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The Marketing Effectiveness of Hotel Facebook Pages: From Perspectives of Customers and Messages

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THE MARKETING EFFECTIVENESS OF HOTEL FACEBOOK PAGES:

FROM PERSPECTIVES OF CUSTOMERS AND MESSAGES

By

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ABSTRACT

**The Marketing Effectiveness of Hotel Facebook Pages:
From Perspectives of Customers and Messages**

By

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The unprecedented growth of social media has not only transformed the way

people interact with each other, but also changed the way businesses attract and retain

consumers. More and more people are using social media sites to connect to others in a

variety of ways, including dating, meeting others with common interests, and sharing

information. Thus all kinds of businesses have started using social media for marketing

purpose. In the hotel industry, social media marketing has become a new trend hoteliers

are chasing and an increasing number of hotels are using social media to promote their

business. However, the marketing effectiveness of social media is still a big challenge in

both academic and business world. Since social media marketing is totally different from

traditional marketing approaches, traditional marketing theories and practices may not be

applicable to social media. Besides, very few studies have examined the effectiveness of

social media marketing in the academic world.

Therefore, this study intended to provide an in-depth examination on the

marketing effectiveness of Facebook, the most commonly used social media site, in the

hotel industry. The study explored the marketing effectiveness of Facebook from both

customer and message perspectives. From the customer perspective, the antecedents of marketing effectiveness were analyzed through an online survey. From a message perspective, different types of messages posted on hotel Facebook pages by hotels were categorized and the marketing effectiveness of different messages was compared using an experiment design. Finally, combining antecedents with outcomes, the study proposed an integrative model of hotel Facebook marketing mechanism.

To achieve these objectives, the study used mixed methods and was comprised of three sub-studies. The first sub-study employed an online survey to understand the antecedents that drive people to join hotel Facebook pages. The sub-study proposed three competing theoretical models, technology model, communication model, and social psychology model, to compare the extent to which the three models can explain customers' intention to join hotel Facebook pages. The social psychology model was tested to be the best model and three factors were identified to influence customers' intention to join hotel Facebook pages. Among them, internalization and identification had positive effects while compliance had a negative effect. Thus, Facebook marketing was more like a social phenomenon influenced by social interactions than a simple technology innovation or a communication platform.

The second sub-study was a qualitative study that uses content analysis to collect data from 12 sample hotel brand Facebook pages and develop a classification of messages posted on hotel Facebook pages by hotels. A 4-type message format and 6-type message content classification was identified. In terms of message format, picture was more marketing effective than word, web link and video formats. In terms of message content, brand, product, and involvement messages had better marketing effectiveness

than promotion, information, and reward messages. Promotion message was the worst message content type in terms of marketing effectiveness. Thus, Facebook works best for hotels to build brands, introduce new products, and interact with customers, while it is not a good platform for hotels to announce promotions and deals.

The third sub-study conducted an online experiment to compare the marketing effectiveness of different types of messages on hotel Facebook pages. A 3×3 two-factor (message format and message content) between-subjects design was employed. Word, picture, and web link were chosen as the message format levels. Brand, product, and involvement were chosen as the message content levels. A hotel brand "Starhill" was created and nine simulated hotel Facebook pages with nine different types of messages were developed. Participants were randomly assigned to read one Facebook page with one type of message and then complete a questionnaire on message marketing effectiveness. Significant interaction effects were found on attitude toward the hotel Facebook page, hotel booking intention, and electronic word-of-mouth. Picture messages are better than word and web link messages in generating positive attitudes among customers, while word and web link messages do better in inducing more customer intentions. Besides, Brand messages work better in picture format while product messages do better in word and web link formats.

This study had both theoretical and practical significance. Theoretically, this study was one of the first attempts about marketing effectiveness of social media using mixed methods and tried to identify the underlying theoretical models of social media marketing in the hospitality field. The integrated model of hotel Facebook marketing mechanism proposed in the study represents an important advancement in the theoretical

research regarding social media marketing, particularly in the hotel industry context. Practically, this study can be used as a guideline for Facebook usage in the hotel industry. The study provided the hotel industry two types of suggestions in leverage Facebook marketing. On the customer side, hotels should reinforce their customers' social identity on their hotel Facebook pages through the creation of a social community and create message contents conforming to the norms and value systems of customers. On the message side, hotels should balance Facebook message format and carefully choose the best message format based on the message content and the purpose of the messages. In terms of message content, brand, product, and involvement messages should be the first choices of hotel Facebook messages. Hotels should avoid using promotion messages a lot.

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CHAPTER 1

INTRODUCTION

In this burgeoning digital world, advances in technologies have brought substantial changes not only in personal and social contexts, but also on the business front. The emergence of Web 2.0 allows internet users to create, edit, share, and view information online (Cormode & Krishnamurthy, 2008), leading to an evolution of social media sites. Social media are defined as "forms of electronic communication through which users create online communities to share information, ideas, personal messages, and other content" (Merriam-Webster, 2012). Social media is an umbrella term for various types of internet applications such as social networking sites, blogs, content communities, forums/bulletin boards, and other interactive applications (Alarcó-del-Amo, Lorenzo-Romero, & Gómez-Borja, 2011; Constantinides & Fountain, 2008). Although there exist numerous social media sites, all social media sites share common features, which allow users to create and share information online and engage in social interactions dynamically (Alarcó-del-Amo et al., 2011; Boyd & Ellison, 2007).

Typical social media sites, including Facebook, Twitter, LinkedIn, Flickr and YouTube, have enjoyed an explosive growth in the past decade. Founded in 2004, Facebook has already had about 900 million active users, more than 50% of whom log on to Facebook every day (Facebook.com, 2012). Started in 2006, Twitter has witnessed a 182% of increase in number of mobile users in 2010 and 140 million tweets people sent per day (Twitter.com, 2011). Officially launched in 2003, LinkedIn is now the world's largest professional social network site with over 135 million members all over the world and more than 2 million LinkedIn Company Pages (LinkedIn.com, 2012). Created in

2004, Flickr is now the best online photo management and sharing application in the

world with more than 51 million registered members and more than 6 billion images

("Flickr," n.d.). Launched in 2005, YouTube has enjoyed 8 years of video content

uploaded and 3 billion videos viewed per day, and had 800 million unique users visiting

YouTube each month from 25 countries (Youtube.com, 2012).

Table 1

The Ten Most Visited Websites in 2004 and 2011

Rank	2004	2011
1	Yahoo!	Google
2	MSN (Microsoft)	**Facebook**
3	~~AOL~~	**YouTube**
4	Google	Yahoo!
5	~~eBay~~	Baidu
6	~~Ask Jeeves~~	**Wikipedia**
7	~~Terra Lycos~~	**Blogger**
8	~~About~~	Windows Live (Microsoft)
9	~~Amazon~~	**Twitter**
10	~~Monster~~	**QQ**

Note. Adapted from "PhoCusWright's social media in travel: Traffic & activity," by D. Quinby, 2010, *PhoCusWright Report: Global Edition*, p. 1. and "10 most visited websites 2011-2012," 2011, October 6, Retrieved from http://exploredia.com/10-most-visited-websites-2011-2012/

A good demonstration of how the Web has changed from 1.0 to 2.0 or social

media is the comparison of the 10 most visited websites in 2004 and 2011 (See Table 1).

The comparison showed that only three big search engineers (Google, Yahoo!, and

Microsoft) remain the same across eight years and there are very big differences in the 10

most visited websites. Some search engines, portals and content publishers went out and

six social media sites (marked bold in Table 1) developed as new popular websites,

including social networking sites (Facebook, Twitter, and QQ), video sharing sites

(YouTube), micro-blogging sites (Blogger), and the collaborative online encyclopedia (Wikipedia).

In addition, the three websites remaining in the top 10 have also integrated social media applications into their previous websites (Quinby, 2010). For example, Google is actively aggregating and soliciting user reviews on hotels, restaurants, and a range of local services from day care to doctors. Yahoo! has created Flickr as a photo-sharing site and also introduced the more recent mashup homepage model to enable users to participate in social media. Microsoft keeps its application MSN, an instant online messaging application, to let its users keep in touch with their friends.

With social media sites growing rapidly, more and more people are using social networking sites to connect to others in a variety of ways, including dating, meeting others with common interests, and sharing information (Stankov, Lazić, & Dragićević, 2010). One survey reported that the number of adult users on social media sites has increased from 8% to 35% between 2005 and 2009 (Geiger, 2009). Another study estimated that the number of social media users has doubled from 2007 to 2009 and there were 55.6 million adults (about 1/3 of the population) in the US visiting social media sites at least monthly in 2009 (Ostrow, 2009). The recent study by Madden and Zickuhr (2011) reported that 65% of US adult internet users (50% of all US adults) now use social networking sites, more than double the percentage that reported in 2008 (29%), and 43% of online adults use social networking sites daily. The majority of social media users are frequent users. A study found that 90% of social network users log on the sites weekly or more often. More than 60% of users participate in social network activities daily or more often (PhoCusWright, 2010). However, different social media sites have different usage

frequency. 52% of Facebook users and 33% of Twitter users engage with the sites daily, while only 7% of MySpace and 6% of LinkedIn users do the same (Hampton, Goulet, Rainie, & Purcell, 2011). In terms of different social media sites, eBizMBA ranked Facebook and Twitter as the top two most popular social networking sites based on website's traffic ("Top 15", 2011).

The explosive growth of social media sites has transformed the way many consumers interact with each other and with businesses, changing the way we do business and how businesses attract and retain consumers. The emergence of Web 2.0 and social media have changed Internet users' online experience from reading, searching and consuming to creating, connecting, and exchanging. Internet users have become generators, collaborators, and commentators (Quinby, 2010). Thus businesses have started using social media for marketing purpose. A recent study showed that 79% of the top 100 companies in the Fortune Global 500 index have applied at least one social media platform for business purposes ("Burson-Marsteller", 2010). Another study revealed that social media channels were also commonly used by US small businesses to connect with their customers or prospects, more than Google ("Facebook still", 2011). 70% of businesses use Facebook, followed by 46% using Twitter, 37% using LinkedIn, and 25% using YouTube. Also, 83% of small businesses indicated that Facebook was effective in marketing and 46% indicated the same of Twitter, higher than 12% in Google. Stelzner's (2009) annual social media marketing report revealed that LinkedIn and Facebook were the top four social media sites used by marketers, with Twitter leading the pack. However, in Stelzner's (2010, 2011) annual reports, Facebook and Twitter became the top two social media tools used by marketers across two years.

As more businesses use social media sites in their marketing efforts, the

marketing spending in social media is also increasing. A study reported that worldwide

social network advertising revenues will surpass $8 billion in 2012 and approach $10

billion by 2013. In US, it will reach $3.9 billion in 2012 and $4.81 billion in 2013, up

from $2.74 billion in 2011 ("Facebook social networks", 2011). Among all social media

sites, Facebook lead in social network advertising revenues and is estimated to tally $5.78

billion in 2012, representing 72% of all social network advertising revenues ("Facebook

social networks", 2011). In the US, Facebook is expected to surpass Yahoo to become the

No. 1 site in term of online advertising revenues ("Facebook social networks", 2011).

In the hotel industry, social media marketing has become a new trend hoteliers are

chasing and an increasing number of hotels are using social media to promote their

business (Moore, 2011). For example, Starwood Hotels & Resorts was one of the first

hotel companies to be engaged in social media marketing. In June 2006, travelers were

encouraged to share their personal travel story in order to win a vacation in its

Sherabration Sweepstakes. Later, in 2009, it launched a new social media platform,

named Sheraton Shared Moments, via multiple social media sites including Twitter,

Facebook, Flickr, and blogging platforms to let users share their travel experiences to win

a holiday at a Sheraton property (Lanz, Fischhof, & Lee, 2010). Hyatt created an online

community site for its Gold Passport members which offers expert insight, tips, and

advices for their travel and stay (Lanz et al., 2010). Marriott's CEO, Bill Marriott's blog,

On the Move (www.blogs.marriott.com) was started in 2007 and has generated more than

$5 million in bookings from people who clicked through to the reservation page from the

blog (Lanz et al., 2010). All Hotel Indigo locations have created their own Facebook fan

pages and given away discounts and promotions to friends and fans on Facebook. In December 2009, Hotel Indigo started a Tweet Away promotion, during which it offered about one million Priority Club points to its Twitter followers redeemable for hotel nights, retail gift cards, electronics and more (Lanz et al., 2010).

According to a recent TravelClick poll, about 75% of hotels have utilized social media for marketing purposes ("One quarter", 2011). Many of the top 50 hotel brands have used at least three social media channels in their marketing efforts (Withiam, 2010). Marriott is the most visible online brand, especially on Twitter. Hyatt recorded the most activity, while Holiday Inn had the most "likes" on Facebook. Best Western has the strongest social media presence overall, followed by Hilton and Marriott (Withiam, 2010). Facebook was utilized by 65% of hoteliers making it the most preferred social media channel, followed by Twitter (20%) ("One quarter", 2011). A UK study also reported that Facebook and Twitter were the two most useful social media channels for business purposes in the hospitality and leisure industry (Friebe & Campbell, 2010).

For hotels, social media marketing enable real-time, two-way communication and allow hotels to communicate at point-of-need (Lanz et al., 2010). Over 60% of online travelers have interacted with hospitality businesses through some social media sites (PhoCusWright, 2010). In this way, hotels can reinforce their message and help it go viral, which generating electronic word-of-mouth (Lanz et al., 2010). Social media advertising is becoming a new advertising trend replacing traditional forms of advertising (Wright, Khanfar, Harrington, & Kizer, 2010). Social media marketing can be used by hoteliers not only to increase sales, but also to improve brand awareness, monitor brand reputation, educate and inform customers and improve customer services (Lim, 2010). Besides,

social media can also enable hotels to build and sustain involved and engaged customer relationships (Edosomwan, Prakasan, Kouame, Watson, & Seymour, 2011).

For customers, the rapid growth of social media is changing the ways in which travelers search for and evaluate travel information (Cox, Burgess, Sellitto, & Buultjens, 2009). Travelers may change their travel decision or travel behavior based on information obtained from social media. McCarthy, Stock, and Verma's (2010) study indicated that social media is an essential part of many consumers' information gathering processes and it impacts their hotel-choice decisions. Cox et al. (2009) found that nearly 90% of all respondents felt their trip planning decisions had been influenced by the information provided by social media. In addition, social media enables users to build and maintain contacts with their family, friends and businesses in a virtual environment, thus provide consumers and businesses with wide better social networking opportunities and enhanced communication abilities (Gregurec, Vranešević, & Dobrinić, 2011; Kucuk & Krishnamurthy, 2007).

<center>**Problem statement**</center>

The emergence of social media creates both opportunities and challenges for more effective marketing and advertising (Vollmer & Precourt, 2008). As more and more hotel managers are incorporating social media into their integrated marketing communications, the attention on its effectiveness is rising. However, it is a significant challenge for businesses to measure the effectiveness of social media marketing (Palmer & Koenig-Lewis, 2009). Although social media is claimed to be effective in improving marketing practices, nonetheless, there is no quantitative support to reinforce these claims. What's even worse, another survey revealed that advertising on social media is perceived by

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many businesses as ineffective in terms of performance (Bower, 2012). Since social media marketing is totally different from traditional marketing approaches, traditional marketing theories and practices used in traditional media such as TV, newspaper, and radio may not be applicable to social media (Gil-Or, 2010; Tariq & Wahid, 2011). Moreover, the old metrics of online advertising effectiveness are found not applicable to social media either (Fisher, 2009).

In a marketing executive survey, 61% of respondents indicated that social media marketing is one of the top challenges of the organization (Mickey, 2011). More than half of marketers view the measurement of social media marketing effectiveness (metrics) as a major obstacle, thus 3/4 of marketers even don't measure their social media marketing effectiveness (Hosford, 2011). The recent commonly used metrics of social media marketing are traffic-building, social buzz, branding, customer feedback, SEO, lead generation, and product or event promotion (Hosford, 2011). However, to measure the effectiveness of social media marketing is still very difficult and largely relies on social media technical statistics such as Twitter followers, re-tweets, mentions, and "shares" on Facebook (Gelles, 2011). New relevant metric of social media marketing are eagerly required by the practitioners.

According to Stelzner (2009, 2010, 2011)'s annual industry report, marketers were keep looking for answers to two most important questions for three years. They were: (1) how to measure effectiveness of social media marketing; and (2) what are the best practices of social media marketing. However, very few studies have examined the effectiveness of social media marketing in the academic world (Mabry & Porter, 2010). Therefore, an in-depth study on both customer and message sides of social media

marketing would not only identify the marketing mechanism of social media on the theoretical side but also justify the usage of social media in the hotel industry in order to help the hotel industry optimize its social media marketing practices.

Purpose of Study

In this particular study, the marketing effectiveness of Facebook for the hotel industry was examined. Facebook was chosen as the specific social media site because of two reasons: (1) Facebook is the most visited social media site ("10 Most", 2011; "Top 15", 2011); (2) Facebook is the most commonly used social media marketing tool (Friebe & Campbell, 2010; "One quarter", 2011; Stelzner, 2011). The study was conducted in the United States, so only U.S. population was considered. Marketing effectiveness measured in this study included three metrics: how Facebook marketing could attract customers to join the hotel social media pages, how Facebook marketing could generate customers' intention of booking hotel, and how Facebook marketing could evoke customers' intention to spread words online (electronic word-of-mouth). Marketing effectiveness has two key dimensions: customer and advertisement. The customer dimension indicates that understanding customer behaviors and decision making processes can help marketers improve marketing effectiveness (Kotler & Keller, 2006). The advertisement dimension suggests that different advertisement has different executional cues which influence marketing effectiveness (MacInnis, Moorman, & Jaworski, 1991).

Therefore, the study explored the marketing effectiveness of Facebook from two perspectives: customer and message (which is an advertisement on hotel Facebook page). From the customer perspective, the antecedents of marketing effectiveness were analyzed. Through reviewing theories and models from three disciplines, three competing

theoretical models of antecedents of Facebook marketing were proposed and compared. From the message perspective, different types of messages posted on hotel Facebook pages by hotels were categorized and the marketing effectiveness of different message types was compared using an experiment design. Finally, the study discussed best-practice procedures for integrating and implementing Facebook marketing in the hotel industry based on the in-depth examination of Facebook marketing effectiveness.

Specifically, the study intended to achieve the following objectives:

(1) to propose and compare three competing theoretical models of antecedents of social media marketing which are built on technology, communication, and sociology theories;

(2) to classify categories of messages posted on hotel Facebook pages by hotels;

(3) to compare the marketing effectiveness of different types of messages on hotel Facebook pages;

(4) to develop an integrated model of Facebook marketing mechanism combining antecedents with outcomes; and

 (5) to provide best practice suggestions for the hotel industry on how to use Facebook for marketing purpose.

Research questions

The following research questions were explored in this study:

(1) what factors influence customers' attitudes toward hotel Facebook pages and their intentions to join hotel Facebook pages?

(2) what types of messages are posted on hotel Facebook pages by hotels?

(3) which type of message is the most effective in terms of marketing outcomes?

(4) what is the mechanism underlying hotel Facebook marketing? and

(5) what hotels can do in the future to leverage Facebook marketing?

Significance of Study

This study had both theoretical and practical significance. Theoretically, there is limited academic research on the marketing effectiveness of social media, let alone that using quantitative method. This study was one of the first attempts about marketing effectiveness of social media using mixed methods, which significantly contributes to the existing literature on social media. Since social media is a new phenomenon, the underlying marketing theory which can be used to explain this phenomenon has not been developed yet. This study tried to examine hotel Facebook marketing issue from two perspectives: consumer behavior and message advertising effectiveness. Applying multiple theories and models from technology, communication, sociology, and marketing fields in social media area, this study identified the underlying theoretical models of social media marketing in the hospitality field and contributed to the marketing theory.

Practically, this study can be used as a guideline for Facebook usage in the hotel industry. As academic research on social media marketing effectiveness is rare, the hotel industry is lacking in instruction on social media marketing. This study attempted to solve one important practical question of Facebook usage for hotel managers: how to use social media to maximize the marketing effectiveness. Specifically, the study answered this practical question from both customer behavior and message type perspectives. Findings of this study could provide the hotel industry two types of suggestions. One is how to motivate customers engaged in Facebook marketing based on consumer behavior

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analysis. The other is how to use the most effective message type to achieve Facebook marketing effectiveness based on the message advertising experiment.

Definition of key terms

The following terms are defined as they were used in this study:

Web 2.0: A new version of the World Wide Web that changes the way in which software developers and end-users utilize the World Wide Web (Kaplan & Haenlein, 2010). Technically, Web 2.0 refers to the "Web as Platform", where software applications are built upon the Web as opposed to upon the desktop (O'Reilly, 2005). More specifically, Web 2.0 is a platform whereby content and applications are continuously created and modified by all users in a participatory and collaborative fashion (Kaplan & Haenlein, 2010). Web 2.0 is considered as the platform for the emergence of social media (Kaplan & Haenlein, 2010).

User generated content (UGC): the various forms of media content that are created, contributed and distributed by regular web end-users (Kaplan & Haenlein, 2010). The Organisation for Economic Cooperation and Development defined three requirements for UGC: publicly accessible to a group of people, containing creative effort, and outside of professional routines and practices (OECD, 2007).

Social media: Internet-based applications built on technological foundations of Web 2.0 that allow the creation and exchange of user-generated content (Kaplan & Haenlein, 2010). Kaplan and Haenlein also categorized social media into six different types of applications based on two dimensions: media richness and self-disclosure. The six types are: collaborative projects (e.g. Wikipedia), blogs and microblogs (e.g. Blogger), content communities (e.g. Youtube, Flickr), social networking sites (e.g. Facebook,

MySpace, Twitter), virtual game worlds (e.g. World of Warcraft) and virtual social worlds (e.g. Second Life). Kim (2010) identified three general categories of social media: social networking sites (e.g., Facebook, Twitter, MySpace, and LinkedIn), video sharing sites (e.g., YouTube), and micro-blogging (e.g., Blogger, Jaiku, or Pownce)

Social media marketing: Social media marketing is the umbrella term for using social networks, online communities, blogs or any other Internet form of media for marketing purpose. Social media marketing differs from traditional marketing approaches in the way consumers interact with the company (Mabry & Porter, 2010). Social media can convert consumers into advertisers so consumers act not only as message receivers, but also as content creators in social media marketing (Akara & Topçu, 2011).

Attitude-toward-social-media-site: adapted from the concept of attitude-toward-the-website (Chen & Wells, 1999), attitude-toward-social-media-site is defined as the predispositions of users of social media site to respond favorably or unfavorably to social media site content in natural exposure situations.

Attitude-toward-the-message: adapted from the concept of attitude-toward-the-ad (Lutz, 1985), attitude-toward-the-message refers to individuals' predisposition to respond in favorable/unfavorable manner to a particular message after reading it on hotel Facebook page.

Attitude-toward-the-hotel-brand: customers' overall evaluation of a hotel brand, whether good or bad (Mitchell & Olson, 1981).

Brand cognition: The internal mapping of a person's mind consists of elements of knowledge about a specific brand (Petty & Cacippo, 1981). It is a customer's perception of a specific brand as a whole.

Task-Media Fit: The level at which the richness of information that can be transmitted via the media's technology fits the information richness requirements for the task performance (McGrath & Hollingshead, 1994).

Perceived ease of use: The user's belief that using and/or learning a new technology will be free of effort (Davis, 1989).

Perceived usefulness: The user's belief that using a new technology will improve the user's job performance (Davis, 1989).

Compliance: an individual accepts influence and adopts the induced behavior because of outside rewards or punishments (Kelman, 1958).

Identification: an individual accepts influence and adopts the induced behavior in intent to establish or maintain a satisfying self-defining relationship with group members (Kelman, 1958).

Internalization: an individual accepts influence and adopts the induced behavior because it is congruent with his/her value system (Kelman, 1958).

Organization of the dissertation

This dissertation is organized into five chapters. Chapter 1 provides an introduction to the problem statement, the purpose of the study, the research questions, significance of the study, and the definitions of key terms. Chapter 2 includes a review of the literature related to social media research in hospitality field and theories from multiple disciplines such as social psychology, technology, communication, and marketing. Chapter 3 presents the research methods and research design for the study, including instruments, data collection procedure, and data analysis methods. Proposed models are also developed in Chapter 3 based on literature review. Chapter 4 provides the

results of the study, including the results of all the three sub-studies. The study concludes

with Chapter 5, which incorporates a summary of the findings, discussion of implications,

and recommendations for future research.

CHAPTER 2

REVIEW OF LITERATURE

The objective of this literature review is to better understand the concepts and theories underlying social media marketing. The literature review consists of three sections. The first section describes the benefits and challenges of social media marketing to businesses. It explains why the hotel industry should integrate social media marketing into marketing strategy. The second section summarizes past studies focused on social media applications in the hospitality field and identifies the gaps existing in the social media marketing research. The final section addresses the theories relevant to social media marketing and reveals the theoretical underpinnings that are the foundation of this study.

Benefits and Challenges of Social Media Marketing

Cooke and Buckley (2008) predicted that Web 2.0 and online social networks would be the marketing tactics of the future, creating a distinct new area of social media marketing in the business world. Social media is gaining in importance both for consumers and for marketers who incorporate them into their marketing plan (Gregurec, Vranešević, & Dobrinić, 2011). Although social media do not replace traditional marketing tools, it has been becoming an increasingly important element of the marketing mix (Palmer & Koenig-Lewis, 2009; Withiam, 2010). The proliferation of social media threatens established business models as well as creates extensive opportunities for new business models (Hennig-Thurau, Malthouse, Friege, Gensler, Lobschat, Rangaswamy, & Skiera, 2010). The social media marketing practices have indicated various implications

to the business world. This section will discuss both benefits and challenges of social

media marketing to businesses.

Benefits

Social media marketing provides various benefits to general businesses and the

hospitality industry, including advertising and promotion, brand awareness and reputation,

sales increase, customer relationships, and word-of-mouth marketing. This section

discussed the benefits of social media marketing to the general business.

Advertising and promotion.

Social media also serves as a new medium of online advertising and promotion

for businesses. The statistics showed that investment in worldwide social media

advertising is predicted to increase from $55 billion to about $80 billion and the

worldwide social media advertising revenue is also estimated to increase three times from

2009 to 2012 ("Social network", 2011). Social media gives businesses a platform to send

out interactive advertising messages that are targeted at relevant market segment. Social

media endow businesses with the ability to segment the market automatically and

effectively based on users' profiles (Gregurec et al., 2011). Businesses get consumers'

demographic, geographic, psychographic information from their social media profiles

and target ads individually tailored to consumer (Hoy & Milne, 2010).

Social media advertising is becoming a new advertising trend replacing traditional

forms of advertising since more and more consumers tend to avoid traditional forms of

advertising (Wright, Khanfar, Harrington, & Kizer, 2010). A marketer survey revealed

that over 70% of marketers expected that the effectiveness of social media advertising

would increase in the near future with a decreasing effectiveness of traditional advertising

(Bernoff, 2009). Social media is also the most inexpensive method of marketing and advertising since it can market products and services to targeted segments at a minimal cost (Paridon & Carraher, 2009). Thus, it is especially suitable for the small businesses that do not have sufficient money (Tariq & Wahid, 2011). Advertising on social media is delivered not only from business to consumer, but also from voluntary consumer to consumer (Gbadeyan, 2010). The latter is called momentum effect that occurs when a consumer refers a particular brand personally, or passes along the ad information to a friend (Gbadeyan, 2010). A UK study showed that 25% of social media users posted comments about an ad and 35% had forwarded an ad to other users (Microsoft Digital Advertising Solutions, 2007). This Momentum effect accounts for more than half of social media advertising effectiveness (Gbadeyan, 2010). In this way, ads are communicated among an exponentially increasing number of users.

Brand awareness and reputation.

The first benefit social media marketing brings to hospitality businesses is enhanced brand awareness. Brand awareness is the consumers' knowledge of a brand's existence (Montalvo, 2011). Brand awareness starts with brand experiences and social media helps strengthen the brand experience and support brand building through facilitating customer engagement (Edosomwan, Prakasan, Kouame, Watson, & Seymour, 2011). Social media platforms increase the brand's visibility of a business through regularly updating content into the social media page (Montalvo, 2011). Through social media, businesses can repeatedly communicate their brand information to the consumers and reinforce the brand in the consumers' minds (Edosomwan et al., 2011). Aggarwal asserted that social media is very helpful for monitoring a brand and driving traffic to a

hotel's website (Withiam, 2010). Social media also entails identifying, and mitigating risks to the brand's reputation on social media platforms (Montalvo, 2011). Using the case of McDonald, Levigne demonstrated that a well designed social-media marketing strategy is essential to building a brand. The strategy involves three main tactics: listening, participating, and leading (Withiam, 2010).

The brand can be strengthened through customer participation in social media. Through analyzing customers' comments about its brands, a business can integrate customer insights into its brand and enhance its brand reputation (Withiam, 2010). More and more consumers are engaged in learning and talking about brands on social media as well as visiting the websites of businesses through social media links (Mahoney, 2009; Pookulangara & Koesler, 2011). A UK study revealed that 73% of UK social media users have visited the personal space of a brand and 16% have already had a dialogue or sent a message to a brand (Microsoft Digital Advertising Solutions, 2007). Jansen, Zhang, Sobel, & Chowdhury (2009)'s study found that one in five tweets mentioned a specific brand or services and about 20% of all microblogs talked about a brand and the brand experience. A study showed that the active users on Facebook contributes more than 3% of all traffic to the top retail sites online (Mahoney, 2009).

Yan (2011) identified nine benefits social media can bring to businesses in terms of branding: (1) creating a sense of community within the business, (2) encouraging the acceptance of brand values, (3) engaging consumers in communicating and promoting the brand, (4) identifying and maintaining a competitive advantage, (5) differentiating the brand, (6) informing the vision behind the brand, (7) building positive brand associations, (8) improving the perceived brand quality, and (9) enhancing brand awareness.

Sales increase.

Social media benefits have moved beyond marketing to driving sales for businesses. Businesses have witnessed sales increases as one of the outcomes of social media marketing (Glazer, 2010). For example, Sony reported that Sony Vaio's Twitter account had achieved over £1 million in sales till 2010 (McEleny, 2010). Dell also reported that its promotions on Twitter have helped generate more than $6.5 million in orders for PCs, accessories and software (Guglielmo, 2009). Social media and mobile applications were predicted to account for half of online sales for businesses by 2015 (Huber, 2011). A poll showed that 78% of marketers considered customer reviews as the most important social media tool for generating sales ("Reaching", 2009). Social media can increase sales for businesses because it offers marketers a better way to solve the needs and problems of customers than that of traditional marketing tools (Chase, 2011). Social media allows businesses to provide ongoing values to customers by updating information on social media that solves their problems and addresses their needs (Chase, 2011).

In the hospitality industry, social media is claimed to be able to make the sales process faster, more efficient and ultimately, more productive (Verret, 2011). User-generated content on social media can increase hotel sales in two ways. One is an indirect way of bringing more traffic to hotel website by increasing rankings in search engines. The other is a direct way of increasing hotel bookings by increasing consumer confidence (Mackenzie, 2011). A study showed that the volume of direct referrals from social media sites to hotel websites was growing (Quinby, 2010). In 2009, more than 20% of travelers who booked trips from online travel agency or booked room from hotel websites had

visited a traveler review site in the same month (Quinby, 2010). What's more, a number

of social media savvy hotels have developed booking widgets on Facebook pages to

facilitate users' booking via Facebook and the outcomes were turned out to be favorable

(Mayock, 2011).

Customer relationships.

Social media is a place for businesses not only to market their products and

services, but also to interact with their customers and build and sustain customer

relationships (Edosomwan et al., 2011). Social media enables businesses to be in touch

with their customers 24 hours a day and communicate directly with them (Wright et al.,

2010). Since social media support a two-way direct communication between consumers

and businesses, it facilitates effective customer engagement for hospitality business. The

ability of social media that grant consumers control over their information sharing

increases the willingness of consumers to continue relationship with businesses (Culnan

& Armstrong, 1999). While traditional media can only keep consumers informed, social

media can even keep the customers stimulated and involved (Lim, 2010). When a

business gets their customers involved and engaged, it leads to lasting customer

relationships with the business (Lim, 2010).

Social media can offer both better service and lower cost advantages to hospitality

businesses in terms of customer relationship management (Withiam, 2010). Social media

offers businesses multifarious ways to measure consumers' communication, browsing, or

purchase-related behaviors (Hennig-Thurau et al., 2010). Thus hospitality businesses are

able to obtain more knowledge about their consumers and to develop individualized

products and services based on their needs and wants (Ružić & Biloš, 2010). Wang, Yu,

and Fesenmaier (2002) suggested that travel retailers are using social media to enhance

their existing travel products and to create new divisions and capabilities. A study

conducted by Wooden revealed that 78% of companies reported improved customer

satisfaction when they started using social media for customer relationship management

(Withiam, 2010). Social media is also a cost-effective tool for customer relationship

management since businesses can communicate with consumers and solve their problems

for free (Mathwick, Wiertz, & De Ruyter, 2008).

Word-of-mouth marketing.

Word-of-mouth (WOM) refers to oral, person-to-person communication between

a communicator and receiver which is perceived as non-commercial message (Arndt,

1967). WOM is believed to be the most influential source of prepurchase information

(Bickart & Schindler, 2002; Crotts, 1999), more powerful than conventional marketing

tools, such as advertising and personal selling (Katz & Lazarsfeld, 1955; Silverman,

2001). WOM referrals also have a strong impact on new customer acquisition, 20 times

stronger than marketing events and 30 times than traditional media appearances (Trusov,

Bucklin, & Pauwels, 2009). Since hospitality businesses offer only experience-based

services, which are hard to be evaluated by potential consumers before purchase,

recommendations or WOM from previous consumers who have the particular service

experience, are preferred source of prepurchase information to potential consumer (Crotts,

1999).

Word-of-mouth marketing is a particularly prominent feature of social media

(Trusov et al., 2009). A distinguishing feature of social media is facilitating the

willingness and ability of individuals to communicate their thoughts and experiences to

others, both to their friends and to those unknown (Palmer & Koenig-Lewis, 2009).

Social media presents as an innovative venue for hospitality businesses to encourage their

consumers to share their views, preferences, or positive experiences with others, thus

spread WOM to influence other consumers (Kim & Hardin, 2010). The traditional WOM

targeted to only one or a few friends through person-to-person communication has been

transformed into enduring messages visible to the entire world through social media

(Duan, Gu, & Whinston, 2008). Using social media, businesses can take advantage of

WOM marketing with a faster delivery at a lower cost (Trusov et al., 2009).

WOM marketing on social media can also happen through sponsored consumer

conversations, which refers to social media users spreading positive information about

brands and products to others in exchange for financial or material compensation from

the business (Kim, 2010). For example, a study pointed out that more than 7,000 Twitter

users have signed up for sponsored tweets, in which they post product-related

information on behalf of the business, and about 500 advertisers are using the sponsored

tweet service (Gregory, 2009).

Challenges

Social media marketing not only brings great benefits to businesses, it also creates

some challenges for businesses. Some major challenges of social media marketing

include return on investment, negative WOM, and legal risk. This section discussed the

challenges of social media marketing to the general business.

Return on investment (ROI).

It is a significant challenge for businesses to measure the effectiveness of social

media marketing, or return on investment (ROI) (Palmer & Koenig-Lewis, 2009). Since

social media marketing is totally different from traditional marketing approaches, traditional marketing theories and practices used in traditional media such as TV, newspaper, and radio may not be applicable to social media. Moreover, the old metrics of ROI of online advertising is found not applicable to social media either (Fisher, 2009). Although social media is claimed to be effective in improving marketing practices, nonetheless, there is no quantitative support to reinforce these claims. According to Stelzner (2009, 2010, 2011)'s annual industry report, marketers are keep looking for answers to one most important question for three years, which is, how to measure return on investment (ROI) of social media. Various studies have proposed different measurements of social media ROI. For example, Owyang (2007) listed a couple of attributes need to be measured in social media marketing: activity, velocity, attention, participation, and qualitative comments. Benson (2008) cited another list of attributes: attention, interaction, conversation index, velocity, sentiment, qualitative, and impacts.

Interactive Advertising Bureau (IAB, 2009) advanced a standard measurement of ROI in social media. It divides social media into three distinct categories, social media sites, blogs, and widgets and social media applications, and then defines different ad metrics for each type by which the effectiveness of social media ads can be measured (IAB, 2009). These definitions of measurement have so far met a controversy in both academe and industry (Fisher, 2009). Some supported that these deep metrics can not only measure whether people are engaged, but how they are engaging in social media advertising (Taylor, 2009). However, Ray (2009) argued that definitions of IAB have significant flaws that these measurements neglect the sentiment within users' comments. Fisher (2009) also criticized that definitions of IAB are not adequate to correctly measure

the ROI of social media marketing since it involves not only business-to-consumer communication, but also consumer-to-consumer interaction. Some even asserted that ROI of social media is not an important measure for businesses since social media marketing is not about sales, market share, and profit margins (Falls, 2008). Hoffman and Fodor (2010) identified two problems generated by a narrow ROI focus. One is that ROI is oriented to the short term while developing online customer relationships takes a long time. The other is that ROI ignores more qualitative objectives of social media. They organized the various measuring metrics for social media marketing based on three social media objectives: brand awareness, brand engagement, and word-of-mouth (Hoffman & Fodor, 2010). Romero (2011) also stated that there are three levels of return of social media marketing: engagement, branding influence, and ROI. Different level of return requires different types of analysis.

Negative WOM.

A major challenge for businesses is to develop appropriate response strategies to negative WOM on social media (Roehm & Tybout, 2006; Stauss, 2000).While social media can help hospitality businesses enhance brand awareness and strengthen consumer loyalty, it also makes it easy for consumers to complain the product or service online (Withiam, 2010). The posting of unanticipated and unfair negative opinion, inaccurate information, and unearned criticism online can lead to very bad consequences (Kasavana, 2008). The proliferation of social media sites makes hospitality businesses hard to control over the consumers' evaluation and feedback (Dwivedi, Shibu, & Venkatesh, 2007).

On the other hand, social media provide the opportunity for hospitality managers to realize the problem and correct it. It is wise for hospitality businesses to view negative

comments as an opportunity for resolution or reparation of the negative situation (Starkov & Mechoso, 2008). Withiam (2010) stated that a hospitality business can improve service and strengthen customer relationships through taking care of consumer complaints appropriately and timely. However, many hospitality businesses failed to leverage this opportunity to manage WOM and customer relationship. A study of TripAdvisor comments showed that less than 5% of negative reviews have been responded by hotels (O'Connor, 2010). Besides, consumers expect speedy responses to their complaints on social media. A UK study revealed that 25% of consumers who complain via Facebook or Twitter expect a reply in an hour and 6% expect a reply in 10 minutes ("Social media", 2011b). Thus it is important for a hospitality business to have an employee taking care of social media responses.

Another suggestion for hospitality businesses to control over negative WOM is to build up and implement their own social media sites where consumers' reviews and comments can be more closely monitored (Kim & Hardin, 2010).

Legal risk.

Social media marketing, like traditional marketing tools, also involves legal risks. Steinman and Hawkins (2010) summarized several common legal issues business need deal with when marketing via social media. First is to protect trademarks and copyrights. Since social media has the ability to facilitate impromptu communication, it also makes the abuse of trademarks and copyrights easier. Second is to comply with all applicable federal, state, and local laws and regulations on social media marketing and advertising. Third is to abide by the terms and conditions of social media channels since different channels may have different specific advertising regulations and rules. Fourth is to

implement own terms and conditions when the business creates its own social media platform, such as a blog or podcast. The terms and conditions will be used to govern the use of the sites by potential users. Fifth is to minimize legal risks associated with incorporating user-generated content (UGC) in business marketing campaign because the inappropriate use of UGC may lead to liability for libel, copyright infringement, violation of one's right of privacy, deceptive advertising, or other violations. Sixth is to follow the Federal Trade Commission Guides concerning the use of endorsements when the business sponsors a consumer to post favorable comments about the business. Seventh is to be aware of privacy and data security issues and be careful in personal data collection, use, and maintenance. Last is to retain records of social media usage in case of a regulatory investigation or other legal proceeding.

Tenenbaum and Zottola (2011) provided suggestions for businesses to avoid these legal risks in social media marketing. First suggestion is to be careful about what they post or send onto social media to avoid copyright infringement. Businesses should avoid using material without permission and always provide proper citation for contents from other sources. Businesses should also announce their role in the content distribution, display, and publication process to protect intellectual property. Second is to take advantage of potential immunity when copyright infringement, tortuous conduct, or defamation occurs. Third is to disclaim responsibility for any third-party site or page that is linked to business website. Fourth is to respect privacy rights. Businesses should always inform consumers about personal data collection and be very careful about publishing personal information. Fifth is to monitor all social media platforms of the business and employees' behavior on social media platforms. Sixth is to develop own

policies and agreements to protect businesses that address responsibility, indemnity, limitation of liability, disclaimers, antitrust compliance, and intellectual property use and ownership.

Social Media Research in the Hospitality Field

With the unprecedented popularity of social media in personal life and business operation, research involving social media in the hospitality field is gaining attention. This section summarizes past studies focused on social media applications in the hospitality field from two aspects: topical area and target social media site.

Topical area

From topical area aspects, social media research in the hospitality field are majorly focused on consumer's demographics, motivation, behavioral intention, and electronic word-of-mouth (eWOM).

Demographics.

The first topic is consumer's demographics. Studies investigate the specific demographics of consumers who are willing to share travel experiences on social media and also the relationship between their demographic characteristics and their motivations (Ip, Lee, & Law, In press; Rong, Vu, Law, & Li, In press). Ip et al. (In press) conducted a large-scale domestic survey in Hong Kong in 2010 and revealed that social media users were young, highly educated, and had a high level of personal income. The finding also suggested that the propensity of travelers to share travel experiences decreased with age and the level of education. Using the same data, Rong et al. (In press) classified web users into browsers and sharers and compared their demographic characteristics and behaviors of sharing travel information online. The findings showed that young people

are more likely to search for and share travel information online than old people. Also,

gender, education, income levels, and past travel experience all have significant

influences on traveler's behavior of sharing online information.

Motivation.

