



Mobile Applications in the Hotel Industry:

A Case Study of Hotels in Phuket

Kanokwan Wongklang

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Author Miss Kanokwan Wongklang

Major Program Hospitality and Tourism Management (International Program)

Major Advisor

.....
(Dr.Ilian Assenov)

Examining Committee:

..... Committee
(Assoc. Prof. Dr. Bongkosh Ngamsom)

.....
(Assoc Prof. Dr. Prathana Kannaovakun)

.....
(Dr.Ilian Assenov)

The Graduate School, Prince of Songkla University has approved this thesis as partial fulfillment of the requirements for the Masters of Business Administration Degree in Hospitality and Tourism Management (International Program)

.....
(Assoc.Prof.Dr.Teerapol Srichana)

Dean of Graduate School

This is to certify that the work here submitted is the result of the candidate's own investigations.
Due acknowledgement has been made of any assistance received.

_____ Signature

(Dr.Ilian Assenov)

Major Advisor

_____ Signature

(Miss Kanokwan Wongklang)

Candidate

I hereby certify that the work has not already been accepted in substance for any degree, and is not being concurrently submitted in candidature for any degree.

_____ Signature

(Miss Kanokwan Wongklang)

Candidate

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บทคัดย่อ

เครื่องมือสื่อสารแบบพกพาเช่น สมาร์ทโฟน และแท็บเล็ต นำความเปลี่ยนแปลงมากมาย มาสู่ธุรกิจบริการ นักท่องเที่ยวจำนวนมากค้นหาข้อมูลการท่องเที่ยวผ่านทางบราวเซอร์บน เครื่องมือสื่อสารแบบพกพาเพื่อตอบสนองการเปลี่ยนแปลงที่เกิดขึ้นนี้ เหล่าผู้ให้บริการจึงมีการใช้ แอปพลิเคชันบนเครื่องมือสื่อสารแบบพกพาหรือโมบายแอปพลิเคชันเป็นเครื่องมือสื่อสารทางการ ตลาดกับกลุ่มลูกค้าเป้าหมาย อีกทั้ง เครื่องมือสื่อสารแบบพกพายังเป็นหนึ่งในช่องทางการจัด จำหน่ายที่ลูกค้าสามารถซื้อสินค้าจากทางผู้ให้บริการ ในขณะที่เดียวกัน ผู้ประกอบการโรงแรมก็ เล็งเห็นความสำคัญของแอปพลิเคชันบนเครื่องมือสื่อสารแบบพกพาในการดำเนินธุรกิจ และมีการ นำมาปรับใช้เป็นส่วนหนึ่งของกลยุทธ์การสื่อสารทางการตลาดของ โรงแรมเพื่อเข้าถึงและสร้าง ความสัมพันธ์กับกลุ่มลูกค้าเป้าหมายของ โรงแรม

งานวิจัยชิ้นนี้ได้จัดทำขึ้นเพื่อเป็นการเติมเต็มช่องว่างของวรรณกรรมในด้านเกี่ยวกับช่อง ทางการสื่อสารและเครื่องมือทางการตลาดผ่านทางโมบายแอปพลิเคชัน โดยมีวัตถุประสงค์ 1) เพื่อ ระบุถึงความสำคัญของโมบายแอปพลิเคชันในการเลือกและจองโรงแรมของผู้บริโภค 2) เพื่อแสดง ให้เห็นว่าผู้ประกอบการโรงแรมต่างๆในจังหวัดภูเก็ตได้ใช้การสื่อสารผ่านทางโมบายแอปพลิเคชัน อย่างไรในการสื่อสารทางการตลาด 3) เพื่อแสดงให้เห็นถึงประสิทธิผลของการสื่อสารทาง การตลาดผ่านทาง โมบายแอปพลิเคชันของธุรกิจโรงแรมต่างๆในจังหวัดภูเก็ต

เพื่อให้บรรลุถึงวัตถุประสงค์ของการวิจัยนี้ผู้เขียนได้เลือกใช้วิธีการวิจัยแบบผสมผสานทั้ง วิธีเชิงคุณภาพ และวิธีเชิงปริมาณ เพื่อให้เข้าถึงกลุ่มเป้าหมายให้ได้มากที่สุด วิธีเชิงคุณภาพ โดยการ สัมภาษณ์แลกเปลี่ยนความรู้กับบุคลากรที่เกี่ยวข้องของ โรงแรมจำนวน 12 แห่งในภูเก็ต โดยหัวข้อ การสัมภาษณ์นั้นมุ่งเน้นถึงการ ใช้โมบายแอปพลิเคชันในการสื่อสารทางการตลาดของ โรงแรม ประสิทธิภาพของ โมบายแอปพลิเคชันและรายได้ที่มาจากช่องทางนี้ ในด้านการวิจัยเชิงปริมาณ ผู้วิจัยได้ใช้แบบสอบถามผ่านทางสื่อออนไลน์ต่างๆ อาทิเช่น เว็บไซต์ TripAdvisor, เว็บไซต์ Facebook และในเว็บไซต์ออนไลน์ต่างๆ ที่สามารถให้บุคคลทั่วไปเข้ามาเยี่ยมชม และแสดง ความ คิดเห็น ส่วนตัวต่อเจ้าของบ้าน ที่กได้ อาทิเช่น Thaivisa.com, Expatblog.com, Flyertalk.com

นอกเหนือจากนี้ ผู้วิจัยได้แจกแบบสอบถามให้กับนักท่องเที่ยวที่เดินทางมายังจังหวัดภูเก็ตและเป็นผู้ใช้เครื่องมือสื่อสารแบบพกพาตามสถานที่ต่างๆ เช่น อาคารผู้โดยสารขาออกระหว่างประเทศ สนามบินภูเก็ต บริเวณชายหาดและสถานที่ท่องเที่ยวต่างๆ คำถามต่างๆ ในแบบสอบถามเป็นคำถามที่มีความเกี่ยวข้องกับพฤติกรรมของผู้บริโภคและการใช้โมบายแอปพลิเคชันในการเลือกและจองโรงแรมของผู้บริโภค จากนั้นได้ทำการวิเคราะห์ข้อมูลเชิงปริมาณโดยใช้เครื่องมือทางสถิติ และใช้วิธีวิเคราะห์เนื้อหาสำหรับข้อมูลเชิงคุณภาพ

งานวิจัยนี้แสดงให้เห็นถึงทัศนคติทั้งของผู้บริโภคและผู้ประกอบการโรงแรมต่อวิวัฒนาการของการใช้โมบายแอปพลิเคชันเป็นเครื่องมือสื่อสารทางการตลาด ผลการวิจัยเชิงปริมาณพบว่าโมบายแอปพลิเคชันมีความสำคัญต่อการเลือกและจองโรงแรมของผู้บริโภค ผู้บริโภคใช้โมบายแอปพลิเคชันในการหาข้อมูลโรงแรมก่อนการตัดสินใจจองห้องพัก ถ่ายโอนรูปภาพของโรงแรมและสถานที่ท่องเที่ยวไปยังสังคมออนไลน์ ค้นหาสถานที่ท่องเที่ยวหรือกิจกรรมใกล้ๆ ที่พัก ในระหว่างการเดินทาง และแบ่งปันประสบการณ์การเดินทางท่องเที่ยวหลังจากเสร็จสิ้นการเดินทาง

นอกเหนือจากนี้ ผู้บริโภคใช้โมบายแอปพลิเคชันสำหรับจองโรงแรมในสถานการณ์ต่างๆ เช่น เมื่อไม่ได้มีการวางแผนการเดินทางหรือการจองที่พักในนาทีสุดท้าย เนื่องจากโมบายแอปพลิเคชันทำให้ผู้บริโภคเกิดความสะดวกสบายในการจองห้องพักระหว่างการเดินทาง หรือเกิดเหตุการณ์ไม่คาดฝันระหว่างการเดินทาง แต่อย่างไรก็ตาม ผู้ตอบแบบสอบถามบางส่วนปฏิเสธที่จะใช้โมบายแอปพลิเคชันในการจองโรงแรมเนื่องจากค่านึงถึงความปลอดภัย ความน่าเชื่อถือ และความแม่นยำ

จากการศึกษาโดยวิธีเชิงคุณภาพพบว่า การใช้โมบายแอปพลิเคชันเป็นเครื่องมือสื่อสารทางการตลาดกับกลุ่มลูกค้าเป้าหมายของโรงแรมในจังหวัดภูเก็ตอยู่ในขั้นเริ่มต้น ผู้ประกอบการโรงแรมส่วนใหญ่ต่างเล็งเห็นว่าโมบายแอปพลิเคชันเป็นช่องทางการสื่อสารทางตรงที่ตรงระหว่างโรงแรมและกลุ่มลูกค้า โรงแรมสามารถเข้าถึงกลุ่มลูกค้าเป้าหมายได้มากขึ้น และการใช้โมบายแอปพลิเคชันยังช่วยให้โรงแรมมอบความสะดวกสบายแก่ลูกค้าในการค้นหา เลือก และจองโรงแรม

ผู้ประกอบการโรงแรมโดยมากมีการใช้กลยุทธ์การตลาดผ่านทางเครื่องมือสื่อสารแบบพกพาและโมบายแอปพลิเคชันหลายรูปแบบ เช่น การออกแบบเว็บไซต์ของโรงแรมให้เหมาะกับหน้าจอของเครื่องมือสื่อสารแบบพกพา เพื่อง่ายต่อการอ่านข้อมูลและจองห้องพัก การจัดทำโมบายแอปพลิเคชันของโรงแรม ซึ่งลูกค้าที่เป็นผู้ใช้สมาร์ตโฟนและแท็บเล็ต สามารถดาวน์โหลดแอปพลิเคชันและติดตั้งลงบนเครื่องมือสื่อสารแบบพกพาของลูกค้าได้ด้วยตนเอง นอกเหนือจากนี้

