □ 4 □ ≧5

3. 請問您認為茶會中最容易與他人互動的時機是下列哪一個？

□ 進入用餐空間時 □ 取用餐點時 □ 取用飲料時
□ 用餐中 □ 用餐結束後 □ 其他：_____

Ⅳ. 請根據您於會議午餐中實際體驗之情況分別回答下列問題。

1. 請問餐點提供的形式下列是哪一種？

□ 個人餐盒 □ 自助式供餐 □ 個人套餐
□ 桌菜 □ 其他:_____

2. 請問在午餐期間您大約與多少人交談？

□ 0 □ 1~3 □ 4~6
□ 7~9 □ 10~12 □ ≧13

3. 請問午餐期間您認識多少新朋友？

□ 0 □ 1 □ 2
□ 3 □ 4 □ ≧5

4. 請問您認為午餐中最容易與他人互動的時機是下列哪一個？

□ 進入用餐空間時　□ 取用餐點時　□ 取用飲料時
□ 用餐中　□ 用餐結束後　□ 其他：_____

Ⅴ. 請根據您於會議晚餐中實際體驗之情況分別回答下列問題。

1. 請問餐點提供的形式下列是哪一種？

□ 個人餐盒　□ 自助式供餐　□ 個人套餐
□ 桌菜　□ 其他:_____

2. 請問在晚餐期間您大約與多少人交談？

□ 0　□ 1~3　□ 4~6
□ 7~9　□ 10~12　□ ≧13

3. 請問晚餐期間您認識多少新朋友？

□ 0　□ 1　□ 2
□ 3　□ 4　□ ≧5

4. 請問您認為晚餐中最容易與他人互動的時機是下列哪一個？

□ 進入用餐空間時　□ 取用餐點時　□ 取用飲料時
□ 用餐中　□ 用餐結束後　□ 其他：_____

Ⅵ. 個人基本資料

1. 性別：

□ 女　□ 男

2. 年齡：

□ ＜ 20　□ 20~30　□ 31~40
□ 41~50　□ 51~60　□ ＞60

3. 教育程度:

□ 高中(職)　□ 大學(專)　□ 碩士
□ 博士

4. 年收入(美元)：

□ ＜ 10,000　□ 10,000~20,000　□ 20,001~30,000
□ 30,001~40,000　□ 40,001~50,000　□ ＞ 50,000

5. 婚姻狀況：

□ 已婚　□ 未婚　□ 其他：_____

6. 職業：

□ 學生	□ 軍公教人員	□ 服務業
□ 工商業	□ 醫護業	□ 電子科技業
□ 退休	□ 其他：_____	

7. 國籍：_____

-問卷到此結束，請回傳至 **threasky@hotmail.com**，非常感謝您的協助！！-

APPENDIX C – ENGLISH QUESTIONNAIRE

Dear Sir/Madam:

The questionnaire is to explore the influence of food & beverage service on social interaction in a conference. The information you provide will be used for research only. Please answer the questions according to your past experience in a conference during three months recently. **Please return to threasky@hotmail.com**. Thanks for taking your time to answer the questions!

Sincerely,

Wei-Shan Hsieh and Shu-Tai Wang, Ph. D.
Department of Hospitality Management, Tunghai University
E-mail：threasky@hotmail.com

Ⅰ. Please answer the following questions according to your past experience in an international conference:

1. What type of conference did you attend?

□ Educational □ Business / Trade □ Medical / Health Care
□ Religious □ Others_____

2. For what purposes did you attend the conference?

□ Networking Opportunities □ Educational Purpose □ Business Activities
□ Product Launch □ Presentation □ Others_____

3. Were the participants from 3 or more countries?

□ Yes □ No

4. Were there 50 or more attendants participating in this conference?

□ Yes □ No

5. Was the conference held regularly?

□ Yes □ No

Ⅱ. Please answer the following questions about your perception on food & beverage service and social interaction during the conference based on the importance and performance. In the importance sections please rate the perception score (5-very important to 1-very unimportant). In the performance sections please rate the satisfaction score (5-very good to 1-very poor) in coffee break, lunch, and dinner, respectively.