The second major topic is consumer's motivation. Many studies try to explore

consumers' motivation to post and read online comments about hotels (Kim, Mattila, &

Baloglu, 2011), restaurants (Jeong & Jang, 2011), and travel experiences (Bronner & de

Hoog, 2011; Huang, Basu, & Hsu, 2010). Kim et al. (2011) conducted a survey with 781

travelers in Las Vegas and identified three major motivations of travelers who seek and

read online hotel reviews: convenience and quality, risk reduction, and social reassurance.

They also found that gender and level of expertise have significant impacts on

motivations. Jeong and Jang (2011) examined the relationships among restaurant

experience factors and motivations of posting online reviews. Using a student sample,

they indicated that restaurants' food quality is positively related to customers' "helping

the restaurant" motivation; service quality is positively related to customers' "helping the

restaurant" and "expressing positive feelings" motivations; atmosphere is positively

related to customers' "concern for others" motivation. However, price fairness of

restaurants does not influence any of customers' motivations to post online restaurant

reviews.

Huang et al. (2010) explored the motivations and barriers of U.S. college students

to share travel information on social media sites. They identified three major functional

motives, obtaining travel information, information dissemination, and personal

documentation, and also two major barriers, privacy concerns and time issues. They

inferred that the functional motivations are more important for college students' sharing travel related information online than other social and psychological motivations. Bronner and de Hoog (2011) studied not only motivations that drive vacationers to post their experience online, but also the relationships between motivation, social media choice, and message type. They identified five factors driving vacationers' posting behaviors, namely, self-directed, helping others, social benefits, consumer empowerment, and helping the company. They also conclude that motivation influences vacationers' social media choice and message type they posted. A self-directed motivation type is distinguished from an other-directed motivation type in terms of characteristics of sites and messages.

Behavioral intention.

The third major topic is consumer's behavioral intention. Consumers' behavioral intention and travel decision making is considered to be a major marketing result of social media marketing. Studies reveal that comments and reviews on various social media sites have significant effects on consumers intention to visit destinations (Tussyadiah, Park, & Fesenmaier, 2011), book hotels (Sparks & Browning, 2011; Vermeulen & Seegers, 2009; Xie, Miao, Kuo, & Lee, 2011), try new restaurants (Wang, 2011), and purchase general travel products (Huang, Chou, & Lin, 2010). Tussyadiah et al. (2011) explored how consumer online narratives about destinations can influence travelers' intentions to visit destination. The findings suggested that travelers' identification of resemblance to past experience and identification of story characters as themselves have significant impacts on their intentions to visit destination, while the narrative content itself does not significantly related to travelers' visiting intentions.

Vermeulen and Seegers (2009) applied consideration set theory in examining the impact of online hotel reviews on consumer's hotel choice. Using a three-factor experiment, the study indicated that online hotel reviews improve consumers' hotel booking intention through enhancing hotel awareness. Valence of reviews positively related to hotel attitudes while hotel familiarity negatively related to hotel awareness and hotel attitudes. Besides, reviewer expertise has a moderating role in hotel consideration. Sparks and Browning (2011) employed a four-factor experimental design to explore how different online hotel reviews influence consumer's hotel booking intention and perception of trust. The results showed that the overall valence of reviews are positively related to consumers' booking intentions and their trust. Valence factor interact with the structure of reviews to influence consumers' booking intentions and the target of reviews also interact with the structure of reviews to influence consumers' trust. Xie et al. (2011) explored the impact of perceived credibility of online reviews on consumers' hotel booking intentions. Conducting an experiment with college students, the study revealed that the presence of online reviewers' personal identifying information positively influences perceived credibility of reviews, which then negatively impacts consumers' hotel booking intentions.

Wang (2011) examined what factors of gastronomy blogs can influence readers' intention to taste local food and beverages. They proposed a model with three determining variables of intention: inspiring taste desire, forming taste awareness, and facilitating interpersonal interaction. The results implied that all three variables significantly impact readers' behavioral intention to taste and the model explained 70% of the variances. Huang et al.'s (2010) study also focused on blogs. They investigated

how the advertisements on travel blogs may influence travellers' intention to purchase travel products. A travel blogger's purchase intention model was proposed based on involvement theory and the advertising effect model. The findings indicated that travel bloggers' involvement level is positively related to ad effects, including ad memory, ad attitude, and brand attitude. Ad memory, ad attitude, and brand attitude then positively influence travellers' purchase intention.

eWOM.

eWOM is another major topic in social media research. eWOM refers to consumers' online comments and reviews on their experience with travel products. Most of the studies on eWOM utilized content analysis to explore what consumers are talking about hotels (Lee, Law, & Murphy, 2011; O'Connor, 2010; Stringam & Gerdes, 2010), restaurants (Pantelidis, 2010; Zhang, Ye, Law, & Li, 2010), and destinations online (Arsal, Woosnam, Baldwin, & Backman, 2010).

Online hotel comments received the most attention from researchers. Expedia.com (Stringam & Gerdes, 2010) and TripAdvior.com (Lee et al., 2011; O'Connor, 2010) are two popular online travel community where data are collected. Both Stringam and Gerdes (2010) and O'Connor (2010) explored the pattern of word usage in online comments. Stringam and Gerdes (2010) revealed that the lack of cleanliness, bathrooms and its associated amenities are usually related to a lower rating of the hotel, while convenience location, food and beverage items, and attentive service are more associated with higher ratings. Similarly, O'Connor (2010) also found that hotel location, good service, the cleanliness, comfort, and breakfast quality are related to higher ratings of the hotel, while room temperature, dirty, maintenance, in-room facilities, noise, and

bad service are related to lower ratings. O'Connor (2010) also defended that TripAdvisor does a good job in keep the comments credible. Lee et al. (2011) further discussed the credibility issue of online reviews and indicated that helpful reviewers are those who travel more, actively post reviews, and give lower hotel ratings.

As for restaurants, content analysis has been conducted to identify the factors influencing customers' online evaluation of a restaurant (Pantelidis, 2010; Zhang et al., 2010). Pantelidis (2010) compared online restaurant comments made during favorable economic conditions with those posted during economic recession. The findings suggested that consumers' comments are similar in both time period and food, service, and atmosphere are top three factor influencing customer satisfaction. Value for money appears as another important factor during economic recession. Zhang et al. (2010) compared reviews posted by consumers with reviews written by professional editors. The findings showed that consumer-generated ratings about food taste, environment and service are positively related to the online popularity of restaurants; while editor reviews have a negative impact on consumers' intention to visit a restaurant's webpage.

Arsal et al. (2010) analyzed online postings and threads on destinations in eight countries from a global online travel community and compared postings written by residents with those written by travelers. The findings indicated that residents are more influential in accommodations and food and beverage recommendations, whereas experienced travelers are more influential in the destination information category.

The other side of eWOM is negative eWOM, or customers' e-complaints (Lee & Hu, 2004; Shea, Enghagen, & Khullar, 2004; Sparks & Browning, 2010). Lee and Hu (2004) collected e-complaints from a specialized online complaint forum,

eComplaints.com and classified 18 problem categories. The findings revealed that hotel customers were mostly unsatisfied with fundamental service failures and the most frequently mentioned keywords in e-complaints are room, staff, service, and customer. Sparks and Browning (2010) collected e-complaints from TripAdvisor.com and examined the forms and motives of hotel e-complaints. The findings showed that hotel internal features, consumer service and public areas of the hotel are three major triggers of e-complaints and altruism and revenge are two big motivations of e-complaints. E-complaints are usually expressed in a story format consisting of context, description, action taken and advice. Shea et al. (2004) explored public e-mail responses to e-complaints and found that e-complaints have widespread and rapid diffusions. However, the study didn't indicate any clear patterns or boundaries of this diffusion.

eWOM is studied not only as a tool of social media marketing, but also as a result of social media technology (Kim & Hardin, 2010). Their study applied environmental psychology to explore how hospitality companies can deliver servicescape and interaction through social media. The proposed research model postulated that social media can generate eWOM of consumers through the mediation of improved customer-to-business interaction, and customer participation in servicescape opportunities. Litvin, Goldsmith, and Pan (2008) reviewed literature related to word-of-mouth (WOM) and introduced eWOM in the hospitality field. A conceptual model of WOM was developed to explain motivations, sources, mediators, and outcomes of WOM. Based on communication scope and level of interactivity, a typology of eWOM channels was discussed and strategies for managing each type of eWOM were suggested.

Social Media Sites

Although social media have various platforms, several of them have been studied more in the hospitality industry. These social media sites include: blogs, online communities, and social networking sites.

Blogs.

Travel blogs are personal online diaries "made up from one or more individual entries strung together by a common theme … to report back to friends and families about their activities and experiences during trips"(Puhringer & Taylor, 2008, p.179). Blogs offer the opportunity for marketers to learn about tourists' experiences, commentaries, thoughts and feelings (Banyai & Glover, in press). Studies on travel blogs attempt to explore what travelers say on their blogs and how the blogs impact blog users' behavioral perceptions. Content analysis and narrative analysis are two most popular research methods used in analyzing blog contents (Banyai & Glover, in press).

The first common research topic of blog studies is bloggers' attitudes and perceptions of destination and what factors lead to these attitudes (Carson, 2008; Magnini, Crotts, & Zehrer, 2011; Pan, MacLaurin, & Crotts, 2007; Wenger, 2008). For example, Pan et al. (2007) analyzed 40 blogs related to Charleston and South Carolina to understand travelers' experiences in destinations. The results revealed that various destination attractions lead to traveler's satisfaction, whereas weather, infrastructure, and fast-service restaurants are related to travelers' negative experience. Magnini et al. (2011) content-analyzes 743 hotel-related travel blogs to investigate what factors influencing customers' delight. The findings showed that customer service, cleanliness, and hotel location are top three determinant factors of customer delight in hotels.

The second common research topic of blog studies is images of tourism destinations as represented on travel blogs (Banyai, 2010; Law & Cheung, 2010; Li & Wang, 2011). For example, Li and Wang (2011) examined international tourists' destination image of China through an analysis of 89 China-related travel blogs and identified a mixed destination image of China in the eyes of bloggers. The positive image of China is related to history, natural attractions, friendliness, and various cuisines, while the negative image of China is associated with local infrastructure, transportation, crowdedness, ease of communication, cleanliness, and costs.

The third common research topic of blog studies is to examine the social aspect of the narratives on travel blogs, including identity and social identity of blogger (Berger & Greenspan, 2008; Karlsson, 2006; Tussyadiah & Fesenmaier, 2008), and interaction of travelers and residents (Enoch & Grossman, 2010). Berger and Greenspan (2008) used narrative analysis of web blogs to investigate the role of technology in the construction of adventure mountaineer identities. The results revealed that technology not only strengthens pre-existing identities as Westerners and professionals, but also generates new tourist identities as hikers, climbers, and mountaineers. Enoch and Grossman (2010) analyzed Israeli and Denish backpackers' blogs related to Indian travel to examine the culture interaction between travelers and residents. The findings indicated that the dominant identity of the bloggers is a combination of "world travelers" and "local sphere".

The last research topic of blog studies focuses on the impact of blog narratives on blog users' perceptions (Zehrer, Crotts, & Magnini, 2011). Zehrer et al. (2011) analyzed user replies to 134 travel blog posts and found that most of blog users consider blog

postings useful. The findings also suggested that multiple posts that are congruent with each other are most influential, and that negative postings not necessarily lead to bad perception if followed by a positive counter reply.

Online travel communities.

An online travel community refers to a group of people who share the same travel interest and exchange words and ideas through the mediation of computer bulletin boards and networks. (Rheingold, 1994; Wang et al., 2002). Typical examples of online travel communities include virtualtourist.com, Travelocity.com, Lonelyplanet.com, and Concierge.com (Wang & Fesenmaier, 2004a). Wang et al. (2002) proposed a theoretical framework of online travel communities to define them as "places in manifestation, symbolic in nature, and virtual in form" (Wang et al., 2002, p. 411). They also identified the operational elements of online travel communities as people, purpose, policy, and computer systems, and three fundamental needs of community members: functional needs, social needs, and psychological needs.

Studies of online travel communities focus on two major topics: the motivations or needs driving people to participate in online communities (Casaló, Flavián, & Guinalíu, 2010; Wang & Fesenmaier, 2003, 2004a, 2004b) and the impact of online communities on people's behavioral intention (Casaló et al., 2010; Kim, Lee, & Hiemstra, 2005; Qu & Lee, 2011). Wang and Fesenmaier (2004a) empirically tested an extended version of the conceptual framework of online travel community member needs proposed by (Wang et al., 2002). The findings indicated that social and hedonic needs are positively related to level of member participation while functional need has a negative effect. Psychological need does not significantly impact level of participation. Besides, membership status and

demographic characteristics both have impacts on member participation. Using the same data, Wang and Fesenmaier (2004b) further analyzed the factors motivating members to actively contribute to online travel communities and found that active contribution of members is driven mainly by three incentives: instrumental, efficacy, and expectancy. Casaló et al. (2010) combined the theory of planned behavior, the technology acceptance model, and social identity theory to explain consumers' intentions to participate in online travel communities. The results showed that attitude and perceived behavioral control have positive effects on participation while subjective norms have negative effects.

Casaló et al.'s (2010) study also proposed and tested two behavioral intentions of members that may be generated by participation in online travel communities. The results revealed that both intentions, the intention to use the firm's products/services and the intention to recommend the host firm, are positively influenced by member's participation intention. Kim et al. (2005) investigated how participation of online travel communities impact members' loyalty and purchase behaviours. The findings indicated that loyalty is determined by three factors, membership in the community, influence and relatedness, and needs fulfilment, and loyalty is positively associated with member's purchasing behaviour. Qu and Lee (2011) applied social identity theory to explore how members' participation in online travel communities influences their social identification and their behaviors. The results showed that members' participation has a positive effect on their community identification, which in turn influences their behaviors such as knowledge sharing and community promotion.

Social networking sites.

Recently, social networking sites, including Facebook, MySpace, and Twitter, have become a new topic of research in the hospitality field. Syed-Ahmad and Murphy (2010) conducted a case study of a small Australian company to examine the effectiveness of MySpace as a marketing tool to target traveling youth. The results indicated that although MySpace creates some awareness for the company in the first place, to maintain the company's profile and friends become the two major challenges which outweigh the benefits.

More research paid interest in Facebook, the most popular social networking site now (Gil-Or, 2010; Lee, 2011; Lee, Xiong, & Hu, 2012; Stankov, Lazić, & Dragićević, 2010). Stankov et al. (2010) investigated the level of Facebook usage of national tourism organizations (NTOs) in Europe and identified poor performance of NTOs in using Facebook. The results showed that only one-third of NTOs have Facebook Pages and none of them has utilized the advantages that are offered by Facebook. Lee (2011) applied technology acceptance model to investigate meeting industry professionals' attitude toward the use of Twitter and Facebook in meeting functions. The findings revealed that the meeting professionals perceive Twitter and Facebook as useful tools in enhancing meeting experience. However, they also think that Twitter and Facebook cannot enhance the work effectiveness in general. Gil-Or (2010) examined how viral message transfer on Facebook can increase the number of members of a restaurant Facebook page. Using an experiment, the study indicated that viral marketing through Facebook messages has a strong effect on the increasing number of members. Lee et al. (2012) applied an extended technology acceptance model (TAM) in event Facebook

marketing context and revealed that only perceived enjoyment has significant effect on users' attitudes and intentions toward an event, while perceived usefulness and perceived ease of use are not significantly related to users' attitudes and intentions as TAM expected. They then concluded that social media environment is an informal and non work-related environment in which TAM may not be applicable.

Summary of Social Media Literature

Based on the above review of past studies focused on social media applications in the hospitality field, the study identifies the following facts of social media related literature:

(1) The most commonly used method in social media studies is content analysis method, followed by SEM and factor analysis. However, there are more qualitative studies than quantitative studies.

(2) Most of the motivation studies used factor analysis method to focus only on the motivations of social media users, only very few studies related motivations to consumer's behavioral intention.

(3) Consumers' behavioral intention as a major result of social media marketing received a lot of attentions, while eWOM as another major result of social media marketing has been hardly studied.

(4) Social networking sites are new research topic and have fewer studies than blogs and online travel communities. Although most studies on social networking sites focused on Facebook, only one study investigates its marketing effectiveness in terms of the number of members.

Therefore, this study intends to use mixed methods to explore Facebook marketing effectiveness in terms of both hotel booking intention and eWOM and propose an integrative model combining motivation with behavioral intentions. In this sense, this study will significantly contribute to social media research in the hospitality field.

Theoretical Foundation of Research

Since social media offers a new communication tool using information technology, research on social media marketing in the hospitality industry is based on multidiscipline theories, including: social psychological (consumer behavior), technology, communication, and marketing theories. This section addresses the underlying theories relevant to social media marketing from these four disciplines.

Social Psychological Theories

Four social psychological theories were identified to be related to social media marketing issue. They were: theory of reasoned action, theory of planned behavior, social identity theory, and social influence model.

Theory of reasoned action (TRA) and theory of planned behavior (TPB).

In consumer behavior field, predicting the determinants of consumer behavior is one of the most important concerns (Petty, Unnava, & Strathman, 1991). In the past four decades, many theories and models of consumer behavior have been proposed. Among them, the two most popular theories are the theory of reasoned action (TRA) and the theory of planned behavior (TPB) (Wen, 2009).

Proposed by Fishbein and Ajzen (1975), the theory of reasoned action (TRA) is used to explain the determinants of consciously intended behaviors (Ajzen & Fishbein, 1980). The theory centers in people's intention to perform a specific behavior. Intentions

are not only representation of the motivational factors under a behavior, but also

immediate antecedents to behavior. That is, if a person has a stronger intention towards a

behavior, he/she is more likely to perform this behavior (Ajzen & Fishbein, 1980). The

theory of reasoned proposes behavioral intentions to be affected by two different sets of

beliefs about the outcome of a particular behavior (Fishbein & Ajzen, 1975).These two

sets of beliefs are behavioral beliefs, which reflect the possible consequences or other

attributes of the behavior, and normative beliefs, which represent the normative

expectations of other people. Behavioral beliefs give rise to attitude toward the behavior,

while normative beliefs lead to subjective norm in the model of the theory (see Figure 1)

(Fishbein & Ajzen, 1975). TRA has been commonly applied in the field of consumer

behavior (Ryan & Bonfield, 1975, 1980) to predict consumer intentions and behavior and

also identify consumers' behavioral changes (Sheppard, Hartwick, & Warshaw, 1988).
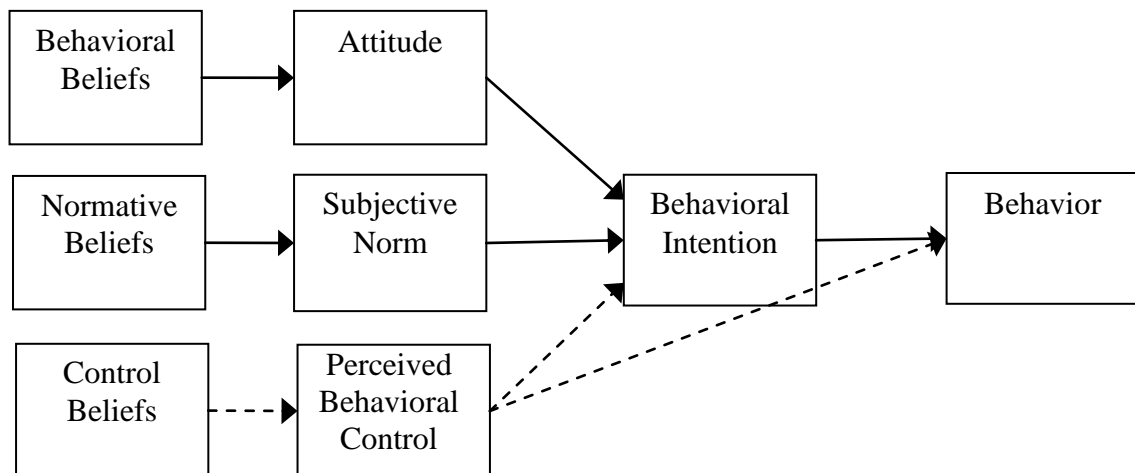
Figure 1. The theory of reasoned action and the theory of planned behavior models. The full

arrows represent the theory of reasoned action; the full arrows and dashed arrows represent the

theory of planned behavior. Adapted from "The theory of planned behavior," by I. Ajzen, 1991,

Organizational Behavior and Human Decision Processes, *50*(2), 182.

Fishbein and Ajzen also acknowledged their model has several limitations (Sheppard et al., 1988). First, the model is developed to deal with behaviors rather than outcomes resulting from behaviors, so the intention measured in the model is behavioral intention instead of goal intention. Second, the model focuses on the antecedents of a single behavior and omits the possibility of people choosing among many alternative behaviors. Third, the model fails in predicting subjects' intentions of future behavior. Due to these theoretical limitations, the theory of reasoned action might not be applicable in the following situations: (a) intent changes prior to performance; (b) intention measure does not correspond to the behavioral criterion in terms of specificity; (c) the intention is not completely under an individual's volitional control (Fishbein & Ajzen, 1975). Sheppard et al. (1988) mentioned two more situations which may not fit neatly in the model: involving choice problems not addressed in the theory, and lack of enough information to form a completely confident intention. That is to say, the theory of reasoned action is constrained within rational, volitational, and systematic behaviors (Chang, 1998).

Although Sheppard et al. (1988) reviewed and analyzed empirical studies using the theory of reasoned action to testify that the model has strong predictive utility even in situations that do not meet the boundary conditions of the original model so it do not need further modifications and refinements, many researchers still proposed additional variables to expand the theory of reasoned action (Madden, Ellen, & Ajzen, 1992), such as inclusion of personal norms (Fishbein, 1967), moral obligations (Gorsuch & Ortberg, 1983; Zuckerman & Reis, 1978), competing attitudes (Davidson & Morrison, 1983). Among them, the most successful extension of the theory of reasoned action is done by

Ajzen (1985, 1991), who incorporated perceived behavioral control into the model to propose the theory of planned behavior (TPB).

As an extension of the theory of reasoned action, the theory of planned behavior (TPB) (Ajzen, 1985) successfully deals with the original model's limitation of completely volitional control (Ajzen, 1991). It is achieved by adding another type of beliefs to the function of behavioral intention, control beliefs, referring to beliefs about the presence of factors that may facilitate or impede performance of the behavior (Ajzen, 2002) (see Figure 1). Control beliefs bring about perceived behavioral control (PBC), which refers to the individual's perception about how easy or difficult it will be for him/her to perform the behavior (Ajzen, 1991; Posthuma & Dworkin, 2000). PBC is determined by whether people have requisite resources and opportunities to perform a behavior (Madden et al., 1992). Individuals will have greater perceived behavioral control over a behavior if they think they possess more resources and opportunities needed (Madden et al., 1992). Through including PBC in the model, TPB proposes that consumers' behavioral intentions are determined by three factors: attitude toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1985, 1991). Thus, TPB is able to extend the boundary condition of volitional control to circumstances where there were constraints on action (Armitage & Conner, 2001). TPB also contends that PBC has impact on both intentions and behaviors, which helps to understand why sometimes intentions do not lead to actual behavior (Ajzen, 1991).

Figure 1 showed both the theory of reasoned action and the theory of planned behavior. In Figure 1, we can find the extension of the theory of reasoned action from full arrows to the theory of planned behavior, which includes also broken arrows.

Perceived behavioral control plays an important role in the theory of planned behavior and differs the TPB from the TRA. After the TPB was proposed, most researchers prefer the TPB over the TRA (Blue, 1995; Godin, 1993; Hausenblas, Carron, & Mack, 1997). Using meta-analysis method, Godin and Kok (1996) identified an additional 13% of variance in intention and 12% in behavior; while Armitage and Conner (2001) found an additional 6% of the variance in intention and 2% in behavior. Armitage and Conner (2001) also stated that PBC not only contribute uniquely to the prediction of behavior, but also predict more intention than attitude and subjective norm. All these studies justified PBC as a useful addition which leads to advantages of the TPB over the TRA.

TPB has been widely used to explain human behaviors and shown strong predictive ability for a wide range of social behaviors and to most people. TPB has also shown their suitability in hospitality context, especially in explaining tourists' travel intention and behavior (Lam & Hsu, 2004, 2006; Sparks & Pan, 2009). Researchers have also applied TPB on various decision topics in the hospitality area, such as choices of transportation mode (Bamberg, Ajzen, & Schmidt, 2003), negative word-of-mouth communication on restaurants choosing (Cheng, Lam, & Hsu, 2006), association members' meeting participation (Lee & Back, 2007), playing the lottery and gambling activities (Moore & Ohtsuka, 1997; Walker, Courneya, & Deng, 2006), customers' visiting to a green hotel (Han, Hsu, & Sheu, 2010; Han & Kim, 2010). All studies have tested the models fit the data very well and the TPB has significant utility in predicting intentions and behaviors in hospitality context.

More recently, TPB has also been employed in predicting online behaviors in the hospitality field, such as meeting planners' use of lodging websites (Lee & Choi, 2009), travelers' use of airline websites (Kim, Kim, & Shin, 2009), consumers' participation in firm-hosted online travel communities (Casaló et al., 2010), employees' adoption of information technology (Huh, Kim, & Law, 2009; Cheng & Cho, 2011). In these studies, TPB is often integrated with information system theories, such as Technology Acceptance Model (TAM) and Task-Technology Fit (TTF) to explore consumers' technology adoption behaviors. For example, Casaló et al. (2010) combined TPB with TAM and Social Identity Theory to investigate consumers' intentions to participate in firm-hosted online travel communities and their intention to use the tourism products and to recommend the host firm. The integrative theoretical framework was tested to be a good model to predict consumers' intentions. Another study conducted by Cheng and Cho (2011) incorporated TPB with TAM and Innovation Diffusion Theory to explore the intentions and actual usages of information and communication technologies by employees in Hong Kong travel agencies. This integrated model was also demonstrated to be adequate to explain intentions and usages.

Social identity theory (SIT).

Identity, defined as perceived self-concepts, is an important concept in social psychology research (Stryker & Burke, 2000). Social identity theory (SIT) is one of the most famous theories centering in identity. Social identity theory (SIT) was first introduced by Tajfel (1978) (see also Tajfel & Turner, 1979) to understand the psychological basis of intergroup discrimination. Tajfel and Turner (1986) formulated the concept of a social identity to explain and predict intergroup behavior. A social identity is

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an individual's self-image derived from perceived membership in a specific social group (Tajfel & Turner, 1986). A social group is a collection of individuals who perceive themselves as members of the same social category and share emotional involvement and social consensus of their memberships (Tajfel & Turner, 1986).

There are three general assumptions SIT holds (Tajfel & Turner, 1986). Firstly, individuals always strive for a positive social identity. Secondly, social identity can be positive or negative based on evaluation. Lastly, the evaluation of social identity is determined by social comparisons between in-group and out-group attributes. Based on the three assumptions, SIT proposed that individuals strive to achieve positive social identity which is based on favorable comparisons between the in-group and relevant out-groups. When social identity is negative, individuals will adopt positive distinctiveness strategies to achieve positive social identity. Thus, individuals attempt to differentiate themselves from some out-groups in order to make in-group/out-group social comparisons positive (Tajfel & Turner, 1986).

Tajfel and Turner (1979) identified three variables influencing intergroup differentiation: 1) the extent to which individuals internalize their group memberships as an aspect of their self-concept; 2) the extent to which the social situation allows for comparison between groups; and 3) the perceived relevance of the comparison out-group.

SIT also detailed three different positive distinctiveness strategies to improve their social comparisons and achieve positive social identity: individual mobility, social creativity, and social competition. Individual mobility refers to individuals trying to leave a lower-status group for a higher-status group. Social creativity refers to individuals redefining or altering the dimension of comparison to increase their positive

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distinctiveness. Social competition refers to individuals seeking positive distinctiveness through via direct competition with the out-group in favor of in-group (Tajfel & Turner, 1986).

Based on the social identity definition, "an individual's self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1978: 63), Ellemers, Kortekaas, and Ouwerkerk (1999) identified three components of one's social identity: cognitive, emotional, and evaluation. *Cognitive* social identity refers to a cognitive awareness of one's membership in a social group, which is also called self-categorization. *Evaluative* social identity is defined as a positive or negative value connotation attached to this group membership, or called group self-esteem. *Emotional* social identity refers to a sense of emotional involvement with the group, or called affective commitment (Ellemers et al., 1999, p.372). Ellemers et al. (1999) used factor analysis to test the three components of social identity are separate and distinctive.

SIT has been applied in the hospitality area to successfully explain private club members' common characteristics (Ferreira, 1996), participation in a fitness activity (Debra, 1998), sport fan attendance (Laverie & Arnett, 2000), certified chefs' burnout (Kang, Twigg, & Hertzman, 2010), and employee–customer interactions (Solnet, 2007). Especially, Casaló et al. (2010) combined SIT with TAM and TPB to examine consumers' intentions to participate in firm-hosted online travel communities. In their study, social identity is composed of affective and cognitive components according to Bergami and Bagozzi's (2000) study. The affective social identity refers to identification as a consequence of the emotional involvement with the group, such as feelings of attachment

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and belonging. The cognitive social identity denotes identification resulting from perceived similarities with other members and dissimilarities with non-members.

Social influence model (SIM).

Social influence is defined as "change in an individual's thoughts, feelings, attitudes, or behaviors that results from interaction with another individual or a group" (Rashotte, 2007, p. 4426). Individuals will changes their feelings and behaviors under social influence which is a result of interaction with others (Rashotte, 2007). Kelman (1958) asserted that individuals' attitude and behavior changes induced by social influence may occur at different levels or through different processes. Kelman (1958) then defined three different processes of social influence: compliance, identification, and internalization. *Compliance* occurs when an individual accepts influence and adopts the induced behavior because of outside rewards or punishments. *Identification* occurs when an individual accepts influence and adopts the induced behavior in intent to establish or maintain a satisfying self-defining relationship with group members. *Internalization* occurs when an individual accepts influence and adopts the induced behavior because it is congruent with his/her value system.

Social influence model has been largely applied in explaining acceptance and usage behavior of adopters of new communication technology. Fulk, Schmitz and their colleagues proposed a social influence model (SIM) of technology use based on social influence and media richness (see Figure 2) (Fulk, 1993; Fulk, Schmitz, & Steinfield, 1988, 1990; Fulk, Steinfield, Schmitz, & Power, 1987). The underlying assumption of this model is that "media perceptions and use are, in part, socially constructed" (Schmitz & Fulk, 1991, p. 490). SIM of technology use postulates that contextual social factors,

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including attitudes, statements, and behaviors of others, influence media perceptions and uses (Fulk et al., 1990). Besides, media expertise variables, such as medium experience, computer experience, and keyboard skills, also influence media perceptions and uses (Schmitz & Fulk, 1991). The model includes two media perceptions: media richness and media usefulness perceptions.
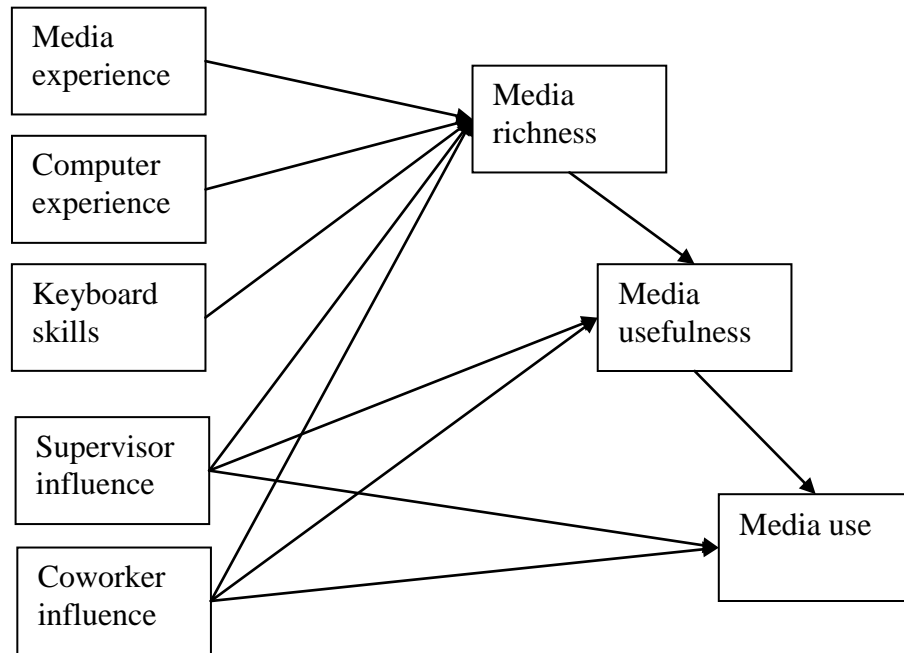
Figure 2. Social influence model of technology use. Adapted from "Cognitive elements in the social construction of technology," J. Fulk, J. Schmitz, and D. Ryu, 1995, *Management Communication Quarterly, 8*(3)*,* p. 270.

Bagozzi and Dholakia (2002) combined social influence with TPB to propose a model of goal-directed behavior to explain member's intention to participate virtual community. They conceptualized member participation in a virtual community as intentional social action since it is influenced by both individual characteristics, such as attitude, perceived behavioral control, desires, and anticipated emotions, and social influences, including compliance, internalization, and social identity (Bagozzi &

Dholakia, 2002). In their model, compliance is represented by subjective norms since

subjective norms is the belief of an individual who is motivated by approval from

significant others (Bagozzi & Dholakia, 2002). In addition, internalization is represented

through the effects of group norms. Dholakia, Bagozzi, & Pearo (2004) applied Bagozzi

and Dholakia's (2002) framework to develop a social influence model of consumer

participation in virtual communities. Their model featured two group-level determinants,

group norms and social identity, of virtual community participation. They also employed

uses and gratifications theory to identify individual value perceptions which are proposed

to affect social influence variables.

Communication Theories

Two communication theories were found to be important to social media

marketing issue. The two theories are uses and gratifications theory and media richness

theory.

Uses and gratifications theory (UGT).

Uses and gratifications research, originating from a functionalist paradigm in the

social sciences (Blumler & Katz, 1974), started in communication studies as early as the

1940s when researchers began to explore audiences' media behavior (Herzog, 1940, 1944;

Lazrsfeld & Stanton, 1944, 1949; Warner & Henry, 1948). However, uses and

gratifications theory (UGT) was first publicized by Blumler and Katz (1974) and then

spread by McQuail (1983, 1987, 1994). UGT is used to understand how individuals

choose and use media for their psychological needs and gratifications. Different from

traditional media effects theories focusing on the effects of media on people, UGT

emphasizes on what people do with media (Katz, 1959). Thus UGT views media user as

active engagers rather than passive receivers of information. There are two basic research

questions UGT answers: why do people use some kind of mediated communication and

what gratification do they get from it? (McQuail, 1983).

UGT asserts that different people use the same communication medium for very

different purposes and the same media content can fulfill different needs for different

people (Blumler & Katz, 1974). UGT links need gratifications and media use from the

perspective of media users. It suggests that media users' needs determine their media

choices, media uses, and the gratifications they receive (Blumler & Katz, 1974). Katz,

Blumler, and Gurevitch (1973-1974, pp. 510-511) identified five basic assumptions of

UGT: (1) media users are active and goal-directed; (2) the link between need gratification

and media choice depends on the media user rather than media themselves; (3) the media

compete with other sources of need satisfaction; (4) media users are aware of and can

report their needs; and (5) cultural and value impacts are ignored when users are

investigated using their own languages.

| Needs | → | Expectation | → | Media exposure Media use | → | Need gratification |
| | | | | | ↘ | Other consequence |
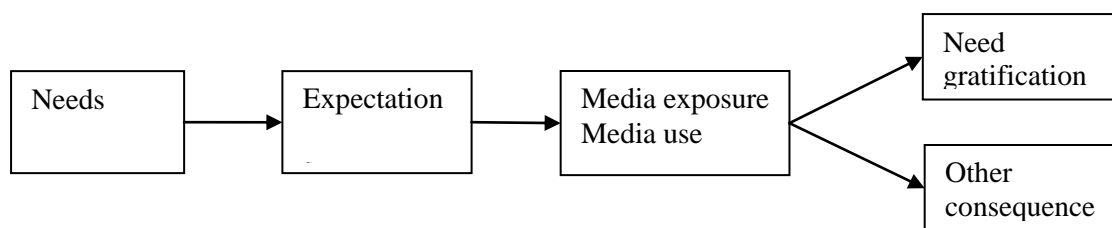
Figure 3. Uses and gratifications model. Adapted from "*Using communication theory: an introduction to planned communication*," by S. Windahl, B. Signitzer, and J. T. Olson, 1992, London: Sage, p. 159.

The core of UGT is the relationship among needs, uses, and gratifications. It

proposes that " the social and the psychological origins of needs which generate

expectations of the mass media or other sources which lead to differential exposure (or

engaging in other activities), resulting in need gratification and other consequences, perhaps mostly unintended ones" (see Figure 3) (Katz et al., 1973-1974, p. 510).

UGT emphasizes motives and the self-perceived needs of audience members. Motivations, or needs, are defined as the type of perceived incentives that propel a user to engage in media use. Even though motivations are different from user to user, basic media use motivations keep the same categories among all media channels even through technology development (Flanagin & Metzger, 2001). Katz, Gurevitch and Haas (1973) borrowed 35 needs from the social and psychological studies and identified five categories: cognitive, affective, personal integrative, social integrative, and tension release needs. McQuail, Blumler, and Brown (1972) classified four important motivation categories: diversion, personal relationships, personal identity, and surveillance/information seeking. McQuail (1983) presented a different classification of motivations: information, personal identity, integration and social interaction, and entertainment. More recently, Lin (1999) identified nine most common motivation categories: relaxation, companionship, habit, pastime, entertainment, social interaction, information/surveillance, arousal, and escape.

The introduction of the Internet, social media and technological advances has provided researchers with new venues to apply UGT. A study conducted by Park, Kee, and Valenzuela (2009) explored Facebook users' gratifications. Using data collected from a Web survey of college students, the study identified four need categories for using Facebook: socializing, entertainment, self-status seeking, and information.

Media richness theory (MRT) and task-media fit (TMF).

Based on contingency theory and information processing theory (Galbraith 1977),

Media Richness Theory (MRT), also referred to as information richness theory, was

developed by Daft and Lengel (1984, 1986) to explore how different communication

media help organizations to process information via them. MRT proposed two forces

influencing organizations' information processing. They are to reduce uncertainty and to

reduce equivocality. Uncertainty refers to the absence of information. The increasing of

information reduces uncertainty. Equivocality means the existence of multiple and

conflicting interpretations of information. When equivocality is high, an organization is

confused by information it obtained. To reduce uncertainty, the media should provide

sufficient information. To reduce equivocality, the media should provide information of

suitable richness. Information richness is defined as "the ability of information to change

understanding within a time interval" (Daft & Lengel, 1986, p. 560).

Different communication media are different in information richness. The

information richness of media is determined by four criteria; instant feedback, multiple

cues, language variety, and personal focus (Daft, Lengel, & Trevino, 1987). In a media

richness hierarchy, the media classifications, in order of decreasing richness, are face-to-

face, video conference, telephone, written, addressed documents such as letters or emails,

and finally, unaddressed documents such as bulk mail, flier and bulletin (Daft & Lengel,

1986; Daft et al., 1987). MRT states that media with more richness are better suited to

equivocal tasks, while those with less richness are better used for tasks of uncertainty

(Daft & Lengel, 1986). Thus, MRT suggests that effective managers choose a particular

communication medium according to the degree of information richness required by a

specific task (Trevino, Daft, & Lengel, 1990). Recently, MRT has been extended to

include newer communication media such as electronic mail, computer-mediated communication systems, and video-based media (Kettinger & Grover, 1997; Lee, 1994; Webster & Hackley, 1997).

McGrath and Hollingshead (1993, 1994) have extended media richness theory by proposed a model called "task-media fit (TMF) hypothesis". TMF integrates media richness theory, the task circumplex (McGrath, 1984), and the time, interaction, and performance (TIP) theory (McGrath, 1991). Task circumplex posits that a typology of tasks consisting four quadrants and eight task types (McGrath, 1984). TIP theory views group task activities as multi-dimensional in nature and potentially composed of multiple subtasks and activities (McGrath, 1991). TMF only considers various tasks encountered by goal-directed groups and explores the role of various media in supporting these different types of tasks and group activities (McGrath, 1984).

TMF proposes a theoretical task continuum for goal-directed group activity composed of four general task categories, generating ideas or plans, choosing a correct, choosing a preferred answer, and negotiating conflicts of interests, and also a theoretical media richness continuum consisting of four communication media types, face-to-face, video, telephone, and computer-mediated (McGrath & Hollingshead, 1993). TMF then hypothesized that tasks are performed most effectively when performed in the "best-fitting" communication medium (see Figure 4) (McGrath & Hollingshead, 1993).

High

Efficiency
loss

Media
richness

TMF:

Effective
information
processing

Effectiveness
loss

Low

Low   Complexity of   High
                       group tasks
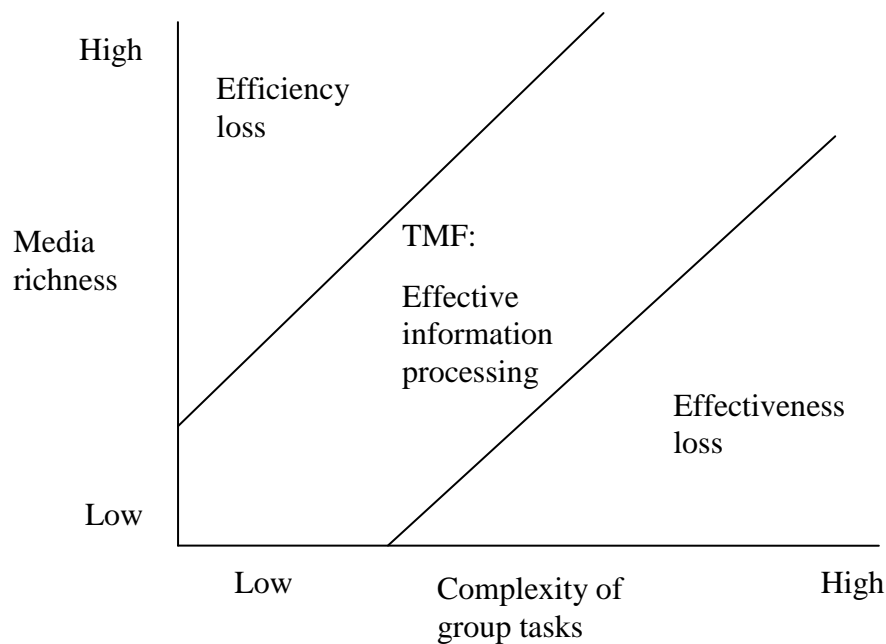
Figure 4. Task-media fit hypothesis. Adapted from "Selecting communication media for

distributed communities," E. Heeren, and R. Lewis, 1997, *Journal of Computer Assisted*

Learning, 13, p. 92.