ผู้ประกอบการโรงแรมบางส่วนมีการมอบส่วนลดหรือข้อเสนอพิเศษ เช่น เครื่องดื่มฟรี อาหารเช้า ฟรีแก่ลูกค้าที่จองห้องพักผ่านทาง โมบายแอปพลิเคชัน ผู้ประกอบการโรงแรมต่างเห็นพ้องต้องกันว่า โมบายแอปพลิเคชันเป็นเครื่องมือสื่อสารทางการตลาดที่มีประสิทธิภาพในการประชาสัมพันธ์ ข่าวสาร การพัฒนาให้โรงแรมนั้นๆเป็นที่รู้จักอย่างกว้างขวางมากขึ้น การสร้างภาพลักษณ์ที่ดีให้กับโรงแรม การสร้างความสัมพันธ์กับลูกค้าและเป็นอีกหนึ่งช่องทางในการสร้างรายได้ให้กับโรงแรม

ในการพัฒนาประสิทธิภาพการสื่อสารทางการตลาดผ่านทาง โมบายแอปพลิเคชัน ทางผู้ประกอบการโรงแรมควรให้ความสนใจในการใช้โมบายแอปพลิเคชันสร้างประสบการณ์การเข้าพักที่ดีให้กับลูกค้า มากกว่าจะเน้นไปที่การสร้างรายได้จากการจองห้องพักช่องทางนี้ โมบายแอปพลิเคชันยังถือเป็นนวัตกรรมใหม่สำหรับลูกค้าบางกลุ่ม และลูกค้าอาจยังมีความกังวลในเรื่องของความปลอดภัยและความน่าเชื่อถือของการใช้โมบายแอปพลิเคชันในการเลือกและจองโรงแรม ดังนั้น ผู้ประกอบการโรงแรมควรให้ข้อมูลเกี่ยวกับ โมบายแอปพลิเคชันของ โรงแรมแก่ลูกค้า อย่างละเอียด ชัดเจนและ โปร่งใส เพื่อลดความกังวลเหล่านี้และเพื่อเพิ่มประสิทธิภาพในการใช้โมบายแอปพลิเคชันในการเลือกและจองโรงแรม

คำสำคัญ: โมบายแอปพลิเคชัน การตลาดบนเครื่องมือสื่อสารแบบพกพา เครื่องมือสื่อสารแบบพกพา การสื่อสารทางการตลาดของ โรงแรม ภูเก็ต

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ABSTRACT

Mobile devices have brought many changes to the hospitality industry. More and more travelers have used the mobile web browser application for searching travel information through their mobile devices. In response, many hospitality companies have responded to these trends by using mobile applications as a marketing channel to communicate with their customers, thus allowing customers to purchase products and services using mobile devices. Many hotel companies have also adopted mobile applications as a marketing channel to reach their potential customers and establish direct relationship with them.

This study fills the gap in literature in particular to answer the following objectives: (1) To determine the importance of mobile applications on consumer hotel decision-making process. (2) To identify how hotels in Phuket use mobile applications for their marketing communications. (3) To identify the effectiveness of mobile applications for hotels' marketing in Phuket.

To achieve these objectives a mixed method approach was adopted. In-depth interviews were conducted with relevant respondents from 12 hotels in Phuket. The interviews focused on how the hotels use mobile applications as their marketing communications, its effectiveness and the revenue that mobile applications can generate to hotels. The questionnaire were posted in different online forums and blogs such as Thaivisa.com, Expatblog.com, and Flyertalk.com and also were distributed by hands to travelers who are mobile device users at Phuket International Airport's international Departure Lounge, beaches, shopping centers, and famous attractions in Phuket. The survey questions were related to consumer behavior and the use of mobile applications in their hotel selection and booking process.

This study revealed the perspective of both consumers and hotels on the emergence of mobile applications as a marketing communication tool. The consumer survey found mobile applications are important in consumer hotel selection and booking process. Mobile application

have been used prior the trip to search hotel information before booking, during the trip to upload pictures of hotel to social network, followed by check-in to a hotel location and find attractions or activities around hotels, and after the trip to review their stay to social network as well.

In addition, mobile applications have been used to make the hotel booking in some situations such as unplanned trips or last-minute booking because it is the most convenient way to perform the activities while the consumers are on the road or face with some unplanned problems during the trip. However, there are still many respondents who do not use mobile applications in their hotel selection and booking process due to security, reliability and accuracy concerns.

Mobile applications are still a new marketing communication tool that has been recently adopted and practiced among hotels in Phuket as another direct communication channel between customers and hotels. Most of the surveyed hotels consider mobile device channel as a great marketing communication channel to interact with their customers. With the use of mobile marketing and mobile applications, hotels can reach more customers and can provide more convenient searching, selecting, and booking process to customers.

Most of the surveyed hotels have engaged with mobile marketing and mobile applications by providing hotel websites in mobile version which are specially designed and optimized for internet-enabled mobile devices' display. In addition, hotels have also provided special offers and promotion to mobile device users and have offered hotel applications for smartphone and tablet users. The use of mobile applications for hotels marketing communications is effective for almost every hotel. Mobile applications act as an efficient PR tool, build brand awareness, build positive image, improve user experience, enhance customer relationship and are increasingly important as a revenue generating channel.

To improve hotels' marketing communication effectiveness via mobile application, the hotels should focus more on the use of mobile application in improving customer experience than on generating revenue. Mobile applications are still new for some customers and many of them still worry about the security and reliability of this channel; the hotels should make their mobile applications more transparent to customers in order to enhance the effectiveness of mobile application usage in the hotel selection and booking process.

Keywords: Mobile Application, Mobile Marketing, Mobile Devices, Hotel Marketing Communication, Phuket

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CHAPTER 1

INTRODUCTION

1.1 Statement of the Problem

The development of mobile technology has turned mobile devices such as mobile phones and tablet devices become increasingly popular in recent year. Gartner (2013) reported that 426 million mobile phones were sold to worldwide end users in the first quarter of 2013, up 0.7 percent from the first quarter of 2012. In addition, the report from International Data Corporation (2013) showed that over 49 million tablets were shipped worldwide in the first quarter of 2013. Mobile devices have become one of the most important electronic devices in today's world. With their evolution into smartphones and tablets, the biggest change is mobile devices are becoming the primary medium for people to access the internet anytime and anywhere. The popularity in mobile devices has increased significantly due to the two major functions of mobile devices that are mobility and broad reach can allow consumers to conduct business and be reached through mobile devices every time and everywhere (Kwon, Bae & Blum, 2013). Moreover, the development on capability of mobile devices that was originally used for calling or texting only but now the vendors have developed the applications and new more features in mobile devices have been added to respond many activities usage such as data searching on the internet, banking, booking, buying tickets, or shopping. International Telecommunication Union (2013) reported that there were over 2 billion mobile internet users in the world in the year of 2012. That is 29.5 percent of global population. Moreover, a survey by Morgan Stanley, 2012 (cited in Pelican, 2012) indicated that 91 percent of smartphone users have their phones within an arm's reach 24 hours a day, 7 days a week. Continuous growth in mobile internet users has created the opportunity for many businesses to use mobile devices as the marketing communication tool by using mobile applications to promote and sell their products to consumers.

The mobile application is new information communication technology artifact that helps users to access, navigate on and use the internet on their mobile devices. Although there is as yet no standard definition, mobile application can be generally referred to the software or program that can be installed and executed in mobile devices. Some mobile applications are pre-installed on the mobile devices such as contact, messages, web browsers and email whereas some

applications can be downloaded by mobile users from mobile app stores or the internet and then installed themselves on mobile devices such as games, social networks, city guides (Chan, 2012; Wang, Liao & Yang, 2013; Yan, Liu, Niemi, & Yu, 2010).

According to Cortimiglia, Ghezzi and Renga (2011), mobile applications can be categorized as either business-to-business (B2B) applications or business-to-customer (B2C) applications. B2B applications have been developed to support a firm's internal process such as warehouse management, customer relationship management, or sales-force automation. B2C applications have been created to fulfill individual consumer's need and can be classified into three types:

1. *Content-oriented applications* fulfill individual needs for information, entertainment, communication, productivity, and socialization such as instant messaging, email, and social networking.

2. *Marketing-oriented applications* are the applications that companies developed for brand advertising or promotion such as Mango, the fashion store from Spain launched its application that lets users browse its collections and located its nearest shop.

3. *Service-oriented applications* are the applications that let users perform tasks such as check a flight schedule, book the accommodation, shop online through mobile devices

The survey conducted by Canalys (2013) found that there are over 800,000 applications available in worldwide mobile app stores. According to Gartner (2012), there were over 45 billion downloads from worldwide mobile app stores in 2012. In addition, by the end of 2014, Gartner (2012) also forecasted that over 130 billion applications will have been downloaded from mobile app stores since the launch of the first one in July 2008. This can be the indicative of consumers' acceptance of mobile applications which it is the opportunity for many businesses and marketers to use this tool for direct communication with consumers.