Example:

Food & Beverage Service	Importance Score	Performance Score		
	Perception	Coffee Break	Lunch	Dinner
Variety of foods.	4	4	3	5

■ Food & Beverage Service

Food & Beverage Service		Importance Score	Performance Score		
		Perception	Coffee Break	Lunch	Dinner
Food Quality	Variety of foods.				
	Attractive food.				
	The taste of the food.				
	The portion of the food.				
	The beverage.				
	The quality of hot coffee / tea.				
	Available utensils.				
	Proper food temperature.				
Service Quality	Friendly servers.				
	Efficiency.				
	Responsiveness to requests.				
	Helpful attitude of servers.				
	Responsiveness to complaints.				
	Promptness of starting the food function.				
	Accurate service was provided.				

Environment Quality	The sensory experience.				
	Cleanliness.				
	Size and shape of the room.				
	Furniture and fittings.				
	Lighting.				
	Temperature and ventilation.				
	Background music.				
	Proper control of noise level.				
	Good atmosphere and ambiance.				
	Proper seating space.				
	Help networking.				
	Facilitate sociable conversation.				
	Active entertainment.				
	Benefit interpersonal relationship.				

■ Social interaction

Social Interaction	Importance Score	Performance Score		
	Perception	Coffee Break	Lunch	Dinner
Feel friendliness of others.				
Make me talk to others easily.				
Connection with other members of the conference during this food function.				
Meet new people easily.				
The frequency of meeting people.				
The time interacting with people was sufficient.				
Make new friends easily.				
Exchange Opinions about the conference.				
Share new information with others.				

Ⅲ. Please answer the following questions according to your experience during "Coffee Break" in the conference.

1. Approximately how many people did you talk to during the coffee break?

□ 0 □ 1~3 □ 4~6
□ 7~9 □ 10~12 □ ≧13

2. How many new friends did you make during the coffee break?

□ 0 □ 1 □ 2
□ 3 □ 4 □ ≧5

3. Which period of time do you feel more comfortable on interacting with others?

□ Entering the area for coffee break □ Taking the food □ Taking the drink
□ During the break □ After the break □ Others _____

Ⅳ. Please answer the following questions according to your experience during "Lunch" time in the conference.

1. Which form was the meal provided?

□ Lunch box □ Buffet □ Full service set meal
□ Shared table Meal □ Others _____

2. How many people did you talk to during lunch time?

□ 0 □ 1~3 □ 4~6
□ 7~9 □ 10~12 □ ≧13

3. How many new friends did you make during lunch time?

□ 0 □ 1 □ 2
□ 3 □ 4 □ ≧5

4. Which period of time did you feel more comfortable on interacting with others?

□ Entering the dining area □ Taking the food □ Taking the drink
□ During the meal □ After the meal □ Others _____

Ⅴ. Please answer the following questions according to your experience during "Dinner" time in the conference.

1. Which form was the meal provided?

□ Buffet □ Full service set meal □ Shared table Meal
□ Others _____

2. How many people did you talk to during reception dinner?

□ 0 □ 1~3 □ 4~6
□ 7~9 □ 10~12 □ ≧13

3. How many new friends did you make during reception dinner?

□ 0 □ 1 □ 2
□ 3 □ 4 □ ≧5

4. Which period of time did you feel more comfortable on interacting with others?

□ Entering the dining area □ Taking the food □ Taking the drink
□ During the meal □ After the meal □ Others _____

Ⅵ. Demographic Information

1. Gender：

□ Female □ Male

2. Age：

□ ＜ 20 □ 20~30 □ 31~40

□ 41~50 □ 51~60 □ ＞60

3. Education:

□ High school □ College / University □ Master degree

□ Ph. D. degree

4. Annual Income (USD)：

□ ＜ 10,000 □ 10,000~20,000 □ 20,001~30,000

□ 30,001~40,000 □ 40,001~50,000 □ ＞ 50,000

5. Marital Status：

□ Married □ Not Married □ Others_____

6. Occupation：

□ Student □ Public Employees □ Retail & Service

□ Business & Industries □ Health Care □ Technology

□ Retiree □ Others_____

7. Nationality：_____

- Please return to threasky@hotmail.com. Thank you very much-