Technology Theories

Three significant models have emerged that provide a strong theoretical base for

IT utilization behavior studies. They are innovation diffusion theory (IDT), technology

acceptance model (TAM), and task-technology fit (TTF) Model.

Innovation diffusion theory (IDT).

Innovation diffusion theory (IDT), or Diffusion of Innovations, is used to explain

the process, pattern, and mechanism of new ideas and technology spreading through

cultures. The origins of IDT span across six main traditional disciplines: anthropology,

early sociology, rural sociology, education, industrial, and medical sociology (Rogers,

1962). However, IDT was first popularized by Rogers (1962, 1983) in his book *Diffusion*

of Innovations. Rogers (1962, 1983) describes diffusion as the process by which an innovation is communicated through certain channels, over time, among the members of a social system.

IDT posits that diffusion of an innovation passes through a five–stage process. Rogers (1983) categorizes the five stages as: knowledge, persuasion, decision, implementation, and confirmation. In knowledge stage, the individual is first exposed to an innovation and lacks information about the innovation. In persuasion stage, the individual generates a favorable attitude to the innovation and actively seeks information about it. In decision stage, the individual decides whether to adopt or reject the innovation based on all information. In implementation stage, the individual puts the innovation into use in various situations and monitors its usefulness. In confirmation stage, the individual reinforces the use of the innovation based on positive outcomes from it (Rogers, 1983).

IDT also classifies individuals into adopter categories in terms of the speed of innovation adoption. Rogers (1962) identifies five categories of adopters: innovators, early adopters, early majority, late majority, and laggards. Innovators are the individuals who first adopt an innovation and are young, rich, high social class, and risk takers. Early adopters are the second to adopt an innovation and are opinion leaders. Early majority are individuals who adopt an innovation after a varying degree of time and have above average social status and seldom hold positions of opinion leadership. Late majority are individuals who adopt an innovation after the average member of the society and are typically skeptical about an innovation. Laggards are the last to adopt an innovation and usually have an aversion to changes and stick to traditions (Rogers, 1962).

The most important contribution of IDT is that it centers on the characteristics of the innovation that determines the rate of diffusion. Based on a variety of previous innovation diffusion studies, Rogers (1983) identified five intrinsic characteristics of innovations that influence an individual's adoption of new technologies. These characteristics are: relative advantage, compatibility, complexity, observability, and trialability. Relative advantage refers to the degree to which an innovation is considered to be superior to its predecessor. Compatibility is the extent to which an innovation is perceived to be consistent with the existing values, needs, and past experiences of potential adopters. Complexity is defined as the degree to which an innovation is seen as difficult to understand and use. Trialability denotes the degree to which an innovation can be experimented prior to adoption. Observability refers to the degree to which the results of an innovation are visible to others (Rogers, 1983). Built on Rogers (1983)'s work, Moore & Benbasat (1991) expanded the list of innovation characteristics to seven: relative advantage, compatibility, trialability, ease of use, image, results demonstrability and visibility.

IDT is considered as the theoretical foundation of many common IS theories. For example, relative advantage and complexity characteristics of an innovation are often considered as the predecessors of perceived usefulness and perceived ease of use beliefs in Technology Acceptance Model (TAM) (Chen et al., 2002; Moore & Benbasat, 1996). In addition, the characteristic of compatibility is viewed as the foundation of Task–Technology Fit (TTF) model (Thompson, Higgins, & Howell, 1991).

Technology acceptance model (TAM).

Technology acceptance model (TAM), first introduced by Davis (1986) in his doctoral dissertation and further explained by Davis (1989), and Davis, Bagozzi, and Warshaw (1989), was designed to explain the determinants of users' adoption of new information technologies and related applications (See Figure 5). TAM is an adaption of the Theory of Reasoned Action (TRA), proposed by Fishbein and Ajzen (1975), specifically tailored to the computer usage behavior (Davis et al., 1989). TAM posits that two beliefs, perceived usefulness and perceived ease of use, are the primary determinants of users' attitude toward using the technology computer. Perceived usefulness is defined as a person's subjective probability that using a new technology will enhance his or her job performance (Davis, 1989; Davis et al., 1989). Perceived ease of use refers to a person's belief that using a new technology will be free of effort (Davis, 1989; Davis et al., 1989). In TAM, perceived ease of use also affects perceived usefulness and user's intention to adopt a new technology depends on both attitude toward using the technology and perceived usefulness (Davis, 1989; Davis et al., 1989).
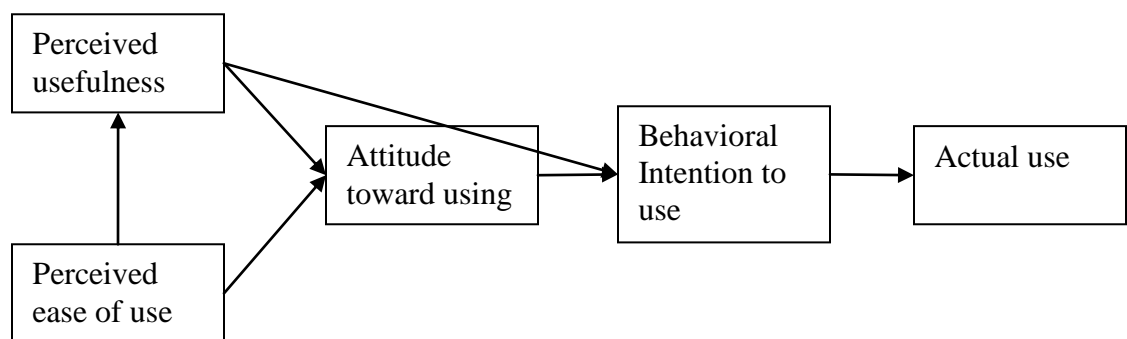
Figure 5 Technology acceptance model (TAM). Adapted from "User acceptance of computer technology: A comparison of two theoretical models," F. D. Davis, R. P. Bagozzi, and P. R. Warshaw, 1989, *Management Science*, 35(8), p. 985.

TAM differs from the TRA in that TAM doesn't include subjective norm as a determinant of behavior intention as TRA does (Davis et al., 1989). This was supported by an empirical study conducted by Davis et al. (1989) which indicated that subjective norms had no effect on intentions to use new technology. Although TAM is considerably less general than TRA, it has been one of the most widely used models in information system field because of the simplicity. King and He (2006) identified 140 TAM articles published on 29 IS-related journals from 1998 to 2003.

TAM has been continuously studied and expanded since it was originally proposed. These studies were conducted from three different theoretical perspectives (Venkatesh & Bala, 2008). First type focused on the psychometric aspects of TAM constructs (Hendrickson, Massey, & Cronan, 1993; Segars & Grover, 1993). Second type investigated theoretical underpinning of the relative importance of perceived usefulness and perceived ease of use in TAM (Karahanna, Straub, & Chervany, 1999). Last type extended TAM by adding determinant factors of perceived usefulness and perceived ease of use to TAM (Karahanna & Straub, 1999; Koufaris, 2002; Venkatesh, 2000; Venkatesh & Davis, 2000).

There were two major upgrades for TAM. The first upgrade was TAM 2 (Venkatesh & Davis, 2000). TAM 2 extends TAM in terms of adding determinants of perceived usefulness. In TAM 2, subjective norm, image, job relevance, output quality, and result demonstrability work with perceived ease of use to influence perceived usefulness and experience and voluntariness are proposed as moderators (Venkatesh & Davis, 2000). The second upgrade was TAM 3 (Venkatesh & Bala, 2008). TAM 3 combines TAM2 (Venkatesh & Davis, 2000) and the model of the determinants of

perceived ease of use (Venkatesh, 2000) to form an integrative model. Besides adding the determinants of perceived usefulness in TAM 2, TAM 3 also includes the determinants of perceived ease of use from Venkatesh (2000)'s study, which identified computer self-efficacy, perceptions of external control, computer anxiety, and computer playfulness, perceived enjoyment and objective usability as factors influencing perceived ease of use (Venkatesh & Bala, 2008). Experience and voluntariness are still proposed as moderators on various relationships. TAM 3 also posits that the determinants of perceived usefulness and perceived ease of use are different so there is no cross-over effect in the model (Venkatesh & Bala, 2008).

The other extension of TAM is the Unified Theory of Acceptance and Use of Technology (UTAUT), which was proposed by Venkatesh, Morris, Davis, and Davis (2003). UTAUT is advanced based on eight user acceptance models used in technology behavior area: the theory of reasoned action (TRA), the technology acceptance model (TAM), the motivational model, the theory of planned behavior (TPB), a model combining TAM and TPB, the model of PC utilization, the innovation diffusion theory (IDT), and the social cognitive theory (Venkatesh et al., 2003). UTAUT theorizes that four constructs, performance expectancy, effort expectancy, social influence, and facilitating conditions, significantly determine users' intentions to use new technology and their use behaviors while attitude toward using technology, self-efficacy, and anxiety are not significantly affect behavioral intentions and use behavior (Venkatesh et al., 2003). UTAUT also posits that gender, age, voluntariness, and experience are key moderators in the model (Venkatesh et al., 2003). UTAUT was tested to outperform each of the individual models (Venkatesh et al. 2003).

Recently, TAM and its extended models have been extensively applied in various hospitality areas. These TAM studies have been conducted from two distinct perspectives: customer perspective and employee/organization perspective. From customer perspectives, TAM has been used to explain customers' acceptance of new technology in hotels (Huh et al., 2009; Morosan & Jeong, 2008; Varol & Tarcan, 2009), restaurants (Morosan, 2011), travel agencies (Mayr & Zins, 2009), and airlines (Kim et al., 2009), and traveler's acceptance of Internet as information source (Luque-Martínez, Castañeda-García, Frías-Jamilena, Muñoz-leiva, & Rodríguez-Molina, 2007; Ryan & Rao, 2008), online travel community (Casaló et al., 2010), and mobile technology (Kim, Park, & Morrison, 2008; Oh, Lehto, & Park, 2009). On the other side, from employee and organization perspective, TAM has also been employed to explore employees' technology acceptance in hotels (Chu & Chu, 2011; Kim, Lee, & Law, 2008; Lam, Cho, & Qu, 2007), restaurants (Ham, Kim, & Forsythe, 2008), and travel agencies (Cheng & Cho, 2011), marketing managers' technology adoption (Wober & Gretzel, 2000) and organizational technology adoption behavior (Wang & Qualls, 2007).

A study that applied TAM in social media context was conducted by Lee et al. (2012). The study proposed an extended TAM which also includes arousal, valence, and perceived enjoyment constructs to explain users' attitudes toward Facebook event pages and intentions to go to the event. The findings suggested that users' emotions (arousal and valence) significantly impact perceived usefulness, perceived ease of use, and perceived enjoyment. However, only perceived enjoyment has significant effect on users' attitudes and intentions toward an event, while perceived usefulness and perceived ease of use are not significantly related to users' attitudes and intentions as TAM expected.

They explained that social media environment is an informal and non work-related environment in which TAM may not be applicable (Moon & Kim, 2001).

Task–technology fit (TTF).

Task–technology fit (TTF) model, first proposed by Goodhue and Thompson (1995) and Goodhue (1995), attempts to explain the linkage between information technology and individual performance. TTF model postulates that the utilization of the technology and the degree of fit between the technology and the tasks it supports positively influence individual performance and technology utilization depends on how well the technology fits with the task (Goodhue & Thompson, 1995). There are five key constructs in the reduced TTF model: task characteristics, technology characteristics, TTF, technology utilization and performance impacts (see Figure 6) (Goodhue & Thompson, 1995). Technology is viewed as a tool used for conducting the task. Task refers to the action of turning input into output. Task-technology fit (TTF) is defined as the degree to which the technology assists in performing the task. Utilization denotes the behavior of using the technology to conduct the task. Performance impact relates to the accomplishment of the task. Higher performance suggests the task is finished with improved efficiency, effectiveness, and quality. The full TTF model adds several additional constructs, including individual characteristics, beliefs of utilization, and feedback, to reduced TTF model. The full TTF model emphasizes the interactions among the task, the technology, and the individual (Goodhue and Thompson, 1995).
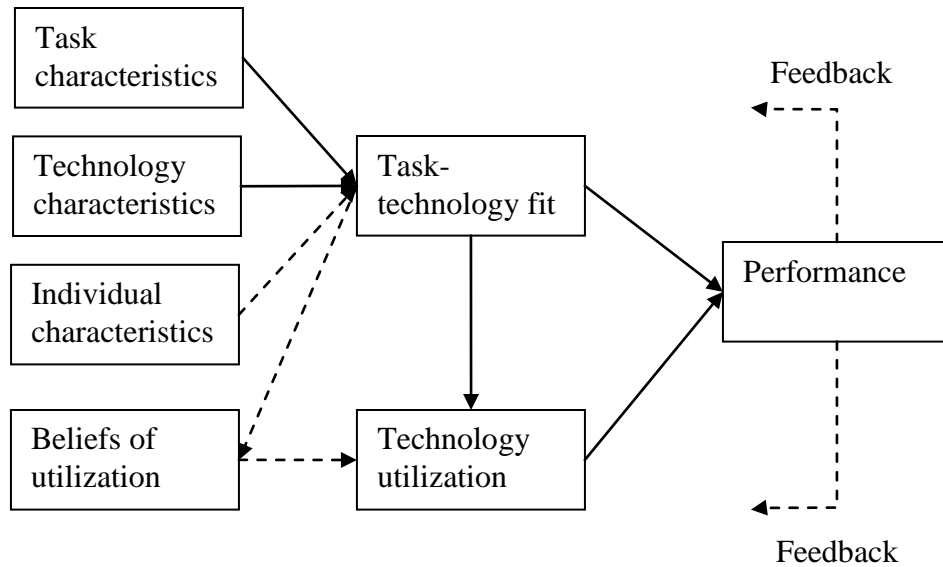
Figure 6. Task-technology fit model. The full arrows represent the reduced TTF model; all arrows, including full arrows and dashed arrows, represent the full TTF model. Adapted from "Task-technology fit and individual performance," D. L. Goodhue, and R. L. Thompson, 1995, *MIS Quarterly*, 19(2), pp. 217, 220.

TTF model was tested to be applicable in both mandatory and voluntary use of technology situations (Goodhue, Klein, & March, 2000). In addition, Zigurs and Buckland (1998) extended the application of TTF model from the individual level to the group level. TAM and TTF overlap in the way that both of them offer explanation to the adoption of technology (Dishaw & Strong, 1999). TTF is viewed as an extension of TAM by considering how the task itself influences technology use while TAM only examines the impact of individuals' beliefs on technology use. Dishaw and Strong (1999) also suggested that the integration of TAM and TTF may provide a better model to explain the technology adoption behavior.

The integrative model of TAM and TTF has been employed in the hospitality area recently. Lam et al. (2007) combined TAM and TTF with TRA to explore the antecedents

of hotel employees' intention to use information technology. The results showed that both perceived IT beliefs and TTF significantly impact the intention through the mediation of attitude and TTF significantly correlate to perceived IT beliefs. Similarly, Kim, Suh, Lee, and Choi (2010) also combined TAM with TTF to examine the factors influencing hotel employees' intention to use hotel information system. In their hypothesized model, TTF was proposed to be one of the external variables impacting both perceived usefulness and perceived ease of use. The other external variable impacting perceived ease of use is self-efficacy. Their findings indicated that TTF has a significant impact on both perceived usefulness and perceived ease of use. Perceived usefulness and perceived ease of use significantly influence attitude towards use and perceived usefulness and attitude toward use are significantly related to intention to use (Kim et al., 2010). Kim et al.'s (2010) study presented a good example of integration of TAM and TTF.

Marketing Theories

Four marketing theories and models were identified to be related to social media marketing issue. They were: motivation, opportunity, ability theory, attitude-toward-the-ad model, attitude-toward-the-website model, and word-of-mouth theory.

Motivation, opportunity, ability (MOA) Theory.

Motivation, opportunity, ability (MOA) theory, founded by MacInnis and Jaworski (1989) and proposed by MacInnis, Moorman, and Jaworski (1991), is a theoretical framework to explore motivation, opportunity, and ability as antecedents of cognitive response to advertisements which based on the elaboration likelihood model (ELM). The MOA theory posits that individual's information processing from an

advertisement is largely impacted by three antecedent factors: motivation, opportunity, and ability. The level of brand information processing in turn influenced the communication outcomes of advertising, including brand attitude and brand memory (MacInnis et al., 1991). Thus enhancing individuals' levels of the MOA elements (processing motivation, opportunity, and ability) can increase brand information processing level and thus improve brand attitude and strengthen brand memory (MacInnis, et al., 1991) (See Figure 7).

Motivation is commonly viewed as a force that directs individuals toward goals, or goal-directed arousal (Park & Mittal, 1985). In the MOA theory, motivation refers to readiness, willingness, interest, and desire to process information in an ad (MacInnis, et al., 1991). Higher motivation means that consumers are more willing to identify and process brand information. Opportunity is defined in the MOA theory as the situational factors that can either enhance or impede the information processing. MacInnis and Jaworski (1989) identified several situational factors such as the time available, attention paid, number of distractions, the amount and type of information, or number of repetitions that something is available. Higher opportunity implies that the information processing is less impeded by the situational factors. Ability is usually defined as the extent to which consumers have the necessary resources (e.g. knowledge, intelligence, money) to make an outcome happen (Hoyer & MacInnis, 1997). In the MOA theory, ability reflects the consumers' skills or proficiencies in processing brand information in an ad (MacInnis et al., 1991). Higher ability suggests that a consumer has prior knowledge necessary to interpret brand information from an ad.

In MacInnis, et al. (1991)'s MOA model, consumers' motivation, ability, and opportunity are measured before and after ad exposure. MOA levels measured after ad exposure are expected to be different from those measured before ad exposure since ad executional cues have an impact on the former.
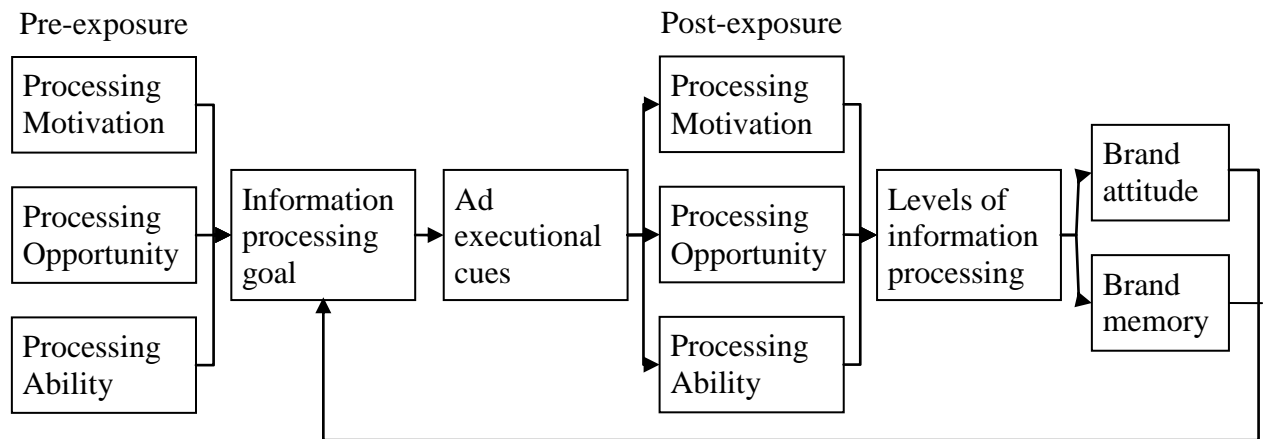

Pre-exposure   Post-exposure

Processing Motivation — Processing Opportunity — Processing Ability → Information processing goal → Ad executional cues → Processing Motivation — Processing Opportunity — Processing Ability → Levels of information processing → Brand attitude — Brand memory

Figure 7. The motivation, opportunity, and ability framework in Ad processing. Adapted from "Enhancing and measuring consumers' motivation, opportunity, and ability to process brand information from ads," D. J. MacInnis, C. Moorman, and B. J. Jaworski, 1991, *Journal of Marketing, 55*, p.34.

The MOA theory has been applied largely in various areas. In advertising area where the MOA theory was generated, scholars focused on how MOA elements could influence the information processing and how different advertising executional elements should be manipulated to match or enhance consumers' motivation, opportunity, and ability (de Heer & Poiesz, 1998; MacInnis et al., 1991; McCarthy & Mothersbaugh, 2002; Robben & Poiesz, 1993). For example, McCarthy & Mothersbaugh (2002) examined how typography as a major executional element of advertising affects consumers' MOA elements and then influences ad persuasion outcomes (brand perception and attitude, ad attitude).

The MOA framework was not only used to explain the information processing behavior, but also used in exploring knowledge-sharing behavior among individuals. Gruen, Osmonbekov, and Czaplewski (2005, 2006, 2007) conducted a series of studies on customer-to-customer knowledge exchange. They proposed a conceptual model that was adapted from the MOA theory and tested the model in two different contexts: an online forum and a face-to-face conference. The findings of two studies were slightly different, but both of them provided evidences to support the efficacy of the MOA model in knowledge exchange study (Gruen et al., 2006, 2007). Besides, Siemsen, Roth, and Balasubramanian (2008) examined the knowledge-sharing phenomenon among employees and proposed a constraining-factor model based on the MOA framework in which the constraining factor among the MOA elements determines the level of knowledge sharing.

In social issues, the MOA theory was claimed to be effective in altering social behavior. Motivation, opportunity, and ability were also found to influence individuals' acceptance of managers' goals on public health (Rothschild, 1999). Rothschild (1999) also explained that social marketing interventions (education, marketing, and law) could be used appropriated to improve the levels of the MOA elements. Binney, Hall, and Oppenheim (2006) extended Rothschild (1999)'s framework to a land-use management context and revealed the similar findings and recommendations. Binney, Hall, and Shaw (2003) further combined self-determination theory with the MOA theory and proposed a framework focusing on the motivation in which the motivation consisted of intrinsic and extrinsic motivation. Their findings suggested that ability and intrinsic motivation were significant predictors of landholders' social behavior.

The MOA theory was also adapted and extended from individual behavior area to organizational behavior studies (Clark, Abela, & Ambler, 2005). Clark, et al. (2005) used the MOA framework to explore the determinants of organizational performance information processing and satisfaction with performance measurement. They revealed that organizational ability and opportunity had positive effects on both performance information processing and satisfaction, while motivation had positive effect on future measurement spending plans. Grewal, Comer, and Mehta (2001) applied the MOA theory in understanding the organizational behaviors of participating in business-to-business electronic markets. However, they only used two antecedents in the MOA theory: motivation and ability. Argote, McEvily, and Reagans (2003) also used the MOA framework as the mechanism of organizational knowledge management and posited that motivation, ability, and opportunity to create, retain, or transfer knowledge determine knowledge management process.

In the organizational level, the MOA theory was particularly employed to explain technology/innovation adoption issues. Wu, Balasubramanian, & Mahajan (2004) used the MOA theory to explain why an organization delays its now product introduction beyond preannounced deadlines. Azadegan and Teich (2010) combined the MOA theory with two other theories (Rogers' adoption theory and technology, organizational and environmental theory) and proposed a theoretical framework to explain what factors influence organizational technology adoption in network settings. They found that motivation and ability of the adopting organization were two determinants to e-procurement technology adoption. Similarly, Sääksjärvi and Samiee (2011) also

incorporated the MOA theory with traditional innovation adoption predictors to propose a model for assessing the organizational adoption of multifunctional innovations.

The MOA theory has also been introduced into the hospitality field. Bigné, Hernández, Ruiz, and Andreu (2010) applied the MOA theory to explain online airline ticket purchases intentions and incorporate perceived channel benefits (convenience, financial advantages, variety and range of services, and enjoyment) as antecedents of motivation. Hung, Sirakaya-Turk, and Ingram (2011) proposed the MOA framework as an integrative model for community participation in tourism development and tested that the level of community members' participation is influenced by their motivation, opportunity, and ability. Hung and Petrick (in-press) applied the MOA model in the context of travel decision making and related motivation, opportunity, and ability to the four psychology concepts: self-congruity, functional congruity, perceived travel constraints, constraint negotiation, and self-efficacy. The empirical results demonstrated that all concepts except perceived constraints have impacts on travel intentions.

Attitude-toward-the-ad model (Aad).

The studies on the effects of persuasive advertising on attitude formation and change have led to a very important concept in marketing and advertising research: Attitude-toward-the-ad (Aad) (Edell & Burke, 1984). The concept of Aad, first introduced by Mitchell and Olson (1981) and Shimp (1981), is an affective construct referring to individuals' favorable/unfavorable feelings toward a particular advertisement after ad exposure. Aad focuses on consumers' affective reactions to ads and thus is opposed to purely cognitive reactions, such as ad cognitions and brand cognitions (MacKenzie, Lutz, & Belch, 1986). Aad has been a major focus of marketing and

advertising research across time (e.g., Dutta-Bergman, 2006; Homer, 2006; Homer & Yoon, 1992; Mehta, 2000; Shavitt, Lowrey, & Haefner, 1998; Speck & Elliott, 1997). The reason why Aad is so important is that numerous studies have tested Aad has mediating influence on brand attitudes and purchase intentions (Lutz, Mackenzie, & Belch, 1983; MacKenzie et al., 1986; Mitchell & Olson, 1981; Shimp, 1981). Aad model describes possible sequences of exposure to a persuasive advertisement and generally posits that a recipient of an advertising message develop an attitude toward the ad which in turn exerts an influence on subsequent measures of advertising effectiveness such as brand attitude and purchase intentions (Lutz et al., 1983). Studies on Aad have proposed four competing Aad models representing different mediating roles of Aad (Lutz et al., 1983; MacKenzie et al., 1986). The four Aad models are based on four alternative hypotheses: affect transfer hypothesis (ATH), dual mediation hypothesis (DMH), reciprocal mediation hypothesis (RMH), and independent influences hypothesis (IIH) (See Figure 8).

ATH model postulates a direct one-way influence of Aad on attitude toward the brand (Ab) (Mitchell & Olson, 1981; Shimp, 1981). DMH model posits both a direct effect of Aad on Ab and an indirect effect through the mediation of brand cognition (Cb) (Holbrook, 1978; Lutz & Swasy, 1977). DMH model is based on a balance theory and asserts a reciprocal causal flow between Aad and Ab in both directions (Heider, 1946). Finally, IIH model assumes no causal relationship between Aad and Ab while both have direct impacts on purchase intentions (Howard, 1977). Both Mackenzie et al.'s (1986) and Homer's (1990) studies compared the four competing Aad models using experiment

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data and demonstrated that the dual mediation hypothesis (DMH) model provides a best fit to the data. That is, Aad has both direct effect and indirect effect through Cb on Ab.
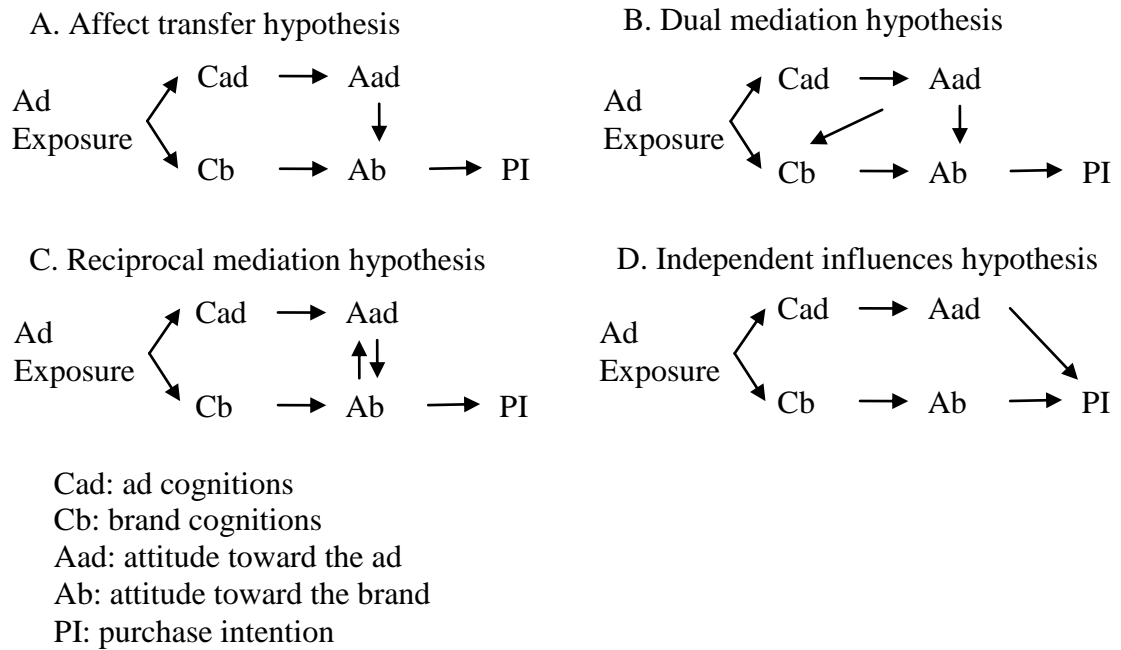
A. Affect transfer hypothesis

Ad Exposure → Cad → Aad
Cad → Aad ↓
Cb → Ab → PI

B. Dual mediation hypothesis

Ad Exposure → Cad → Aad
Cad → Aad ↓
Cb → Ab → PI

C. Reciprocal mediation hypothesis

Ad Exposure → Cad → Aad
Cad → Aad
Cb → Ab → PI

D. Independent influences hypothesis

Ad Exposure → Cad → Aad
Cb → Ab → PI

Cad: ad cognitions
Cb: brand cognitions
Aad: attitude toward the ad
Ab: attitude toward the brand
PI: purchase intention

Figure 8. Four alternative Attitude-toward-the-ad models. Adapted from "The role of attitude toward the Ad as a mediator of advertising effectiveness: A test of competing explanations," S. B. MacKenzie, R. J. Lutz, and G. E. Belch, 1986, *Journal of Marketing Research, 23*(2), p.131.

Lutz et al. (1983) classified five determining antecedents of Aad: credibility of the ad, perception of the ad, attitude toward the advertiser, general attitude toward advertising, and "mood". Credibility of the ad refers to the recipient's perception of how truthful or believable the assertions in the ad are. Ad credibility is the most important aspect of Ad perceptions, so it is considered as a separate determinant of Aad. Besides credibility, there are other perceptions also influencing Aad, such as annoy, enjoyment, informativeness, and offense (Bauer & Greyser, 1968). Attitude toward the advertiser denotes the recipient's affective feelings about the advertiser, similar to the construct of source attractiveness. General attitude toward advertising refers to the recipient's

affective reaction advertising in general and is determined by perceptions of advertising. Mood is defined as the recipient's general affective state at the time of exposure to the commercial message. Mood is determined by individual differences and the reception context (Lutz et al., 1983).

Attitude-toward-the-website (Aws) model.

Aad model has also extended to explain web advertising effects. Under the web environment, a new construct attitude-toward-the-website (Aws) is added to be as important as attitude-toward-the-ad in evaluating advertising effectiveness (Chen & Wells, 1999). Similar to Aad, Aws is defined as web users' "predispositions to respond favorably or unfavorably to web content in natural exposure situations" (Chen & Wells, 1999, p. 28). The rationale for adding this new construct is that customers' reactions to the context where an advertisement is presented (the website) are proposed to impact how consumers react to the ad (Bruner & Kumar, 2000). Chen and Wells (1999) developed a reliable and valid scale that measures Aws and concluded that entertainment, informativeness, and organization are three dimensions of Aws. Stevenson, Bruner, and Kumar (2000) proposed that attitude-toward-the-website plays an important role in the traditional Aad model. Bruner and Kumar (2000) further tested their new model of web advertising effectiveness, which proposed that one's web experience play an important role along with webpage complexity and interestingness on Aws, which in turn impacts Aad, attitude-toward-the brand and finally purchase intention. Poh and Adam (2002) incorporated the three dimensions of Aws (Chen & Wells, 1999) with the web advertising effectiveness model proposed by Bruner and Kumar (2000) and developed an integrative Aws model (See Figure 9).

Attitude-toward-the-website	→	Attitude-toward-the-ad	→	Attitude-toward-the brand	→	Purchase intention
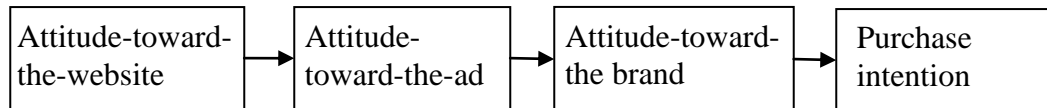
Figure 9. Attitude-toward-the-website model. Adapted from "Web Commercials and Advertising Hierarchy-of-Effects," G. C. Bruner, and A. Kumar, 2000, Journal of Advertising Research, 40(1/2), p. 39.

In the hospitality field, only a few studies have been conducted using Aws model. McMillan, Hwang, and Lee (2003) explored determining factors of Aws of hotel websites. Two structural variables (number of features and creative strategy) and two perceptual variables (Involvement and perceived interactivity) were tested in terms of their effects on Aws. They found that perceptual variables have greater impacts on Aws than structural variables. Jeong & Choi (2004) examined the potential effects of different picture presentations on hotel websites on Aws and customers' behavioral intentions. The findings indicated that the picture content and picture realism significantly influence Aws of hotel websites and Aws is a strong predictor of behavioral intentions.

Word-of-mouth (WOM) and electronic word-of-mouth (eWOM).

Word-of-mouth (WOM) has been an important concept in the marketing field for decades. Since the early 1950s, researchers have noticed the importance of personal conversation and informal exchange of information among acquaintances in marketing (Arndt, 1967; Whyte, 1954). Arndt (1967) was one of the earliest researchers who defined WOM as oral, person-to-person communication between a communicator and receiver which is perceived as non-commercial message. More recently, Stern (1994, p. 7) defined WOM as "the exchange of ephemeral oral messages between a contiguous source and a recipient who communicate directly in real life". In terms of content, WOM is

considered as "informal communications directed at other consumers about the ownership, usage, or characteristics of particular goods and services and/or their sellers" (Westbrook, 1987, p. 261).WOM is used to describe verbal communications of consumption related information between groups, especial consumers (Schiffman & Kanuk, 1994). WOM can be messages about usage or characteristics of particular brand, product, or service (Arndt, 1967), or messages focusing on providers or sellers (Buttle, 1998; Westbrook, 1987).

WOM is claimed to be a powerful marketing force to influence a variety of consumer conditions: awareness (Sheth, 1971), expectations (Anderson & Salisbury, 2003; Webster, 1991; Zeithaml, Berry, & Parasuraman, 1993), attitudes (Herr, Kardes, & Kim, 1991), purchase intentions and decisions (Arndt, 1967; Grewal, Cline, & Davies, 2003; Katz & Lazarfield, 1995; Mangold, 1987; Whyte, 1954), and even post-usage perceptions (Bone, 1995; Burzynski & Bayer, 1977). Research generally demonstrates that WOM is more influential than conventional marketing tools, such as printed materials, advertising, and personal selling (Herr et al.,1991; Katz & Lazarsfeld, 1955; Sheth, 1971; Silverman, 2001). The power of WOM is attributed to the source reliability/trustworthy and the flexibility of interpersonal communication (Day, 1971; Murray, 1991).

Buttle (1998) characterized WOM by valence, focus, timing, solicitation and intervention. Valence means WOM can be either positive or negative. Thus WOM can influence consumers' decisions either positively, negatively, or neutral (Harrison-Walker, 2001). However, many studies revealed that negative WOM is more powerful in influencing consumers than positive WOM (Arndt, 1967; Day, 1971). Focus refers to the

communicator and the receiver of WOM. Marketers should concern not only WOM among customers, but also WOM among suppliers/alliances, employees, influentials, recruitment and referral markets (Christopher, Payne, & Ballantyne, 1991). Timing refers to when WOM happens, whether before or after purchase. WOM can be classified as input WOM that is obtained by a consumer before purchase and output WOM that is uttered by a consumer after purchase. Solicitation means the authority of the communicator of WOM. Intervention refers to the extent to which the business is involved in stimulating and managing WOM.

Researchers have also paid attention to exploring the drivers of WOM. Two main perspectives have suggested different drivers of WOM. One is motivation-based perspective, which indicates that WOM is driven by motivation (Dichter, 1966; Gatignon & Robertson, 1986) so the products has to be interesting to be talked about (Hughes, 2005; Rosen, 2009; Sernovitz, 2006). The other is accessibility-based perspective, which implies that WOM is intrigued more by accessibility, or whether products are top of mind so the products that have more environment cues and are more publicly visible will be talked about more (Berger & Schwartz, 2011). Berger and Schwartz (2011) also states that motivation-based WOM is more immediate WOM toward promotional giveaways and accessibility-based WOM can be generated both right away and over time. Buttle (1998) identifies two sets of variables, intrapersonal and extrapersonal variables, both influence the seeking of input WOM and the production of output WOM. Intrapersonally, a constomer's satisfaction/dissatisfaction with a product influences the production of output WOM. Extrapersonally, culture, social networks, incentives, and business climate all have impacts on both input and output WOM.

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Kozinets, de Valck, Wojnicki, and Wilner (2010) reviewed the theoretical development of WOM theory and synthesized three evolutionary shifts of WOM theory development. The earliest WOM model is called the organic interconsumer influence model. In this model, WOM occurs in the communication between two consumers without influence of marketers and is driven by consumer's motivation to help others (Arndt 1967; Engel, Kegerreis, & Blackwell 1969; Whyte, 1954). The second model, the linear marketer influence model, focuses on the opinion leaders, or particularly influential consumers in the WOM process. In this model, marketers try to target and influence potential opinion leaders who send out messages to multiple friends (Feick & Price, 1987; King & Summers, 1976). The latest model, network coproduction model, is developed with the advent of the Internet. This model emphasizes the role of consumer networks, groups, and communities and assumes that messages exchanged in the consumer network are multidirectional rather than unidirectional (Cova & Cova, 2002; Hoffman & Novak, 1996; Muñiz & O'Guinn, 2001).

De Matos and Rossi (2008) proposed an integrative model of WOM antecedents and moderators based on a meta-analytic review of WOM literature. Satisfaction, loyalty, quality, commitment, trust, perceived value are identifies as common antecedents of WOM and valence and incidence are posited as the moderators of WOM. The results indicated that commitment is the most important antecedent of WOM, followed by perceived value, quality, trust, satisfaction, and loyalty. WOM valence is tested to be a moderator in the relationships between satisfaction and loyalty and WOM. Incidence is also found to be a moderator in the loyalty–WOM relationship.

Traditional WOM is limited by boundaries since it works through person-to-person communications (Bhatnagar & Ghose, 2004). With the growth and popularity of the Internet, the WOM concept was expanded to be applied in the Internet-based communications and the power of WOM has become stronger using Web 2.0 technologies (Hennig-Thurau & Walsh, 2003). WOM on the Internet is called electronic word-of-mouth (eWOM). Stauss (2000, p. 243) conceptualized eWOM as "internet customer communication that occurs when customers report or interact about consumption-relevant circumstances on the Internet". More specifically, eWOM is defined as "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the internet" (Hennig-Thurau et al., 2004, p. 39). Similar to WOM, eWOM is found to be influential in consumer shopping behaviors and product choices in Internet channels (Bickart & Schindler, 2001; Senecal & Nantel, 2004; Xia & Bechwati, 2008).

Researchers has also identified several major differences between WOM and eWOM. First, eWOM uses the internet as communicating medium, which is different from WOM (Klopper, 2002). Granitz and Ward (1996) also mentioned that internet based WOM is mainly a written message while traditional WOM is usually a spoken message. Second, the traditional WOM is a unidirectional communication, flowing from the communicator to the receiver (Kozinets et al., 2010). With the help of Web 2.0, all consumers are free to create and share information online, so eWOM has changed from unidirectional to multidirectional communication (Thackeray & Neiger, 2009). Third, the social ties between consumers are different between eWOM and WOM (Datta,

Chowdhury, & Chakraborty, 2005). In traditional WOM, consumers usually communicate through strong social ties since strong ties are more effective in terms of referral (Brown & Reingen, 1987; Kim, 2010). In eWOM, consumers often share information among weak ties and even anonymously (Dellarocas, 2003), leading to a big problem of information credibility (Schindler & Bickart, 2005). Fourth, the biggest differences between eWOM and WOM are reach and growth. Granitz and Ward (1996) stressed that eWOM can spread more widely and broadly, while traditional WOM is usually limited by communicator's boundary. In addition, WOM is local and slow in growth, while eWOM is usually global and enjoys an exponential growth (Datta, et al., 2005). Last, traditional WOM are very difficult to trace, while eWOM is measurable since comments on a product are written and available in the websites (Godes & Mayzlin, 2004). eWOM is sometimes also controllable since businesses can delete negative reviews and comments on their websites (Park & Kim, 2008).

Since eWOM has many differences from WOM, the WOM models have been revised to explore eWOM issues. Most eWOM studies have focused on the motives or drivers of posting (Hennig-Thurau et al., 2004; Hennig-Thurau &Walsh, 2003; Lee et al., 2006) and reading (Goldsmith, 2006; Goldsmith & Horowitz, 2006) eWOM. Okazaki (2009) integrated social influence model and uses and gratifications theory to present a theoretical model of eWOM antecedents. The findings indicated that social identity, desires (purposive value, social enhancement and intrinsic enjoyment), and opinion leadership are all antecedents affecting social intention to engage in eWOM. Hung and Li (2007) employed social capital theory in understanding the antecedents and consequences of eWOM. The integrated model proposed that three sources of social capital (structured

eWOM, cognitive focus, and social relations) influence eWOM and the outcomes of eWOM include both cognitive and behavioral. Consumer learning as cognitive outcome has an impact on behavioral outcomes, including consideration set and consumer reflexivity. Through review of related literature, Chan and Ngai (2011) proposed a classification eWOM framework from an input-process-output perspective. The inputs of eWOM include the motivations of three different parties: writers, readers, and marketers. The process of eWOM consists of the platform, system, or interface/site where eWOM is processed and the eWOM messages and message processing. The outputs of eWOM refers to the influence and impact of eWOM, including purchase decision, customer attitude, loyalty, product adoption, reduced risk, marketing implication, and eWOM metric.