Mobile devices have brought many changes to the hospitality industry. More and more travelers have used the mobile web browser application for searching information about places to go, accommodation, flight, or where to eat and planning the transactions through their mobile devices. According to TripAdvisor (2013), approximately 33 percent of consumers plan a trip by using mobile applications to find attractions or activities nearby and 26 percent of respondents have downloaded travel applications specific to the destination. Moreover, a research conducted

by Nielsen (2013) showed that more than 55% of mobile travel consumers in United Kingdom use mobile devices for planning the trip while 31% of them book their trips using their mobile devices. In addition, 81% of mobile travel search has been conducted for flights and 67% for hotels. So, many hospitality companies have responded these current trends by using mobile applications as a marketing channel to communicate with customers which allowing customers to purchase products and services using mobile devices. In addition, mobile applications are up-and-coming marketing tools useful for businesses to help improve awareness and provide more information and convenience to their customers. Customers can make the reservation for hotels, flights, rental cars, etc. anytime and anywhere (Kwon, Bae & Blum, 2013).

With the emergence of mobile technology, more and more hotel companies have used several types of mobile application to be the marketing tool to reach their potential customers and establish a relationship directly. Some hotels have use the basic mobile applications by sending SMS or MMS to guests, some hotels have developed mobile-friendly version of their websites where customers could easily access all information about hotel through web browser application such as the mobile website version of Hilton Hotels & Resorts (<http://www3.hilton.com/en/about/hilton/mobile.html>), InterContinental Hotels Group (<http://www.ihg.com/hotels/us/en/global/support/mobile>), etc. Some hotels created the hotel applications or 'hotel apps' which can be downloaded through mobile app stores such as Marriott launched 'Free Marriott Mobile App' for smartphones (Kuan-Yu, Yu-Lun & Chia-Chun, 2012). Therefore, it can be seen that more studies related to the use of mobile applications in the hotel industry and their effectiveness are required. However, the academic papers on the use of mobile applications in the hotel industry are limited in number (Chan, 2012; Kwon, Bae & Blum, 2013; Kim, 2011; Kuan-Yu, Yu-Lun & Chia-Chun, 2012; Wang & Wang, 2010). Moreover, there is no previous literature that has discussed the use of mobile applications in the hotel industry in Thailand. So, this research will investigate further on the use of mobile application and how effective of mobile applications for the hotels in Thailand by selecting the hotel samples only from Phuket of Thailand. Phuket is the biggest island in Thailand and is a major destination of tourists. Phuket also had the number of hotels, resorts, guesthouses, and bungalows over 800 units at the end of 2012 (Ministry of Interior, 2012).

This research focuses on how hotels use mobile applications for their marketing communication and it will further evaluate the effectiveness of this marketing tool. In addition, the consumers' behavior and their mobile application usage are also discussed. This study collects the data by using both qualitative and quantitative methods which will be further analyzed. The findings can contribute the hotels to have thorough knowledge and understanding of mobile applications before utilize them as one of hotel's marketing tools.

1.2 Aim and Objectives

This study is aimed to answer the following research questions:

1. How important are the mobile applications for the consumer hotel decision-making process?
2. How do hotels in Phuket use mobile applications for their marketing communications?
3. Are the mobile applications important for hotels' marketing and are they effective?

Objectives of this study:

1. To determine the importance of mobile applications on consumer hotel decision-making process.
2. To identify how hotels in Phuket use mobile applications for their marketing communications.
3. To identify the effectiveness of mobile applications for hotels' marketing in Phuket.

1.3 Scope of the Study

1.3.1 Scope of research area:

This research is limited to the use of mobile applications by hotels and consumers. Hotels in Phuket were taken to study and determine the effectiveness of mobile application usage as a marketing tool. In addition, the consumers whom either have visited Phuket before or planning to visit were taken to study their behavior towards the use of mobile applications in hotel selection or booking process.

1.3.2 Scope of time

The study period was from June- December 2013. The questionnaires were distributed by hand and were posted to different websites which target Phuket tourists and future tourists. In-depth interviews with hotel's marketing heads were conducted during September- October 2013.

1.3.3 Scope of demographics

This research has two main target populations that are hotels in Phuket and consumers who are mobile device users. This study aimed to identify the viewpoints of mobile application usage from both hotels and consumers.

1.3.4 Scope of geography

The data collection of this study was limited to hotels in Phuket, Thailand and consumers from all around the world that have visited Phuket or in process of planning to visit Phuket.

1.4 Significance of the Study

1. The findings of this study can contribute to the literature related to the use of mobile applications in the hotel industry and its impact on hotel's marketing strategies and consumer decision making process.

2. The findings can be used for hotel marketers to develop, utilize and improve their marketing strategies through the mobile applications.

1.5 Limitations of the Study

There are a number of limitations in this study. First of all, this is a dynamic evolving topic, there was very limited previous study related directly to mobile applications in the hotel industry that has been conducted, which provides challenges for researcher to review the literature and fill the gap in the literature.

Secondly, with the online surveys posted on several travel websites and blogs for tourists who have traveled to Phuket or planning to, the actual respondents might not all have been tourists due to researcher's limited access to monitor the sites. Also, some regions and nationalities might have been under represented as the sampling method was not stratified.

Thirdly, it is hard to technically measure the effectiveness of mobile applications for hotel's marketing as this tool is still new for hotels. In addition, hotels rejected to reveal their accounting and financial reports that show the exact revenue from mobile channel. Furthermore, customers use multiple channels in their hotel selection and booking process.

Lastly, the interviews were conducted with only 12 hotels in Phuket using purposive and convenience sampling that would create bias as most of the hotels interviewed were 4-5 stars and chain hotels. Hence they are more likely to be early adopters in adopting mobile applications as one of their marketing communication tools. There are some hotels who did not wish to conduct and provide any information on their marketing tactics.

1.6 Definition of Key Terms

Mobile application: the software or program that can be installed and executed in mobile devices and has an operating system that supports stand-alone software. Mobile applications can be pre-installed on the mobile device as well as can be downloaded by users from application distribution platforms such as mobile app stores (Wang, Liao & Yang, 2013).

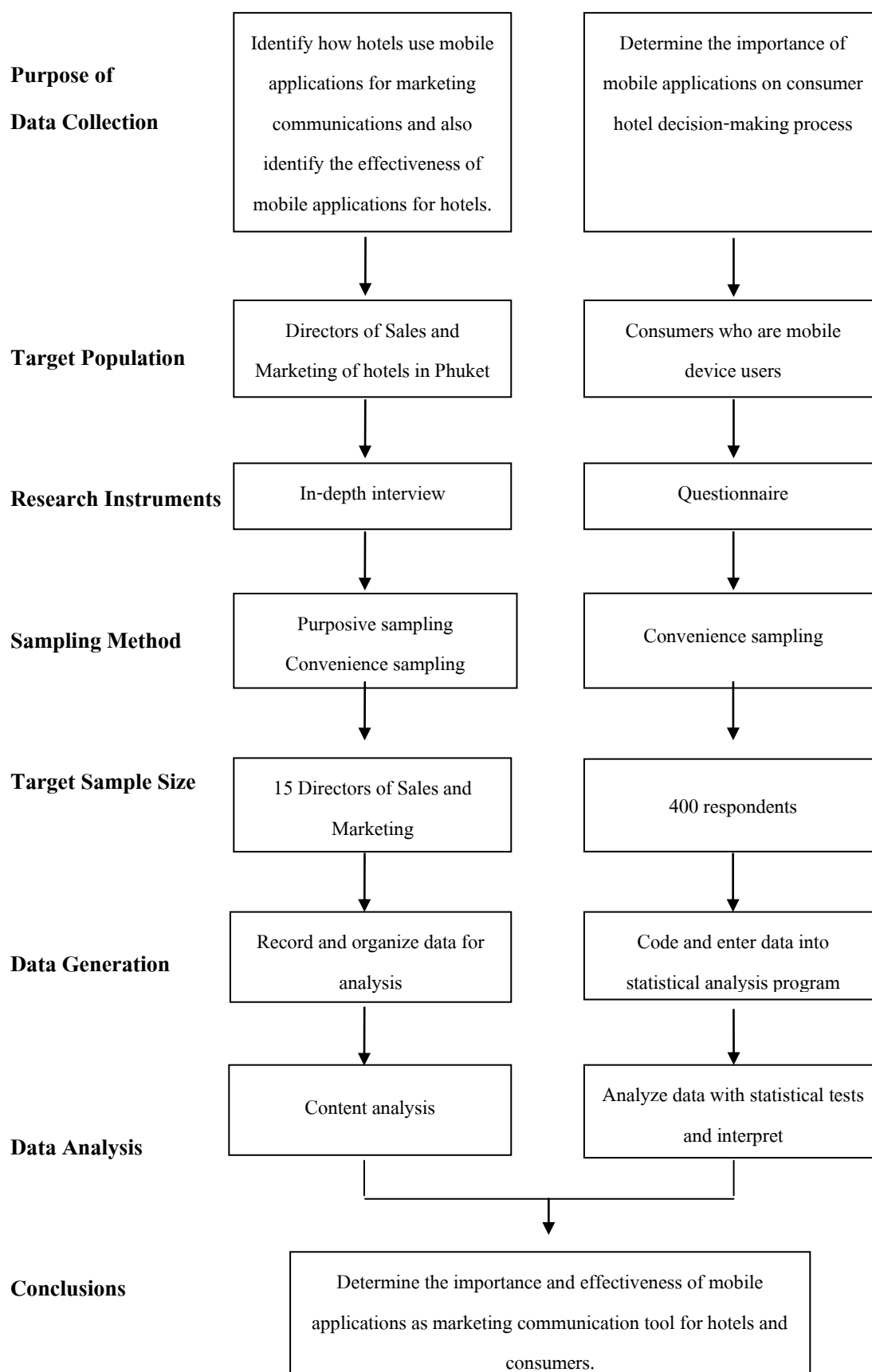
Mobile devices: handheld devices used in accessing, sending, and sharing data via call, text and other mechanisms depending on their features (Kuan-Yu, Yu-Lun & Chia-Chun, 2012).

Mobile website: a mobile version of an internet website. User can use the pre-installed browser application (e.g. Safari for iPhone) to access it (Wong, 2012).

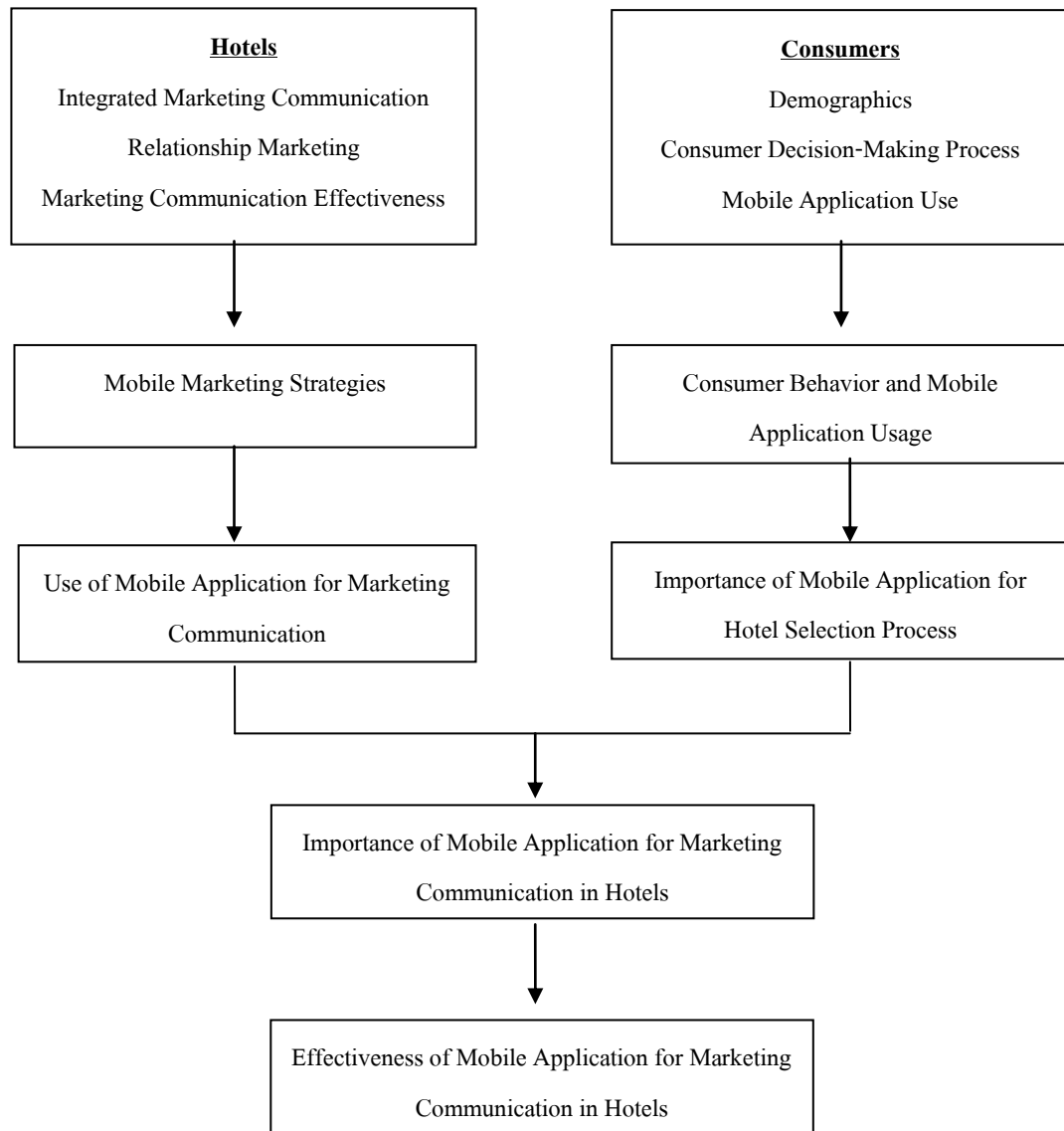
Smartphone: programmable mobile phone that has sophisticated sensing capabilities which allow users to store information, e-mail, and install programs, along with using a mobile phone in one device (Raento, Oulasvirta & Eagle, 2009).

Tablet devices: mobile touch-screen personal computers that combine the features of a notepad, a laptop and touch sensitivity device, they can be operated by stylus, special-purpose pen, or user's finger (Fischer, Smolnik, & Galletta, 2013).

1.7 Research Flow Chart



1.8 Conceptual Framework



CHAPTER 2

RELATED CONCEPTS, THEORY, AND LITERATURE

This chapter of the study of mobile applications in the hotel industry reviews the ideas, theories and related research, and is organized as follows:

2.1 Integrated Marketing Communications (IMC)

2.1.1 Definition of IMC and communication mix strategies

2.1.2 Relationship marketing

2.1.3 Marketing communication effectiveness

2.2 Consumer behavior and decision making process in hotel selection

2.3 Mobile marketing

2.3.1 Challenges for the marketers with the emergence of mobile marketing

2.4 Mobile applications

2.4.1 Definitions of mobile applications

2.4.2 Mobile applications in the hotel industry

2.1 Integrated Marketing Communications (IMC)

2.1.1 Definition of IMC and communication mix strategies

In the past, marketers have succeeded in mass marketing which selling standardized products to mass customers. However, marketers face some new marketing communication problems. Mass markets have separated into diverse and smaller markets and information technology has been improved. Moreover, customers are confused by messages about company images, brand positions, products from different communication sources. Then, the concept of marketing communications has been changed. Marketers were shifting away from mass marketing and developing focused marketing programs to build closer relationship with customers through new information and communication tools such as mobile phone, or tablets. Many companies have adopted this perspective of marketing communication and have integrated marketing communication programs to deliver a clear, consistent, and compelling message about the company and/or its brands to their customers (Belch & Belch, 2003; Kotler & Armstrong, 2011).

According to Schultz & Schultz (1998), the American Association of Advertising Agencies firstly defined Integrated Marketing Communications (IMC) as:

“A concept of marketing communication planning that recognizes the added value of a comprehensive plan that evaluates the strategic roles of a variety of communication disciplines and combines these disciplines to provide clarity, consistency and maximum communication impact.”

Schultz & Schultz (1998) also added IMC refer to a strategic business process that used to plan, develop, execute, and evaluate coordinated, measurable, persuasive marketing communication programs with both internal and external consumers, customers, prospects and other targeted. Companies’ total marketing communications strategies and activities should be provided consistent, unified image or message to communicate with its customers, build strong customer relationships by showing how the company and its products can help customers solving their problems.

The IMC approach can help companies to improve their traditional method which doing marketing and communications elements as virtually separate activities. Furthermore, the companies can identify the most appropriate and effective methods for communicating and building relationships with their customers, employees, suppliers, investors, interest groups, and the general public (Kitchen & Burgmann, 2010).

Traditionally, the elements of marketing communications mix have consisted of advertising, sales promotion, public relations, personal selling, and direct marketing but modern marketers also view interactive or Internet marketing as major IMC tools. Table 2.1 describes the tools for integrated marketing communications:

Table 2.1 The tools for IMC

IMC Tools	Description
1. Advertising	One-way communication with the target mass audience by using any paid form of non-personal presentation and promotion. It is one of the most cost effective ways to communicate and provide information to customers.
2. Sales promotion	Marketing activities that provide extra value or incentives to encourage the purchase or sale of a product or service. Sales promotion includes coupons, sampling, contests, price deals, premium, trade show, etc.
3. Publicity/ Public relations	Non-personal communication that aim to build good relations with the company's various publics by obtaining favorable publicity, building up a good corporate image, and handling or heading off unfavorable rumors, stories, and events.
4. Personal selling	Personal presentation by the firm's sales force for the purpose of making sales and building customer relationships.
5. Direct marketing	Direct connections with targeted consumers to obtain an instant response and cultivate lasting customer relationships. Direct mail, catalogs, telemarketing, email, mobile phone marketing are the examples of direct marketing.
6. Interactive/Internet Marketing	Communication with target customers through interactive media, particularly the Internet. It is one of the greatest impacts of today's marketing which the interactive media deliver back-and-forth flow of information as customers can participate in and modify the information they receive in real time.

Source: Adapted from Belch and Belch (2003); Kotler and Armstrong (2011)

There are a number of reasons that IMC approach has become popular among firms marketing consumer products and services as well as business-to-business marketers. As mentioned earlier, major changes have occurred among consumers regarding to their lifestyles, media use, and buying pattern. The shift toward segmented marketing and the development in

information and communication technology have had a huge impact on marketing communications. The rules of marketing and the role of traditional advertising agency have been revolved (Kitchen & Burgmann, 2010). Both large and small companies have adopted IMC approach to marketing communications planning and strategy as they understood the value of integrating the various communications functions. In addition, marketers recognized that many consumers have less responded to traditional communications media so they have to look for alternative ways to communicate with their audiences (Belch & Belch, 2003). Another reason is when consumers perceived messages from different media or promotional approaches, they always bundle those messages to a single message. Companies can avoid duplication, take advantage of synergy among communication tools, and develop more efficient and effective marketing communications programs by coordinating total marketing communications strategy and activities to provide consistent, unified image or message to communicate with its customers (Kotler & Armstrong, 2011).