De Bruyn and Lilien (2008) proposed a multi-stage model to explore how eWOM influences consumers in the three stages of the decision-making process: awareness, interest, and final decision. They also posited that four antecedents, tie strength, perceptual affinity, demographic similarity, and source expertise, have different effects at different stages. The findings showed that tie strength creates awareness, perceptual affinity evokes interest, and demographic similarity has a negative impact on eWOM. Park and Kim (2008) combined cognitive fit theory and the elaboration likelihood model to postulate that the type of eWOM is a moderator in the relationship between consumer expertise and purchase intention. The results suggested that the type of eWOM has stronger impacts on purchase intentions of experts is than those of novices while the number of eWOM has stronger impacts on purchase intentions of novices is than those of experts. Yeh and Choi (2011) also proposed a conceptual model of eWOM that identifies

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key antecedents of eWOM as brand identification, brand loyalty, community

identification, and community trust. The findings implied that brand identification

positively influences eWOM through the mediation of brand loyalty and community

identification.

CHAPTER 3

METHODOLOGY

The purpose of this study was to explore the marketing effectiveness of hotel Facebook pages from two perspectives: customer and message. This chapter presents the methodology used to achieve this purpose in four sections. The first section discusses the detailed mixed methods research design which consists of three connected sub-studies. The second section introduces the sampling and data collection procedures for three sub-studies. The third section describes the development of the questionnaires. The fourth section presents the data analysis methods that will be used in three sub-studies.

Research Design and Theoretical Framework

Quantitative and qualitative research methods are two research paradigms advocated by different scholars for more than a century (Johnson & Onwuegbuzie, 2004). In the hospitality field, researchers have traditionally borrowed quantitative methods from natural sciences to explain complex social phenomena (Chacko & Nebel, 1990). Quantitative methods use statistical tools to deal with numbers and test hypotheses. Using quantitative methods, hospitality phenomena are treated in the same way as natural phenomena were treated by natural scientists (Johnson & Onwuegbuzie, 2004). Since the last few decades, qualitative research methods have been increasingly used in the hospitality field (Chacko & Nebel, 1990). Qualitative research methods deal with words instead of numbers, with the goal of developing an understanding of complex and multidimensional concepts or phenomenon (Chacko & Nebel, 1990). Johnson and Onwuegbuzie (2004) discussed that since both quantitative and qualitative methods have weaknesses, the mixed methods were better solutions for researchers. Mixed methods

that mix both quantitative and qualitative methods can maximize the strengths and minimize the weaknesses of both methods (Johnson & Onwuegbuzie, 2004).

The major objectives of this study were three-fold: (1) to compare three competing theoretical models of antecedents of social media marketing; (2) to compare the marketing effectiveness of different types of messages on hotel Facebook pages; and (3) to develop an integrative model of Facebook marketing mechanism including antecedents, processing, and outcomes. To achieve these objectives, the study used mixed methods and was comprised of three sub-studies.

Sub-study 1

The first sub-study employed an online survey to understand the antecedents that drive people to join hotel Facebook pages. The sub-study proposed three competing theoretical models to compare the extent to which the three models can explain customers' attitudes toward hotel Facebook pages. The three competing models were: (1) technology model based on technology acceptance model (TAM) and task-technology fit (TTF); (2) communication model based on uses and gratifications theory (UGT); (3) social psychology model based on social influence model (SIM) and social identity theory (SIT). The major result of this sub-study was to decide which of the competing theoretical models was the best in terms of explaining and predicting customers' attitudes toward hotel Facebook pages and their intentions to join hotel Facebook pages (See Figure 10).

Perceived
usefulness

Task-
technology fit

Perceived
ease of use

Attitude-
toward-hotel-
Facebook-page

Intention to
join hotel
Facebook page

Technology model (model 1)

Functional needs

Social needs

Psychological
needs

Hedonic needs

Hotel
Facebook
page usage

Attitude-
toward-hotel-
Facebook-page

Intention to
join hotel
Facebook page

Communication model (model 2)

Cognitive

Emotional

Evaluation

Compliance

Identification

Internalization

Attitude-
toward-hotel-
Facebook-page

Intention to
join hotel
Facebook page

Social psychology model (model 3)

Figure 10. Three competing theoretical models for explaining people's intention to join hotel

Facebook pages.

Model 1: Technology model.

The first competing model under investigation in the sub-study was the

technology model based on TAM and TTF. The technology model was adapted from

Kim, Suh, Lee, and Choi's (2010) study which represents an integrative model of TAM and TTF. In the technology model, TTF was postulated to have a direct impact on both perceived usefulness (PU) and perceived ease of use (PEU). PU and PEU were then postulated to have direct impacts on people's attitudes toward hotel Facebook pages and their intentions to join hotel Facebook pages.

Model 2: communication model.

The second competing model under investigation in the sub-study was the communication model based on UGT. The communication model was adapted from Ko, Cho, and Roberts's (2005) study. In the communication model, four needs of participating hotel Facebook groups (Wang & Fesenmaier, 2004a, 2004b) were proposed to have direct impacts on people's Facebook usage, which in turn has a direct impact on people's attitudes toward hotel Facebook pages and their intentions to join hotel Facebook pages.

Model 3: social psychology model.

The third competing model under investigation in the sub-study was the social psychology model based on SIM and SIT. The social psychology model was adapted from O'Reilly and Chatman's (1986) and Bagozzi and Dholakia's (2002) studies. In the social psychology model, three social influences, compliance, identification, and internalization, were proposed to have direct impacts on people's attitudes toward hotel Facebook pages and their intentions to join hotel Facebook pages. Beside, the model postulated that identification includes three components based on SIT: cognitive, emotional, and evaluation.

Sub-study 2

The second sub-study was a qualitative study that uses content analysis to collect data from 12 sample hotel brand Facebook pages. The major result of this sub-study was to develop a classification of messages posted on hotel Facebook pages by hotels. These messages were considered as hotel advertisements on Facebook pages. Messages were classified based on message format and message content. The like, comment, share of messages were also collected to explore the marketing effectiveness of messages. In addition, the message type differences across six hotel scale levels were also examined.

Sub-study 3

The third sub-study was another quantitative study that conducts an online experiment to compare the marketing effectiveness of different types of messages on hotel Facebook pages. This sub-study was based on the classification result of the second sub-study. A two-factor (message format and message content) between-subjects design was employed. Although according to the results of the second sub-study, message format had 4 levels and message content had 6 levels. A 4×6 design was too complicated to report and explain the results. Also, a 4×6 design asked for a very big sample size. Because of these reasons, a 3×3 experiment design was employed.

The selection of factor levels was based on the results of sub-study 2. In terms of message format, since word, picture, and web link formats were much more commonly used than video format, they were chosen as message format levels. However, the six different types of message contents didn't have big difference in terms of the number of messages and the results of MANOVA revealed that brand, product, and involvement had better marketing effectiveness than the other three types. Thus, brand, product, and

involvement were chosen as the factor levels of message content to further explore the marketing effectiveness of different message contents.

Then the sub-study created nine hotel Facebook pages on Facebook.com. One hotel Facebook page only employed one type of message. A hotel brand "Star Hill" was created only for study purpose. Messages posted on Star Hill hotel Facebook pages were replicated from real messages collected in sub-study 2. The study posted messages on Star Hill hotel Facebook pages between April 2nd, 2012 to April 11th, 2012. One message was posted on one Star Hill hotel Facebook page every day. All messages and nine Star Hill hotel Facebook pages were presented in the appendices (see Appendix A and Appendix B). In the experiment, participants were randomly assigned to read one Facebook page and then complete a questionnaire on message marketing effectiveness.

The hypothesized model for the third sub-study was based on Aad model and Aws model that both focus on the advertising effectiveness (See Figure 11). Since the hotel brand "Starhill" was created by the researcher and does not exist in the real world, the construct "brand cognition" in the Aad model was not applicable in this study. As suggested by Bruner and Kumar's (2000) Aws model, the hypothesized model added an construct attitude-toward-hotel-Facebook-page to Aad model to explain the advertising effectiveness under the Facebook environment. Thus, the hypothesized model postulated that attitude-toward-hotel-Facebook-page has a direct impact on attitude-toward-the-message, which has a direct effect on attitude-toward-the-hotel-brand. Attitude-toward-the-hotel-brand then had a direct impact on hotel booking intention and intention to spread positive eWOM.
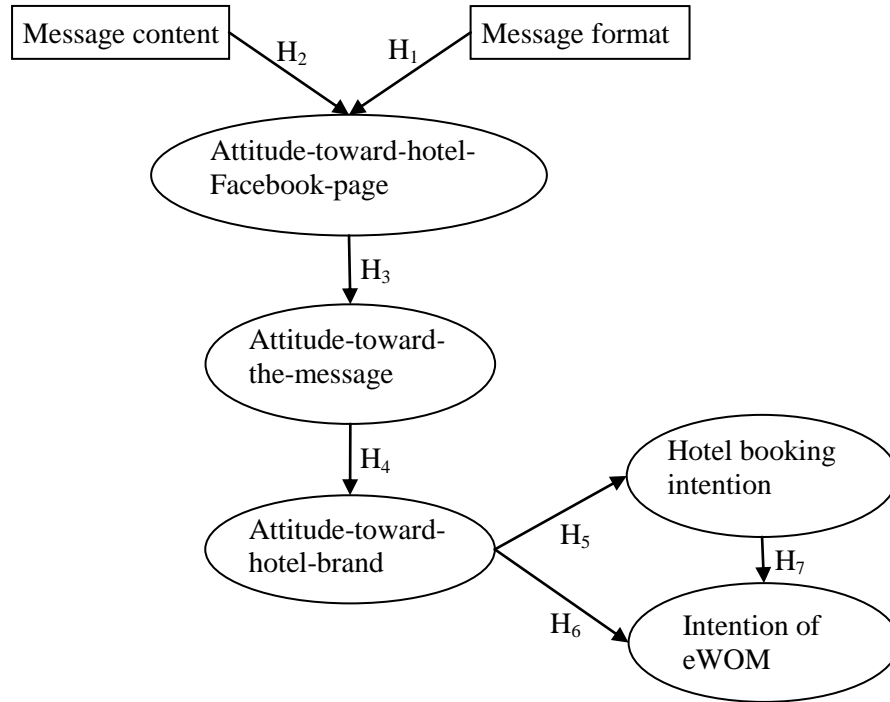
Figure 11. Hypothesized model of marketing effectiveness of hotel Facebook messages. Ovals represent latent variables; rectangles represent observed variables.

Thus, the experiment design of the third sub-study intended to test was the effects of message content and message format on several marketing effectiveness variables. This led to the following two hypotheses associated with the experiment:

H_1: Different message format will have an effect on:

a. attitude-toward-the-hotel-Facebook-page

b. attitude-toward-the-message,

c. attitude- toward-the-brand,

d. hotel booking intention, and

e. intention to spread positive eWOM.

H_2: Different message content will have an effect on:

a. attitude-toward-the-hotel-Facebook-page

b. attitude-toward-the-message,

c. attitude- toward-the-brand,

d. hotel booking intention, and

e. intention to spread positive eWOM.

In addition, put the hypothesized model into consideration, seven additional

directional hypotheses were proposed as follows:

H_3: A customer's attitude toward the hotel Facebook page has a positive

relationship with the customer's attitude toward the Facebook message.

H_4: A customer's attitude toward the Facebook message has a positive

relationship with the customer's attitude toward the hotel brand.

H_5: A customer's attitude toward a hotel brand has a positive relationship with the

customer's intention to book the hotel brand.

H_6: A customer's attitude toward a hotel brand has a positive relationship with the

customer's intention to spread positive word-of-mouth about this hotel brand online.

H_7: A customer's hotel booking intention has a positive relationship with the

customer's intention to spread positive word-of-mouth about this hotel brand online.

Sampling and Data Collection

Sub-study 1

Data of the first sub-study was collected via an online survey. Internet survey

method is chosen in this study since online surveys have advantages over traditional mail

surveys in terms of designing and implementing surveys more quickly and easily with

significantly lower costs (Dillman, 2007; Sheehan, 2001). Besides, Internet technologies

also help design surveys that were more interactive, easier to navigate and in richer

format (Dillman, 2007; Schaefer & Dillman, 1998). One big disadvantage of using

Internet survey method is that it requires respondents to have hardware, software, Internet

connections, and computer skills (Couper, 2000; Dillman, 2007). However, the targeted

population of this study was all Facebook users who have both ability and technological

support to finish the online survey. Therefore, the first sub-study chose Internet survey as

data collection method.

Participants were randomly selected using a database provided by an online

research company Qualtrics between April 2, 2012 and April 12, 2012. The company

offers software enable users to create their own web-based surveys and helps find the

respondents and distribute the survey. The sample of this online survey was collected

from Qualtics' panel members that were nearly 4 million individuals within the United

States. An email was sent to the potential participants in search of people who were

Facebook users. Qualified participants were invited to first browse through one hotel

Facebook page of their choice and then take the survey via a link contained in the email.

In order to use Structural Equation Modeling, the acceptable sample size to parameters

ratio is 10:1 (Jackson, 2003). According to the biggest number of parameters in the three

models, the acceptable minimum sample size for the first sub-study was 550.

Sub-study 2

Data of the second sub-study was collected from 12 sample hotel brand Facebook

pages. The selection of hotel brand was based on 2012 U. S. hotel chain scale segments

conducted by Smith Travel Research (STR, 2012). Chain scale segmentation is a method

developed by Smith Travel Research to group hotel brands based on the actual average

room rates (STR, n.d.). The chain scale segments are divided into six levels: luxury, upper upscale, upscale, upper midscale, midscale, and economy chains.

The number of likes of each hotel brand Facebook page was collected for all 229 hotel brands listed in the report. The study then chose two sample hotel brands from each hotel scale level based on the number of likes and parent hotel company. First, the hotels that had the most number of likes were chosen because these hotels were more active in Facebook activities. Second, the study try to choose sample hotels from different parent companies to make the hotel sample more representative. Only North American hotel companies were considered in this study since Facebook pages of European hotel brands have a lot of information written in non-English. The 12 sample hotel brands chosen in the second sub-study were listed in table 2.

Table 2

The Ten Sample Hotel Brand Studied and Their Facebook Page Address

Hotel Brand	Scale Level	Parent Company	No. of Fans	Facebook Page
The Ritz-Carlton Hotels	Luxury	Marriott International	110418	http://www.facebook.com/ritzcarlton
Four Seasons Hotels and Resorts	Luxury	Four Seasons Hotels, Inc.	99091	http://www.facebook.com/FourSeasons
Hyatt Hotels	Upper Upscale	Hyatt Hotels Corp.	49948	http://www.facebook.com/Hyatt
Kimpton Hotels & Restaurants	Upper Upscale	Kimpton Group Holding	43836	http://www.facebook.com/Kimpton
Aloft Hotels	Upscale	Starwood Hotels & Resorts	61413	http://www.facebook.com/alofthotels
Radisson Hotels	Upscale	Carlson	53481	http://www.facebook.com/Radisson
Hampton Inn Hotels	Upper Midscale	Hilton Worldwide	122196	http://www.facebook.com/Hampton
Holiday Inn Hotels & Resorts	Upper Midscale	InterContinental Hotels Group	91134	http://www.facebook.com/HolidayInnHotels
Best Western	Midscale	Best Western International	226710	http://www.facebook.com/BestWestern
La Quinta Inn & Suites	Midscale	LQ Management	41118	http://www.facebook.com/laquinta
Super 8	Economy	Wyndham Hotel Group	165590	http://www.facebook.com/Super8
Motel 6	Economy	Accor	12600	http://www.facebook.com/motel6

Note. Data collected from Facebook.com at 5:00pm to 7:30pm on February 20th, 2012.

For all hotel brand Facebook pages, all messages posted on the walls by hotels between October 1, 2011 and February 29, 2012 were reviewed. Those mini-survey questions on Facebook pages and messages posted by hotel guests were eliminated from the study. Only messages posted by hotels that had like, comment, and share were included in this study. Besides, the messages adding photos to the same album were grouped together. Since they have exactly same numbers of likes, comments, and shares, only one message was used to represent the message group in order to avoid duplication.

For each message, information collected included post date, message content, message format, the number of likes, the number of comments, and the number of shares. Message content and message format were classified into several categories. The classification was conducted by one researcher in order to maintain consistency after a comprehensive discussion among several researchers. The first-round data collection was conducted between February 20th, 2012 and March 4th, 2012. Then an inter-rater reliability check was conducted by another researcher between March 9th, 2012 to March 19th, 2012.

Sub-study 3

Data of the third sub-study was collected via an online experiment. The sample of this online experiment was also collected from Qualtics' panel members between April 13, 2012 and April 23, 2012. As the first sub-study, an email was sent to the potential participants in search of people who were Facebook users. Qualified participants were invited to participate in the online experiment via a link contained in the email. The participants of the experiment were randomly assigned to nine groups. Each group was led to a simulated hotel Facebook page with only one type of message. All participants

had enough time to browse through the Facebook page and also do any activity they want such as like, comment, or share. After finish reading the hotel Facebook page, all participants were asked to complete a questionnaire. The number of parameters of the hypothesized model was 45 (See Figure 11), suggesting that the acceptable minimum sample size for the third sub-study was 450. Thus, each group had 50 participants, resulting in a total sample size of 450.

Instrumentation

The survey instruments for the first sub-study and the third sub-study were developed in a three-stage process. Initial questions were borrowed from existing instruments in the previous literature and revised by the researcher to address the study context. Secondly, initial questions were discussed extensively in the dissertation committee and appropriate changes were suggested. In addition, a pilot test was administered to a group of undergraduate students to check the reliability of the instruments and further refine the instruments through comments and suggestions. The full questionnaires were presented in the appendices (see Appendix C and Appendix D). The next section provided details of how the proposed variables (constructs) in two sub-studies were measured.

Sub-study 1

The first sub-study contained three competing models and had nine constructs/variables to be measured. They were: task-technology fit, perceived usefulness, perceived ease of use, needs of joining hotel Facebook page (including socializing, entertainment, self-status seeking, and information), hotel Facebook page usage, compliance, identification (including cognitive, emotional, and evaluation),

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internalization, attitude toward hotel Facebook pages, and intention to join hotel

Facebook pages.

Task-technology fit.

Goodhue and Thompson (1995) outlined eight factors to measure task-technology

fit (TTF) as follows: (1) quality, (2) locatability, (3) authorization , (4) compatibility, (5)

training and ease of use, (6) production timeliness, (7) systems reliability; and (8)

relationship with users.

Table 3

Measurement of TTF Construct

Construct	Scale Items
Task-technology fit (TTF)	The hotel Facebook page was available when needed.
	The hotel Facebook page was important to travel decision making.
	Information on the hotel Facebook page was displayed in a readable and understandable form when needed.
	Get information from the hotel Facebook page was convenient and easy.
	Information on the hotel Facebook page was timely and up to date.
	Information on the hotel Facebook page was accurate.
	Information on the hotel Facebook page can help me deal with unexpected situations.
	Information on the hotel Facebook page enables me to make good travel decisions.

However, this measurement was developed in the content of users' IT-supported

decision making and was not exactly applicable in this study, which explores users' usage

of the hotel Facebook page in travel planning and travel decision making. Lam, Cho, and

Qu (2007) applied Goodhue and Thompson's (1995) measurement of TTF in the content

of hospitality employee's adoption of technology and modified the measurement based

on focus group interviews. Their modified TTF measurement includes 10 items. The TTF

scale in this study was adapted from Lam et al. (2007)'s measurement. One item "The information system was able to integrate information across multiple departments" was deleted because of irrelevancy. Two items "Improves quality of decision" and "The information system can enables me to make good hotel decision" were combined because of similarity. The final TTF scale of this study includes eight items listed in Table 3. Each item was measured using a 7-point Likert scale anchored with 1 representing strongly disagree to 7 representing strongly agree.

Perceived usefulness.

The scale of perceived usefulness (PU) in this study was adapted from Davis's (1989) study. The original measurement in Davis's (1989) study contains five items. One item "Using technology in my job would increase my productivity" was deleted since this study was not about production job. The final PU scale of this study includes five items listed in Table 4. Each item was also measured using a 7-point Likert scale anchored with 1 representing strongly disagree to 7 representing strongly agree.

Table 4

Measurement of PU Construct

Construct	Scale Items
Perceived usefulness (PU)	Using the hotel Facebook page would enable me to make travel decisions more quickly.
	Using the hotel Facebook page would make it easier to make travel decisions.
	Using the hotel Facebook page improves my performance in making travel decisions.
	Using the hotel Facebook page enhances my effectiveness in making travel decisions.
	I find the hotel Facebook page to be useful in travel decisions making.

Perceived ease of use.

Davis (1989) listed six items to measure perceived ease of use (PEU). However, this measurement was used for job performance information systems. The scale of PEU in this study was revised from Davis's (1989) study and consists of four items listed in Table 5. Two items in Davis's (1989) scale, "My interaction with CHART-MASTER would be clear and understandable" and "I would find CHART-MASTER to be flexible to interact with", were deleted because the hotel Facebook page was not an information system used for job. Each item was also measured using a 7-point Likert scale anchored with 1 representing strongly disagree to 7 representing strongly agree.

Table 5

Measurement of PEU Construct

Construct	Scale Items
Perceived ease of use (PEU)	Learning to use the hotel Facebook page was easy for the first time user.
	I find it easy to use the hotel Facebook page to do what I want it to do.
	It was easy for me to become skillful at using the hotel Facebook page.
	Hotel Facebook page was hard to use.

Needs of joining the hotel Facebook page.

Uses and gratifications theory posits that users' different needs (motivations) lead to different media usage. Wang and Fesenmaier (2004a, 2004b) identified four categories of needs that members participate in online travel communities try to satisfy. These need categories are: functional needs, social needs, psychological needs and hedonic needs. Considering that hotel Facebook pages were also online travel communities, this study used the scale developed by Wang and Fesenmaier (2004a, 2004b) to measure users' needs to join a hotel Facebook page (group). The final scale of need includes 14 items derived from the four need dimensions (See Table 6). Each item was also measured using

a 7-point Likert scale anchored with 1 representing strongly disagree to 7 representing

strongly agree.

Table 6

Measurement of Need Construct

Need Construct	Scale Items
Functional	Information
(FC)	Efficiency
	Convenience
Social	Trust
(SC)	Communication
	Relationship
	Involvement
Psychological	Belonging
(PY)	Identification
	Affiliation
Hedonic	Amusement
(HD)	Fun
	Enjoyment
	Entertainment

Hotel Facebook page usage.

The scale of hotel Facebook page usage was adopted from Ellison, Steinfield, and

Lampe's (2007) study. Ellison et al. (2007) created a new measure of Facebook usage

which includes both two self-reported assessments of Facebook behavior (number of

Facebook friends and hours spent on Facebook), and six Likert-scale attitudinal items.

These six items were then adopted in Ross, Orr, Sisic, Arseneault, Simmering, and Orr's

(2009) Facebook study. The scale of hotel Facebook page usage in this study used five

items out of six generated by Ellison et al. (2007) (See Table 7). One item "I would be

sorry if Facebook shut down" was eliminated because hotel Facebook page cannot be

shut down by itself. Each item was also measured using a 7-point Likert scale anchored

with 1 representing strongly disagree to 7 representing strongly agree.

Table 7

Measurement of Hotel Facebook Page Usage Construct

Construct	Scale Items
Hotel Facebook page usage (USG)	Hotel Facebook page was part of my everyday activity. I am proud to tell people I'm on hotel Facebook page. Hotel Facebook page has become part of my daily routine. I feel out of touch when I haven't logged onto hotel Facebook page for a while. I plan to be part of the hotel Facebook community.

Table 8

Measurement of COMP and INT Constructs

Constructs	Scale Items
Compliance (CMP)	In order for me to get rewarded on the hotel Facebook page, it was necessary to express the right attitude. My private views about the hotel were different from those I express publicly. How much I am involved in the hotel Facebook page was directly linked to how much I am rewarded. Unless I'm rewarded for it in some way, I see no reason to expend extra effort on the hotel Facebook page.
Internalization (INT)	If the values of the hotel were different, I would not be as attached to the hotel Facebook page. Since joining the hotel Facebook page, my personal values and those of the hotel have become more similar. The reason I prefer this hotel Facebook page to other hotels' Facebook pages was because of its values. My attachment to the hotel Facebook page was primarily based on the similarity of my values and those represented by the hotel. What the hotel stands for was important to me.

Compliance and internalization.

The scales for these two social influence constructs were adapted from O'Reilly

and Chatman's (1986) and Vandenberg, Self, and Seo's (1994) social influence studies.

The scales of compliance (CMP) and internalization (INT) use all items developed in

both studies and were slightly modified to fit the hotel Facebook page context (See Table

8). Each item was also measured using a 7-point Likert scale anchored with 1 representing strongly disagree to 7 representing strongly agree.

Identification.

The last social influence construct, identification, was measured as the concept of social identity in the social identity theory. As Ellemers, Kortekaas, and Ouwerkerk (1999) proposed, one's social identity was composed of three components: cognitive, emotional, and evaluation. Bagozzi and Dholakia (2002) developed a set of scales to measure three components of social identity and referred them to identification in the social influence model. The scale of identification (ID) in this study was adapted from Bagozzi and Dholakia's (2002) study and consists six items measuring three social identity components (See Table 9). Each item was also measured using a 7-point Likert scale anchored with 1 representing strongly disagree to 7 representing strongly agree.

Table 9

Measurement of ID Constructs

Identification Constructs	Scale Items
Cognitive (COG)	My personal identity overlaps with the identity of the hotel Facebook group as I perceive it.
	When I am engaging in group activities, my personal identity overlaps with the identity of the hotel Facebook group.
Emotional (EMT)	I am attached to the hotel Facebook group I like.
	I have strong feelings of belonging to the hotel Facebook group I like.
Evaluation (EVL)	I am a valuable member of the hotel Facebook group I like.
	I am an important member of the hotel Facebook group I like.

Attitude-toward-hotel-Facebook-page.

The concept attitude-toward-hotel-Facebook-page was derived from the concept of attitude-toward-the-website in Chen and Wells's (1999) and Bruner II and Kumar's (2000) website advertising studies. Chen and Wells (1999) created six items to measure

attitude-toward-the-website, while Bruner and Kumar (2000) used three different items.

Combining these two studies, this study developed a six-item scale to measure attitude-

toward-hotel-Facebook-page (ATF) (See Table 10). Each item was also measured using a

7-point Likert scale anchored with 1 representing strongly disagree to 7 representing

strongly agree.

Table 10

Measurement of ATF Construct

Construct	Scale Items
Attitude-toward-hotel-Facebook-page (ATF)	The hotel Facebook page makes it easy for me to build a relationship with this hotel.
	I'm satisfied with the information provided by the hotel Facebook page.
	I feel comfortable in surfing the hotel Facebook page.
	I feel surfing the hotel Facebook page was a good way for me to spend my time.
	Overall, I think it was a good hotel Facebook page.
	Overall, I like this hotel Facebook page

Table 11

Measurement of ITJ Construct

Construct	Scale Items
Intention to join hotel Facebook page (ITJ)	I intend to join this hotel Facebook page.
	I would like to visit the hotel Facebook page again in the future.
	It was likely that I will join this hotel Facebook page.

Intention to join hotel Facebook page.

The scale of intention to join hotel Facebook page was derived from Huh, Kim,

and Law's (2009) study. Huh et al. (2009) used 3 items to measure behavior intention to

use hotel information system. In this study the scale was slightly modified to fit the hotel

Facebook page context and the final scale of intention to join hotel Facebook page (ITJ)

consists of 3 items (See Table 11). Each item was also measured using a 7-point Likert

scale anchored with 1 representing strongly disagree to 7 representing strongly agree.

Sub-study 3

The third sub-study was derived from Aad model and Aws model and has five constructs/variables to be measured. They are: attitude-toward-hotel-Facebook-page, attitude-toward-the-message, attitude-toward-the-hotel-brand, hotel booking intention, and intention of eWOM. Among them, attitude-toward-hotel-Facebook-page construct was measured using the same scale used in the first sub-study (See Table 10).

The measurement for attitude-toward-the-message and attitude-toward-the-hotel-brand were borrowed from various Aad studies (eg, Batra & Ray, 1986; MacKenzie & Lutz, 1989; MacKenzie, Lutz, & Belch, 1986; Mitchell & Olson, 1981). The scales of attitude-toward-the-message (ATM) and attitude-toward-the-hotel-brand (ATB) both consist of six items listed in Table 12. Each item was measured using 7-point semantic differential scales anchored with 1 representing negative words to 7 representing positive words.

Table 12

Measurement of ATM and ATB Construct

Construct	Scale Items
Attitude-toward-the-message (ATM)	Good / bad
	Like / dislike
	Favorable / unfavorable
	Positive / negative
	Interesting / uninteresting
	Irritating / not irritating
Attitude-toward-the-hotel-brand (ATB)	Important / unimportant
	Unattractive / attractive
	Unfavorable / favorable
	Good / bad
	Pleasant / unpleasant
	Nice / awful

Almost all Aad studies use three items to measure purchase intention: unlikely/likely, improbable/probable, and impossible/possible (eg, Batra & Ray, 1986; MacKenzie & Lutz, 1989; MacKenzie et al., 1986; Mitchell & Olson, 1981). Chiang and Jang (2006) applied this scale in measuring hotel booking intention and extended three items into four statements. The scale for hotel booking intention (BI) in this study was adapted from Chiang and Jang's (2006) study and was slightly modified to fit the Facebook context (See Table 13).

The scale for intention to spread positive eWOM was developed by the researcher based on the scale for intention to spread positive WOM in Gruen, Osmonbekov, and Czaplewski's (2006) study. Gruen et al. (2006) used only two items to measure customers' intentions to spread WOM. Svensson's (2011) study on Facebook eWOM suggested that consumers spread eWOM on Facebook by commenting, liking, and sharing messages to their friends. Therefore, this study developed five items to measure intention to spread positive eWOM (WOM) as listed in Table 13.

Table 13

Measurement of BI and WOM Construct

Construct	Scale Items
Hotel booking intention (BI)	My willingness to book Star Hill hotels was very high.
	The probability that I would consider booking Star Hill hotels was very high.
	The likelihood of booking Star Hill hotels was very high.
	If I am going to book this hotel, I would consider booking this hotel via Facebook.
Intention to spread positive eWOM (WOM)	I will like the messages I read on Facebook.
	I will comment on the messages I read on Facebook.
	I will share the messages I read with my friends on Facebook.
	I will post my experience in the hotel on Facebook.
	I will recommend the hotel to friends on Facebook.

Data Analysis Methods

Sub-study 1

Data collected in the first sub-study was entered and analyzed in SPSS 18.0 and EQS 6.1 statistical software packages. First, data was pre-processed for consistency to eliminate incorrect sampling units and for completeness to check for non-responses. Only completed cases were used for the analysis. Descriptive statistics were then conducted for all items to check for errors in data entry and missing data.

Measurement validity and reliability were then evaluated. Measurement validity of the instrument was evaluated by conducting factor analysis. A principal axis factor analysis was conducted utilizing oblimin rotation on all of the scale items. The total number of factors generated from factor analysis should match the number of constructs proposed in the study (Hair, Black, Babin, & Anderson, 2010). Reliability was evaluated by calculating Cronbach's alpha. All of the alpha values should be at an acceptable level of 0.7 or higher (Nunnally, 1978).

The comparison of the three competing theoretical models (technology model, communication model, and social psychology model) was conducted using Structural Equation Modeling (SEM) in the EQS 6.1 statistical software package. The three competing models were independently tested in two steps. First, confirmatory factor analysis (CFA) was performed to determine whether the observed variables well reflected the hypothesized latent variables. Second, full structural models were tested to examine overall model fit (goodness-of-fit indices), path coefficients significance, and explanatory power (explained variance R^2) of the three competing models.

Next, the three competing models were compared in three steps. First, multiple

goodness-of-fit indices (Comparative Fit Index (CFI), Non-normed Fit Index (NNFI),

standardized Root Mean Square Residual (SRMR), and Root Mean Square Error of

Approximation (RMSEA) and its lower and upper confidence interval boundaries) were

used to check the fit of each competing model to the data. Second, once competing

models show a good fit, path coefficients and explanatory power of models were

compared. Finally, if multiple model fit indices and explanatory power were equivalent,

the best model was the most parsimonious one (Rust, Lee, & Valente, 1995). Using these

procedures, the three competing models were evaluated for overall model fit, their

contribution to explaining attitude toward hotel Facebook pages and intention to join

hotel Facebook pages, and their parsimony.

Each indicator in the measurement model consisted of 2 to 8 questionnaire items.

Item parceling was used in the study for those construct (latent variable) that had more

than three items because using all individual items in the measurement model may harm

the overall model fit. Item parceling can lead to a better fitting solution and less bias in

estimates of structural parameters when the items were unidimensional (Bandalos, 2002).

Item parceling in this study used the following procedure: First, items belonging to each

construct (latent variable) were subjected to exploratory factor analysis to determine if

the unidimensional assumptions were met. After finding that the unidimensional

assumptions were met, items were grouped into three indicators for each factor using

systematic sampling method. That is, the first, the fourth, the seventh, ... items were

grouped into one indicator, and the second, the fifth, the eighth, ... items were grouped

into another indicator, and the third, the sixth, the ninth, ... items were grouped into

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another indicator. Last, the average score of items was calculated to represent the subscale scores of each indicator. This procedure was applied for each group.

Sub-study 2

Data collected in the second sub-study was entered and analyzed in Excel 2007 and SPSS 18.0 statistical software packages. First, reliability and validity of the data was evaluated. Internal validity in qualitative research refers to the congruence of findings with reality (Merriam 2002). Triangulation, member checks, and peer review are the most common methods to ensure internal validity in qualitative research (Arsal, Woosnam, Baldwin, & Backman, 2009). In this study, peer review was conducted by another researcher to ensure internal validity of the data. External validity in qualitative research refers to the sample's generalizability. In this study, twelve sample hotel brands cover all six scale levels of hotel and were from twelve different parent hotel company. In addition, the messages were collected for a range of five months. In this way, this study attempts to ensure external validity of the data. Reliability is a concept related to the quality of the qualitative research (Stenbacka, 2001). The audit trail is a method used for ensuring reliability in qualitative research, which is a description of how the data were collected, how the categories were derived, and how the study was conducted overall (Merriam 2002). In this sub-study, the researcher kept a memo throughout the conduct of the study and had others review the trail of analysis in order to ensure reliability of the data.

The analysis of data in the second sub-study has three steps. First, descriptive statistics were presented to show the overall Facebook marketing status of twelve sample hotels and the categorization of messages. Second, two Chi-Square test of independence were run to examine the relationships among message format, message content, and hotel

scale level. Chi-Square test of independence is used to test whether there is a relationship between two categorical variables (Azen & Walker, 2011). In this study, since hotel scale level, message format and message content were all categorical variables, Chi-Square test was the appropriate method to examine message type differences across hotel scale levels. The first Chi-Square test was conducted to test the independence between message format and hotel scale level and the second was run to test the independence between message content and hotel scale level. In Chi-Square tests, two contingency tables were calculated to show different message preferences of different hotel scale levels. Last, a Multivariate Analysis of Variance (MANOVA) was conducted to measure the marketing effectiveness differences across message types. Two independent variables used in MANOVA were message format and message content. Three dependent variables in MANOVA were the number of likes, the number of comments, and the number of shares.

Sub-study 3

Data collected in the third sub-study was entered and analyzed in SPSS 18.0 and EQS 6.1 statistical software packages. Similar to the first sub-study, data was pre-processed for consistency, completeness, errors in data entry and missing data. Measurement validity and reliability were then evaluated.

Data was then analyzed in two steps. First, Multivariate Analysis of Variance (MANOVA) was run to measure the differences of the marketing effectiveness across message types. Two independent variables used in MANOVA were message format and message content. There were five dependent variables to measure marketing effectiveness: attitude-toward-hotel-Facebook-page (ATF), attitude-toward-the-message (ATM), attitude-toward-the-hotel-brand (ATB), hotel booking intention (BI), and

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intention of eWOM (WOM). Both main effects and interaction effects were tested in

MANOVA. For any effects that were significant, post hoc tests were conducted to

determine which type of message was the most effective in Facebook marketing.

Second, Structural Equation Modeling (SEM) was conducted to examine the

proposed model (See Figure 11). The hypothesized model was examined for the overall

model fit, path coefficients, and explanatory power to test the hypotheses from 3 through

9. Same as the first sub-study, item parceling procedure was again employed for the data

set of this sub-study.

CHAPTER 4

ANALYSIS AND RESULTS

This chapter presents the data analysis process and the results of this study. Since this study is composed of three sub-studies, the data analysis and the results of three sub-studies are presented in three sections. In each section, validity and reliability issues are first addressed. Then the demographics and descriptive statistics are provided. Lastly, the results of main statistical tests, using SEM, Chi-Square, or MANOVA, are discussed and the results associated with the testing of the hypotheses are presented.

Sub-Study 1

The first sub-study proposed three competing models to explain customers' attitude toward and intention to join hotel Facebook pages and employed structural equation modeling (SEM) to do model comparison. This section consists of three parts: descriptive statistics, measurement validity and reliability, and SEM results of model comparison.

Descriptive Statistics

Table 14 shows the demographics of the sample collected in sub-study 1. Of the 550 respondents, females (57%) and males (43%) were roughly evenly distributed while in favor of females. The biggest age group was 45-54 years old (27%), followed by 35-44 years old (24%), and 25-34 years old (21%). Of the all respondents, 16.5% were 18-24 years old and 11.5% were older than 54 years. In terms of ethnicity, the majority of the respondents were white (78%), with a small number of black (8%), Asian (6%), and Hispanic (5%). Other ethnicities together only occupied 3% of the total respondents.

Table 14

Demographic Profile of the Respondents (N=550)

Demographic	n	%
Gender		
Male	235	42.7
Female	315	57.3
Age		
18-24	91	16.5
25-34	115	20.9
35-44	131	23.8
45-54	150	27.3
55-64	52	9.5
65+	11	2.0
Ethnicity		
White / Caucasian	430	78.2
Hispanic / Latino	29	5.3
Black / African American	42	7.6
American Indian / Alaska Native	7	1.3
Asian	33	6.0
Native Hawaiian / Pacific Islanders	1	0.2
Other	8	1.5
Education level		
less than high school	5	0.9
high school	87	15.8
some college	244	44.4
bachelor's degree	133	24.2
some graduate education	31	5.6
graduate degree	50	9.1
The length of using the Internet		
Less than 1 year	1	0.2
1-2 years	9	1.6
3-5 years	24	4.4
6-10 years	88	16.0
over 10 years	428	77.8
The length of using Facebook		
Less than 1 year	17	3.1
1-2 years	111	20.2
3-4 years	240	43.6
5-6 years	121	22.0
over 6 years	61	11.1

The majority of the respondents had already achieved at least high school diploma (99%), 39% of respondents had at least bachelor's degree, and 9% of respondents had graduate degree. Most of the respondents were heavy Internet users. Of the all respondents, 78% had used the Internet for more than 10 years and 94% had used the Internet for more than 5 years. In terms of Facebook usage, 97% of the respondents indicated that they had used Facebook for at least one year. And 11% of them had even used Facebook for more than 6 years considering that Facebook only had a history of about 8 years.

Measurement Validity and Reliability

First of all, construct validity of the instrument was evaluated by conducting factor analysis (Hair et al., 2010). Since sub-study 1 included three competing models, the three models were tested separately. Factor analysis employing principal axis factoring extraction method and direct oblimin rotation was utilized on all scale items included in each of the three models.

Table 15 shows the factor analysis results of model 1: technology model. In model 1, one item ("Hotel Facebook page was hard to use") was reversely coded because of the negative wording of the question. Using the guidelines established by Comrey & Lee (1992), only items with factor loadings higher than 0.40 were included in the final constructs. The factor analysis results also showed that two items of task-technology fit (TTF) construct ("The hotel Facebook page was important to travel decision making" and "Information on the hotel Facebook page enables me to make good travel decisions") did not indicate the TTF factor. However, these two items turned out to be better indicators

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of the perceived usefulness (PU) factor. Thus, in future analysis, these two items were

included as indicators of the PU construct instead of the TTF construct.

Table 15

Factor Analysis of Technology Model (Model 1)

Items	Factor				
	TTF	PU	PEU	ATF	ITJ
TTF6: accurate information	**.646**	.025	.104	-.038	.129
TTF5: timely and up to date	**.623**	.033	.147	-.160	.020
TTF4: convenient and easy	.379	.199	.357	-.129	.061
TTF1: available when needed	.352	.025	.314	-.122	-.044
TTF3: readable and understandable	.344	.095	.269	-.285	.015
PU4: enhance effectiveness	-.021	**.934**	.025	-.029	-.011
PU3: improve performance	-.004	**.929**	-.025	-.036	-.002
PU1: make travel decisions more quickly	-.078	**.901**	.113	-.002	-.004
PU2: easy to make travel decisions	-.073	**.890**	.072	-.063	.016
PU5: useful in travel decisions making	-.052	**.838**	.132	-.015	.054
TTF2: important to travel decision making	.154	**.709**	-.040	.028	.125
TTF8: make good travel decisions	.255	**.634**	-.091	-.144	.010
TTF7: deal with unexpected situations	.363*	.512*	-.190	-.011	.098
PEU3: easy to become skillful	.016	.097	**.855**	.036	.112
PEU1: Learning to use is easy	.028	.057	**.821**	-.063	.045
PEU2: easy to do what I want	.073	.209	**.731**	.013	.076
PEU4: easy (hard) to use	.051	-.071	**.644**	-.073	-.057
ATF5: good hotel Facebook page	.007	.025	-.048	**-.903**	.058
ATF6: like hotel Facebook page	.032	.033	-.014	**-.888**	.003
ATF2: satisfied with Facebook page	.041	.085	.042	**-.717**	.042
ATF3: comfortable in surfing Facebook page	-.012	-.025	.311	**-.568**	.032
ATF1: build relationship with hotel	.102	.113	-.040	**-.453**	.227
ITJ3: likely to join hotel Facebook page	.024	-.037	.026	.041	**1.013**
ITJ1: intend to join hotel Facebook page	.030	-.025	.034	.055	**.982**
ITJ2: revisit hotel Facebook page	-.083	.072	.031	-.228	**.681**
ATF4: a good way to spend time	.003	.158	-.076	-.194	**.551**

Note. Numbers in bold represented items with higher factor loadings on corresponding
factors. * item with cross-loading problem.
Acronyms: TTF = task-technology fit; PU = perceived usefulness; PEU = perceived
ease of use; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the
hotel Facebook page.