Communication mix strategies

To communicate effectively, marketers need to provide two-way communications which the firms can reach their target customers and customers can give feedback for the firms to improve their products or services. To developing an effective integrated marketing communications and promotion programs, the firms should identify the target audience, determine the communication objectives, design a message that they would like to deliver to target audience, choose the media to send the message, and collect the feedback from customers (Belch & Belch, 2003; Kitchen & Burgmann, 2004; Schultz & Schultz, 1998).

According to Kotler and Armstrong (2011), there are two basic communication mix strategies that mostly used in marketing communications:

- Push strategy
- Pull strategy

Push strategy refers to communication mix strategy that the firm pushes communication mix and marketing activities through the distributors such as wholesalers and retailers to final consumers. The firms promote their products to the members in distribution channel; those members promote the products to final customers to induce them purchase the product. This strategy makes use of a company's sales force, trade shows, and promotional

relationships activities such as sales incentives, product training for retail staff to promote a product and create customer's demand.

Pull strategy is a communication strategy that the firms direct their marketing activities such as advertising or consumer promotion toward final consumers. If the pull strategy is effective, consumers will demand the product from distributors, the distributors will then ask for the products from the producers. Some companies use only one strategy in their marketing communication. However, hotel industry often use both push and pull strategies to communicate with their intermediaries and target market.

2.1.2 Relationship marketing

As the nature of marketing has changed as well as customers have much more demanding, marketing is no longer only about developing, selling and delivering products. Marketers more concerned with the development and maintenance of satisfying long-term relationships with customers because enduring relationships with customers cannot be copied by competitors, and therefore provide for a unique and sustained competitive advantage to the companies (Belch & Belch, 2003; Kotler & Armstrong, 2011).

Relationship marketing involves the process of creating, enhancing, and maintaining long-term relationships between company and individual customers as well as other stakeholders for mutual benefits. It was found that customers engage in relationship with company because they want to make their buying and consuming process simple and reduce their perceived risks while the developing and maintaining enduring relationships with customers is generally accepted in many companies as they recognized that the cost of retaining customers is less than gaining the new ones. When the customers engage in relationship with company, they most repeatedly transact with the same marketer or purchase the same brand of products or services. So, the expenses for customers care can be decreased during later phases of the relationship life cycle because the customers are already familiar with products and services (Belch & Belch, 2003; Buttle, 1996; Sheth & Parvatiyar, 1995).

The relationship marketing programs include customization of products, services and communications, frequent user incentives, customer referral benefits, preferred customer programs, after-sales services, service guarantees, service recovery programs and the use of relational database to provide added value. Many firms considered relationship marketing as

direct marketing, database marketing, one-to-one marketing, customer relationship management, loyalty marketing, etc. which represent various tools for building relationships (Das, 2009). Implementing relationship marketing can help company to control the customer behavior which further leads to customer loyalty and positive word of mouth (Henning-Thurau, Gwinner, & Gremler, 2002).

The developing and maintaining relationship with customers has played significant role in several service businesses especially in the hotel industry. As the customers' wants and desire for service are continuing, customers also have various alternative hotels to choose, so they can easily switch to other hotels if they are not satisfied with the services of one hotel. Hotels can differentiate themselves from competitors by maintaining relationship with their existing customers and also building relationship with the new customers (Gilpin, 1996). In addition, a good relationship between hotels and customers can create positive word of mouth which is considered as the powerful and reliable form of communication in the hotel industry. The survey from TripAdvisor (2013) revealed that customers mostly rely on recommendations from family and friends or reviews from other customers when booking the accommodation. So, hotels can get more benefits from existing customers that influence others through word-of-mouth advertising.

Hotels can use information technology to build good long-term relationship easily by developing a company database which hotels can get customer information from booking and registration processes. Furthermore, it is also possible for hotels to find out other value information, such as frequency of stay and spending behavior, through hotel records. Then, hotels can begin a relationship with customers. To implement relationship marketing successfully, hotels must identify more about the customer through database analysis, improve and make the product or service more attractive and inform more hotel information to customers, persuade customers to make repeat purchase or try different products. Finally, hotels should develop the loyalty programs to retain and reinforce the relation with customers (Belch & Belch, 2003; Bowie & Buttle, 2012; Buttle, 1996; Gilbert et al., 1999).

Customer Relationship Management in the hotel industry

In a dynamic business environment which increasing in global competition, more demanding from consumers and more switching between the firms, the quality of the products

and services is no longer sufficient to increase customer loyalty and repeat purchases. Managing relationships with customers has been applied in many organizations to establish a sustainable relationship with customers and maintain those customers to be loyal customers. Customer relationship management (CRM) is a means that maximize customer value by offering customers more options and customized products and services for everyone. Customer relationship management refers to a strategic approach that enables companies to use internal resources, such as technology, people, and process to manage the relationship with customers for the whole of their life-cycle, in order to create a competitive advantage and improve company's performance (MiloviĆ, 2012; Mohammed & Rashid, 2012; Sinisalo, Salo, Leppaniemi, & Karjaluoto, 2005).

According to Yim, Anderson and Swaminathan (2004), successful customer relationship management implementations depend on four specific dimensions which can be described as below:

Focusing on key customers is the crucial factor in successful implementation of CRM. Organizations require a better understanding of customer behavior to increase customer long-lasting satisfaction and to create customer loyalty.

Organizing around CRM relates to the involvement of employees in the organization which can help company to implement CRM successfully. The entire company should be organized around cultivating valuable relationships with customers. The organizational structure needs to be flexible and reconstructed to generate customer-centric values.

Managing knowledge the success of relationship management is heavily dependent on collecting and analyzing customers' information and using that information for developing highly personalized offerings. To enhance customer profitability, information about customers should be gathered through interactions or touch points across all functions or areas of the firm.

Incorporating CRM-based technology which enables organizations to plan and implement successful marketing actions for improving communication, retaining customers and making them more profitable. Many CRM activities, such as customer database management, cannot be optimized without using technology.

The successful implementation of CRM strategy will provide many great benefits to the company, such as increasing sales through better market segmentation, customizing products and services, obtaining higher quality products, gaining access to information and employee satisfaction, and ensuring long-lasting customer retention and loyalty. CRM strategy is widely adopted in many industries especially in the hospitality industry. For example, hotels used CRM software for recording guest profiling and their preferences, then the hotels can send customized email newsletters or special offers to guests. Customer relationship management can be used to personalize individual experiences that will give customers a feeling that they are fully taken care of. In addition, CRM enables organizations to adapt their products and services to reach customer satisfaction. Then, satisfied customers can turn to be returning customers or loyalty customers (Mohammed & Rashid, 2012; Pechruttanamunee & Assenov, 2008; Yim, Anderson & Swaminathan, 2004).

Today, customers mostly use technology innovation such as social media to gather information and compare the alternatives about the places to go, eat and stay. A customer seems to rely on comments and reviews which provided by other travelers who used to travel those places. The hospitality firms must do everything to survive in globally competitive environment. Social media has been used by hotels as marketing tool for promoting and connecting with guests which it can increase brand awareness among customers (Assenov & Khurana, 2012). While hotels try to reach new customers, they have to retain loyal and profitable customers in the same time. The innovative technique that hotels use to gain more customers directly, enhance more effective communication with customers, increase satisfaction and customer loyalty is Electronic Relationship Management (eCRM) which uses web technologies to support customer relationship management system (Pechruttanamunee & Assenov, 2008).

eCRM refers to a business strategy which is supported by web technologies that allows organizations to engage customers by offering more options and customized services to increase satisfaction and customer loyalty. eCRM provides companies with the means to implement interactive, personalized, and relevant communication with customers through both electronic and traditional channels. Most of hotels used CRM software for recording guest profiling and their preferences, then the hotels can send customized email newsletters or special

offers to guests and they hope that guests may stay frequently at the hotels (Milović, 2012; Pechruttanamunee & Assenov, 2008).

Mobile Customer Relationship Management

Despite the potential of eCRM to provide value for customers, customers are still expecting more and more individual attention. The latest technique that hospitality firms adopt and use to manage the relationship with customers is Mobile Customer Relationship Management (Chan, 2012). Mobile Customer Relationship Management (mCRM) is both one-way and interactive communication between firms and their customers that is conducted through mobile devices for building and maintaining a relationship. It is considered as powerful channel to reach customers because it allows personalization and interactivity of the content and the context of message (Sinisalo et al., 2005).

Unlike other CRM channels, the key characteristics of mobile technology, which are immediacy, ubiquity and message personalization, has allowed organizations to reach their customers directly anytime and anywhere. Furthermore, mobile devices have shown to be very personal devices with a large reach, low costs, immediate feedback, accessibility and localization possibilities which firms can use to build and maintain the relationships with customers (Camponovo, Pigneur, Rangone & Renga, 2005).

With previously mentioned characteristics of the mobile medium, many hotels start to use mCRM strategies for building trust, enhancing satisfaction, establishing and improving relationships with customers. mCRM allows hotels to directly contact with the guests, which also be useful when immediate follow up and feedback are require to manage these relationships. In addition, hotels can transfer personalized information and direct marketing activities to their customers immediately, thus making customer relationships is easier to manage through mobile devices. For example, Starwood's W Hotels launched short messaging service (SMS) text messaging application where guests can subscribe to receive reminder text messages during stay at the hotels to enhance customer service and experience. (Chan, 2012; Kuan-Yu, Yu-Lun & Chia-Chun, 2012).

In summary, although mobile customer relationship management provided companies with a new channel to connect with their consumers, companies should also integrate mCRM along with traditional CRM strategies to deliver greater customer relationship

management service because when customers are offered with more ways to communicate with organizations, they can choose the medium that they prefer to interact with the companies (Sinisalo et al., 2005).

This research will discuss how hotels in Phuket use mobile applications as their marketing communications and whether they are really effective.

2.1.3 Marketing communication effectiveness

As indicated earlier, many organizations start to use mobile device and its application to communicate and deliver the messages to their customers. After sending the message, the marketers must research and evaluate its effect on the target audience. It involves the process of collecting feedback by asking the customers whether they remember the message, how they felt about the message, their attitudes toward the product and company, and measure customer behavior resulting from the message such as how many people bought a product, talked to others about it, visited the store, etc. (Kotler & Armstrong, 2011).

The effectiveness of marketing communications has been measured separately for each marketing communication tool with various techniques such as balanced scorecard (BSC), customer lifetime value, return on investment, recall test, and etc. (Belch & Belch, 2003; Griniute, 2012). However, some of these techniques are not appropriate to measure the effectiveness of new marketing communications' tool such as social media, email marketing or mobile marketing.

Assenov and Khurana (2012) conducted the research related to the measurement of using social media as marketing communication tool in the hotel industry and found that different hotels have different ways to measure social media marketing effectiveness. The simplest technique is distributing questionnaire to the guests during check-in to learn more about how the customer found out about the hotels. Some hotels have arranged the cocktail party to enable customers to talk and share their experiences to the managers. Furthermore, the Click-through rate (the percentage of people who actually click on the hotel's page), Bounce rate (the percentage of single page visit or visits in which the persons left the site from the entrance page) and Like rate (referring to the like button on Facebook page), number of member on hotel social media site as well as numbers of comments and responses on Facebook pages and Twitter are the techniques that the hotels use to measure the effectiveness of social media marketing. On the other hand, return on investment (ROI) has been employed for measuring marketing communication

effectiveness in terms of financial measurement when the hotel has invested in marketing communication programs. Milovic (2012) also mentioned that the hotels can evaluate whether their website and CRM system are effective or not from the result of number of reservations, customer loyalty and ROI value.

The growth in mobile marketing spending and consumer usage requires the reliable measurement to assess its effectiveness and understand the audience. Radar Research (2011) examined the current state of mobile measurement and summarized that the landscape for web measurement on computers can adapt to mobile platforms. For mobile website, many of metrics that can be measured are similar to the website on personal computer such as page views and time spent. The effectiveness of branded mobile applications can be measured by common metrics which include are number of downloads and installation, frequency of use, and time spent. For text messaging through mobile device is typically evaluated by open rate and response rate.

According to Kuan-Yu, Yu-Lun and Chia-Chun (2012), there is no standard measurement to determine the outcomes in using the mobile application as marketing communication tool because using mobile applications is a relatively new development in hotel marketing and mobile application tracking tools and surveys are limited. One way to evaluate marketing offers via mobile devices is looking into the extent and characteristics of customer responses. Customer adoption and use of mobile application is a determinant of its success as a marketing tool. As a successful tool, its adoption and use should translate into bookings and revenue. The effectiveness of using mobile application as IMC tool can measure from the number of hotel apps downloaded, the number of hotel reservations made through the mobile application, and the revenue attributes to the mobile applications.

Measuring the marketing communication effectiveness is really difficult as marketing communications are intangible attributes and it is hard to measure in form of tangible returns. In addition, there is very limited study on measuring the effectiveness of the marketing communications and these findings are not applicable in the scope of this study as mobile marketing and its applications are the new marketing communications' tool. Therefore, this research decided to apply the methodology from the study of Assenov and Khurana (2012) by asking the marketing managers that how they evaluate their marketing communications via mobile applications. Although this method can't be measured the effectiveness of marketing

communication via mobile applications correctly but the qualitative evaluation can be estimated based on interviewing the managers on how they measure their marketing effectiveness and quantitative result can be evaluated through surveying consumers' pre-purchase and post trip behavior. This will identify the degree of effectiveness of marketing communication from both hotel and customer perspective.

This study will investigate and analyze on the effectiveness of marketing communication through mobile applications.

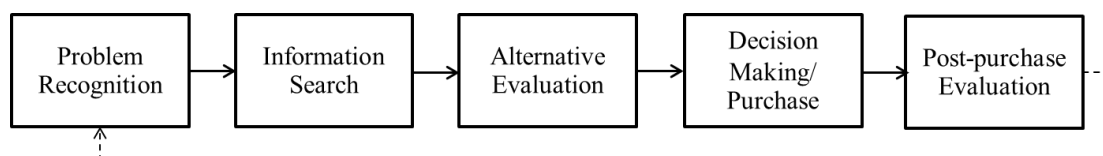
2.2 Consumer behavior and decision- making process in the hotel industry

As one definition of marketing is referred to satisfying consumer's needs, the marketers therefore try to understand how consumers behave in order to optimize the effectiveness and efficiency of marketing activities. A consumer is referred to the person who identifies a need or desire, engages himself in physical activities of evaluating, acquiring, using and disposing of goods and services to satisfy their needs and desires (Noel, 2009). Consumer is a broader term which emphasizes not only the actual buyer or customer who actually purchases a product or service from a particular organization or a shop, but also its users who consumes that product or service such as a product is purchased by the head of family and used by the whole family (Khan, 2004).

It can be seen that consumer is the most important person in business's world as the business revolves around the consumer then the study of consumer behavior becomes a necessity. Solomon (2004) claimed that the marketers try to create the products and services that will provide the desired benefits and satisfy consumer's need. Once a need has been activated, consumers have a state of tension that drives them to attempt to reduce or eliminate the need (as cited in Stanciu & Tichindelean, 2010). Consumer behavior can be defined as the behavior that consumers display in acquiring, evaluating, consuming and disposing of goods and services, activities, ideas in order to fulfill their needs and desires. Consumer behavior is not just attend the buying of goods and services but, the process actually starts before the goods have been acquired or bought when a process of buying starts in consumers' minds, then leads to the finding of alternatives, following by a process of decision-making for purchase and using the goods, and then the post-purchase behavior occurs (Khan, 2004; Kotler & Armstrong, 2011; Noel, 2009).

Generally, the consumer decision-making process consists of five stages which can be described as figure 2.1:

Figure 2. 1 The consumer decision-making process



Source: Kotler and Armstrong (2011)

1. *Problem recognition*: the first stage that consumers identify a problem or they have an existing need or desire that is unfulfilled.

2. *Information search*: once the problem is recognized, information search is undertaken to find an effective solution. Consumers can search information from several sources such as their previous experiences, family, friends, or neighbors, mass media, websites, etc. (Khan, 2004).

3 *Alternative evaluation*: when the problem has been identified and a search for desirable alternatives has been completed, the consumer will evaluate the alternatives and make a decision based on their beliefs, attitudes, and possible options.

4.*Decision making and purchase*: the consumption stage that consumer make the decision then purchase the products or services which involves where to buy, when to buy and from whom to buy or do not buy.

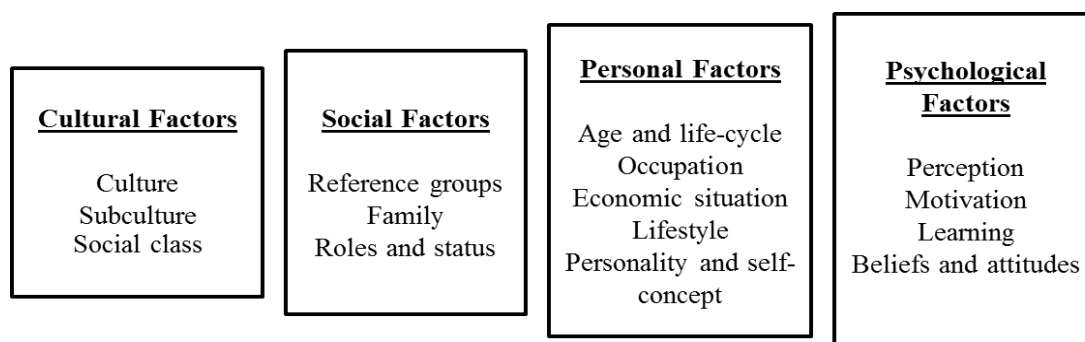
5. *Post-purchase evaluation*: the final stage in the consumption process that consumers evaluate and decide if the outcome was satisfaction or dissatisfaction. This stage is very important as the consumers may share their both good and bad experiences by the word of mouth to others. So, many firms provide the after sales service to follow up and ensure that consumer has satisfied with their products or services (Noel, 2009).

However, some of the stages can be skipped when consumers make a decision to purchase depending on the type of purchases.

Factors affecting consumer behavior

Consumers are influenced in their decision-making process by many factors. According to Kotler and Armstrong (2011), those factors can be grouped into four aspects as figure 2.2.