Similarly, one item of the attitude toward the hotel Facebook page (ATF) construct ("I feel surfing the hotel Facebook page was a good way for me to spend my time") showed a high factor loading value on intention to join the hotel Facebook page (ITJ) factor and a low factor loading on ATF factor. Thus, this item was included in ITJ construct for future analysis. Besides, one item of the TTF construct ("Information on the hotel Facebook page can help me deal with unexpected situations") had cross-loading on two factors, thus, it was removed from the additional analysis.

Table 16 shows the factor analysis results of model 2: communication model. Again, only items with factor loadings higher than 0.40 were included in the final constructs. However, although two items of the ATF construct ("I feel surfing the hotel Facebook page was a good way for me to spend my time") had factor loadings lower than 0.40 on the ATF and ITJ construct, to keep the consistency of the dependent variables ATF and ITJ across three competing models, these two items were still included in the ITJ construct. One item of the social needs (SC) contract ("involvement") showed a high factor loading on the psychological needs (PY) factor and was thus included in the PY construct for further analysis. Besides, one item of the functional need construct ("convenient") and two items of the hotel Facebook page usage (USG) construct ("I plan to be part of the hotel Facebook community" and "I am proud to tell people I'm on hotel Facebook page") were removed from the additional analysis due to cross-loading on two factors.

Table 16

Factor Analysis of Communication Model (Model 2)

Items	Factor						
	HD	PY	SC	FC	USG	ATF	ITJ
HD4: entertaining	**.916**	-.023	-.023	-.023	.042	.013	-.049
HD2: fun	**.794**	.045	.092	.052	-.028	.018	-.091
HD1: amusing.	**.784**	.067	-.061	-.044	-.115	.005	.103
HD3: enjoyable	**.671**	.055	.073	-.070	.011	.054	-.104
FC3: convenient	**.444***	-.018	.121	**-.278****	.085	.160	-.053
PY3: affiliation	.020	**.810**	.036	.012	-.028	.068	-.065
PY1: belonging	.104	**.664**	.055	-.055	-.075	.012	-.074
PY2: identification	.130	**.486**	-.098	-.137	-.156	-.039	-.053
SC4: involvement	.074	**.484**	-.063	-.137	-.259	-.027	-.060
SC1: trust	.025	.389	.206	-.012	.126	.211	-.106
SC2: communication	.122	.175	**.428**	-.265	.019	.027	.024
SC3: relationship	.232	.331	**.418**	-.100	-.049	-.058	-.049
FC2: efficiency	.080	.009	.002	**-.752**	-.057	-.018	-.141
FC1: information	.044	.105	.036	**-.583**	.065	.241	-.002
USG3: part of my daily routine	.056	.004	.003	.001	**-.907**	.030	-.013
USG1: part of my everyday activity	.003	.077	.007	-.013	**-.903**	.057	.010
USG4: feel out of touch when log out	.025	.057	-.019	-.007	**-.786**	-.032	-.101
USG5: be part of Facebook community	-.015	.045	.060	-.058	**-.412***	.000	**-.515***
USG2: proud to tell people	.090	.024	.117	-.038	**-.310***	.070	**-.416***
ATF5: good hotel Facebook page	.065	.074	-.112	-.063	-.003	**.859**	-.018
ATF6: like hotel Facebook page	.092	.130	-.104	.024	-.017	**.857**	-.054
ATF2: satisfied with Facebook page	-.076	-.071	.113	-.190	-.129	**.693**	-.044
ATF3: comfortable in surfing Facebook	.073	-.049	.214	-.017	.049	**.588**	-.051
ATF1: build relationship with hotel	.154	-.030	.297	-.047	-.236	**.341**	-.070
ITJ3: likely to join hotel Facebook page	.044	.038	-.017	-.029	-.011	-.027	**-.914**
ITJ1: intend to join hotel Facebook page	-.054	.094	.001	-.042	-.044	-.011	**-.883**
ITJ2: revisit hotel Facebook page	.117	-.001	-.029	-.046	.065	.153	**-.729**
ATF4: a good way to spend time	.181	-.005	.024	-.086	-.299	.126	**-.330**

Note. Numbers in bold represented items with higher factor loadings on corresponding factors. * item with cross-loading problem.
Acronyms: HD = hedonic needs; PY = psychological needs; SC = social needs; FC = functional needs; USG = hotel Facebook page usage; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page.

Table 17 shows the factor analysis results of model 3: social psychology model. Same as the above, only items with factor loadings higher than 0.40 were included in the final constructs.

Table 17

Factor Analysis of Social Psychology Model (Model 3)

Items	Factor				
	CMP	INT	ID	ATF	ITJ
CMP4: rewarded in order to expend effort	**.733**	.154	-.062	-.005	-.138
CMP3: involvement linked to reward.	**.728**	-.091	.033	-.054	.143
CMP2: private view different from public	.360	-.145	.308	.116	.000
INT3: prefer because of values	-.064	**-.777**	.117	-.076	.000
INT4: attachment based on similar values	-.076	**-.773**	.144	-.023	.040
INT5: stands for is important	.006	**-.646**	-.121	-.055	.172
INT2: personal and hotel values become similar	-.016	**-.638**	.310	.018	.015
INT1: different value, not attached	-.002	**-.512**	-.026	-.079	.024
CMP1: express right attitude for rewards	.325	**-.479**	-.033	-.009	.109
EVL1: a valuable member	.018	.070	**.812**	-.082	.172
EVL2: an important member	.020	.046	**.758**	-.056	.221
EMT2: strong feelings of belonging	-.036	-.144	**.730**	-.044	.143
EMT1: attached to hotel Facebook page	-.046	-.154	**.702**	-.095	.117
COG1: identity overlap as perceived	.096	-.391	**.468**	-.086	-.043
COG2: identity overlap with engagement	.102	-.389	**.458**	-.081	-.047
ATF5: good hotel Facebook page	-.011	.047	.071	**-.930**	-.029
ATF6: like hotel Facebook page	-.046	.044	.111	**-.909**	.000
ATF2: satisfied with Facebook page	-.021	-.045	.016	**-.822**	.007
ATF3: comfortable in surfing Facebook page	.052	-.037	-.149	**-.758**	.022
ATF1: build relationship with hotel	.068	-.147	.083	**-.550**	.115
ITJ3: likely to join hotel Facebook page	-.005	-.028	.058	.018	**.932**
ITJ1: intend to join hotel Facebook page	.019	-.009	.099	.014	**.894**
ITJ2: revisit hotel Facebook page	-.097	-.066	.005	-.216	**.673**
ATF4: a good way to spend time	.051	-.068	.231	-.245	**.412**

Note. Numbers in bold represented items with higher factor loadings on corresponding factors.
Acronyms: CMP = compliance; INT = internalization; EVL = evaluation identification; EMT = emotional identification; COG = cognitive identification; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page.

One item of the compliance (CMP) construct showed a high factor loading on the internalization (INT) factor and was thus included in the INT construct for further analysis. Since cognitive, emotional, and evaluation identification items were all components of the identification (ID) construct, they were grouped in one factor. As in model 1 and model 2, one item of the ATF construct ("I feel surfing the hotel Facebook page was a good way for me to spend my time") was included in the ITJ construct. However, no significant cross-loading problem was identified in model 3.

Table 18

Analysis of Measurement Reliability of Three Competing Models

Items	Mean	Stand. Dev.	Cronbach's α
TTF5: timely and up to date	5.46	1.20	0.84
TTF6: accurate information	5.24	1.14	
PU1: make travel decisions more quickly	4.47	1.55	0.97
PU2: easy to make travel decisions	4.55	1.57	
PU3: improve performance	4.40	1.59	
PU4: enhance effectiveness	4.41	1.62	
PU5: useful in travel decisions making	4.61	1.64	
TTF2: important to travel decision making	4.34	1.60	
TTF8: make good travel decisions	4.72	1.46	
PEU1: Learning to use is easy	5.67	1.37	0.90
PEU2: easy to do what I want	5.34	1.42	
PEU3: easy to become skillful	5.54	1.38	
PEU4: easy (hard) to use	5.42	1.67	
HD1: amusing.	4.30	1.55	0.93
HD2: fun	4.60	1.51	
HD3: enjoyable	4.77	1.49	
HD4: entertaining	4.60	1.57	
PY1: belonging	4.16	1.62	0.89
PY2: identification	3.73	1.61	
PY3: affiliation	4.24	1.66	
SC4: involvement	3.63	1.78	
SC2: communication	5.17	1.36	0.79
SC3: relationship	4.65	1.51	

Items	Mean	Stand. Dev.	Cronbach's α
FC1: information	5.16	1.40	0.85
FC2: efficiency	4.63	1.55	
USG1: part of my everyday activity	2.58	1.60	0.95
USG3: part of my daily routine	2.62	1.62	
USG4: feel out of touch when not logging	2.55	1.68	
CMP3: involvement linked to reward.	3.87	1.56	0.62
CMP4: rewarded in order to expend effort	4.23	1.76	
INT1: different value, not attached	4.23	1.38	0.88
INT2: personal and hotel values be similar	3.64	1.43	
INT3: prefer because of values	3.93	1.44	
INT4: attachment based on similar values	3.89	1.48	
INT5: stands for is important	4.60	1.42	
CMP1: express right attitude for rewards	4.26	1.30	
COG1: identity overlap as perceived	3.58	1.51	0.94
COG2: identity overlap with engagement	3.61	1.53	
EMT1: attached to hotel Facebook page	3.33	1.62	
EMT2: strong feelings of belonging	3.28	1.63	
EVL1: a valuable member	3.19	1.66	
EVL2: an important member	3.20	1.67	
ATF1: build relationship with hotel	4.54	1.46	0.92
ATF2: satisfied with hotel Facebook page	5.02	1.39	
ATF3: comfortable in surfing Facebook page	5.44	1.37	
ATF5: a good hotel Facebook page	5.21	1.36	
ATF6: like hotel Facebook page	5.15	1.43	
ITJ1: intend to join hotel Facebook page	3.59	1.86	0.93
ITJ2: revisit hotel Facebook page	4.42	1.74	
ITJ3: likely to join hotel Facebook page	3.86	1.87	
ATF4: a good way to spend time	3.80	1.70	

Note. Acronyms: TTF = task-technology fit; PU = perceived usefulness; PEU = perceived ease of use; HD = hedonic needs; PY = psychological needs; SC = social needs; FC = functional needs; USG = hotel Facebook page usage; CMP = compliance; INT = internalization; COG = cognitive identification; EMT = emotional identification; EVL = evaluation identification; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page.

Measurement reliability was evaluated by Cronbach's alpha. Table 18 displays

the calculated alpha values along with the means and standard deviations for each

variable. All alpha values were found to be at an acceptable level of 0.6 or higher (Miller,

1995). However, the reliability of compliance (CMP) construct was relatively low (α = 0.62), suggesting that the instrument developed to measure CMP construct was not a very good design.

Structural Equation Modeling (SEM)

The comparison of the three competing models was conducted using structural equation modeling (SEM) in the EQS 6.1 statistical package. SEM is distinguished from other statistical techniques because SEM can analyze both observed variables and latent variables, which are not measured directly but estimated from several observed variables, at the same time (Kline, 2011). SEM can be applied in three situations: theory testing (confirmatory modeling), theory development (exploratory modeling), and theory comparison (testing alternative models) (Kline, 2011). In this study, all constructs are latent variables, thus SEM is the appropriate method to compare the three competing models.

Measurement models were tested first for the three competing models. Then the three full structural models were tested and compared based on goodness-of-fit indices, path coefficients, explanatory power, and parsimony. The goodness-of-fit indices used in the study included Comparative Fit Index (CFI), Non-normed Fit Index (NNFI), standardized Root Mean Square Residual (SRMR), and Root Mean Square Error of Approximation (RMSEA) and its lower and upper confidence interval boundaries. The recommended threshold values of the indices are presented in Table 19 (Kline, 2011). In addition, standardized residuals and the results of Lagrange Multiplier tests and Wald tests were inspected along with the theoretical literature of the research area.

Table 19

Goodness-of-Fit Indices

Indices	Threshold
CFI	> 0.90
NNFI	> 0.90
SRMR	≤ 0.08
RMSEA	≤ 0.08
Upper confidence interval of RMSEA	≤ 0.1

Note. Adapted from "*Principles and practice of structural equation modeling* (3rd ed.),"
by R. B. Kline, 2011, New York, NY: The Guilford Press, p. 204-209.

Linearity, multicollinearity, and singularity assumptions for SEM analyses were

met. The multivariate kurtosis indicated that the data distributions were less than optimal

(normalized estimates were 42.0, 46.9, and 51.4 for the three models, respectively).

However, the data distributions and outlier analysis only suggested one outlier for model

3 and no outlier for model 1 and model 2. After deleting the outlier for the model 3,

normalized estimate of model 3 was 43.6. Then, SEMs were run using both the maximum

likelihood estimation and the robust methods estimation. As the results from both

methods were very similar, the results of the maximum likelihood estimation were

reported.

Measurement model.

Model 1: Technology model.

The measurement model of model 1 specified five factors: task-technology fit

(TTF), perceived usefulness (PU), perceived ease of use (PEU), attitude toward hotel

Facebook pages (ATF), and intention to join hotel Facebook pages (ITJ). To test the

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measurement model, indicators were constrained to load only on the factor it was designated to measure. The residual terms for all indicators were fixed to be uncorrelated and the factor covariances were free to be estimated.

Goodness-of-fit indices indicated that the measurement model was only a marginal fit to the data and the LM statistics identified one correlation between errors of two indicators of ITJ construct contributing most to model misfit. Thus, the measurement model 1 was respecified and included the error correlation parameter. The new measurement model 1 suggested a good fit to the data: $\chi^2(66, N = 550) = 240.83$, $p < 0.001$, CFI = 0.98, NNFI = 0.97, SRMR = 0.04, RMSEA = 0.07 (CI = 0.06, 0.08). All factor loadings of the indicators were statistically significant, ps < 0.001, ranging from 0.82 to 0.98.

Table 20

Standardized Factor Loadings and Variance (R^2) for Model 1

Indicator	TTF	PU	PEU	ATF	ITJ	R^2
TTF1	0.90					0.81
TTF2	0.82					0.66
PU1		0.98				0.96
PU2		0.95				0.91
PU3		0.94				0.88
PEU1			0.88			0.78
PEU2			0.90			0.81
PEU3			0.92			0.84
ATF1				0.91		0.83
ATF2				0.86		0.73
ATF3				0.93		0.86
ITJ1					0.85	0.71
ITJ2					0.98	0.97
ITJ3					0.87	0.75

Note. Acronyms: TTF = task-technology fit; PU = perceived usefulness; PEU = perceived ease of use; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page.

Variances (R^2) of the indicators were accounted for by their corresponding

constructs ranged from 0.66 to 0.97. The three smallest explained variances were all from

the indicators of TTF, suggesting that the measurement of task-technology fit construct

need to be improved. Standardized factor loadings and the explained variances (R^2) of the

indicators are presented in Table 20.

The correlations among factors in the measurement model are presented in Table

21. Correlation coefficients ranged from 0.42 to 0.74, all ps < 0.001. The highest

correlation was the relationship between TTF and ATF. The lowest correlation was found

to be the relationship between PU and ITJ.

Table 21

Correlation between Constructs for Model 1

Construct (Factor)	1	2	3	4	5
1. TTF	--				
2. PU	0.56[*]	--			
3. PEU	0.64[*]	0.65[*]	--		
4. ATF	0.74[*]	0.69[*]	0.72[*]	--	
5. ITJ	0.72[*]	0.42[*]	0.50[*]	0.73[*]	--

Note. [*] $p < 0.001$. Acronyms: TTF = task-technology fit; PU = perceived usefulness; PEU = perceived ease of use; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page.

Model 2: Communication model.

The measurement model of model 2 specified seven factors: functional needs

(FC), social needs (SC), psychological needs (PY), hedonic needs (HD), hotel Facebook

page usage (USG), attitude toward hotel Facebook pages (ATF), and intention to join

hotel Facebook pages (ITJ). To test the measurement model, indicators were constrained

to load only on the factor it was designated to measure. The residual terms for all

indicators were fixed to be uncorrelated and the factor covariances were free to be estimated.

Goodness-of-fit indices indicated that the measurement model fit the data well: $\chi^2(131, N = 550) = 577.73$, $p < 0.001$, CFI = 0.96, NNFI = 0.95, SRMR = 0.05, RMSEA = 0.08 (CI = 0.07, 0.09). All factor loadings of the indicators were statistically significant, ps < 0.001, ranging from 0.74 to 0.97. Variances (R^2) of the indicators were accounted for by their corresponding constructs ranged from 0.55 to 0.94. The smallest explained variances were from the indicators of social need construct. Standardized factor loadings and the explained variances (R^2) of the indicators are presented in Table 22.

Table 22

Standardized Factor Loadings and Variance (R^2) for Model 2

Indicator	FC	SC	PY	HD	USG	ATF	ITJ	R^2
FC1	0.84							0.70
FC2	0.88							0.78
SC1		0.74						0.55
SC2		0.89						0.80
PY1			0.89					0.80
PY2			0.84					0.70
PY3			0.88					0.77
HD1				0.90				0.81
HD2				0.91				0.83
HD3				0.89				0.80
USG1					0.96			0.93
USG2					0.96			0.93
USG3					0.87			0.76
ATF1						0.93		0.86
ATF2						0.85		0.73
ATF3						0.91		0.83
ITJ1							0.96	0.92
ITJ2							0.88	0.78
ITJ3							0.97	0.94

Note. Acronyms: HD = hedonic needs; PY = psychological needs; SC = social needs; FC = functional needs; USG = hotel Facebook page usage; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page.

The correlations among factors in the measurement model are presented in Table 23. Correlation coefficients ranged from 0.39 to 0.83, all ps < 0.001. The highest correlation was the relationship between social need and hedonic need. The lowest correlation was found to be the relationship between USG and ATF.

Table 23

Correlation between Constructs for Model 2

Construct (Factor)	1	2	3	4	5	6	7
1. FC	--						
2. SC	0.80[*]	--					
3. PY	0.73[*]	0.81[*]	--				
4. HD	0.83[*]	0.83[*]	0.81[*]	--			
5. USG	0.48[*]	0.45[*]	0.64[*]	0.54[*]	--		
6. ATF	0.81[*]	0.70[*]	0.60[*]	0.74[*]	0.39[*]	--	
7. ITJ	0.71[*]	0.65[*]	0.74[*]	0.68[*]	0.69[*]	0.66[*]	--

Note. [*] $p < 0.001$. Acronyms: HD = hedonic needs; PY = psychological needs; SC = social needs; FC = functional needs; USG = hotel Facebook page usage; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page.
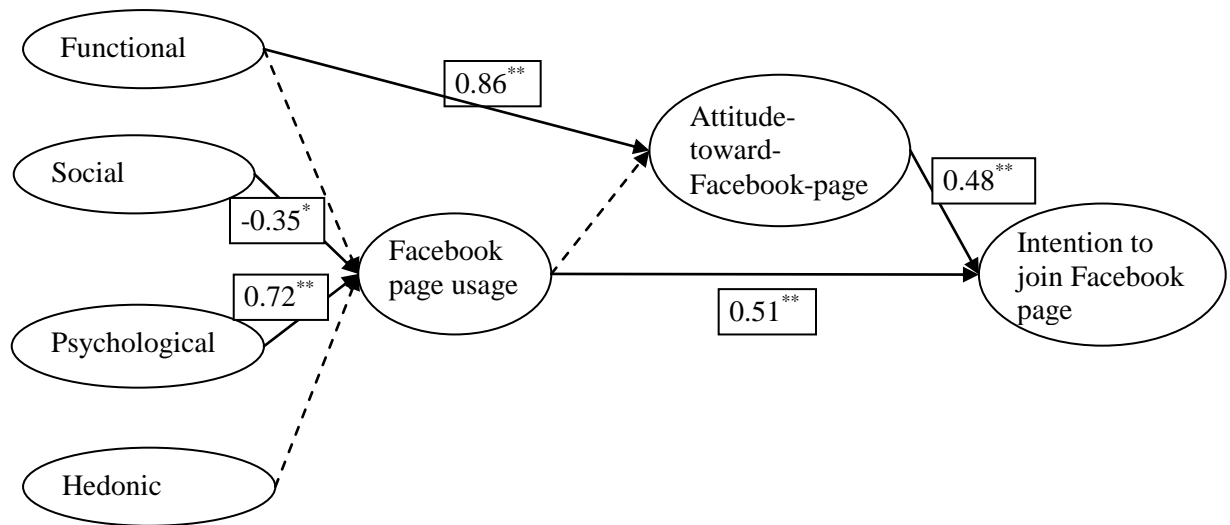
Model 3: Social psychology model.

According to proposed model 3, identification construct comprised of three constructs, cognitive, emotional, evaluation identification, all of which were measured by two items respectively. Thus, the measurement model of model 3 was a hierarchical, second-order CFA model. The identification construct was the only second-order factor, while other constructs consisted of the first-order measurement model. It was examined in ascending order, beginning with the first-order model. The initial first-order model of measurement model 3 specified seven factors: compliance (CMP), internalization (INT), cognitive identification (COG), emotional identification (EMT), evaluation identification (EVL), attitude toward hotel Facebook pages (ATF), and intention to join hotel Facebook pages (ITJ). To test the first-order model, indicators were constrained to load only on the

factor it was designated to measure. The residual terms for all indicators were fixed to be

uncorrelated and the factor covariances were free to be estimated.

Goodness-of-fit indices indicated that the first-order model fit the data well:

$\chi^2(96, N = 549) = 319.52, p < 0.001$, CFI = 0.98, NNFI = 0.97, SRMR = 0.03,

RMSEA = 0.07 (CI = 0.06, 0.07). The correlations among factors in the measurement

model are presented in Table 24. Correlation coefficients ranged from 0.20 to 0.88, all ps

< 0.001. The highest correlation was the relationship between emotional and evaluation

identification. The lowest correlation was found to be the relationship between CMP and

ATF. The high correlations among cognitive, emotional, and evaluation identification

indicated there existed higher-order factors that explain the strong relationship among

these three constructs.

Table 24

Correlation between Constructs for Model 3

Construct (Factor)	1	2	3	4	5	6	7
1. INT	--						
2. CMP	0.42*	--					
3. COG	0.74*	0.41*	--				
4. EMT	0.77*	0.33*	0.76*	--			
5. EVL	0.67*	0.32*	0.65*	0.88*	--		
6. ATF	0.57*	0.20*	0.44*	0.50*	0.45*	--	
7. ITJ	0.69*	0.27*	0.60*	0.76*	0.71*	0.66*	--

Note. * $p < 0.001$. Acronyms: CMP = compliance; INT = internalization; COG = cognitive
identification; EMT = emotional identification; EVL = evaluation identification; ATF =
attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page.

The first-order factor model was respecified to include one second-order factor,

identification, in place of first-order factor covariances. The second-order model again fit

the data well: $\chi^2(104, N = 549) = 395.71, p < 0.001$, CFI = 0.97, NNFI = 0.96,

SRMR = 0.04, RMSEA = 0.07 (CI = 0.06, 0.08). All factor loadings of the indicators

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were statistically significant, ps < 0.001, ranging from 0.56 to 1.00. Variances (R^2) of the

indicators were accounted for by their corresponding constructs ranged from 0.35 to 1.00.

Both the smallest and the highest explained variances were both from the indicators of

CMP, suggesting that the measurement of compliance construct need to be improved.

Variance (R^2) of cognitive, emotional, and evaluation identification explained by

identification (second-order factor) were 0.60, 0.96, and 0.80. Standardized factor

loadings and the explained variances (R^2) of the indicators are presented in Table 25.

Table 25

Standardized Factor Loadings and Variance (R^2) for Model 3

Indicator	CMP	INT	COG	EMT	EVL	ATF	ITJ	ID	R^2
CMP1	1.00								1.00
CMP2	0.56								0.35
INT1		0.85							0.73
INT2		0.91							0.83
INT3		0.86							0.74
COG1			0.93						0.86
COG2			0.96						0.92
EMT1				0.94					0.89
EMT2				0.96					0.92
EVL1					0.97				0.94
EVL2					0.97				0.95
ATF1						0.92			0.85
ATF2						0.86			0.74
ATF3						0.92			0.84
ITJ1							0.96		0.92
ITJ2							0.88		0.78
ITJ3							0.97		0.94
COG								0.78	0.60
EMT								0.98	0.96
EVL								0.89	0.80

Note. Acronyms: CMP = compliance; INT = internalization; COG = cognitive
identification; EMT = emotional identification; EVL = evaluation identification; ATF =
attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page;
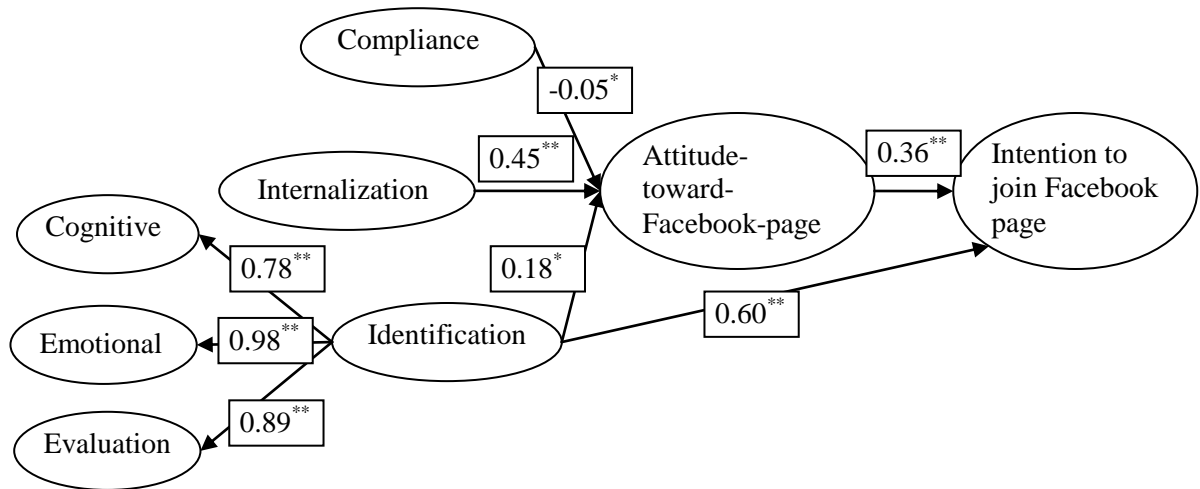ID = identification.

Structural Model.

Model 1: Technology model.

To examine the goodness-of-fit of the hypothesized model 1, the measurement

model of model 1 was re-specified by imposing the structure of the model. Goodness-of-

fit indices showed that the structural model 1 was only a marginal fit to the data and the

LM statistics identified one parameter that was not included in the earlier model

contributing most to model misfit (perceived usefulness had a direct effect on intention to

join). Thus, the structural model 3 was respecified taking into account the LM statistics.

The new structural model 1 indicated a good fit to the data: $\chi^2(70, N = 550) = 410.18$,

$p < 0.001$, CFI = 0.96, NNFI = 0.95, SRMR = 0.06, RMSEA = 0.09 (CI = 0.09, 0.1).

Table 26 and Figure 12 present the structural model 1 with path coefficients (β) and

corresponding significances. All hypothesized paths were tested to be significant.

Table 26

Direct, Indirect, and Total Effects (β), and Variance (R^2) for Model 1

Construct	Direct effect	Indirect effect	Total effect	R^2
On PU				0.44
TTF	0.49[*]	0.15[*]	0.64[*]	
PEU	0.23[*]		0.23[*]	
On PEU:				0.44
TTF	0.67[*]		0.67[*]	
On ATF:				0.66
TTF		0.60[*]	0.60[*]	
PEU	0.41[*]	0.12[*]	0.55[*]	
PU	0.51[*]		0.51[*]	
On ITJ:				0.51
TTF		0.47[*]	0.47[*]	
PEU		0.27[*]	0.27[*]	
PU	0.43[*]	0.17[*]	0.60[*]	
ATF	0.33[*]		0.33[*]	

Note. [*]$p < 0.001$. Acronyms: TTF = task-technology fit; PU = perceived usefulness; PEU = perceived ease of use; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page.

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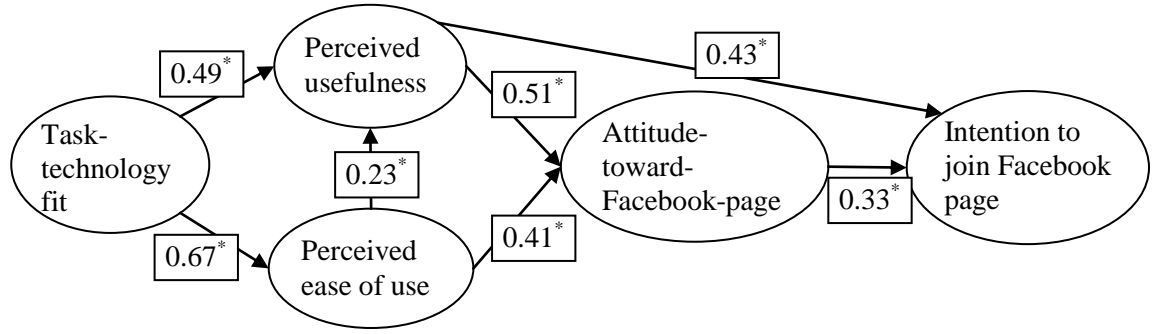
Figure 12. The structural model of technology model 1 with standardized path coefficients. $^*p < 0.001$.

As can be seen in Table 26 and Figure 12, task-technology fit had significant effects on both perceived usefulness ($\beta = 0.49$, $p < 0.001$) and perceived ease of use ($\beta = 0.67$, $p < 0.001$). Perceived ease of use also had a significant impact on perceived usefulness ($\beta = 0.23$, $p < 0.001$). Both perceived usefulness ($\beta = 0.51$, $p < 0.001$) and perceived ease of use ($\beta = 0.41$, $p < 0.001$) had significant impacts on attitude toward hotel Facebook pages. Attitude toward hotel Facebook pages then had a significant influence on intention to join hotel Facebook pages ($\beta = 0.33$, $p < 0.001$). Besides, perceived usefulness also had a significant direct effect on intention to join hotel Facebook pages ($\beta = 0.43$, $p < 0.001$). All the hypotheses in the proposed technology model were supported by the data. The results indicated that the more customers feel Facebook fit their task, the higher the perceived usefulness and ease of use of the hotel Facebook pages. The higher the perceived usefulness and ease of use customers, the more positive attitude they have towards the hotel Facebook pages and the more likely they are to join the hotel Facebook pages.

In addition, task-technology fit showed three significant indirect effects: on perceived usefulness ($\beta = 0.15$, $p < 0.001$) through the mediation of perceived ease of use;

on attitude toward hotel Facebook pages ($\beta = 0.60$, $p < 0.001$) through the mediation of perceived usefulness and perceived ease of use; and on intention to join hotel Facebook pages ($\beta = 0.47$, $p < 0.001$) through the mediation of perceived usefulness, perceived ease of use and attitude toward hotel Facebook pages. Perceived ease of use had a significant indirect impact on attitude toward hotel Facebook pages ($\beta = 0.12$, $p < 0.001$) mediated by perceived usefulness. Besides, perceived usefulness ($\beta = 0.17$, $p < 0.001$) and perceived ease of use ($\beta = 0.27$, $p < 0.001$) both had significant indirect effects on intention to join hotel Facebook pages through the mediation of attitude toward hotel Facebook pages.

Table 26 also shows that the variance (R^2) in perceived usefulness accounted for by task-technology fit and perceived ease of use was 0.44. The variance (R^2) in perceived ease of use explained by task-technology fit was 0.44. Besides, a total of 66% of variance (R^2) in attitude toward hotel Facebook pages was accounted for by perceived usefulness and perceived ease of use and 51% of variance (R^2) in intention to join hotel Facebook pages was attributed by attitude toward hotel Facebook pages.

Model 2: Communication model.

To examine the goodness-of-fit of the hypothesized model 2, the measurement model of model 2 was re-specified by imposing the structure of the model. Goodness-of-fit indices showed that the structural model 2 was a bad fit to the data and the LM statistics identified two parameters that were not included in the earlier model contributing most to model misfit (function needs had a direct effect on attitude and Facebook usage had a direct effect on intention to join). Thus, the structural model 2 was respecified taking into account the LM statistics. The new structural model 2 indicated a

good fit to the data: $\chi^2(138, N = 550) = 646.48$, $p < 0.001$, CFI $= 0.96$, NNFI $= 0.94$,

SRMR $= 0.06$, RMSEA $= 0.08$ (CI $= 0.08$, 0.09). Table 27 and Figure 13 present the

structural model 2 with path coefficients (β) and corresponding significances. The dashed

lines represent the nonsignificant paths.

Table 27

Direct, Indirect, and Total Effects, and Variance (R^2) for Model 2

Construct	Direct effect	Indirect effect	Total effect	R^2
On USG:				0.45
FC	0.07^{NS}		0.07^{NS}	
SC	-0.35^{*}		-0.35^{*}	
PY	0.72^{**}		0.72^{**}	
HD	0.20^{NS}		0.20^{NS}	
On ATF:				0.72
FC	0.86^{**}	-0.002^{NS}	0.86^{**}	
SC		0.01^{NS}	0.01^{NS}	
PY		-0.02^{NS}	-0.02^{NS}	
HD		-0.01^{NS}	-0.01^{NS}	
USG	-0.03^{NS}		-0.03^{NS}	
On ITJ:				0.68
FC		0.44^{**}	0.44^{**}	
SC		-0.17^{*}	-0.17^{*}	
PY		0.36^{**}	0.36^{**}	
HD		0.10^{NS}	0.10^{NS}	
USG	0.51^{**}	-0.01^{NS}	0.50^{**}	
ATF	0.48^{**}		0.48^{**}	

Note. $^{*}p < 0.01$, $^{**}p < 0.001$, $^{NS}p > 0.05$. Acronyms: HD = hedonic needs; PY = psychological needs; SC = social needs; FC = functional needs; USG = hotel Facebook page usage; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page.

Functional

Social

Psychological

Hedonic

0.86**

-0.35*

0.72**

Facebook page usage

Attitude-toward-Facebook-page

0.48**

0.51**

Intention to join Facebook page

Figure 13. The structural model of communication model 2 with standardized path coefficients. The dashed lines represent the nonsignificant paths. *$p < 0.01$, **$p < 0.001$.

As can be seen in Table 27 and Figure 13, psychological needs had a significant positive effect on hotel Facebook page usage ($\beta = 0.72$, $p < 0.001$) while social needs had a significant negative effect on hotel Facebook page usage ($\beta = -0.35$, $p < 0.01$). However, both functional needs and hedonic needs did not have significant impact on hotel Facebook page usage. Instead, functional needs had a significant influence on attitude toward hotel Facebook pages ($\beta = 0.55$, $p < 0.001$), whereas hotel Facebook page usage did not have a significant impact on attitude toward hotel Facebook pages as hypothesized in communication model. Both hotel Facebook page usage and attitude toward hotel Facebook pages had significant effects on intention to join hotel Facebook pages ($\beta = 0.51$ and $\beta = 0.48$, ps < 0.001). The results indicated that the more psychological needs customers seek on hotel Facebook pages, the more they would use hotel Facebook pages. The less social needs customers seek on hotel Facebook pages, the more they would use hotel Facebook pages. However, customers who use hotel Facebook pages more did not show a more positive attitude towards hotel Facebook pages. Instead,

the more functional needs customers seek on hotel Facebook pages, the more positive

attitude they have towards the hotel Facebook pages. Finally, the more customers use

hotel Facebook pages and the more positive attitude they have, the more likely they are to

join the hotel Facebook pages.

In terms of indirect effect, functional and psychological needs showed significant

indirect effects on intention to join hotel Facebook pages ($\beta = 0.44$ and $\beta = 0.36$, $ps <$

0.001) through the mediation of hotel Facebook page usage. Besides, social needs

showed a significant negative indirect effects on intention to join hotel Facebook pages (β

$= -0.17$, $p < 0.01$) through the mediation of hotel Facebook page usage.

Table 27 also shows that variance (R^2) in hotel Facebook page usage accounted

for by social and psychological needs was 0.45. In addition, a total of 72% of variance

(R^2) in attitude toward hotel Facebook pages was accounted for by functional needs and

68% of variance (R^2) in intention to join hotel Facebook pages was attributed by hotel

Facebook page usage and attitude toward hotel Facebook pages.

Model 3: Social psychology model.

To examine the goodness-of-fit of the hypothesized model 3, the measurement

model of model 3 was re-specified by imposing the structure of the model. Goodness-of-

fit indices showed that the structural model 3 was a bad fit to the data and the LM

statistics identified one parameter that was not included in the earlier model contributing

most to model misfit (identification had a direct effect on intention to join). Thus, the

structural model 3 was respecified taking into account the LM statistics. The new

structural model 3 indicated a good fit to the data: $\chi^2(106, N = 549) = 398.31$,

$p < 0.001$, CFI $= 0.97$, NNFI $= 0.96$, SRMR $= 0.04$, RMSEA $= 0.07$ (CI $= 0.06$, 0.08).

Table 28 and Figure 14 present the structural model 3 with path coefficients (β) and corresponding significances.

Table 28

Direct, Indirect, and Total Effects, and Variance (R^2) for Model 3

Construct	Direct effect	Indirect effect	Total effect	R^2
On ATF:				0.34
CMP	-0.05*		-0.05*	
INT	0.45**		0.45**	
ID	0.18*		0.18*	
On ITJ:				0.70
CMP		-0.02^{NS}	-0.02^{NS}	
INT		0.16**	0.16**	
ID	0.60**	0.06*	0.66**	
ATF	0.36**		0.36**	

Note. *$p < 0.05$, **$p < 0.001$. $^{NS}p > 0.05$. Acronyms: CMP = compliance; INT = internalization; ATF = attitude toward the hotel Facebook page; ITJ = intention to join the hotel Facebook page; ID = identification.

Figure 14. The structural model of social psychology model 3 with standardized path coefficients. The dashed line represents the nonsignificant path. *$p < 0.05$, **$p < 0.001$.

As can be seen in Table 28 and Figure 14, internalization and identification had significant positive effects on attitude toward hotel Facebook pages (β = 0.45, $p < 0.001$, and β = 0.18, $p < 0.05$) while compliance had a significant negative effect on attitude

toward hotel Facebook pages ($\beta = -0.05$, $p < 0.05$). Both attitude toward hotel Facebook pages and identification had significant impacts on intention to join hotel Facebook pages ($\beta = 0.36$ and $\beta = 0.60$, ps < 0.001). The results indicated that the more internalization and identification customers feel from hotel Facebook pages, the more positive attitude they have towards the hotel Facebook pages. The more positive attitude customers have towards the hotel Facebook pages, the more likely they are to join the hotel Facebook pages. Besides, the more identification customers feel from hotel Facebook pages, the more likely they are to join hotel Facebook pages.

In terms of indirect effect, both internalization and identification showed significant indirect effects on intention to join hotel Facebook pages ($\beta = 0.16$, $p < 0.001$, and $\beta = 0.06$, $p < 0.05$) through the mediation of attitude toward hotel Facebook pages.

Table 28 also shows that a total of 34% of variance (R^2) in attitude toward hotel Facebook pages was accounted for by compliance, internalization and identification. Besides, 70% of variance (R^2) in intention to join hotel Facebook pages was attributed by identification and attitude toward hotel Facebook pages.

Model Comparison.

Following the satisfactory results of the model evaluations, the three competing models were compared for model fit, path coefficients, explanatory power, and parsimony. Table 29 summarizes the goodness-of-fit indices and the explanatory power of each competing model. Various goodness-of-fit indices in Table 29 indicated that the three competing models all provided an acceptable fit to the data, suggesting that all three models can be applied to explain customers' attitude toward and intention to join hotel Facebook pages. However, comparatively speaking, model 3, social psychology model

provided a best fit among the three competing models, followed by technology model, while communication model provided a worst fit.

In terms of path coefficient significance, communication model had three non-significant paths and added two more significant paths that were not included in the hypothesized model. Technology model and social psychology model only added one more significant path. Thus, compared to the hypothesized models, communication model had the most modification and thus was not very well developed. Explanatory power was then used to determine which competing model was superior in explaining customer's attitude toward and intention to join hotel Facebook pages. The results showed that model 2, communication model, had the best explanatory power in predicting attitude toward hotel Facebook pages and model 3, social psychology model, had the best explanatory power in predicting intention to join hotel Facebook pages.

Table 29

Comparison of the Three Competing Models: Technology, Communication, and Social Psychology Models

	Model 1 (Technology)	Model 2 (Communication)	Model 3 (Social psychology)
Goodness-of-fit indices			
χ^2	410.18	646.48	398.31
d.f.	70	138	106
p	< 0.001	< 0.001	< 0.001
CFI	0.96	0.96	0.97
NNFI	0.95	0.94	0.96
SRMR	0.06	0.06	0.04
RMSEA	0.09	0.08	0.07
90% CI of RMSEA	(0.09, 0.1)	(0.08, 0.09)	(0.06, 0.08)
Explanatory power (R^2)			
ATF	0.66	0.72	0.34
ITJ	0.51	0.68	0.70
Parsimonious fit index			
AIC	270.18	370.48	186.31

In terms of model parsimony, Akaike information criterion (AIC) was used as parsimonious fit index because AIC performed the best in all parsimony based fit indices for comparison of multiple models (Williams & Holahan, 1994). The model with the smallest AIC value is considered to be the most parsimonious and most likely to replicate (Kline, 2011). Thus, the results indicated social psychology model is the most parsimonious model, followed by technology model, while communication model is the worst.

In summary, combining model fit, path coefficients, explanatory power, and parsimony, model 3, social psychology model, was the best model to explain customer's intention to join hotel Facebook pages. Model 3 was the best fit model, the most parsimonious model, and had the most explanatory power in explaining intention. Although model 2, communication model, offered a better explanatory power in predicting customer's attitude toward hotel Facebook pages, the model itself was not good developed considering the model fit, path change, and parsimonious. Future research should modify this communication model proposed in the study in order to use it in other contexts.