Figure 2.2 Factors affecting consumer behavior



Source: Adapted from Kotler and Armstrong (2011)

1. Cultural factors

Consumer behavior is deeply influenced by cultural factors which comprises of set of values and beliefs of a particular community or group individuals. These factors are often inherent in our values and decision processes. Cultural factors include consumer's culture, subculture and social class (Durmaz, Celik & Oruc, 2011).

Culture: the most basic cause of a person's wants and behavior as every group or society has a culture and it influences on consumer buying behavior. It is a complex of beliefs of human societies, their roles, their behavior, their values, traditions, customs and traditions.

Subculture: each culture consists of smaller groups of people which they have own cultures based on their common life experiences and situations. Many subcultures such as nationalities, religions, and racial groups are important for market segmentation which marketers can design the products and customized marketing programs to meet their needs.

Social class: every society possesses some forms of social class which is important to the marketers because each social class have its own patterns of buying behavior. So, marketing activities could be tailored according to different social classes. Social class is not only

determined by income but there are various other factors as well such as wealth, education, occupation, etc (Bowie & Buttle, 2004).

2. Social factors

Social Factors are the external factors that also influence a consumer's behavior. The important social factors are:

Reference groups: have a significant impact on consumption of products and services as the reference groups are the sets of people with whom individual consumers compare themselves in developing their own attitudes and behaviors. Reference groups can impact consumer to face new behaviors and lifestyles, influence consumers' attitudes and interests, and create compulsive conditions in the consumer's product and brand choices. Reference groups also include opinion leader who influences other because of his special skill, knowledge or other characteristics (Noel, 2009).

Family: consumer buying behavior is strongly influenced by family members. Many marketers try to extensively research on the roles and influence of husband, wife and children in decision-making process because the family is the most important consumer buying organization society.

Roles and status: each person has different roles and status in the society depending upon the groups, clubs, family, organization, etc. to which he or she belongs. People usually choose products appropriate to their roles and status.

3. Personal factors

Personal factors relate to personal characteristics such as buyer's age and life-cycle stage, occupation, economic situation, lifestyle, and personality and self-concept (Bowie & Buttle, 2004).

Age and life-cycle stage: the consumers change the purchase of goods and services over their lifetimes. Moreover, buying behavior also shaped by family life-cycle which consists of different stages such young singles, married couples, etc.

Occupation: the person's occupation has significant impact on his buying behavior. For example, blue-collar workers tend to buy inexpensive work clothes, whereas the managers will buy the expensive, well-cutting business suits.

Economic situation: economic situation relates to consumer's income and savings. Consumer with high income will mostly buy expensive products or services.

Lifestyle: lifestyle refers to the way an individual lives in a society and is expressed by the things in his or her environment. It is determined by customer interests, opinions, activities, etc. and shapes consumer's whole pattern of acting and interacting.

Personality and self-concept: every individual has his or her own characteristic personality traits which reflect in his or her buying behavior.

4. Psychological factors

Four important psychological factors that affect the consumer buying behavior are perception, motivation, learning, beliefs and attitudes.

Perception: what an individual thinks about a particular product or service is his or her perception. Perception is the process which people select, organize and interpret information to produce a meaningful experience. There are three different perceptual processes which are selective attention, selective distortion and selective retention. *Selective attention* refers to the process that people pay attention to information which relevant to their wants, whereas *selective distortion* is the tendency of people to perceive information in a way which would be in line to their existing thoughts and beliefs. Finally, *selective retention* can be describes that consumers are likely to remember only information which would be useful to them (Fratu, 2011).

Motivation: person's buying decisions are affected by different needs such as physiological needs, biological needs, social needs, etc. and those needs become motives which directly press the person to seek products or services to satisfy the needs.

Learning: learning about products and services can come through the consumer's experiences which occur after he or she uses those products and services.

Beliefs and attitudes: beliefs and attitudes play an important role in influencing the consumer buying decision process. Individuals create a certain image of every product or service available in the market. Every brand has an image attached to it, also called its brand image. Consumers purchase products or services based on their opinions which they form towards a particular product or service (Kotler and Armstrong, 2011; Noel, 2009).

Consumer behavior in hospitality and tourism

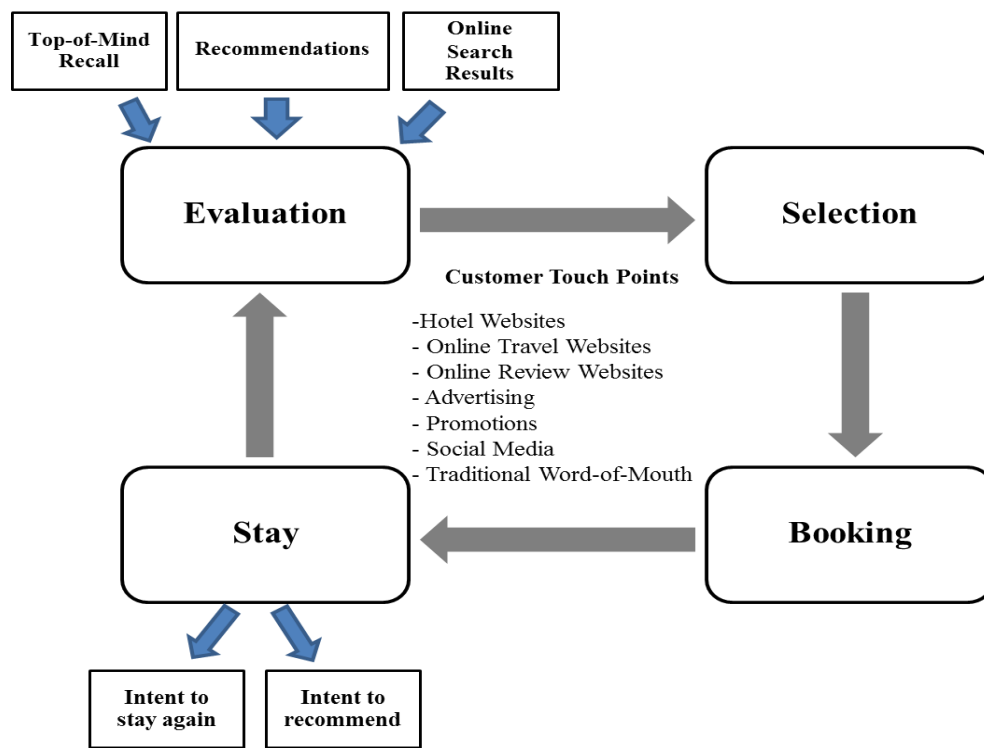
In contrast to many consumer goods and services, the purchase decision by consumers in hospitality and tourism fields is based on the emotion, discretionary time and their income. Scholl (1977) quoted in Swarbrooke and Horner (1999), mentioned that purchase decisions in hospitality and tourism fields are the result of the interaction of four elements as follows:

- Travel stimuli, including guide books, advertising and promotion, and reports from other travellers.
- Personal determinants of travellers' behaviors such as personality factors, attitudes and values
- External variables, including destination images, confidence in travel intermediaries and agents, cost and time.
- Characteristics and features of service destination such as the range of attractions and amenities offered, and the perceived link between cost and value.

Mathieson and Wall (1982) summarized that the travel buying decision process starts when consumers recognize their needs or travel desire then they collect information for alternatives evaluation. Most of consumers will 'shop around' before choosing the destination to visit. After the decision was made, the consumers find more information relates their destinations such as where to stay, eat, shop, and visit. In this step, the hotel selection and booking processes is occurred. The consumer will search for the various hotels in destination place for staying, compare the alternative hotels, choose the hotel that meet their needs and then make the booking. The last step of travel buying decision process is the outcome evaluation after the trip was finished and sharing their experiences to others.

HawkPartners (2012) proposed the hotel evaluation and selection process framework (figure 2.3) which has become more dynamic and cyclical. The process occurs through different touch points and feedback loops influencing and reinforcing each other. Customers firstly evaluate the hotels from their recall, the recommendations from others, or the results from online searching. Then, they select the hotel from their choices and make the booking and follow by the staying process which customers will evaluate the outcome to stay again or to recommend to others.

Figure 2.3 The hotel evaluation and selection process framework



Source: HawkPartners (2012)

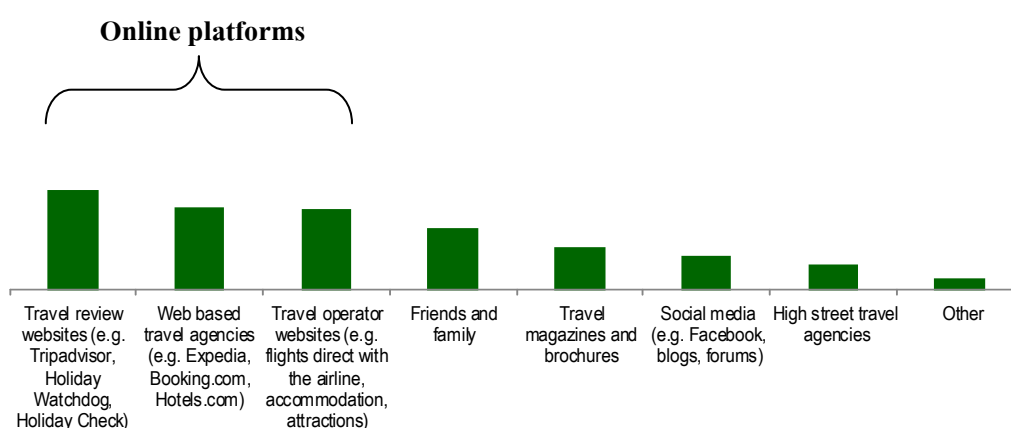
As the consumption of hospitality and tourism products involves pre- and post-consumption stages in addition to the actual trip which can spread over several weeks or months, information search is the significant part of the decision-making process in hospitality and tourism. Many studies found consumers would like to access the information in every step of decision-making process. So, the development of new and more powerful information and communication technologies which allow consumer to access the information anytime and anywhere are playing the vital role in consumer purchase decision (Buhalis & Law, 2008; Gretzel, Fesenmaier, & O’Leary, 2006).