Sub-Study 2

The second sub-study was a content analysis of messages posted by hotels on 12 sample hotel brand Facebook pages. Since this sub-study is a qualitative study instead of quantitative study, validity and reliability check of the data was different from the other two sub-studies and there was no statistical result associated with validity and reliability check. So this section consists of four parts: descriptive statistics, categorization of messages, and results of two Chi-Square tests and two MANOVAs.

Descriptive Statistics

A total of 1837 messages were collected from the selected 12 hotel brand

Facebook pages that were posted between October 31, 2011 and February 29, 2012.

Table 30 shows the breakdown of messages by hotel brand and post time.

Table 30

Number of Facebook Messages by Hotel Brand and Post Month

Hotel brand	Oct.	Nov.	Dec.	Jan.	Feb.	Total
The Ritz-Carlton Hotels	58	51	47	52	46	254
Four Seasons Hotels and Resorts	70	65	68	55	65	323
Hyatt Hotels	9	19	16	19	21	84
Kimpton Hotels & Restaurants	20	19	15	12	12	78
Aloft Hotels	40	24	20	16	8	108
Radisson Hotels	24	23	20	14	13	94
Hampton Inn Hotels	24	18	25	10	20	97
Holiday Inn Hotels & Resorts	28	24	28	32	28	140
Best Western	77	68	54	54	55	308
La Quinta Inn & Suites	29	45	33	40	43	190
Super 8	21	20	21	20	22	104
Motel 6	9	10	12	14	12	57
Total	409	386	359	338	345	1837

Table 30 shows that Four Seasons posted the most number of messages (323)

during the study period, followed by Best Western (308), while Motel 6 posted the least

number of messages (57). In terms of post time, the largest number of messages (409)

was posted in October, 2011 while the least number of messages (345) was posted in

January, 2012.

The sub-study also collected the numbers of likes, comments, and shares of each

message, which were considered as measurements of marketing effectiveness of

Facebook messages. As shown in Table 31, the number of likes for all messages collected

in the study ranged from 0 to 1848 with an average of 90.5 likes per message. The

number of comments for all messages ranged from 0 to 750 with an average of 21.3

136

comments per message. The number of shares for all messages ranged from 0 to 237 with

an average of 6.3 shares per message.

Table 31

Descriptive Statistics for the Numbers of likes, comments, and shares

	Minimum	Maximum	Mean
Like	0	1848	90.5
Comment	0	750	21.3
Share	0	237	6.3

In terms of hotel scale level (See Table 32), luxury hotels posted the most

messages (577) during the study period, followed by midscale hotels (498). These two

scale level hotels together posted almost 60% of total messages. Economy hotels and

upper upscale hotels posted the least number of messages during the study period (161

and 162, respectively). Luxury hotels showed the biggest average number of likes (178.2

per message) and shares (16.6 per message), while upper midscale hotels enjoyed the

largest average number of comments (36.2 per message). Upscale hotels had the lowest

number of likes (19.4 per message) and comments (4.1 per message), whereas upper

upscale hotels received the lowest number of shares (0.6 per message).

Table 32

Number of Facebook Messages, Average Numbers of likes, comments, and shares by

Hotel Scale Level

Scale level	No. of messages	%	Like	Comment	Share
Luxury	577	31.4	178.2	13.8	16.6
Upper upscale	162	8.8	29.2	12.8	0.6
Upscale	202	11.0	19.4	4.1	0.7
Upper midscale	237	12.9	50.4	36.2	2.9
Midscale	498	27.1	68.2	34.3	1.7
Economy	161	8.8	54.8	15.8	1.1

Categorization of Messages

The messages were then classified into two categorizations based on two factors:

message format and message content. Message format referred to the presenting format

of message on hotel Facebook pages. In terms of message format, a 4-type categorization

was identified for all messages. They were: word, picture, web link, and video. That

means, messages on hotel Facebook pages were presented in words, pictures, weblinks,

or videos. The results of message format categorization show that Web link (696

messages, 37.9%) was the most commonly used message format, followed by Picture

(560 messages, 30.5%) and Word (527 messages, 28.7%) (See Table 33). Video was the

least commonly used message format since only 54 messages (2.9%) were presented in

videos. The results suggest that hotels are familiar with post word, picture, and web link

messages on Facebook, while the use of video messages on Facebook is still limited.

Table 33

Number of Facebook Messages by Message Format

	Message format	No. of messages	%
1	Web link	696	37.9
2	Picture	560	30.5
3	Word	527	28.7
4	Video	54	2.9

Note. Message format categories are in order of the number of messages.

The study further identified a 6-type categorization of message content. The six

types of message content were: brand, product, promotion, information, involvement, and

reward. Brand messages focused on hotel brand, including messages talking about hotel

news, hotel reviews, commercials, hotel honor and awards, hotel facts, staffing/team,

charity/giveback/donation, reward programs, service recovery, brand magazines, and so

on. Product messages introduced various products of hotels, including new and existing

hotel properties, food & beverage, restaurants, bars, lounge, amenities, room services, spa, events/festivals, holiday products, holiday décor, mobile apps, and so on. Promotion messages included those messages discussing deals, promotions, special offers, discounts, sales, packages, double/extra points, and so on. Information messages talked about information that is not directly related to the hotel, like travel tips, destination information, trip diary, travel sayings, holiday greeting, food recipe, food trends, consumer trends, and so on. Involvement messages asked for Facebook fans' replies and actions, such as questions, experience sharing, comments, picture captions, fill in the blank, humor, and so on. Reward messages gave Facebook fans chances to win something from the hotel without any purchase, including contests, guesses, prizes, spins, games, sweepstakes, giveaways, free stays, free points, winner announcements, and so on.

Table 34

Number of Facebook Messages by Message Content

	Message content	No. of messages	%
1	Involvement	466	25.4
2	Information	365	19.9
3	Product	358	19.5
4	Reward	298	16.2
5	Brand	224	12.2
6	Promotion	126	6.9

Note. Message format categories are in order of the number of messages.

Table 34 shows the result of message content categorization. Involvement was the most commonly used message content type (466 messages, 25.4%), followed by Information (365 messages, 19.9%) and Product (358 messages, 19.5%). Interestingly, Promotion is the least commonly used message content type (126 messages, 6.9%), which is different from people's common perception that Facebook is a platform for

hotels to deliver promotions. Actually, Facebook is commonly used by hotels to interact with existing and potential customers, to share information and to announce new products.

Chi-Square Test and Contingency Table

Chi-Square test of independence is used to test whether there is a relationship between two categorical variables (Azen & Walker, 2011). In this study, since hotel scale level, message format and message content, were both categorical variables, two Chi-Square tests of independence were conducted to examine message type differences across hotel scale levels. In doing the Chi-Square test, a contingency table that summarizes the frequencies observed in each category of the variables is calculated. The expected frequencies under independence and residuals are also shown in the contingency table for further result explanation (Azen & Walker, 2011). Adjusted standardized residual is the index showing whether the observed frequency is significantly different from the expected frequency. The cut-off value of adjusted standardized residual is ±2. That means, when adjusted standardized residual is larger than 2, the observed frequency is significantly higher than expected frequency. When adjusted standardized residual is smaller than -2, the observed frequency is significantly smaller than expected frequency (Azen & Walker, 2011).

First, the study conducted a Chi-Square test of independence between message format and hotel scale level. Since the results showed that 2 cells had expected frequencies of five or less, the large sample assumption of Chi-Square test was not met. Therefore, a Fisher's exact test was used to replace the Chi-Square test. The Fisher's exact test ($p < 0.0001$) indicated that the two variables, message format and hotel scale level, were not independent. That is to say, different scale levels of hotels used different

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message formats. Please note this finding and the following results were all based on the

fact that each scale level only had two hotel samples.

Table 35

Observed Frequency, Expected Frequency (in Parentheses), and Adjusted Standardized

Residual (in Bold) for Message Format by Hotel Scale Level

	Message format				
Scale level	Word	Picture	Web link	Video	Total
Luxury	5	351	205	16	577
	(165.5)	(175.9)	(218.6)	(17.0)	
	-17.8	**19.1**	**-1.4**	**-0.3**	
Upper upscale	53	21	83	5	162
	(46.5)	(49.4)	(61.4)	(4.8)	
	1.2	**-5.1**	**3.7**	**0.1**	
Upscale	81	20	89	12	202
	(57.9)	(61.6)	(76.5)	(5.9)	
	3.8	**-6.7**	**1.9**	**2.7**	
Upper midscale	100	77	54	6	237
	(68.0)	(72.2)	(89.8)	(7.0)	
	4.9	**0.7**	**-5.1**	**-0.4**	
Midscale	188	71	226	13	498
	(142.9)	(151.8)	(188.7)	(14.6)	
	5.2	**-9.2**	**4.0**	**-0.5**	
Economy	100	20	39	2	161
	(46.2)	(49.1)	(61.0)	(4.7)	
	9.8	**-5.2**	**-3.7**	**-1.3**	
Total	527	560	696	54	1837

Table 35 shows the contingency table of the test. The contingency table indicates

that luxury hotels used more picture messages (r_{ad} = 19.1), upper upscale hotels preferred

web link messages (r_{ad} = 3.7), upscale, upper midscale, and economy hotels posted more

word messages (r_{ad} = 3.8, 4.9, 9.8, respectively), while midscale hotels preferred both

word (r_{ad} = 5.2) and web link messages (r_{ad} = 4.0). On the other hand, luxury hotels

posted fewer word messages (r_{ad} = -17.8), upper upscale, upscale, and midscale hotels

didn't use picture messages very much (r_{ad} = -5.1, -6.7, -9.2, respectively), upper

midscale hotels used fewer web link messages ($r_{ad} = -5.1$), and economy hotels post a small number of picture ($r_{ad} = -5.2$) and web link messages ($r_{ad} = -3.7$).

A second Chi-Square test of independence was run between message content and hotel scale level. The Pearson Chi-Square (570.0, $p < 0.0001$) indicated that the two variables, message content and hotel scale level, were not independent. Thus, different scale levels of hotels posted different message contents on Facebook pages.

The contingency table (see Table 36) showed that luxury hotels focused more on brand messages ($r_{ad} = 6.9$) and product messages ($r_{ad} = 11.1$). Upper upscale hotels emphasized more on information messages ($r_{ad} = 3.7$). Upscale hotels posted more product messages ($r_{ad} = 7.1$) and promotion messages ($r_{ad} = 5.4$). Upper midscale hotels preferred involvement messages ($r_{ad} = 7.0$). Midscale hotels used more reward messages ($r_{ad} = 11.4$). On the other hand, luxury hotels less used promotion ($r_{ad} = -6.3$), involvement ($r_{ad} = -5.0$), and reward messages ($r_{ad} = -10.4$). Upper upscale hotels less focused on product messages ($r_{ad} = -3.9$). Upscale hotels posted fewer brand ($r_{ad} = -2.9$), information ($r_{ad} = -5.3$), and involvement messages ($r_{ad} = -3.1$). Upper midscale hotels didn't use product ($r_{ad} = -4.4$) and information messages ($r_{ad} = -3.3$) a lot. Midscale hotels posted a small number of brand ($r_{ad} = -4.3$) and product messages ($r_{ad} = -11.4$). Lastly, economy hotels used all six types of message content balancedly.

The results suggested that different scale levels of hotels used Facebook differently. Luxury hotels considered Facebook as a tool of brand building instead of price promotion. Upper upscale hotels focused on providing travel-related information to their Facebook fans rather than marketing their own products. Upscale hotels used Facebook as a platform to promote product and provide special offers to fans, but they

less focused on brand building and customer involvement. Upper midscale hotels employed Facebook to involve existing and potential customers while lack of attention on announcing products. Midscale hotels preferred giving out rewards to Facebook fans to brand building and product promotion. Economy hotel was the only hotel scale level that used Facebook wisely for all purposes.

Table 36

Observed Frequency, Expected Frequency (in Parentheses), and Adjusted Standardized Residual (in Bold) for Message Content by Hotel Scale Level

	Message content						
Scale level	Brand	Product	Promotion	Information	Involvement	Reward	Total
Luxury	115	200	8	134	103	17	577
	(70.4)	(112.4)	(39.6)	(114.6)	(146.4)	(93.6)	
	6.9	**11.1**	**-6.3**	**2.4**	**-5.0**	**-10.4**	
Upper upscale	20	13	16	50	47	16	162
	(19.8)	(31.6)	(11.1)	(32.2)	(41.1)	(26.3)	
	0.1	**-3.9**	**1.6**	**3.7**	**1.1**	**-2.3**	
Upscale	12	77	32	12	33	36	202
	(24.6)	(39.4)	(13.9)	(40.1)	(51.2)	(32.8)	
	-2.9	**7.1**	**5.4**	**-5.3**	**-3.1**	**0.7**	
Upper midscale	28	21	9	28	104	47	237
	(28.9)	(46.2)	(16.3)	(47.1)	(60.1)	(38.4)	
	-0.2	**-4.4**	**-2.0**	**-3.3**	**7.0**	**1.6**	
Midscale	34	11	56	106	130	161	498
	(60.7)	(97.1)	(34.2)	(98.9)	(126.3)	(80.8)	
	-4.3	**-11.4**	**4.5**	**0.9**	**0.4**	**11.4**	
Economy	15	36	5	35	49	21	161
	(19.6)	(31.4)	(11.0)	(32.0)	(40.8)	(26.1)	
	-1.2	**1.0**	**-2.0**	**0.6**	**1.5**	**-1.1**	
Total	224	358	126	365	466	298	1837

Multivariate Analysis of Variance (MANOVA)

Multivariate Analysis of Variance (MANOVA) analysis was used to examine the marketing effectiveness differences across message formats and message contents. The marketing effectiveness of messages in this sub-study was represented by the number of

likes, the number of comments, and the number of shares since these three numbers indicated that the number of people who have read the message and spread it on Facebook. The correlation matrix among like, comment, and share suggested that all three variables were significantly correlated (ps < 0.0001) (see Table 37). Besides, the Bartlett's Test of Sphericity (1696.7, p < 0.0001) also revealed the correlation among the three variables. Therefore, MANOVA was an appropriate method to analyze the effects of message format and message content on the three correlated dependent variables: the numbers of likes, comments, and shares because MANOVA can assess group differences across multiple metric dependent variables simultaneously (Hair et al., 2010).

Table 37

Correlation Matrix among the Numbers of likes, comments, and shares

	like	comment	share
like	1.00	0.14[*]	0.77[*]
comment		1.00	0.10[*]

Note. [*] p < 0.0001.

Before conducting MANOVA, the data were analyzed for influential cases (outliers), and 91 were deleted, resulting in a final sample size of 1746 messages. The Shapiro-Wilk test (ps < 0.0001) indicated that normality assumption of dependent variables was violated. However, since the violation of this assumption has little impact with larger sample sizes (more than 1000) (Hair et al., 2010), MANOVA could still be conducted in this study due to the large sample size.

The first MANOVA was conducted using message format as the independent variable. The overall MANOVA test of Pillai's Trace and Wilks' Lambda were both significant (ps < 0.0001), suggesting that the numbers of likes, comments, and shares varied across message format. The Box's M test (1675.6, p < 0.0001) showed significant

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differences in variances across groups; therefore, the Tamhane T2 post hoc test was used

to further analyze group differences since Tamhane T2 is the most conservative test used

when the variances are unequal across groups (Hair et al., 2010).

The post hoc results of MANOVA on message format (see Table 38) showed that

picture messages (M = 117.9) generated a larger number of likes than word (M = 46.0),

web link (M = 48.6), and video (M = 50.2) messages. Word (M = 26.0) and picture

messages (M = 20.9) created a greater number of comments than web link (M = 6.1) and

video messages (M = 5.7). In terms of the number of shares, picture (M = 10.2) and video

messages (M = 7.6) were the best format, followed by web link message (M = 3.1), while

word message (M = 1.0) was considered as the weakest format to induce shares.

Table 38

Mean Scores and Standard Deviations (in Parentheses) for the Numbers of likes,

comments, and shares as a Function of Message Format

Dependent variables		Message format				F-ratio
		Word	Picture	Web link	Video	
Like	Mean	46.0^b	117.9^a	48.6^b	50.2^b	182.8^*
	(SD)	(46.7)	(74.3)	(48.8)	(52.4)	
Comment	Mean	26.0^a	20.9^a	6.1^b	5.7^b	60.5^*
	(SD)	(35.7)	(33.3)	(11.5)	(7.4)	
Share	Mean	1.0^c	10.2^a	3.1^b	7.6^{ab}	118.5^*
	(SD)	(3.8)	(11.8)	(7.0)	(13.2)	

Note. [a,b,c] The mean scores with different letters (a, b, c) are significantly different from each other at 0.01 or lower probability level. The superscripts are in order of mean score size. [*] $p < 0.0001$.

Therefore, picture message was the most marketing effective message format

since it could generate the biggest numbers of likes, comments, and shares. Word

messages were better than web link and video messages in terms of prompting comments,

while web link and video messages were better than word messages in terms of evoking shares.

The second MANOVA was run using message content as the independent variable. The overall MANOVA test of Pillai's Trace and Wilks' Lambda were also significant (ps < 0.0001), indicating that the numbers of likes, comments, and shares varied across message content. The Box's M test (2918.4, $p < 0.0001$) showed significant differences in variances across groups; therefore, the Tamhane T2 post hoc test was used to further analyze group differences.

The results of MANOVA on message format (see Table 39) showed that product (M = 92.5) and brand messages (M = 89.9) generated the biggest number of likes, followed by information (M = 65.4) and involvement messages (M = 62.6). Promotion messages (M = 30.8) induced the smallest number of likes, worse than reward messages (M = 48.9). In terms of the number of comments, involvement messages (M = 43.9) did best, followed by reward (M = 11.4) and brand messages (M = 8.3). Promotion messages (M = 3.5) evoked the lowest number of comments, worse than product (M = 6.8) and information messages (M = 6.0). In addition, product (M = 7.8) and brand messages (M = 7.7) prompted a much bigger number of shares than information (M = 4.4) and involvement messages (M = 3.5), while, reward (M = 2.0) and promotion messages (M = 1.7) were the weakest message content types to induce shares.

Therefore, product and brand messages were the best message types in terms of generating likes and shares whereas involvement message did best in inducing comments. All these three types of messages were considered to have better marketing effectiveness than the other three types. Information messages were also good in prompting likes and

shares but were weak in generating comments. Reward messages, on the other hand, were

good at evoking comments but weak in inducing likes and shares. Relatively speaking,

promotion messages had worst marketing effectiveness in terms of the numbers of likes,

comments, and shares.

Table 39

Mean Scores and Standard Deviations (in Parentheses) for the Numbers of likes,

comments, and shares as a Function of Message Content

Dependent variables		Message content						F-ratio
		Brand	Product	Promo.	Info.	Involv.	Reward	
Like	Mean	89.9^a	92.5^a	30.8^d	65.4^b	62.6^b	48.9^c	30.1*
	(SD)	(72.4)	(78.0)	(37.2)	(56.0)	(62.8)	(48.9)	
Comment	Mean	8.3^{bc}	6.8^c	3.5^d	6.0^c	43.9^a	11.4^b	147.8*
	(SD)	(10.1)	(6.7)	(6.5)	(6.6)	(45.7)	(17.3)	
Share	Mean	7.7^a	7.8^a	1.7^d	4.4^b	3.5^{bc}	2.0^{cd}	23.7*
	(SD)	(12.1)	(11.0)	(4.0)	(7.9)	(8.1)	(6.3)	

Note. ^{a,b,c,d} The mean scores with different letters (a, b, c, d) are significantly different from each other at 0.05 or lower probability level. The superscripts are in order of mean score size. $^* p < 0.0001$.

The results indicated that hotel Facebook pages work best in building hotel brands,

introducing new products, and interacting with customers. Facebook can also used by

hotels as tools of sharing travel information and giving out rewards. However, Facebook

is not a good platform for hotels to announce promotions and deals.

Sub-Study 3

The third sub-study proposed the marketing effectiveness model of hotel

Facebook messages and collected data through an online experiment. In this sub-study,

two major multivariate analysis, multivariate analysis of variance (MANOVA) and

structural equation modeling (SEM), were employed to assess marketing effectiveness

differences among message type and test hypothesized causal relationships in the model.

This section consists of four parts: measurement validity and reliability, descriptive statistics, MANOVA results of message type differences, and SEM results of model testing.

Descriptive Statistics

Table 40 shows the demographics of the sample collected in sub-study 3. Similar to the gender distribution of the sample collected in sub-study 1, there were more females (58%) than males (42%) among the 450 respondents. The largest age group was 45-54 years old (33%), followed by 55-64 years old (24%),and 35-44 years old (21%). 19% of respondents were younger than 35 years old and only 4 % of respondents were older than 64 years. In terms of ethnicity, the majority of the respondents were white (82%), with a small number of black (9%), Asian (4%), and Hispanic (4%). Other ethnicities together only occupied less than 2% of the total respondents.

The majority of the respondents had already achieved at least a high school diploma (99.8%), 44% of respondents had at least bachelor's degree, and 14% of respondents had graduate degree. Most of the respondents were heavy Internet users. Of the all respondents, 76% had used the Internet for more than 10 years and 93% had used the Internet for more than 5 years. In terms of Facebook usage, 92% of the respondents indicated that they had used Facebook for at least one year. What's more, 8% of them had even used Facebook for more than 6 years, considering that Facebook only had a history of about 8 years. Although some of the respondents did not have a long history using Facebook, all respondents used Facebook frequently. All respondents logged on Facebook more than once a month. Eighty-eight percent of them logged on Facebook more than once a week and 66% of them logged on Facebook daily.

Table 40

Demographic Profile of the Respondents (N=450)

Demographic	n	%
Gender		
Male	187	41.6
Female	263	58.4
Age		
18-24	15	3.3
25-34	69	15.3
35-44	94	20.9
45-54	148	32.9
55-64	107	23.8
65+	17	3.8
Ethnicity		
White / Caucasian	367	81.6
Hispanic / Latino	17	3.8
Black / African American	39	8.7
American Indian / Alaska Native	2	0.4
Asian	19	4.2
Native Hawaiian / Pacific Islanders	6	1.3
Other	0	0
Education level		
less than high school	1	0.2
high school	82	18.2
some college	169	37.6
bachelor's degree	109	24.2
some graduate education	25	5.6
graduate degree	64	14.2
The length of using the Internet		
Less than 1 year	2	0.4
1-2 years	3	0.7
3-5 years	25	5.6
6-10 years	78	17.3
over 10 years	342	76.0
The length of using Facebook		
Less than 1 year	37	8.2
1-2 years	125	27.8
3-4 years	195	43.3
5-6 years	58	12.9
over 6 years	35	7.8
The frequency of using Facebook		
2-3 times a month	15	3.3
Once a week	41	9.1
2-3times a week	99	22.0
Daily	295	65.6

Measurement Validity and Reliability

First of all, construct validity of the instrument was evaluated by conducting

factor analysis (Hair et al., 2010). Factor analysis employing principal axis factoring

extraction method and direct oblimin rotation was utilized on all scale items included in

the hypothesized model.

Table 41 shows the factor analysis results. No significant cross loading problem

was identified and all items indicated higher factor loadings on the constructs they

belonged to. Thus, the construct validity of the instrument was largely met.

Then measurement reliability was evaluated by Cronbach's alpha. Table 42

displays the calculated alpha values along with the means and standard deviations for

each variable. All alpha values were larger than 0.90, suggesting that the reliability of the

instrument was again largely met. Both validity and reliability tests indicated that the

measurements for marketing effectiveness model were well designed.

Table 41

Factor Analysis of Marketing Effectiveness Model

Items	Factor				
	ATF	ATM	ATB	BI	WOM
ATF5: good hotel Facebook page	**.905**	-.088	-.036	.066	-.028
ATF6: like hotel Facebook page	**.847**	-.148	.011	.019	.009
ATF2: satisfied with Facebook page	**.816**	.005	-.009	-.026	-.030
ATF3: comfortable in surfing Facebook page	**.601**	.062	-.139	-.042	.052
ATF1: build relationship with hotel	**.527**	.044	.002	-.202	.149
ATF4: a good way to spend time	**.446**	.005	.014	-.230	.306
ATM4: Positive / negative	-.011	**-.940**	.021	-.044	-.031
ATM3: Favorable / unfavorable	.011	**-.882**	-.003	-.093	-.006
ATM2: Like / dislike	.084	**-.743**	-.089	-.071	.048
ATM1: Good / bad	.075	**-.726**	-.080	-.017	.078
ATM5: Interesting / uninteresting	.075	**-.686**	-.020	-.037	.172
ATM6: Irritating / not irritating	.011	**-.486**	-.258	.101	-.002
ATB5: Pleasant / unpleasant	.023	-.028	**-.906**	-.021	-.016
ATB6: Nice / awful	.078	.025	**-.899**	-.055	-.028
ATB2: Unattractive / attractive	-.043	-.007	**-.846**	.014	.083
ATB4: Good / bad	.060	-.144	**-.727**	-.036	.052
ATB3: Unfavorable / favorable	.095	-.169	**-.650**	-.083	.013
ATB1: Important / unimportant	.080	-.177	-.290[*]	-.212[*]	.215[*]
BI3: likelihood of booking	-.025	-.044	.011	**-.930**	.027
BI2: probability of booking	-.023	-.044	-.061	**-.922**	-.021
BI1: willing to book	.067	-.009	-.086	**-.797**	.016
BI4: booking via Facebook	.194	-.107	.045	**-.508**	.153
WOM2: comment on the messages	-.007	.023	-.010	.039	**.966**
WOM3: share the messages	.002	-.042	.027	-.002	**.933**
WOM4: post experience on Facebook	-.027	.062	-.069	-.081	**.836**
WOM5: recommend to Facebook friends	.010	-.058	-.067	-.095	**.770**
WOM1: like the messages	.079	-.134	.009	.039	**.756**

Note. Numbers in bold represented items with higher factor loadings on corresponding factors. [*] item with cross-loading problem.
Acronyms: ATF = attitude toward the hotel Facebook page; ATM = attitude toward the Facebook message; ATB = attitude toward the hotel brand; BI = hotel booking intention; WOM = intention to spread word-of-mouth on Facebook.

Table 42

Analysis of Measurement Reliability of Marketing Effectiveness Model

Items	Mean	Stand. Dev.	Cronbach's α
ATF5: good hotel Facebook page	4.96	1.55	0.93
ATF6: like hotel Facebook page	5.02	1.50	
ATF2: satisfied with Facebook page	4.43	1.73	
ATF3: comfortable in surfing Facebook page	5.14	1.38	
ATF1: build relationship with hotel	4.62	1.47	
ATF4: a good way to spend time	4.15	1.69	
ATM4: Positive / negative	5.77	1.30	0.94
ATM3: Favorable / unfavorable	5.70	1.31	
ATM2: Like / dislike	5.72	1.33	
ATM1: Good / bad	5.75	1.24	
ATM5: Interesting / uninteresting	5.39	1.67	
ATM6: Irritating / not irritating	5.66	1.49	
ATB5: Pleasant / unpleasant	5.83	1.18	0.96
ATB6: Nice / awful	5.88	1.17	
ATB2: Unattractive / attractive	5.74	1.25	
ATB4: Good / bad	5.74	1.27	
ATB3: Unfavorable / favorable	5.64	1.30	
BI3: likelihood of booking	4.05	1.74	0.95
BI2: probability of booking	4.21	1.71	
BI1: willing to book	4.26	1.67	
BI4: booking via Facebook	4.28	1.73	
WOM2: comment on the messages	4.05	1.75	0.96
WOM3: share the messages	3.98	1.79	
WOM4: post experience on Facebook	4.39	1.81	
WOM5: recommend to Facebook friends	4.35	1.70	
WOM1: like the messages	4.39	1.70	

Note. Acronyms: ATF = attitude toward the hotel Facebook page; ATM = attitude toward the Facebook message; ATB = attitude toward the hotel brand; BI = hotel booking intention; WOM = intention to spread word-of-mouth on Facebook.

Multivariate Analysis of Variance (MANOVA)

MANOVA was conducted to compare the marketing effectiveness measurements across different message types. The two independent variables in MANOVA were message format (word, picture, and web link) and message content (brand, product, and involvement). The original dependent variables in MANOVA were all items measured in the marketing effectiveness model. Since there were too many dependent variables in

MANOVA and it was hard to analyze the results, mean scores were calculated for all constructs in the marketing effectiveness model. Thus, five factors (attitude toward the hotel Facebook page, attitude toward the message, attitude toward the hotel brand, hotel booking intention, and intention of eWOM) were used to replace the original items as dependent variables in MANOVA.

Before conducting MANOVA, the date set were analyzed for influential cases (outliers), and 5 were deleted, resulting a final sample size of 445. Then the three assumptions of MANOVA, independence, normality, and homoscedasticity, were tested. Since data were collected from all different respondents, the independence assumption was met. Skewness and kurtosis values of all dependent variables were in the interval of (-1,1), suggesting that the normality assumption was met. The Box's M test (179.76, $p = 0.001$) indicated that the equal variance assumption was violated. However, Levene's Test of univariate homoscedasticity indicated that all five dependent variables met equal variance assumption. Given that all groups were of approximately equal size, the violation of this assumption had only minimal impact (Hair et al., 2010). Besides, the Bartlett's Test of Sphericity (1927.30, $p < 0.0001$) indicated the significant correlation among the five dependent variables. Thus, MANOVA was appropriate method to explore the marketing effectiveness differences among message types.

Table 43 shows the multivariate MANOVA test for main effects of both independent variables and their interaction effect on the dependent variables. Pillai's Trace and Wilks' Lambda were chosen as statistical measures of multivariate test since they are the preferred measures when the basic design considerations are met (Hair et al, 2010). As shown in Table 43, the multivariate test of interaction effect (format × content)

was not significant (ps = 0.25). However, the univariate test indicated significant

interaction effects on two dependent variables respectively (See Table 44). The two

variables are attitude toward the hotel Facebook page (F = 2.38, p = 0.05) and hotel

booking intention (F = 2.53, p = 0.04). A marginal interaction effect was also found on

the dependent variable of electronic word-of-mouth (F = 2.11, p = 0.08).

Table 43

Multivariate Tests for Group Differences in Marketing Effectiveness Measures Across

Message Types

Statistical Test	Value	F	Sig.
Interaction			
Pillai's Trace	0.05	1.19	0.25
Wilks' Lambda	0.95	1.19	0.25
Message format			
Pillai's Trace	0.05	2.41	0.008[*]
Wilks' Lambda	0.95	2.43	0.007[*]
Message content			
Pillai's Trace	0.02	0.79	0.64
Wilks' Lambda	0.98	0.79	0.64

Note. [*] $p < 0.01$.

Table 44

Univariate Tests for Group Differences in Marketing Effectiveness Measures Under

Interaction Effect (Message Formats ✕ Message Content)

Dependent variable	Sum of Squares	F	Sig.
ATF	4.03	2.38	0.05[*]
ATM	1.40	1.04	0.39
ATB	1.86	1.62	0.17
BI	6.07	2.53	0.04[*]
WOM	5.43	2.11	0.08°

Note. [*] $p \leq 0.05$, ° $p < 0.1$. Acronyms: ATF = attitude toward the hotel Facebook page;
ATM = attitude toward the Facebook message; ATB = attitude toward the hotel brand; BI
= hotel booking intention; WOM = intention to spread word-of-mouth on Facebook.

Thus, the interaction effects on the three dependent variables, attitude toward the hotel Facebook page, hotel booking intention, and electronic word-of-mouth, were explored and the results are presented in Table 45 - Table 47. The results showed that message format had a significant effect on customer's attitude toward the hotel Facebook page when the message content was about brand. Message format also had a significant impact on customer's booking intention when the message content was about product. On the other hand, message content had a significant impact on customer's attitude toward the hotel Facebook page when the message was in web link format. Message content also had marginal impacts on customer's booking intention and electronic word-of-mouth when the message was in picture format.

Table 45

Mean Scores and Standard Deviations (in Parentheses) for the attitude toward the hotel Facebook page (ATF) as a Function of Interaction Effect

ATF			Message format			
			Word	Picture	Web link	F-ratio
	Brand	Mean	4.58^{ab}	5.06^{a}	$4.25^{b(b)}$	5.11^{**}
		(SD)	(1.24)	(1.10)	(1.53)	
Message content	Product	Mean	4.71	4.65	$4.90^{(a)}$	0.60
		(SD)	(1.33)	(1.23)	(1.16)	
	Involvement	Mean	4.55	4.93	$4.77^{(ab)}$	0.99
		(SD)	(1.38)	(1.33)	(1.38)	
F-ratio			0.21	1.55	3.28^{*}	

Note. $^{*}p < 0.05$, $^{**}p \leq 0.01$.

[a,b,c] The mean scores with different letters (a, b, c) are significantly different from each other at 0.01 or lower probability level. The superscripts not in parentheses show different mean scores of message format groups when message content is fixed. The superscript in parentheses show different mean scores of message content groups when message format is fixed. The superscripts are in order of mean score size.

Table 46

Mean Scores and Standard Deviations (in Parentheses) for the hotel booking intention

(BI) as a Function of Interaction Effect

BI			Message format			
			Word	Picture	Web link	F-ratio
	Brand	Mean	4.18	$4.45^{(a)}$	3.99	1.29
		(SD)	(1.38)	(1.49)	(1.57)	
Message content	Product	Mean	4.48^{a}	$3.78^{b(b)}$	4.60^{a}	4.61^{*}
		(SD)	(1.53)	(1.56)	(1.38)	
	Involvement	Mean	4.22	$4.18^{(ab)}$	4.16	0.02
		(SD)	(1.61)	(1.57)	(1.84)	
F-ratio			0.61	$2.58°$	1.96	

Note. $° p < 0.1,$ $^{*} p < 0.05,$ $^{**} p ≤ 0.01.$

[a,b,c] The mean scores with different letters (a, b, c) are significantly different from each other at 0.01 or lower probability level. The superscripts not in parentheses show different mean scores of message format groups when message content is fixed. The superscript in parentheses show different mean scores of message content groups when message format is fixed. The superscripts are in order of mean score size.

Table 47

Mean Scores and Standard Deviations (in Parentheses) for the intention to spread word-

of-mouth on Facebook (WOM) as a Function of Interaction Effect

WOM			Message format			
			Word	Picture	Web link	F-ratio
	Brand	Mean	4.05	$4.49^{(a)}$	3.92	1.89
		(SD)	(1.52)	(1.51)	(1.74)	
Message content	Product	Mean	4.42	$3.85^{(b)}$	4.44	2.33
		(SD)	(1.60)	(1.65)	(1.57)	
	Involvement	Mean	4.33	$4.41^{(ab)}$	4.36	0.03
		(SD)	(1.64)	(1.65)	(1.57)	
F-ratio			0.78	$2.55°$	1.52	

Note. $° p < 0.1,$ $^{*} p < 0.05,$ $^{**} p ≤ 0.01.$

[a,b,c] The mean scores with different letters (a, b, c) are significantly different from each other at 0.01 or lower probability level. The superscripts not in parentheses show different mean scores of message format groups when message content is fixed. The superscript in parentheses show different mean scores of message content groups when message format is fixed. The superscripts are in order of mean score size.

More specifically, as shown in Figure 15, picture messages generated more positive attitude toward the hotel Facebook page than web link messages when the message content was about brand. In all weblink messages, product messages could induce better attitude toward the hotel Facebook page than brand messages.
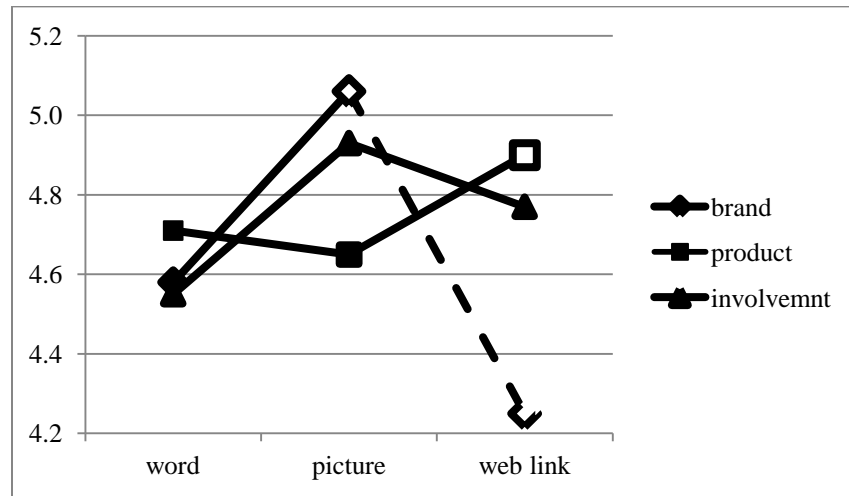
Figure 15. Interaction effects of the attitude toward the hotel Facebook page across message groups. The full lines and solid markers represent non-significant difference, while the dashed line and hollow markers represent significant differences. *p*s < 0.05.

In terms of hotel booking intention shown in Figure 16, word and web link messages were better than picture messages in generating customers' hotel booking intention when message content was about product. In all picture messages, brand messages could produce more hotel booking intentions than product messages.
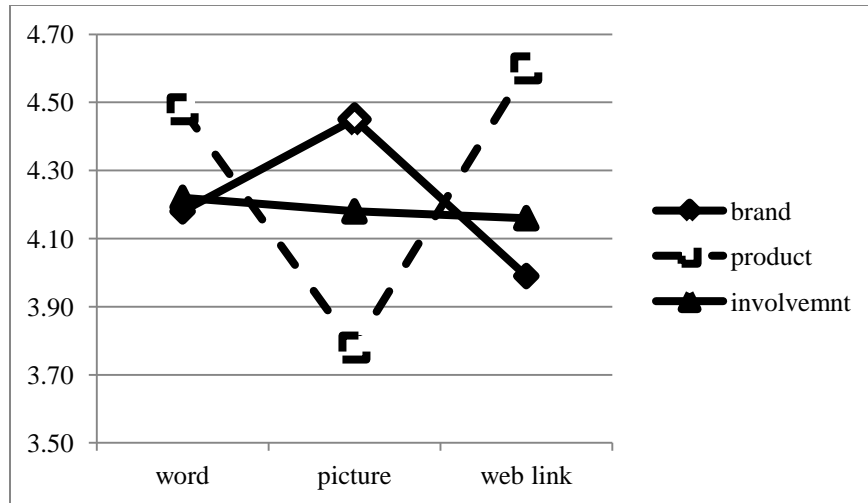
Figure 16. Interaction effects of the hotel booking intention across message groups. The full lines and solid markers represent non-significant difference, while the dashed line and hollow markers represent significant differences. ps < 0.1.

In terms of electronic word-of-mouth shown in Figure 17, brand messages were better than product messages in inducing customers' word-of-mouth on Facebook when messages were in picture format.
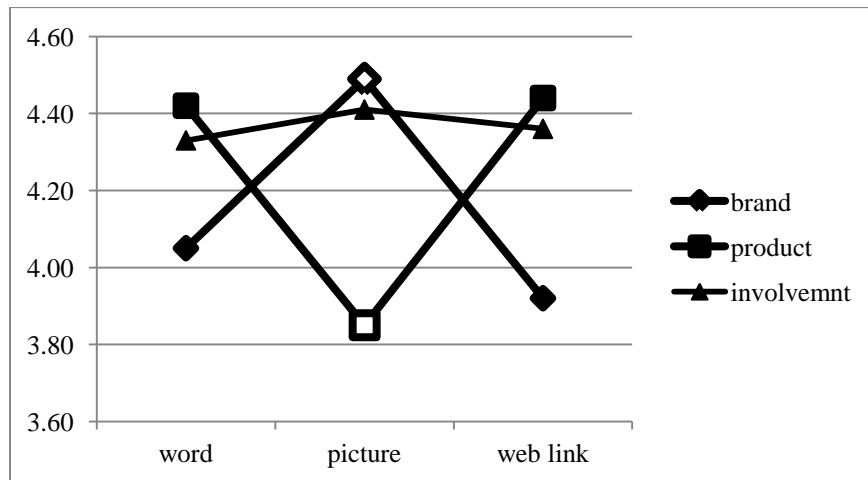
Figure 17. Interaction effects of the intention to spread word-of-mouth on Facebook across message groups. The full lines and solid markers represent non-significant difference, while the hollow markers represent significant differences. $p < 0.1$.

After discussing the interaction effects, two main effects of independent variables were interpreted separately. Among the two main effects (See Table 43), effect of message format was found to be significant (ps < 0.01) while effect of message content was found to be non-significant (ps $= 0.64$). Therefore, hypotheses 2 was refuted by the results of MANOVA, suggesting that the three message contents did not have any differences in terms of the five marketing effectiveness measures. However, both the univariate test and post hoc test indicated only marginal effect of message format on only one dependent variable, attitude toward the hotel brand. As shown in Table 48, picture message (M = 5.97) generated a more positive attitude toward the hotel brand than word message (M = 5.70). Thus, hypotheses 1 was only partial supported by the results of MANOVA.

Table 48

Mean Scores and Standard Deviations (in Parentheses) for Attitude Toward the Hotel Brand (ATB) as a Function of Message Format

Dependent variable		Message format			F-ratio	Sig.
		Word	Picture	Web link		
ATB	Mean	5.70[b]	5.97[a]	5.76[ab]	2.60	0.08
	(SD)	(1.10)	(1.01)	(1.12)		

Note. [a,b] The mean scores with different letters (a, b) are significantly different from each other at 0.1 or lower probability level. The superscripts are in order of mean score size.

Structural Equation Modeling (SEM)

Since MANOVA test indicated that both message format and message content had no effects on any of the constructs in the hypothesized marketing effectiveness model, message format and message content were dropped from the original model and the hypothesized model was changed as in Figure 16 to examine the structural relationship among message marketing effectiveness variables.
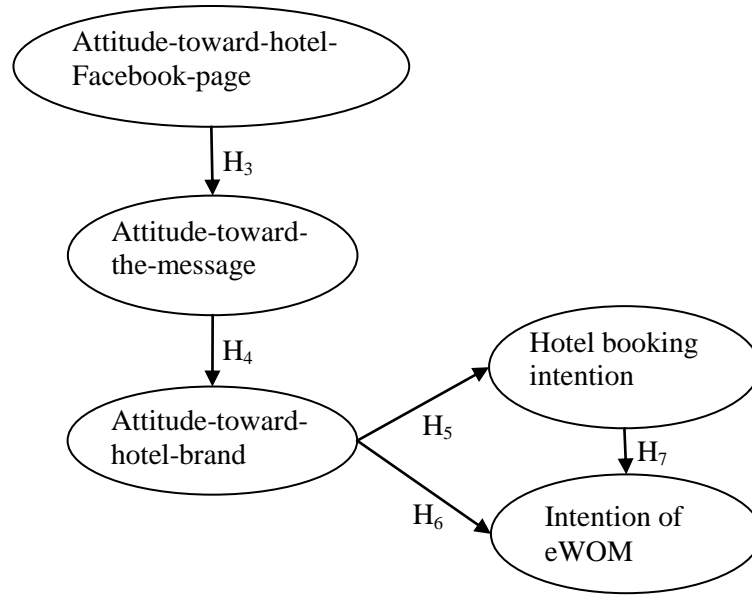
Figure 18. Revised hypothesized model of marketing effectiveness of Facebook message after MANOVA test.

The test of the hypothesized model was conducted using structural equation modeling (SEM) in the EQS 6.1 statistical package. Measurement models were tested first, followed by the test of the full structural model. The goodness-of-fit indices used in the study again included Comparative Fit Index (CFI), Non-normed Fit Index (NNFI), standardized Root Mean Square Residual (SRMR), and Root Mean Square Error of Approximation (RMSEA) and its lower and upper confidence interval boundaries. In addition, standardized residuals and the results of Lagrange Multiplier tests and Wald tests were inspected along with the theoretical literature of the research area.

Linearity, multicollinearity, and singularity assumptions for SEM analyses were met. The multivariate kurtosis indicated that the data distributions were less than optimal (normalized estimates were 55.4). However, the data distributions and outlier analysis suggested no outlier. Thus, SEMs were run using both the maximum likelihood

estimation and the robust methods estimation. As the results from both methods were very similar, the results of the maximum likelihood estimation were reported.

The measurement model specified five factors: attitude toward the hotel Facebook page (ATF), attitude toward the message (ATM), attitude toward the hotel brand (ATB), hotel booking intention (BI), and intention of eWOM (WOM). To test the measurement model, indicators were constrained to load only on the factor it was designated to measure. The residual terms for all indicators were fixed to be uncorrelated and the factor covariances were free to be estimated.

Table 49

Standardized Factor Loadings and Variance (R^2) for Marketing Effectiveness Model

Indicator	ATF	ATM	ATB	BI	WOM	R^2
ATF1	0.92					0.85
ATF2	0.85					0.72
ATF3	0.96					0.92
ATM1		0.95				0.90
ATM2		0.95				0.91
ATM3		0.84				0.71
ATB1			0.98			0.96
ATB2			0.97			0.94
ATB3			0.85			0.72
BI1				0.94		0.88
BI2				0.93		0.87
BI3				0.92		0.84
WOM1					0.96	0.92
WOM2					0.93	0.86
WOM3					0.92	0.84

Note. Acronyms: ATF = attitude toward the hotel Facebook page; ATM = attitude toward the Facebook message; ATB = attitude toward the hotel brand; BI = hotel booking intention; WOM = intention to spread word-of-mouth on Facebook.

Goodness-of-fit indices indicated that the measurement model was a good fit to the data: $\chi^2(80, N = 450) = 194.71$, $p < 0.001$, CFI = 0.99, NNFI = 0.96, SRMR = 0.03, RMSEA = 0.06 (CI = 0.05, 0.07). All factor loadings of the indicators were

statistically significant, ps < 0.001, ranging from 0.84 to 0.98. Variances (R^2) of the

indicators were accounted for by their corresponding constructs ranged from 0.71 to 0.96.

Standardized factor loadings and the explained variances (R^2) of the indicators were

presented in Table 49.

The correlations among factors in the measurement model are presented in Table

50. Correlation coefficients ranged from 0.63 to 0.91, all ps < 0.001. The high

correlations among constructs suggested that there were causal relationship existing

among constructs.

Table 50

Correlation between Constructs for Marketing Effectiveness Model

Construct (Factor)	1	2	3	4	5
1. ATF	--				
2. ATM	0.76*	--			
3. ATB	0.74*	0.91*	--		
4. BI	0.82*	0.66*	0.65*	--	
5. WOM	0.80*	0.66*	0.63*	0.84*	--

Note. * p < 0.001. Acronyms: ATF = attitude toward the hotel Facebook page; ATM = attitude toward the Facebook message; ATB = attitude toward the hotel brand; BI = hotel booking intention; WOM = intention to spread word-of-mouth on Facebook.

To examine the goodness-of-fit of the hypothesized marketing effectiveness

model, the measurement model was re-specified by imposing the structure of the model.

Goodness-of-fit indices showed that the structural model was a bad fit to the data and the

LM statistics identified one parameter that was not included in the earlier model

contributing most to model misfit (attitude toward the hotel Facebook page had a direct

effect on hotel booking intention). Thus, the structural model was respecified taking into

account the LM statistics. The new structural model 3 indicated a good fit to the data:

$\chi^2(84, N = 450) = 232.94, p < 0.001$, CFI = 0.98, NNFI = 0.98, SRMR = 0.03,

RMSEA = 0.06 (CI = 0.05, 0.07). Table 51 and Figure 17 presented the structural model

1 with path coefficients (β) and corresponding significances. All paths were statistically

significant, ps < 0.001.

Table 51

Direct, Indirect, and Total Effects (β), and Variance (R^2) for Marketing Effectiveness

Model

Construct	Direct effect	Indirect effect	Total effect	R^2
On ATM				0.59
ATF	0.77**		0.77**	
On ATB:				0.84
ATF		0.70**	0.70**	
ATM	0.92**		0.92**	
On BI:				0.69
ATF	0.76**	0.07*	0.83**	
ATM		0.09*	0.09*	
ATB	0.09*		0.09*	
On WOM:				0.73
ATF		0.73**	0.73**	
ATM		0.20**	0.20**	
ATB	0.14**	0.07*	0.21**	
BI	0.75**		0.75**	

Note. $^*p < 0.05$, $^{**}p < 0.001$. Acronyms: ATF = attitude toward the hotel Facebook page; ATM = attitude toward the Facebook message; ATB = attitude toward the hotel brand; BI = hotel booking intention; WOM = intention to spread word-of-mouth on Facebook.
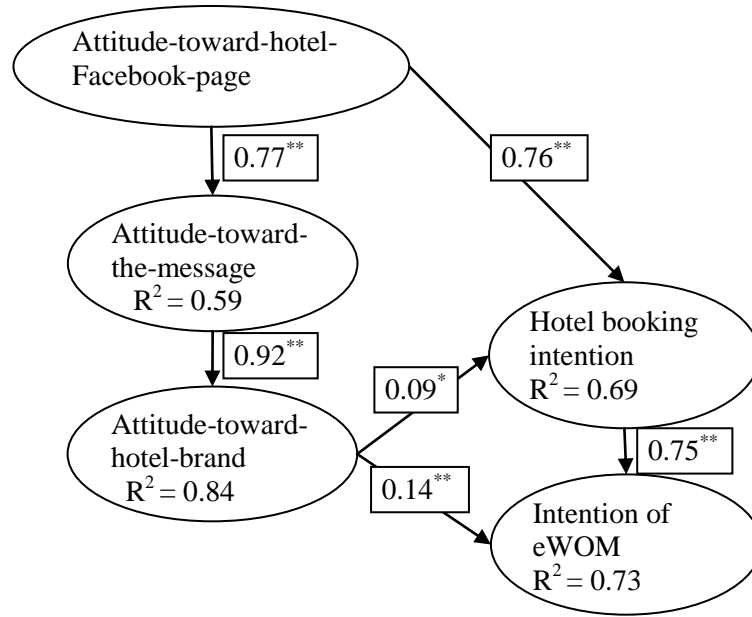
Figure 19. The structural model of marketing effectiveness model with standardized path coefficients. $^{*}p < 0.05$, $^{**}p < 0.001$.

As can be seen in Table 51 and Figure 17, attitude toward the hotel Facebook page had a significant effect on attitude toward the messages ($\beta = 0.77$, $p < 0.001$). Attitude toward the messages then had a significant impact on attitude toward the hotel brand ($\beta = 0.92$, $p < 0.001$). Attitude toward the hotel brand had significant effects on both hotel booking intention ($\beta = 0.09$, $p < 0.05$) and intention of eWOM ($\beta = 0.14$, $p < 0.001$). Hotel booking intention also had a significant influence on intention of eWOM ($\beta = 0.75$, $p < 0.001$). The results supported hypotheses 3-7 proposed in sub-study 3. Besides, the results also indicated a significant direct effect of attitude toward the hotel Facebook page on hotel booking intention ($\beta = 0.76$, $p < 0.001$). The results indicated that the more positive attitude customers have toward the hotel Facebook page, the more positive attitude they have toward the messages posted on the hotel Facebook page and toward the hotel brand. The more positive attitude customers have toward the hotel brand,

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the more likely they would book this hotel brand and spread word-of-mouth online about this hotel brand. Moreover, the higher intention customers have to book this hotel brand, the more likely they would spread word-of-mouth online. The larger direct effect of attitude toward the hotel Facebook page on hotel booking intention than attitude toward the hotel brand on hotel booking intention suggested that Facebook users tend to book the hotel as soon as they generate a positive attitude toward the hotel Facebook page. This intention drive is not moderated by attitude toward the hotel brand.

In addition, many significant indirect effects were also showed in the final marketing effectiveness model. Attitude toward the hotel Facebook page had a significant indirect effect on attitude toward the hotel brand ($\beta = 0.70$, $p < 0.001$) through the mediation of attitude toward the messages. It also had a significant indirect effect on hotel booking intention ($\beta = 0.07$, $p < 0.05$) through the mediation of attitude toward the messages and attitude toward the hotel brand. Another significant indirect effect of attitude toward the hotel Facebook page was on intention of e-WOM ($\beta = 0.73$, $p < 0.001$) through the mediation of attitude toward the messages, attitude toward the hotel brand, and hotel booking intention. Attitude toward the messages had significant indirect impacts on both hotel booking intention ($\beta = 0.09$, $p < 0.05$) through the mediation of attitude toward the hotel brand and intention of e-WOM ($\beta = 0.20$, $p < 0.001$) through the mediation of attitude toward the hotel brand and hotel booking intention. Attitude toward the hotel brand also had a significant indirect influence on intention of e-WOM ($\beta = 0.07$, $p < 0.05$) through the mediation of hotel booking intention.

Table 51 also showed that variance (R^2) in attitude toward the messages accounted for by attitude toward the hotel Facebook page was 0.59 and variance (R^2) in

attitude toward the hotel brand explained by attitude toward the messages was 0.84.

Besides, a total of 69% of variance (R^2) in hotel booking intention was accounted for by

attitude toward the hotel brand and 73% of variance (R^2) in intention of e-WOM was

attributed by attitude toward the hotel brand and hotel booking intention.

Integrated Model of Hotel Facebook Marketing Mechanism

Sub-study 3 also combined the antecedents of customer's attitude toward the hotel

Facebook page with the consequences of customer's attitude toward the hotel Facebook

page to propose an integrated model of hotel Facebook marketing mechanism. Since sub-

study 1 suggested that model 3, social psychology model, was the best model to explain

customer's attitude toward and intention to join hotel Facebook pages, the integrated

model of hotel Facebook marketing mechanism incorporated compliance, identification,

and internalization as three predicting factors of attitude toward the hotel Facebook page

into the marketing effectiveness model shown in Figure 16. Thus the integrated model of

hotel Facebook marketing mechanism was proposed in Figure 18.
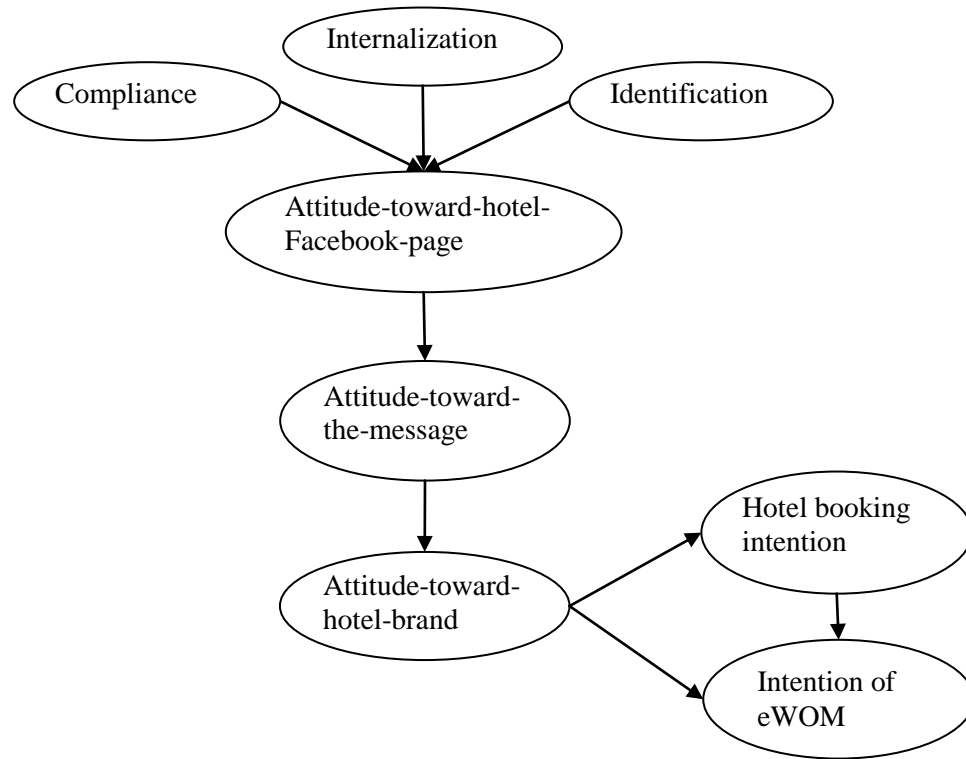
Figure 20. Proposed integrated model of hotel Facebook marketing mechanism.

The test of the proposed integrated model was conducted again using structural equation modeling (SEM) in the EQS 6.1 statistical package. Measurement models were tested first, followed by the test of the full structural model. The goodness-of-fit indices used were the same as those in testing the above Facebook marketing effectiveness model. In addition, standardized residuals and the results of Lagrange Multiplier tests and Wald tests were inspected along with the theoretical literature of the research area.

Linearity, multicollinearity, and singularity assumptions for SEM analyses were met. The multivariate kurtosis indicated that the data distributions were less than optimal (normalized estimates were 52.8). However, the data distributions and outlier analysis suggested no outlier. Thus, SEMs were run using both the maximum likelihood

estimation and the robust methods estimation. As the results from both methods were

very similar, the results of the maximum likelihood estimation were reported.

Table 52

Standardized Factor Loadings and Variance (R^2) for Integrated Model

Indicator	CMP	ID	INT	ATF	ATM	ATB	BI	WOM	R^2
CMP1	0.71								0.50
CMP2	0.67								0.45
ID1		0.96							0.92
ID2		0.96							0.93
ID3		0.86							0.73
INT1			0.84						0.71
INT2			0.91						0.82
INT3			0.91						0.83
ATF1				0.92					0.85
ATF2				0.85					0.72
ATF3				0.96					0.92
ATM1					0.95				0.90
ATM2					0.95				0.91
ATM3					0.84				0.71
ATB1						0.98			0.96
ATB2						0.97			0.94
ATB3						0.85			0.72
BI1							0.94		0.88
BI2							0.93		0.87
BI3							0.91		0.83
WOM1								0.96	0.92
WOM2								0.93	0.86
WOM3								0.92	0.84

Note. Acronyms: CMP = compliance; ID = identification; INT = internalization; ATF = attitude toward the hotel Facebook page; ATM = attitude toward the Facebook message; ATB = attitude toward the hotel brand; BI = hotel booking intention; WOM = intention to spread word-of-mouth on Facebook.

The measurement model specified eight factors: compliance (CMP), identification

(ID), internalization (INT), attitude toward the hotel Facebook page (ATF), attitude

toward the message (ATM), attitude toward the hotel brand (ATB), hotel booking

intention (BI), and intention of eWOM (WOM). To test the measurement model,

indicators were constrained to load only on the factor it was designated to measure. The

residual terms for all indicators were fixed to be uncorrelated and the factor covariances were free to be estimated.

Goodness-of-fit indices indicated that the measurement model was a good fit to the data: $\chi^2(202, N = 450) = 508.83$, $p < 0.001$, CFI = 0.98, NNFI = 0.97, SRMR = 0.04, RMSEA = 0.06 (CI = 0.05, 0.06). All factor loadings of the indicators were statistically significant, ps < 0.001, ranging from 0.67 to 0.98. Variances (R^2) of the indicators were accounted for by their corresponding constructs ranged from 0.45 to 0.96. Standardized factor loadings and the explained variances (R^2) of the indicators were presented in Table 52.

The correlations among factors in the measurement model are presented in Table 53. Correlation coefficients ranged from 0.25 to 0.91, all ps < 0.001. The two lowest correlations were relationships between identification and attitude toward the messages and attitude toward the hotel brand.

Table 53

Correlation between Constructs for Integrated Model

Construct (Factor)	1	2	3	4	5	6	7	8
1. CMP	--							
2. ID	0.69[*]	--						
3. INT	0.84[*]	0.64[*]	--					
4. ATF	0.81[*]	0.46[*]	0.77[*]	--				
5. ATM	0.59[*]	0.25[*]	0.56[*]	0.76[*]	--			
6. ATB	0.56[*]	0.27[*]	0.53[*]	0.74[*]	0.91[*]	--		
7. BI	0.79[*]	0.46[*]	0.81[*]	0.82[*]	0.66[*]	0.65[*]	--	
8. WOM	0.76[*]	0.41[*]	0.78[*]	0.80[*]	0.66[*]	0.63[*]	0.84[*]	--

Note. [*]$p < 0.001$. Acronyms: CMP = compliance; ID = identification; INT = internalization; ATF = attitude toward the hotel Facebook page; ATM = attitude toward the Facebook message; ATB = attitude toward the hotel brand; BI = hotel booking intention; WOM = intention to spread word-of-mouth on Facebook.

To examine the goodness-of-fit of the hypothesized integrated model of Facebook marketing mechanism, the measurement model was re-specified by imposing the structure of the model. Goodness-of-fit indices showed that the structural model was a bad fit to the data and the LM statistics identified one parameter that was not included in the earlier model contributing most to model misfit (identification had a direct effect on hotel booking intention). Thus, the structural model was respecified taking into account the LM statistics. The new structural model 3 indicated a good fit to the data:

$\chi^2(218, N = 450) = 637.90, p < 0.001$, CFI = 0.97, NNFI = 0.96, SRMR = 0.05, RMSEA = 0.06 (CI = 0.06, 0.07). Table 54 and Figure 19 presented the structural model 1 with path coefficients (β) and corresponding significances. The dashed line represents the nonsignificant path. All paths were statistically significant, ps < 0.001.

As shown in Table 54 and Figure 19, identification and internalization both had significant positive effects on attitude toward the hotel Facebook page ($\beta = 0.37$ and $\beta = 0.66$, respectively, ps < 0.001), while compliance had a significant negative effect on attitude toward the hotel Facebook page ($\beta = -0.24$, $p < 0.001$). The other effects were the same as those tested in the above marketing effectiveness model. Attitude toward the hotel Facebook page had a significant effect on attitude toward the messages ($\beta = 0.76$, $p < 0.001$). Attitude toward the messages then had a significant impact on attitude toward the hotel brand ($\beta = 0.92$, $p < 0.001$). Attitude toward the hotel brand had significant effects on both hotel booking intention ($\beta = 0.30$, $p < 0.001$) and intention of eWOM ($\beta = 0.14$, $p < 0.001$). Hotel booking intention also had a significant influence on intention of eWOM ($\beta = 0.76$, $p < 0.001$). Besides all the proposed relationships, the final model

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indicated that identification also had a significant impact on hotel booking intention (β =

0.67, $p < 0.001$).

Table 54

Direct, Indirect, and Total Effects (β), and Variance (R^2) for Integrated Model

Construct	Direct effect	Indirect effect	Total effect	R^2
On ATF:				0.71
CMP	-0.24[*]		-0.24[*]	
INT	0.66[*]		0.66*	
ID	0.37[*]		0.37*	
On ATM				0.58
CMP		-0.18[*]	-0.18[*]	
INT		0.50*	0.50*	
ID		0.28*	0.28*	
ATF	0.76*		0.76*	
On ATB:				0.84
CMP		-0.17[*]	-0.17[*]	
INT		0.46*	0.46*	
ID		0.26*	0.26*	
ATF		0.70*	0.70*	
ATM	0.92*		0.92*	
On BI:				0.76
CMP		-0.05[*]	-0.05[*]	
INT		0.14*	0.14*	
ID	0.67*	0.08*	0.75*	
ATF		0.27*	0.27*	
ATM		0.21*	0.21*	
ATB	0.30*		0.30*	
On WOM:				0.73
CMP		-0.06[*]	-0.06[*]	
INT		0.17*	0.17*	
ID		0.61*	0.61*	
ATF		0.25*	0.25*	
ATM		0.33*	0.33*	
ATB	0.14*	0.23*	0.36*	
BI	0.76*		0.76*	

Note. [*]$p < 0.001$. Acronyms: CMP = compliance; ID = identification; INT = internalization; ATF = attitude toward the hotel Facebook page; ATM = attitude toward the Facebook message; ATB = attitude toward the hotel brand; BI = hotel booking intention; WOM = intention to spread word-of-mouth on Facebook.
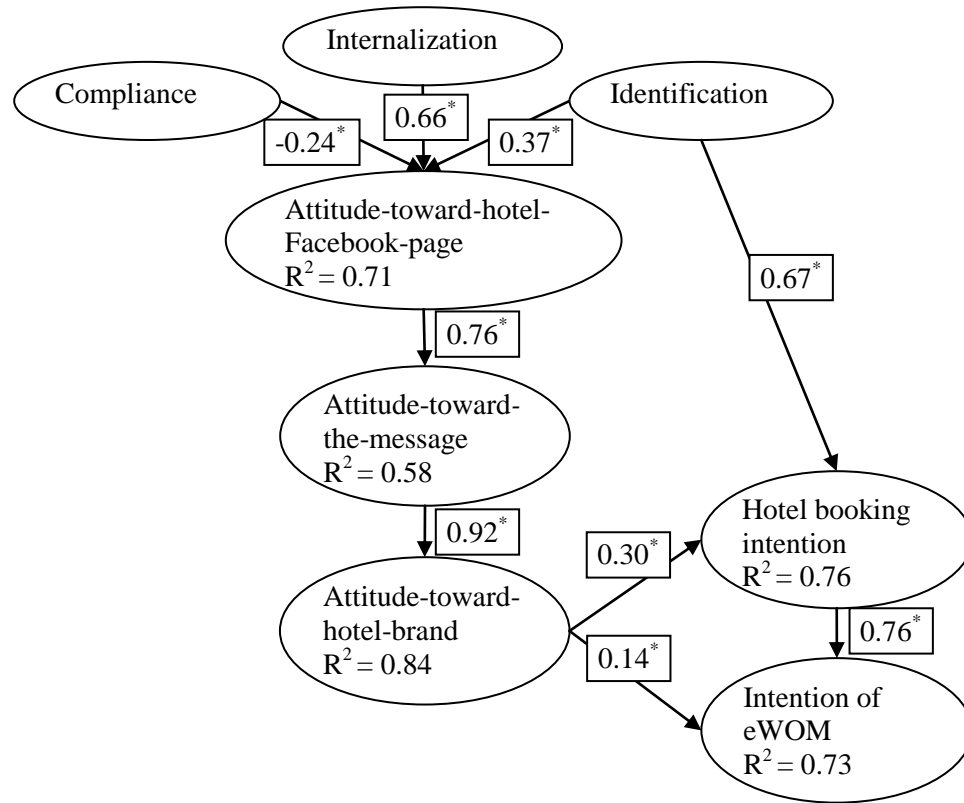
Figure 21. The structural model of integrated model of hotel Facebook marketing mechanism with standardized path coefficients. $^{*}p < 0.001$.

The results indicated that the more customers want to establish relationships with the hotel brand or the more customers feel that the hotel brand has the same value as their own value systems, the more positive attitude they have toward the hotel Facebook page. However, the more customers feel that the hotel Facebook page is a platform for rewards, the more negative attitude they have toward the hotel Facebook page. Moreover, the more customers want to establish relationships with the hotel brand, the more likely they would book this hotel brand in the future.

In addition, all indirect effects in the final integrated model were significant, *p*s < 0.001. Both identification and internalization had significant positive indirect effects on attitude toward the messages ($\beta = 0.28$ and $\beta = 0.50$, respectively, *p*s < 0.001) through the

mediation of attitude toward the hotel Facebook page. They also had significant positive indirect effects on attitude toward the hotel brand ($\beta = 0.26$ and $\beta = 0.46$, respectively, ps < 0.001) through the mediation of attitude toward the hotel Facebook page and attitude toward the messages. They also had significant positive indirect effects on hotel booking intention ($\beta = 0.08$ and $\beta = 0.14$, respectively, ps < 0.001) and intention of e-WOM ($\beta = 0.61$ and $\beta = 0.17$, respectively, ps < 0.001) through the mediation of other constructs. Besides, compliance had significant negative indirect effects on attitude toward the messages ($\beta = -0.18$, $p < 0.001$) through the mediation of attitude toward the hotel Facebook page and attitude toward the hotel brand ($\beta = -0.17$, $p < 0.001$) through the mediation of attitude toward the hotel Facebook page and attitude toward the messages. It also had significant negative indirect effects on hotel booking intention ($\beta = -0.05$, $p < 0.001$) and intention of e-WOM ($\beta = -0.06$, $p < 0.001$) through the mediation of other constructs. Other indirect effects were the same as those in the above Facebook marketing effectiveness model.

Table 54 also showed explained variances in all dependent variables in final integrated model. Variance (R^2) in attitude toward the hotel Facebook page accounted for by compliance, identification, and internalization was 0.71. Variance (R^2) in attitude toward the messages attributed by attitude toward the hotel Facebook page was 0.58 and variance (R^2) in attitude toward the hotel brand explained by attitude toward the messages was 0.84. Besides, a total of 76% of variance (R^2) in hotel booking intention was accounted for by identification and attitude toward the hotel brand and 73% of variance (R^2) in intention of e-WOM was attributed by attitude toward the hotel brand and hotel booking intention. Compared to the above Facebook marketing effectiveness

model, integrated model indicated a better explanatory power in explaining hotel booking

intention.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

This chapter discusses the major findings of this study. The results are discussed and the implications are suggested for the hotel industry. Based on the discussion of the results, contributions of the study are presented from both theoretical and practical perspectives. This chapter concludes with an explanation of the limitations of this study and recommendations for future research.

Discussion of the Findings

The purpose of this study was to explore the marketing effectiveness of Facebook from two perspectives: customer and message. From the customer perspective, the antecedents of marketing effectiveness were analyzed. From a message perspective, different types of messages posted on hotel Facebook pages by hotels were categorized and the marketing effectiveness of different messages was compared. The study revealed several important findings as summarized in this section.

First of all, social psychology model based on social influence model and social identity theory, was the best model among the three competing models in explaining customer's intention to join hotel Facebook pages. It suggested that Facebook marketing was more like a social phenomenon which was influenced by social interactions than a simple technology innovation or communication platform. This finding is supported by the notions of Ellison, Steinfield, and Lampe (2007) and Valenzuela, Park, and Kee (2009) that Facebook plays an important role in forming and maintaining social capital (relationships) among college students.

The study also found that internalization and identification had significant positive effects on attitude toward hotel Facebook pages while compliance had a significant negative effect on attitude toward hotel Facebook pages. The role of social identification on Facebook has already been demonstrated in the literature. The finding of positive relationship between identification and attitude is consistent with the notion of Taylor, Lewin, and Strutton (2011) that reinforcing consumers' identity on social networking sites (including Facebook) can lead to their positive attitudes toward social networking advertising. The finding of a positive relationship between identification and intention was supported by Zeng, Huang, and Dou's (2009) finding that the stronger the social identity perceived by social networking site users, the more likely they will accept social networking advertising. The finding of a negative relationship between compliance and attitude is in accordance with findings of message effectiveness in this study that promotion and reward messages are less effective for marketing.

A new significant direct effect of identification on intention to join hotel Facebook pages revealed in the model was not proposed in the hypothesized model, but it was still supported by the social influence theory. According to the social influence theory, individuals might change their attitudes and behaviors under the impacts of three social influences: compliance, identification, and internalization (Kelman, 1958). Thus, social influence can not only change an individual's thoughts and attitudes, but also his/her behaviors and behavioral intentions. The direct effect of identification as one type of social influence on customer's behavioral intention was supported by the theory even it was not proposed in the original model.

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Secondly, messages on hotel Facebook pages were classified based on two dimensions: message format and message content. The study identified a 4-type message format classification (word, picture, web link, and video) and a 6-type message content classification (brand, product, promotion, information, involvement, and reward). Web link was the most commonly used message format, whereas video was rare used in hotel Facebook messages. Involvement was the most commonly used message content type, while promotion is the least commonly used message content type. This two-dimension message classification was supported by the advertising message strategy literature which defined message strategy as both "what to say" and "how to say it" (Laskey, Fox, & Crask, 1995).

Thirdly, different types of hotel Facebook messages had different marketing effectiveness. Significant interaction effects were tested between message format and message content. Picture messages generated more positive attitudes toward the hotel Facebook page than web link messages when the message content was about brand. However, word and web link messages were better than picture messages in generating customers' hotel booking intentions when message content was about product. In all weblink messages, product messages could induce better attitude toward the hotel Facebook page than brand messages. In all picture messages, brand messages could produce more hotel booking intentions and induce more word-of-mouth on Facebook than product messages. The interaction effect finding is interesting since in the advertising literature a common belief was that pictures are more memorable and more easily recalled or recognized than their verbal counterparts (Lutz and Lutz, 1978; Paivio 1969). However, in this study, picture messages were not always better than word

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messages. And another interesting finding of the study is that video format is worse than picture format for Facebook messages, which can be explained by the fact that Facebook is not a common video sharing website as Youtube.

In terms of main effects, picture message generated a moderately better attitude toward the hotel brand than word message. Brand, product, and involvement messages had better marketing effectiveness than promotion, information, and reward messages. Promotion message was the worst message type in terms of marketing effectiveness. These findings coincide with the findings in social psychology model. Brand, product, and involvement messages are usually employed by hotels to enhance customers' identification and internalization, whereas promotion and reward messages are used to increase customers' compliance. Thus, brand, product, and involvement messages can generate better attitude among customers and then achieve better marketing outcomes. On the contrary, promotion and reward messages will lead to negative attitudes among customers and thus achieve worse marketing outcomes. These findings are also supported by the notion of Kim (2010) that consumers want to receive updates on future products and know about the activities of companies on their Facebook pages.

Fourthly, hotel Facebook marketing effectiveness model based on attitude-toward-the-ad (Aad) and attitude-toward-the-website models (Aws) was found to be a good fit to the data. Thus, attitude toward the hotel Facebook page had a significant effect on attitude toward the messages, which had a significant impact on attitude toward the hotel brand. Attitude toward the hotel brand had significant effects on both hotel booking intention and intention of eWOM. Hotel booking intention also had a significant influence on intention of eWOM. A new significant direct effect of attitude toward the

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hotel Facebook page on hotel booking intention was added based on the data. The findings extended the application area of Aad model from traditional marketing and internet marketing to social media marketing. It also illustrated a difference between traditional marketing and social media marketing by identifying a new direct effect of attitude toward the hotel Facebook page on hotel booking intention. It suggested that in social media marketing, customers' positive attitudes toward the hotel Facebook page can directly lead to their booking intentions, while in traditional marketing, customers' positive attitudes toward the ad would impact their purchase intentions through the mediation of attitude toward the brand. Thus, in social media marketing, customers' intention can be generated more directly by social media pages, even if they don't have a positive attitude toward the brand.

Finally, the integrated model of hotel Facebook marketing mechanism, which combined social psychology model with Facebook marketing effectiveness model, was also found to be a good fit to the data. Similar to the social psychology model, the results indicated that identification and internalization both had positive effects on attitude toward the hotel Facebook page, while compliance had a negative effect on attitude toward the hotel Facebook page. Identification was also found to have a positive direct impact on hotel booking intention. Since the integrated model incorporated antecedents into the hotel Facebook marketing effectiveness model, integrated model indicated a better explanatory power in explaining hotel booking intention than the Facebook marketing effectiveness model.

Practical Implications

The findings of this study suggested several important practical implications for the hotel industry to leverage Facebook marketing from two perspectives: customer and message.

Customer Perspective: How to Motivate Customers to Join Hotel Facebook Pages

The study found that social psychology model was the best model to explain customer's intention to join hotel Facebook pages. That is to say, customers join hotel Facebook pages not because Facebook is a new technology or a new communication platform, but because Facebook has important social implications on them. Thus, hotel managers have to understand that Facebook marketing is a social phenomenon influenced by social interactions, which is very different from traditional marketing. Facebook is not only a channel for hotels to disseminate information and promotion, but also a place for hotels to create a social community to involve all their customers. Hotel managers should focus on creating social interactions, relationships, and outcomes on hotel Facebook pages. The creation of the social community through the hotel Facebook page is the key to attract cutomers to join the hotel Facebook page. It also means that hotel managers should not rely too much on the fancy technology representations or communication representatives on Facebook pages to attract customers.

The three influential factors identified in the model, compliance, internalization, and identification, had different influences on attitude toward hotel Facebook pages and intention to join hotel Facebook pages. First of all, internalization was positively related to attitude toward hotel Facebook pages and intention to join hotel Facebook pages. Internalization refers to the social influence changing an individual's attitudes and behaviors because it is congruent with his/her value system (Kelman, 1958). Thus, hotels

should present a congruent brand value on Facebook pages with customers' personal value in order to attract customers' to join hotel Facebook pages. Since Facebook is a two-way communication, hotels can find out their potential customers' preferences and value systems through interactive messages on Facebook pages. Hotels can even find out this information through their fans' Facebook profiles. Then hotels should create message contents conforming to the norms and value systems of potential customer groups. For example, to environmental friendly customers, the hotel should be presented as an environmental friendly hotel brand on its Facebook page. To pet lovers, the hotel should be presented as pet friendly hotel brand on its Facebook page. To families, the hotel should show its family friendly on its Facebook page.

Secondly, identification also had positive effects on attitude toward hotel Facebook pages and intention to join hotel Facebook pages. Identification is the social influence changing an individual's attitudes and behaviors since he/she wants to establish or maintain a satisfying relationship with group members (Kelman, 1958). Thus, in order to motivate more customers to become hotel Facebook fans, hotel managers should create social groups on their hotel Facebook pages to reinforce their customers' social identity. In the Facebook social group or social community, fans are treated as part of the community and social interaction among fans and hotel are strengthened. The goal of the Facebook social community is to let all fans generate a sense of belonging to the group or community. Fans will feel proud of being part of the hotel Facebook social group. To achieve this goal, hotels should use their Facebook pages as both brand building platform and customer interaction tool. On one hand, hotels should promote the values of the hotel brands through messages posted on Facebook pages to establish a strong social identity

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of the Facebook social group. One the other hand, hotel should also interact with customers through messages and comments. Customers' voices would be expressed and respected on hotel Facebook pages so customers feel that they are part of the Facebook social group.

Lastly, compliance was negatively related to attitude toward hotel Facebook pages and intention to join hotel Facebook pages. Compliance is the social influence changing an individual's attitudes and behaviors because of outside rewards or punishments (Kelman, 1958). This finding suggested that customers are not looking for rewards or incentives on hotel Facebook pages. Thus, hotel marketers should not use rewards and discounts to attract customers to join hotel Facebook pages. In other words, Facebook is not a good platform for hotels to give out deals, discounts, and incentives.

Message Perspective: What Type of Message is Most Effective for Marketing

By content analyzing 12 sample hotel Facebook pages, the study developed a two-dimension classification of message posted on hotel Facebook pages. The two dimensions, message content and message format, dealt with both "what to say" and "how to say it" as advertising message strategy of hotels. Thus, hotel marketers can use this message classification as a guideline to create messages on their Facebook pages. For those hotels which haven't started their Facebook pages yet, the message classification can provide them all types of messages they can use in hotel Facebook marketing. For those hotels that have already developed mature Facebook pages, hotel marketers can identify their current Facebook message types based on the message classification and modify or maintain their message types to improve marketing effectiveness.

The study also demonstrated that different message contents and message formats generated different marketing effectiveness. In terms of message content, brand, product, and involvement messages have better marketing effectiveness than information, reward, and promotion messages. Promotion message was the worst message content type in terms of marketing effectiveness. Therefore, hotel marketers should post more brand, product, and involvement messages on their Facebook pages and less use Facebook to share promotions and deals. For example, managers can post their hotel news, hotel honor and awards, hotel facts, charity/giveback/donation, and hotel reviews to build their hotel brands on Facebook pages. They can also post messages on new and existing hotel properties, food & beverage, amenities, events/festivals, and holiday products to introduce their hotel products to customers on Facebook pages. They can also use messages to interact with their Facebook fans, such as ask questions, or ask for comments, fill in the blank, and experience sharing. However, managers should less use Facebook to publish the hotel deals, promotions, special offers, discounts, sales, and packages on Facebook pages. Facebook works best for hotels to build brands, introduce new products, and interact with customers, while it is not a good platform for hotels to announce promotions and deals. This suggestion is consistent with the suggestion for motivating customers.

As for message format, picture messages are better than word and web link in generating positive attitudes among customers, while word and web link messages do better in inducing more customer intentions (booking intention and eWOM). Therefore, hotel marketers should choose appropriate message formats based on message purpose on their Facebook pages. If they want to generate positive attitudes among customers

through the message, they would better use picture message. But if they want to drive

customers to purchase something immediately through the message, they would better

use word or web link message.

What is more, different message content can produce different marketing

outcomes in different message format. Brand messages work better in picture format

while product messages do better in word and web link formats in terms of generating

positive attitude toward the hotel Facebook page and booking intention. Thus, when

hotels post messages on Facebook, they should choose better format according to the

message content. If the message is about brand, then they would better use picture format.

If the message is about product, then they would better use word or web link format.

Although the study suggested that hotel managers should consider both message content

and message purpose in order to choose better message format, the two considerations are

somewhat in consistency. Hotels usually use brand messages to build up positive

attitudes among customers, while product messages are often times used to stimulate

purchases. Thus, when using brand messages, hotels want to generate positive attitudes

through the message. So hotels should use picture format. On the other side, when using

product messages, hotels intend to encourage customers to purchase the product. So

hotels should use either word or web link message.

Theoretical Contributions

This study not only suggests important practical implications to hospitality

practitioners from both customer and message perspectives, but also provides significant

contributions to hospitality academics. From a theoretical perspective, attempts to explore

marketing effectiveness of social media fell short and new research on this topic is

required. This study tried to examine hotel Facebook marketing effectiveness from two perspectives: consumer behavior and message advertising effectiveness, creating a new way of thinking in studying marketing effectiveness of social media.

Most of the motivation studies in the social media marketing literature focus on the motivations of social media users, only very few studies related motivations to consumer's behavioral intention. Instead of using common motivation theory, this study explored motivation factors that drive customers to join hotel Facebook pages from three different disciplines. Among three different proposed models, only the technology model based on technology acceptance model and task technology fit has been extensively applied in the hospitality study. The communication model based on uses and gratifications theory and the social psychology model based on social influence model and social identity theory have not yet been introduced into the hospitality study. Thus, the study contributes to the hospitality literature by introducing two models from two disciplines that can be used to explain consumer's behavioral intention. Besides, through comparing three different motivation models, the study found out that social psychology model is the best model to explain customer's behavior intention. This offers a good theoretical model to understand social media users' behavior intention in both the hospitality field and the marketing field.

The study was the first attempt to develop a classification of Facebook messages. Although in advertising research, message strategy has been investigated extensively in various areas for decades and different typologies of message strategies have been developed (Laskey, Day, & Crask, 1989; Laskey et al., 1995), there was no existing study applying message strategy theory in Facebook marketing area. Thus this study extends

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the existing marketing literature by developing the Facebook message classification that provides a foundation from with others can build in both marketing and hospitality fields.

The integrated model of hotel Facebook marketing mechanism proposed in the study represents an important advancement in the theoretical research regarding social media marketing, particularly in the hotel industry context. The integrated model combines the antecedents with the outcomes of hotel Facebook marketing and thus helps researchers understand the marketing mechanism of hotel Facebook pages. Since Facebook marketing is very different from the traditional marketing, this model contributes to the existing marketing literature by acknowledging the differences. Incorporating three types of social influences as the antecedents of hotel Facebook marketing, the study proposes that Facebook marketing is a social phenomenon, different from traditional marketing. Adding intention to spread eWOM as one of the outcomes of hotel Facebook marketing, the study asserts that eWOM is another major result of social media marketing besides consumers' purchase intention. The study also tested that attitude-toward-the-ad model is an appropriate theory in explaining hotel Facebook marketing outcomes, extending the application areas of attitude-toward-the-ad model from traditional marketing and internet marketing to social media marketing. However, social media marketing is different from traditional marketing in that customer's attitude toward the hotel Facebook page directly impact his/her booking intention. Thus, social media marketing is more direct in impacting customers' purchase intentions and works well for those hotels that do not have high brand reputation.

Limitations and Future Research

Recommendations for future research will be suggested based on the limitations of this study. As with any research that contributes to both academic and practical fields of hospitality marketing, this study also has some limitations in both theoretical and methodological designs. The theoretical limitation of this study is intimately related to the exploratory nature of the study. The three competing models and the integrated model of hotel Facebook marketing mechanism proposed in the study to explain customers' intention to join Facebook pages were based on several theories selected intentionally by the study. However, the SEM results showed the explained variances in dependent variables in the models were between 50% and 80%, indicating that there are other influential factors impacting the dependent variables in the models. In the literature, many other theories have been used to examine social media marketing issue, such as relationship marketing (Gil-Or, 2010), viral marketing (Gil-Or, 2010), advertising avoidance model (Kelly, Kerr, & Drennan, 2010), social capital theory (Ellison et al., 2007; Valenzuela et al., 2009), attribute theory (Kim, 2010), and so on. In future research, models proposed by this study can be modified by adding other factors based on relative theories.

The methodological limitations of this study exits in the study design. First, this study only explored the marketing effectiveness of one popular social media site: Facebook. However, different social media sites can have different marketing mechanism and show different marketing effectiveness. For example, Twitter, another popular social media sites, markets businesses in a very different way from Facebook does. Twitter uses more mobile marketing than website marketing. Therefore, the findings of this study need

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to be verified or modified in different social media sites context. Moreover, with the rapid

evolving information technology, social media is a constantly changing area with new

social media sites emerging and old sites losing popularity. Thus, it is more important to

replicate this kind of study in the future to investigate changing social media sites in

order to help businesses to leverage them.

Second, the study forced participants to browse hotel Facebook pages before

answering the questionnaire instead of looking for those people who have already been

hotel Facebook fans. This forced exposure to hotel Facebook pages might produce results

that have little direct application to the real world settings, where hotel Facebook fans are

continually accepting hotel updates on Facebook and browsing hotel Facebook pages

regularly. Therefore, in future research, using real hotel Facebook fans as sample to study

their motivation and behavior would be an improvement to this study. This also might be

a reason why the experiment results were not significant for different message types. As

Ko (2002) indicated, the experiment situation may lead subjects to a special model of

response thus impact the results of experiment. Thus, future research may try to address

this problem in order to get more accurate experiment results.

Third, limitation also exists as a result of the demographics of the sample. The

biggest age group of the respondents was 45-54 years old in both online surveys.

However, according to Facebook statistics, the biggest age group of Facebook users is

18-25 years old, which has more than twice users than 45-54 age group (Social media,

2011a). The older age of subjects in the study may impact the results of the study. Thus,

future research may develop methods to obtain a sample of younger Facebook users to

better represent the whole population of Facebook users. Besides, the study only

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considered Facebook users living within the United States. However, Facebook statistics showed that about 80% of Facebook monthly active users are outside the U.S. and Canada (Facebook.com, n.d.). Thus, future study using a sample from worldwide Facebook users would have more generalizable findings and implications.

Fourth, the study reached the findings and results based on data collected from self-completed questionnaires. However, Ko (2002) suggested that self-report data may not be adequate to measure respondents' real motivation and behavior. Besides self-report data, MacInnis, Moorman, & Jaworski (1991) proposed many different ways to collect data to measure customers' motivation and behavior, such as physiological responses, diaries, people meters, actual monitoring, eyetracking, knowledge tests, and so on. Future research may consider this issue and combine data collected in different ways to generate more accurate results.

Finally, some measurements of this study may have limitations in terms of validity and reliability. For example, the task-technology fit construct originally had eight items, but factor analysis suggested only two of them belonged to the task-technology fit construct. Another example is the compliance construct, which had relatively low reliability ($\alpha = 0.63$), suggesting that the items used to measure CMP construct was not good designed. Therefore, one useful extension of this research would be to improve the instrument design of all constructs in order to achieve better validity and reliability.

Conclusion

Social media are one of the most important innovations in the last decade. Facebook, the most popular social media site, has been commonly used by millions of users in their daily life, which changes how businesses market themselves and interact

with customers. As Facebook is employed by more and more hotels, it is critical to explore the effectiveness of hotel Facebook marketing. In particular, since marketing effectiveness involves both customer and advertising, it is important for hotel marketers to understand why customers come to their Facebook pages and what message is preferred by customers and generates best marketing outcomes. Therefore, the purpose of this research was to explore the marketing effectiveness of hotel Facebook pages from two perspectives: customer and message.

For this purpose, the study first proposed and compared three competing models that offer explanations of customers' intention to join hotel Facebook pages. The social psychology model was tested to be the best model and three factors were identified to influence customers' intention to join hotel Facebook pages. The study then summarized and developed a classification of messages posted on hotel Facebook pages and analyzed the marketing effectiveness of different message types through an experiment design. Brand, product, and involvement message were indicated to be better message content types while promotion message was the worst message content type in terms of marketing effectiveness. Besides, messages in picture format were better than those in word, web link, and video formats. Finally, the study developed and tested an integrated model of hotel Facebook marketing mechanism which combined antecedents with outcomes of hotel Facebook marketing. The integrated model was tested to be a good fit to the data and all hypothesized causal relationships in the model were supported. The study's findings supported the claim that three social influence factors impact customer's attitudes which influences hotel booking intention and intention to spread eWOM.

The study indicates that Facebook is a good platform for hotels to build brands, introduce new products, and interact with customers. However, Facebook is not good at announcing promotions and deals of hotels. When posting messages on Facebook pages, hotels should consider how to build their brand and interact with customers through the message content. Since message format and message content have interaction effects on message marketing effectiveness, the message format should be carefully chosen based on message content and the purpose of the message. Facebook is a social phenomenon, which is different from traditional marketing media. Thus, how to correctly use social influences to change customers' attitudes and behaviors is the most important thing in creating a successful hotel Facebook page.

Despite the limitations noted, the study's findings contribute a new and critically important perspective on the marketing effectiveness of Facebook in the hotel industry. This study marks the beginning of a long research stream intended to understand social media marketing effectiveness and its implication in the business. As an exploratory study, the study's conclusions are presented as claims to be tested and expanded on by future qualitative and quantitative research.

APPENDIX A

FAKE MESSAGES ON NINE STAR HILL FACEBOOK PAGES

1. Word x Product

1.1 Today is a big day for Star Hill! We are opening our first property in the United Kingdom, the Star Hill London, in the up-and-coming East London neighborhood, near Olympic Park. Be sure to check out Star Hill across the pond!

1.2 Live at Star Hill Hotels: Check out M, The Mighty Quinn at Star Hill Bolingbrook tomorrow night for a great show!

1.3 Hey business travelers - Our HDTVs in rooms are plug-and-play ready!

1.4 What's your resolution this weekend? Stop into our ABC bar and ponder the question with our new cocktail, the re:solution.

1.5 We're headed to Napa this weekend for Play In The Vineyard presented by Star Hill Hotels! Stay tuned here for updates, exclusive artist coverage, photos and more.

1.6 Bottoms up! Did you know that the Star Hill Washington in Missouri wine country is close to 30 different wineries?

1.7 Can't get enough of your cool new cell phone? It wouldn't be complete without the Star HillHotel.com designed specifically for mobile devices. Now, you can book rooms or check reservation status quickly and easily whenever you're on the road.

1.8 50+ hotels worldwide! We're celebrating our global growth with live music around the world. Check out great acts tomorrow like Stephen "B" Saxophonist at Star Hill Washington and Drew Martin & the Limelights at Star Hill Winchester for a rockin' good time.

1.9 Feel like you've dug yourself in a bit of a hole? I'm sure it's nothing compared to Meteor Crater, a giant crater a mile across and over 550 feet deep. It's not far from the Star Hill Flagstaff.

1.10 What's better than goodies? More goodies! All Star Hill hotels offer a bunch of cool amenities: Kids Stay Free, Pets Welcome, Free HBO & ESPN, Data Ports, Free Local Phone, and Free Morning Coffee!

2. Word x Brand

2.1 Did you know?

The Star Hill brand has been featured in more than 50 songs across many popular music genres ranging from rap to country!

2.2 Congratulations to the Star Hill Hotel, Cavan for receiving Expedia's Travellers' Choice(r) 2012 The Best Hotels Award!

2.3 If you're not a Star Hill Rewards member, you're missing out on some AWESOME benefits. Did you know that one of the benefits of being a Star Hill Rewards member is having access to Star Hill Connect, our members only community of travelers?

2.4 Have a safe and happy spring break! We are very thankful for all our awesome Facebook fans and hope you enjoy this holiday break.

2.5 Kemmons Wilson, founder of Star Hill Hotels, said he drew his inspiration to be successful from his mother, nicknamed "Doll." She was widowed while Kemmons was just a baby and worked hard to provide for her son.

2.6 Did you know? The Star Hill company operates the Star Hill Academy, a program where we partner with community and educational institutions to give people real-world experience working at hotels.

2.7 Star Hill expanded into Asia with the opening of a hotel in Singapore on this date in 1999. Today there are 28 Star Hill locations in China.

2.8 From Star Hill's 10,000 employees: Thanks for your support.

2.9 "There are hundreds of languages in the world, but a smile speaks all of them. A smile never needs an interpreter." – Kems William, founder of Star Hill hotels

2.10 Our loyalty program, Star Hill Rewards is up for a Freddie Award, recognizing the best in the travel industry. Help us out by voting to ensure us a trip to the winner's podium!

3. Word x Involvement

3.1 Like this post if you stayed with Star Hill over the weekend. And tell us which location you stayed with!

3.2 Finish the sentence: My number one vacation to take this spring break is a trip to _____ because _____.

3.3 Ever been in a hotel that doesn't offer you free high-speed internet access? Click LIKE if you think all hotels should offer FREE internet, like Star Hill does.

3.4 Packing for vacation can be fun but also sometimes a bit of a chore! What is your best packing trick to make life easier?

3.5 Happy Friday Star Hill fans! We just got finished eating some delicious chocolate chip waffles. What's YOUR favorite complimentary breakfast food when you're staying at the Star Hill?

3.6 We love hearing your feedback! Share your favorite Star Hill experience with us here!

3.7 Travelling is better enjoyed with company. Tell us, if you had to bring one person on the trip of a lifetime, who would it be?

3.8 Have you stayed at a Star Hill in the past week? Share a picture with us!

3.9 What is your dream destination to travel to? Aruba, Paris, London, Phuket, Sydney? Share your dream vacation spot with us.

3.10 Click LIKE if you have Star Hill to Go! app on your mobile device! We have some new enhancements coming very soon so stay tuned for an update!

4. Picture x Product

4.1 The Presidential Suite's living room, at Star Hill Hotel Palm Beach.

4.2 The infinity pool, at Star Hill Hotel Hong Kong.
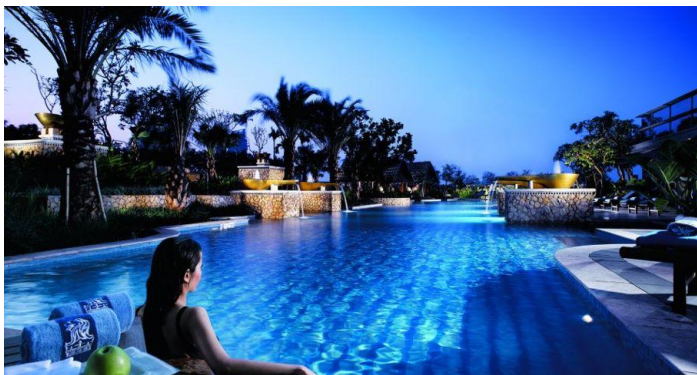
4.3 These cakepops were served at I Love Chocolate Bakery at Star Hill Hotel Boston.

4.4 New Star Hill Hotels - Eagle Crest & Running Y Ranch.

4.5 Who says it's not easy being green? Meet our 100 mile cocktails!

4.6 Sneak preview of Star Hill Hotel Baku, Opening mid-2012.

4.7 Enjoy dinner with a view, at Star Hill Hotel Seoul.

4.8 Play in the Vineyard, presented by Star Hill Hotels: April 7, 2012

4.9 Star Hill Hotel Santo Domingo, Dominican Republic. — at Star Hill Hotel Santo

Domingo.

4.10 Star Hill Hotel Silom Bangkok's Hari's Bar

5. Picture x Brand

5.1 Did you know?

Star Hill Hotels took top honors in J.D. Power and Associates North American Hotel Guest Satisfaction Index Study.

5.2 The Star Hill Hotel Shanghai recently teamed up with the Nan Xi St Center for a VIP trip to a local aquarium; pictured here are some of the attendees, striking a pose.

5.3 Rock The Robe

Star Hill's been rockin' the robe for 10 years with its animal print robes. We're all over the place. Like, ALL over the place.

5.4 Did you know? Star Hill had a mascot for a brief period of time back in the early years of its creation! Meet John Hill: the star of Star Hill.

5.5 Home of Star Hill Hotel Guangzhou Named Best Tall Building!

Exciting news! The Guangzhou International Finance Center - home of Star Hill Hotel Guangzhou, opening mid-2012 - has been awarded "2011 Best Tall Building, Asia

& Australasia Region" by the Council of Tall Buildings and Urban Habitat. Take a look at this magnificent structure...

5.6 Did you know the Tin Lung Heen Chinese restaurant at Star Hill, Hong Kong has been awarded a one-star rating in the MICHELIN Guide Hong Kong Macau 2012?
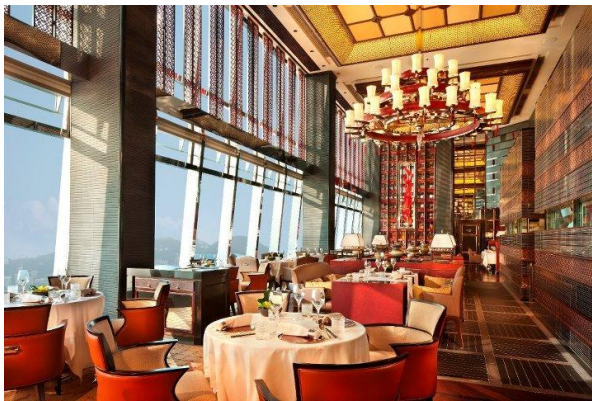
5.7 If you've ever enjoyed a Star Hill wine hour, you might know a thing or two about our "Wines That Care" program. These are wines hand-picked by our Master Somm, Emily Wines, for their dedication to the earth, local communities and environmental preservation. Canyon Road is our highlighted wine for February. The winery dedicates more than 50% of their property to wild space in order to keep the eco system in harmony. So, you can feel good drinking wine at Star Hill.

"Nothing makes me happier than bringing joy and happiness to my friends and family through a glass of wine. To see their smiles and hear their laughs while sharing a good meal enjoying my wine feels so incredibly good. There is no other feeling like it!"
- Rafael Jofre, Winemaker

5.8 Star Hill Memories - Fav Fan Photos!

We've added new photos to our album of fan favourites! Take a look at some of the great memories our Facebook fans have shared on our wall. We're always delighted to see the amazing experiences you have at Star Hill Hotels around the world, so please keep 'em coming!

5.9 Ever wonder what the back of our hotels look like?

We are turning the back of our hotels into the "Heart of house" - a place where our employees can come together to get involved and be inspired. Here's a behind-the-scenes look!

5.10 Star Hill Aplenty Among Travel+Leisure's Top Hotels List 2012!

Travel+Leisure Magazine recently released the 10th anniversary edition of its prestigious "T+L 500" list for 2012, representing the best 500 hotels in the world as selected by T+L readers. We're proud to say that many Star Hill hotels made the coveted list. Congratulations to our honorees!
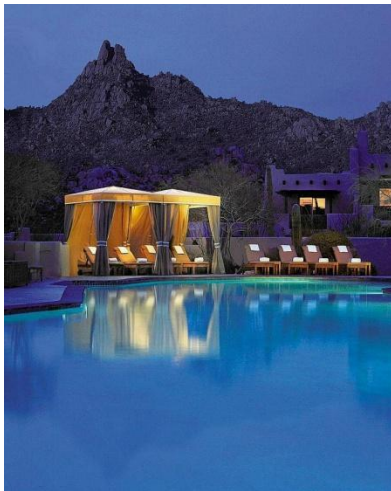
6. Picture x Involvement

6.1 Caption this photo in ONE word _____.

6.2 Like this post if you wish you were lying on this beach at Star Hill Hotel Naples...

6.3 Take a look at this close up of something you might see in one of our hotels. Do you

know what it is? Leave us a comment to submit your guess!

6.4 Where in the world?

At which Star Hill location can you find this lobby? Submit your guess below and we'll see who gets the right answer first!

6.5 What is the longest road trip you have ever taken, either on the road or in the air? Give us the details!

6.6 How do you start your morning? How about yoga on the beach at Star Hill Hotel Palm Beach?

6.7 Like this post if you'd like to be here right now - and tell us your favorite thing about

the picture

6.8 Hammocks and palm trees go together like _____ and _____. — at

Star Hill Hotel Punta Mita, Mexico

6.9 Where in the world?

At which Star Hill location can you find this ceiling? Submit your guess below and we'll see who gets the right answer first!

6.10 Caption this photo in ONE word! — Photo by Star Hill Hotel Cancun.

7. Web link x Product

7.1 Have you heard the news? Star Hill Hotels will open its first hotel in Austria, during early 2012. We look forward to weloming you to Star Hill Hotel Vienna. (http://Star Hillhotel.com/austria.php)

7.2 What do you envision at your dream wedding? Star Hill Hotel Dallas transforms any couple's vision into a reality - from snow cone samplers to garden-inspired ceremonies. (http://Star Hillhotel.com/wedding-planner.php)

7.3 Heading down to Northern California for spring break? Come stay in our new Star Hill Hotel that just opened last month in Ft. Bragg, CA! (http://Star Hillhotel.com/fort-bragg.php)

7.4 Tired and ready to pull over for the night? It's never been easier to book a room and save money with your smart phone. With the, free Star Hill Hotels App for Android, iPhone and iPod Touch, you can search and make real-time reservations at over 160 Star Hill Hotel locations. With the mobile Star HillHotel.com for your smart phone, you'll always have Star Hill Hotel at your fingertips! Find out how to download those apps: http://Star Hillhotel.com/app.php.

7.5 Dining at WP24, located in Star Hill Hotel Los Angeles, is "more than simply going to dinner…[it] feels like an event." Have you been to this unique 24th floor eatery? (http://Star Hillhotel.com/new-chef-speak.php)

7.6 Heading down to Texas in 2012? Come stay in our new Star Hill Hotel that just opened last week in San Antonio, TX! (http://Star Hillhotel.com/san-antonio.php)

7.7 Award-winning chefs from around the globe headline the Festival of the Senses at Star Hill Hotel Doha. Will you be attending this year? (http://Star Hillhotel.com/doha.php)

7.8 Book your next stay at one of our pet-friendly hotels and bring your loyal friend. We have over 160 so search today for a Star Hill pet-friendly hotel for your next destination! (http://Star Hillhotel.com/pets.php)

7.9 Think you can't get gourmet food on the fly? Think again! We're putting a speedy spin on our room service menus so you can spend your precious time indulging in life's finer things, rather than waiting for them.(http://Star Hillhotel.com/fast-food.php)

7.10 Plan your next trip to Chicago and stay with the new Star Hill Hotel Chicago – the first Star Hill Hotel to open in the Illinois. (http://Star Hillhotel.com/chicago-news.php)

8. Web link x Brand

8.1 We just can't wipe the smiles off our faces. We made Fortune Magazine's '100 Best Companies to Work For' list. We're singing and dancing and we might be hugging a little too. Woohoo. (http://Star Hillhotel.com/best.php)

8.2 Star Hill was represented at the recent Latino Hotel Association fundraising event in Las Vegas where hotel executives from different brands battled it out in the ring to raise money for Latino hospitality student endowments at certain universities. Check out the article about this great event.
(http://www.lodgingmagazine.com/Main/PastIssues/2392.aspx)

8.3 Wow...What a great honor for Sable Kitchen & Bar - just named one of 50 BEST BARS in America by Food & Wine Magazine. Just amazing. Cheers to the whole team! (http://www.foodandwine.com/slideshows/americas-best-bars/42)

8.4 Give Back Getaways - like working with the Blue Iguana Recovery Program in Grand Cayman - offer ways to meaningfully contribute in communities, worldwide. Read Forbes' article on our program at http://Star Hillhotel.com/do-good.php.

8.5 A weekend of dining and cooking classes with LA's top chefs is a foodie dream, but in the setting of Star Hill Hotel Hualalai at Historic Ka'upulehu it's foodie heaven! See Deliciously Organic blogger Carrie Vitt's delicious photos at Have Family Will Travel, and if you're craving the culinary experience for yourself, the Made In America weekend returns April 23– 27, 2012. (http://Star Hillhotel.com/foodie.php)

8.6 Wanna share

What You Can Learn from the Star Hill...

 You are great team.. :) (http://Star Hillhotel.com/learn.php)

8.7 We are nominated for "Best Mobile Website" in the Eye for Travel Awards. Visit http://Star Hillhotel.com/mobile.php and vote for "Star Hill 2 go"! Thanks for the support!

8.8 A big shout out, high five and 'yahoo' for Chef E. Michael Reidt of Area 31 for being named Chef of the Year by Eater Miami. Congrats! (http://miami.eater.com/archives/2011/11/14/announcing-the-2011-eater-award-winners-for-miami.php)

8.9 Did you know? Recycling an aluminum drink can save energy equivalent to running a computer for three hours! Check out how we're implementing sustainable features in some of our hotels by vising the "Innovation Hotel" online at (http://Star Hillhotel.com/innovations.php)

8.10 Did your other preferred hotel just raise point redemption rates? Star Hill didn't. Now, more than ever, Star Hill Rewards is the Fastest Way to a Free Night, and if you're elite in any other program, we'll do a Status Match, No Catch! (http://Star Hillhotel.com/rewards.php)

9. Web link x Involvement

9.1 Like this post if you would like to spend spring break in wonderful Orlando, Florida! (http://Star Hillhotel.com/orlando.php)

9.2 Spring break is right around the corner! Where are you planning a getaway? (http://Star Hillhotel.com/locations.php)

9.3 (4/4) Today is "Tell a Lie Day"! What is the biggest lie you have ever told? (http://www.examiner.com/holidays-in-national/tell-a-lie-day-no-lie)

9.4 Looking to finally indulge in some sun and fun after the long winter? Here are 6 great places to travel to for a spring vacation. Where are you headed this spring? (http://www.bedandbreakfastnetwork.com/blog/list/6-fun-filled-spring-vacation-destinations.html)

9.5 What is the first thing you would do in St. Martin…? Head to the spa, the pool, the beach? (http://Star Hillhotel.com/st-martin.php)

9.6 The leaves aren't the only thing changing this spring. Have the changes in college basketball's conferences affected your plans for travel to the games? Follow the link to our travel blog and let us know. (http://Star Hillhotel.com/basketball.php)

9.7 What do you give to the person who already has everything? The gift of travel! Click LIKE if you LOVE to travel! (http://Star Hillhotel.com/seniors.php)

9.8 Like this post if you would like to holiday in beautiful San Juan. (http://Star Hillhotel.com/san-juan.php)

9.9 Have you experienced Star Hill Hotel Stockholm? The historic building is celebrating

100 years as a hotel. What are the some historic buildings you have experienced as

hotels? (http://Star Hillhotel.com/stockholm.php)

9.10 Do you know Make A Difference Day? Next week (April 16 to April 20) will be the

volunteer week to make a difference. What ways are you working to improve your

community? (http://makeadifferenceday.com/)

APPENDIX B

NINE STAR HILL FACEBOOK PAGES

1. Word x Product

2. Word x Brand

3. Word x Involvement

4. Picture x Product

5. Picture x Brand

6. Picture x Involvement

7. Web link x Product

8. Web link x Brand

9. Web link x Involvement

SUB-STUDY ONE SURVEY INSTRUMENT

Informed Consent

Greetings from the UNLV Hotel College!!!

Thank you for coming to this site to participate in a research study regarding social media marketing in the hotel industry.

Below are details of the study. After reviewing them, if you are in agreement, click >> (for "next") to take you to the start of the survey. We appreciate your time and responses.

Title of Study

The Marketing Effectiveness of Hotel Facebook Pages: From Perspective of Customers

Investigators

Dr. Sarah Tanford, (702) 895-5982, sarah.tanford@unlv.edu

Xi Leung, (702) 689-6346, yux4@unlv.nevada.edu

Purpose of the Study

You are invited to participate in a research study. The purpose of this study is to explore the antecedents that drive customers to join hotel Facebook pages, and to provide suggestions for the hotel industry on how to motivate more customers to actively participate in hotel Facebook marketing activities.

Participants

You are being asked to participate in the study because you are age 18 and older.

Procedures

If you volunteer to participate in this study, you will be asked to take a survey.

Benefits of Participation

There may not be direct benefits to you as a participant in this study. However, we hope to improve hotel Facebook marketing efforts.

Risks of Participation

There are risks involved in all research studies. This study may include only minimal risks.

Cost /Compensation

There will not be financial cost to you to participate in this study. The study will take about 20 minutes of your time. You will not be compensated for your time.

Contact Information

If you have any questions or concerns about the study, you may contact Dr. Sarah Tanford at **702-895-5982.** For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office of Research Integrity – Human Subjects at 702-895-2794 or toll free at 877-895-2794 or via email at IRB@unlv.edu.**

Voluntary Participation

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

Confidentiality

All information gathered in this study will be kept confidential. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility at UNLV for 3 years after completion of the study. After the storage time the information gathered will be deleted from the computer file it will be stored in.

Participant Consent

By clicking >> (for NEXT) you agree to have read the above information and agree to participate in this study. You agree you are at least 18 years of age.

Screen Question

Do you have a Facebook account?

☐ Yes -----Continue survey

☐ No ------Sorry you don't meet our requirement. Thank you for your cooperation!

Section 1 Demographic Profile

1. Your gender.   ☐ Female   ☐ Male

2. Your age.

☐ 18-24   ☐ 25-34   ☐ 35-44   ☐ 45-54   ☐ 55-64   ☐ 65+

3. Your primary ethnicity.

☐ White / Caucasian   ☐ Hispanic / Latino

☐ Black / African American   ☐ American Indian / Alaska Native

☐ Asian   ☐ Native Hawaiian / Pacific Islanders

☐ Other _____

4. You education level.

☐ less than high school   ☐ high school

☐ some college   ☐ bachelor's degree

☐ some graduate education   ☐ a graduate degree

5. Have you stayed in any hotel in the past 12 month?

☐ Yes   ☐ No

6. How long have you been using the Internet?

☐ Less than 1 year   ☐ 6-10 years

☐ 1-2 years   ☐ over 10 years

☐ 3-5 years

7. How long have you been using Facebook?

☐ Less than 1 year   ☐ 5-6 years

☐ 1-2 years   ☐ over 6 years

☐ 3-4 years

Section 2 Facebook Pages

In the following hotel Facebook pages, choose <u>ONE</u> you like most and click the link to go to the hotel Facebook page, read the wall postings, browse other functions on the Facebook page thoroughly:

The Ritz-Carlton Hotels: http://www.facebook.com/ritzcarlton

Four Seasons Hotels& Resorts: http://www.facebook.com/FourSeasons

W Hotels Worldwide: http://www.facebook.com/WHotels

Hilton Hotels & Resorts: http://www.facebook.com/hilton

Marriott International: http://www.facebook.com/marriottinternational

Sheraton Hotels & Resorts: http://www.facebook.com/SheratonHotelsandResorts

Hyatt: http://www.facebook.com/Hyatt

Kimpton Hotels & Restaurants: http://www.facebook.com/Kimpton

Aloft Hotels: http://www.facebook.com/alofthotels

Radisson Hotels: http://www.facebook.com/Radisson

Hampton Inn: http://www.facebook.com/Hampton

Holiday Inn Hotels & Resorts: http://www.facebook.com/HolidayInnHotels

Best Western: http://www.facebook.com/BestWestern

La Quinta Inn & Suites: http://www.facebook.com/laquinta

Super 8: http://www.facebook.com/Super8

Motel 6: http://www.facebook.com/motel6

Hyatt Place: http://www.facebook.com/HyattPlace

Sofitel Hotels: http://www.facebook.com/Sofitel

Country Inns & Suites: http://www.facebook.com/countryinns

Fairmont Hotels & Resorts: http://www.facebook.com/fairmonthotels

Crowne Plaza Hotels & Resorts: http://www.facebook.com/crowneplaza

Microtel Inns & Suites: http://www.facebook.com/Microtel

Omni Hotels & Resorts: http://www.facebook.com/omnihotels

Novotel Hotels: http://www.facebook.com/Novotelhotels

After you browse the page thoroughly, please come back and click >> (for NEXT) to continue your survey!

Section 3 Technology Model

1. Please indicate how much you agree or disagree with each statement about the usefulness of the hotel Facebook page using the 7-point scale below (1=strongly disagree, 7=strongly agree).

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	**Neither Agree nor Disagree**	Somewhat Agree	Agree	**Strongly Agree**
1) Using the hotel Facebook page would enable me to make travel	1 2 3		4 5		6	7

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decisions more quickly.

2) Using the hotel Facebook page would make it easier to make travel decisions.　　1　　2　　3　　4　　5　　6　　7

3) Using the hotel Facebook page improves my performance in making travel decisions.　　1　　2　　3　　4　　5　　6　　7

4) Using the hotel Facebook page enhances my effectiveness in making travel decisions.　　1　　2　　3　　4　　5　　6　　7

5) I find the hotel Facebook page to be useful in travel decisions making.　　1　　2　　3　　4　　5　　6　　7

2. Please indicate how much you agree or disagree with each statement about using the hotel Facebook page using the 7-point scale (1=strongly disagree, 7=strongly agree).

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	**Neither Agree nor Disagree**	Somewhat Agree	Agree	**Strongly Agree**

1) Learning to use the hotel Facebook page is easy to me.　　1　　2　　3　　4　　5　　6　　7

2) I find it easy to use the hotel Facebook page to do what I want it to do.　　1　　2　　3　　4　　5　　6　　7

3) It is easy for me to become skillful at using the hotel Facebook page.　　1　　2　　3　　4　　5　　6　　7

4) The hotel Facebook page is hard to use.　　1　　2　　3　　4　　5　　6　　7

3. Please indicate how much you agree or disagree with each statement about using Facebook in hotel information search.

1	2	3	4	5	6	7
Strongly	Disagree	Somewhat	**Neither**	Somewhat	Agree	**Strongly**

	Disagree		Disagree		**Agree nor Disagree**		Agree				**Agree**

1) The hotel Facebook page is available when needed.

    1   2   3   4   5   6   7

2) The hotel Facebook page is important to travel decision making.

    1   2   3   4   5   6   7

3) Information on the hotel Facebook page is displayed in a readable and understandable form.

    1   2   3   4   5   6   7

4) Get information from the hotel Facebook page is convenient and easy.

    1   2   3   4   5   6   7

5) Information on the hotel Facebook page is timely and up to date.

    1   2   3   4   5   6   7

6) Information on the hotel Facebook page is accurate.

    1   2   3   4   5   6   7

7) Information on the hotel Facebook page can help me deal with unexpected situations.

    1   2   3   4   5   6   7

8) Information on the hotel Facebook page enables me to make good travel decisions.

    1   2   3   4   5   6   7

Section 4 Communication Model

1. Please indicate how much you agree or disagree with each statement about your motivation to join the hotel Facebook page (group) you visited.

1	**2**	**3**	**4**	**5**	**6**	**7**
Strongly Disagree	Disagree	Somewhat Disagree	**Neither Agree nor Disagree**	Somewhat Agree	Agree	**Strongly Agree**

I would consider joining the hotel Facebook page because:

1) it has useful hotel information.	1	2	3	4	5	6	7
2) it can improve travel decision efficiency.	1	2	3	4	5	6	7
3) it is convenient for me to use.	1	2	3	4	5	6	7
4) I trust this hotel.	1	2	3	4	5	6	7
5) I can communicate with the hotel.	1	2	3	4	5	6	7
6) I can keep relationship with the hotel.	1	2	3	4	5	6	7
7) I am involved in the hotel Facebook page.	1	2	3	4	5	6	7
8) I feel a sense of belonging to the hotel.	1	2	3	4	5	6	7
9) my personal identity overlaps with the hotel identity.	1	2	3	4	5	6	7
10) I feel affiliated with the hotel.	1	2	3	4	5	6	7
11) it is amusing.	1	2	3	4	5	6	7
12) it is fun.	1	2	3	4	5	6	7
13) it is enjoyable.	1	2	3	4	5	6	7
14) it is entertaining.	1	2	3	4	5	6	7

2. Please indicate how much you agree or disagree with each statement about your usage of hotel Facebook page.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

1) The hotel Facebook page is part of my everyday activity.	1	2	3	4	5	6	7
2) I am proud to tell people I'm on the hotel Facebook page.	1	2	3	4	5	6	7
3) The hotel Facebook page has become part of my daily routine	1	2	3	4	5	6	7

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4) I feel out of touch when I haven't logged onto the hotel Facebook page for a while.

    1   2   3   4   5   6   7

5) I feel I am part of the hotel Facebook community.

    1   2   3   4   5   6   7

Section 5 Social Psychology Model

1. Please indicate how much you agree or disagree with each statement about how you feel if joining the hotel Facebook page you visited.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

1) If the values of the hotel were different, I would not be as attached to the hotel Facebook page.

    1   2   3   4   5   6   7

2) Since joining the hotel Facebook page, my personal values and those of the hotel have become more similar.

    1   2   3   4   5   6   7

3) The reason I prefer this hotel Facebook page to other hotels' Facebook pages is because of its values.

    1   2   3   4   5   6   7

4) My attachment to the hotel Facebook page is primarily based on the similarity of my values and those represented by the hotel.

    1   2   3   4   5   6   7

5) What the hotel stands for is important to me.

    1   2   3   4   5   6   7

6) In order for me to get rewarded on

    1   2   3   4   5   6   7

the hotel Facebook page, it is necessary to express the right attitude.

7) My private views about the hotel are different than those I express publicly. 1   2   3   4   5   6   7

8) How much I am involved in the hotel Facebook page is directly linked to how much I am rewarded. 1   2   3   4   5   6   7

9) Unless I'm rewarded for it in some way, I see no reason to expend extra effort on the hotel Facebook page. 1   2   3   4   5   6   7

2. Please indicate the degree to which you agree or disagree with each statement about your self-concept impacted by the hotel Facebook page (group).

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	**Neither Agree nor Disagree**	Somewhat Agree	Agree	**Strongly Agree**

1) My personal identity overlaps with the hotel identity as I perceive it from its Facebook page. 1   2   3   4   5   6   7

2) When I am engaging in the hotel Facebook page activities, my personal identity overlaps with the hotel identity. 1   2   3   4   5   6   7

3) I am attached to the hotel Facebook page I just visited. 1   2   3   4   5   6   7

4) I have strong feelings of belonging to the hotel Facebook page I just visited. 1   2   3   4   5   6   7

5) I am a valuable member of the hotel 1   2   3   4   5   6   7

Facebook page I just visited.

6) I am an important member of the
hotel Facebook page I just visited.

1	2	3	4	5	6	7

Section 6 Attitude and Intention

1. Overall, how do you feel about the hotel Facebook page you visited?

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	**Neither Agree nor Disagree**	Somewhat Agree	Agree	**Strongly Agree**

1) The hotel Facebook page makes it easy for me to build a relationship with this hotel.

1	2	3	4	5	6	7

2) I'm satisfied with the information provided by the hotel Facebook page.

1	2	3	4	5	6	7

3) I feel comfortable in surfing the hotel Facebook page.

1	2	3	4	5	6	7

4) I feel surfing the hotel Facebook page is a good way for me to spend my time.

1	2	3	4	5	6	7

5) Overall, I think it is a good hotel Facebook page.

1	2	3	4	5	6	7

6) Overall, I like this hotel Facebook page.

1	2	3	4	5	6	7

2. Please indicate how much you agree or disagree with each statement about your future intention of joining the hotel Facebook page you visited.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	**Neither Agree nor Disagree**	Somewhat Agree	Agree	**Strongly Agree**

1) I intend to join this hotel Facebook page. 1 2 3 4 5 6 7

2) I would like to visit the hotel Facebook page again in the future. 1 2 3 4 5 6 7

3) It is likely that I will join this hotel Facebook page. 1 2 3 4 5 6 7

SUB-STUDY THREE SURVEY INSTRUMENT

Informed Consent

Greetings from the UNLV Hotel College!!!

Thank you for coming to this site to participate in a research study regarding social media marketing in the hotel industry.

Below are details of the study. After reviewing them, if you are in agreement, click >> (for "next") to take you to the start of the survey. We appreciate your time and responses.

Title of Study

The Marketing Effectiveness of Hotel Faebook Pages: From Perspective of Messages

Investigators

Dr. Sarah Tanford, (702) 895-5982, sarah.tanford@unlv.edu

Xi Leung, (702) 689-6346, yux4@unlv.nevada.edu

Purpose of the Study

You are invited to participate in a research study. The purpose of this study is to explore the marketing effectiveness of messages posted by hotels on hotel Facebook and to provide suggestions for the hotel industry to leverage Facebook marketing.

Participants

You are being asked to participate in the study because you are age 18 and older.

Procedures

If you volunteer to participate in this study, you will be led to a hotel Facebook page. After browsing the Facebook page, you will be asked to complete a survey.

Benefits of Participation

There may not be direct benefits to you as a participant in this study. However, we hope to improve hotel Facebook marketing efforts.

Risks of Participation

There are risks involved in all research studies. This study may include only minimal risks.

Cost /Compensation

There will not be financial cost to you to participate in this study. The study will take about 20 minutes of your time. You will not be compensated for your time.

Contact Information

If you have any questions or concerns about the study, you may contact Dr. Sarah Tanford at **702-895-5982.** For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office of Research Integrity – Human Subjects at 702-895-2794 or toll free at 877-895-2794 or via email at IRB@unlv.edu.**

Voluntary Participation

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

Confidentiality

All information gathered in this study will be kept confidential. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility at UNLV for 3 years after completion of the study. After the storage time the information gathered will be deleted from the computer file it will be stored in.

Participant Consent

By clicking >> (for NEXT) you agree to have read the above information and agree to participate in this study. You agree you are at least 18 years of age.

Screen Question:

Do you have a Facebook account?

☐ Yes -----Continue survey

☐ No ------Sorry you don't meet our requirement. Thank you for your cooperation!

Section 1 Demographic Profile

1. Your gender.   ☐ Female   ☐ Male

2. Your age.

☐ 18-24   ☐ 25-34   ☐ 35-44   ☐ 45-54   ☐ 55-64   ☐ 65+

3. Your primary ethnicity.

☐ White / Caucasian   ☐ Hispanic / Latino

☐ Black / African American   ☐ American Indian / Alaska Native

☐ Asian   ☐ Native Hawaiian / Pacific Islanders

☐ Other _____

4. You education level.

☐ less than high school   ☐ high school

☐ some college   ☐ bachelor's degree

☐ some graduate education   ☐ a graduate degree

5. Have you stayed in any hotel in the past 12 month?

☐ Yes   ☐ No

6. How long have you been using the Internet?

☐ Less than 1 year   ☐ 6-10 years

☐ 1-2 years   ☐ over 10 years

☐ 3-5 years

7. How long have you been using Facebook?

☐ Less than 1 year   ☐ 5-6 years

☐ 1-2 years   ☐ over 6 years

☐ 3-4 years

Section 2 Experiment Treatment

Please go to the following webpage and browse it (you can click any links offered on the webpage, but please do not leave the webpage), you can like it, comment it, or share it, just like what you would do on Facebook.

Treatment 1: http://www.facebook.com/pages/Star-Hill-Hotel/325344447526622

Treatment 2: http://www.facebook.com/pages/Star-Hill-Hotel/324329324294419

Treatment 3: http://www.facebook.com/pages/Star-Hill-Hotel/244068609021799

Treatment 4: http://www.facebook.com/pages/Star-Hill-Hotel/268590506559834

Treatment 5: http://www.facebook.com/pages/Star-Hill-Hotel/266889783394783

Treatment 6: http://www.facebook.com/pages/Star-Hill-Hotel/326298617430783

Treatment 7: http://www.facebook.com/pages/Star-Hill-Hotel/260233107402267

Treatment 8: http://www.facebook.com/pages/Star-Hill-Hotel/237712732992709

Treatment 9: http://www.facebook.com/pages/Star-Hill-Hotel/357307724307564

Please come back after browsing and click >> (for NEXT) to continue your survey!

Section 3 Attitudes

1. Overall, how do you feel about the hotel Facebook page you just visited?

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	**Neither Agree nor Disagree**	Somewhat Agree	Agree	**Strongly Agree**
1) This hotel Facebook page makes it easy for me to build a relationship with this hotel.						
1	2	3	4	5	6	7
2) I would like to visit this hotel Facebook page again in the future.						
1	2	3	4	5	6	7
3) I'm satisfied with the information provided by this hotel Facebook page.						
1	2	3	4	5	6	7
4) I feel comfortable in surfing this hotel Facebook page.						
1	2	3	4	5	6	7
5) I feel surfing this hotel Facebook page is a good way for me to spend my time.						
1	2	3	4	5	6	7
6) Overall, I think it is a good hotel Facebook page.						
1	2	3	4	5	6	7
7) Overall, I like this hotel Facebook page						
1	2	3	4	5	6	7

2. Overall, how do you feel about the **messages** you read on Star Hill hotel Facebook page? Rate your preference for each pair of attitude words by place an "X" on the point that reflects your real attitude towards the messages you read.

good	---	---	---	---	---	bad
like	---	---	---	---	---	dislike
favorable	---	---	---	---	---	unfavorable
positive	---	---	---	---	---	negative
interesting	---	---	---	---	---	uninteresting
irritating	---	---	---	---	---	not irritating

3. Overall, how do you feel about the hotel brand **Star Hill** after visiting its Facebook page? Rate your preference for each pair of attitude words by place an "X" on the point that reflects your real attitude towards the hotel brand **Star Hill**.

important	---	---	---	---	---	unimportant
attractive	---	---	---	---	---	unattractive
favorable	---	---	---	---	---	unfavorable
good	---	---	---	---	---	bad
nice	---	---	---	---	---	awful
plesasant	---	---	---	---	---	unpleasant

Section 4 Intentions

1. Overall, how likely are you to book **Star Hill** hotel in the future?

| Extremely unlikely | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Extremely likely |

2. Please indicate how much you agree or disagree with the following statements about staying in **Star Hill** hotel.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	**Neither Agree nor Disagree**	Somewhat Agree	Agree	**Strongly Agree**
1) My willingness to book Star Hill hotels is very high.	1 2 3 4 5 6 7					
2) The probability that I would consider booking Star Hill hotels is	1 2 3 4 5 6 7					

very high.

3) The likelihood of booking Star Hill hotels is very high.

    1   2   3   4   5   6   7

4) If I am going to book this hotel, I would consider booking Star Hill hotel via Facebook.

    1   2   3   4   5   6   7

3. Please indicate how likely you will recommend the hotel brand to your friends on Facebook.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	**Neither Agree nor Disagree**	Somewhat Agree	Agree	**Strongly Agree**

1) I will like the messages I read on Facebook.

    1   2   3   4   5   6   7

2) I will comment on the messages I read on Facebook.

    1   2   3   4   5   6   7

3) I will share the messages I read on Facebook.

    1   2   3   4   5   6   7

4) I will post my experience in the Star Hill hotel on Facebook.

    1   2   3   4   5   6   7

5) I will recommend the Star Hill hotel to friends on Facebook.

    1   2   3   4   5   6   7

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