The emergence of new information and communication technologies has dramatically changed the consumer behavior in the hospitality and tourism. The new consumers of tourism products and services are more informed, more involved, and more sophisticated. The study from HawkPartners (2012) found that the way travelers evaluate, research, and book hotels has also changed over the past decade. In the past, when travelers needed to find a hotel; whether for a

business or leisure purpose trip, they had a limited number of ways to do it. They relied on recommendations from friends, family, hotel guide books or hotel's website. Then, they picked up the phone and called a travel agent or hotels directly. Now, hotel guests have many more sources available to help inform their evaluation process. They can compare price and availability immediately via online travel sites such as Expedia, read users' reviews on sites like TripAdvisor, and see where their friends prefer to stay on social media sites like Facebook and Twitter.

The survey from TripAdvisor (2013) also indicated that the consumer behavior in hospitality and tourism has changed. Consumers are more planning and booking in short holidays on the spur of the moment. Most people start to plan for the trip and booking everything relatively close to their departure date, some of them just book flights and arrange everything else at the destination because ICT technologies and Internet allow them to access the information and do the transactions every time and everywhere. Online platforms were the main source of travel information when the respondents plan and research the trip (figure 2.4), and most of them booked their accommodation through web based travel agencies and accommodation provider's website.

Figure 2.4 Travel information sources

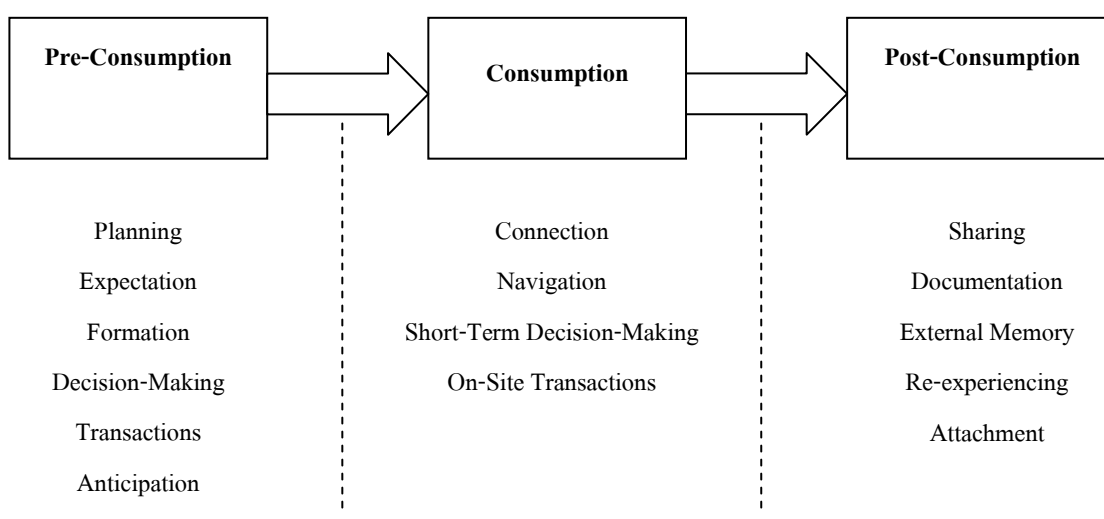


Source: Adapted from TripAdvisor (2013)

In addition, the survey also indicated that online sources are the influencer in decision making process as many consumers claimed that they rely on other travellers' reviews on travel review websites when they looked for accommodation. During the trip, people connected to the Internet to upload photos, update status to their social networks to keep their friends and family up-to-date. After the trip, Internet technologies have been used for sharing their travel experiences by writing the reviews through online channel.

Gretzel, Fesenmaier and O'Leary (2006) described that Internet technologies are used in the pre-trip to obtain information necessary for planning trips, formulate correct expectations, evaluate, compare, and select alternatives, as well as to communicate with the providers of tourism products and services to prepare or execute transactions. During trip, the functions served by these technologies are more related to being connected and obtaining detailed information relevant to a specific place and moment in time. In the post trip phase, Internet technologies are used for sharing, documenting, reliving tourism experiences through storytelling, as well as establishing close relationships with the places, attractions, or product/service providers. Figure 2.5 summarizes the particular communication and information needs in the three stage of tourism consumption.

Figure 2.5 Communication and information needs in the tourism consumption stage



Source: Gretzel, Fesenmaier and O'Leary (2006)

Buhalis and Law (2008) summarized that the technological innovation is the most influential factor that has changed travellers' behavior. If the hospitality and tourism organizations have more knowledge about these technologies, they can develop and implement proper strategies to meet customer satisfaction and increase customer loyalty. One of the key innovative technologies that affect travellers' behavior and support organizations in their marketing and communications with consumers is mobile and wireless technologies.

How mobile applications influence consumers in the hotel industry

The way consumers research, evaluate, and book hotels has also changed dramatically over the past decade. Customers have communicated with the hotels through the intermediaries which include traditional travel agents and online travel agents, and through hotel directly by phone call, email, and hotel website (Assenov and Khurana, 2012; HawkPartners, 2012). While all these methods are still valid, the development of mobile technology has turned mobile devices such as smartphones and tablets into full capacity and Internet-enabled computers and mobile devices have emerged as an important tool supporting customers before, during and after trip. Mobile devices are becoming the important travel planning and hotel distribution channel for hotel guests. Customers can research, evaluate, book, and review the hotels via their mobile devices (HawkPartners, 2012; TripAdvisor, 2013).

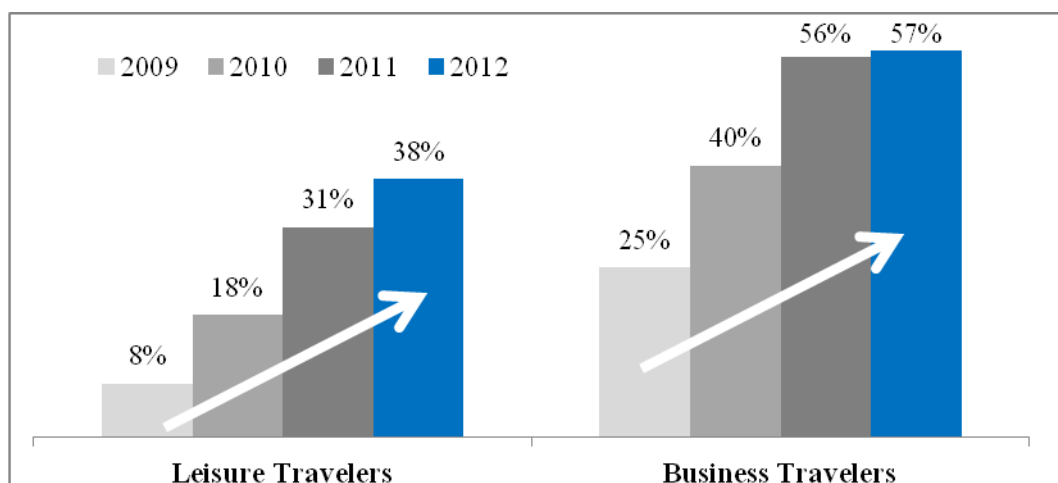
ICT developments have increased the use of wireless applications and devices which include mobile devices. The development of mobile network allowed the communication of voice, data, and multimedia information over mobile devices. The survey from Accenture (2012) indicated that mobile devices are rapidly becoming the primary medium to access the Internet for consumers. In fact, activities or transactions on mobile Internet such as receiving and sending e-mail, connecting online communities or instant messaging have become so much a part of consumer's daily life. In the commerce world, the consumers are using the mobile applications to connect with brands, purchase products or services.

In the hospitality and tourism industry, the proliferation of different mobile devices, such as Personal Digital Assistants (PDAs), and 3G mobile phone with Global Positioning Systems (GPSs) enable travellers to retrieve travel related information any time and without geographic constraints. Travellers can book hotel rooms, air-tickets, and car rentals, retrieve information about transportation schedules, travel guides for destinations, and dining guides by

using mobile applications. The studies found that online ticketing, reservations for flight and hotels or theater tickets are part of the most attractive mobile applications, since the two major functions of mobile devices which are mobility and broad reach allow consumers to business and are reached via mobile devices at anytime and anywhere (Bigne, Ruiz, & Sanz, 2005; Buhalis & Law, 2008; Oh, Lehto, & Park, 2009; Wang, Park, & Fesenmaier, 2011).

Google and Ipsos MediaCT (2012) revealed that 38% of leisure travelers and 57% of business travelers use a mobile device to access the Internet for travel information in 2012. Figure 2.6 illustrated the percentage of travelers who use a mobile device from 2009 to 2012 which increased every year. It showed that more leisure and business travelers used mobile for access travel-related information when they planned.

Figure 2.6 Percentage of travelers who use a mobile device to access internet for travel information



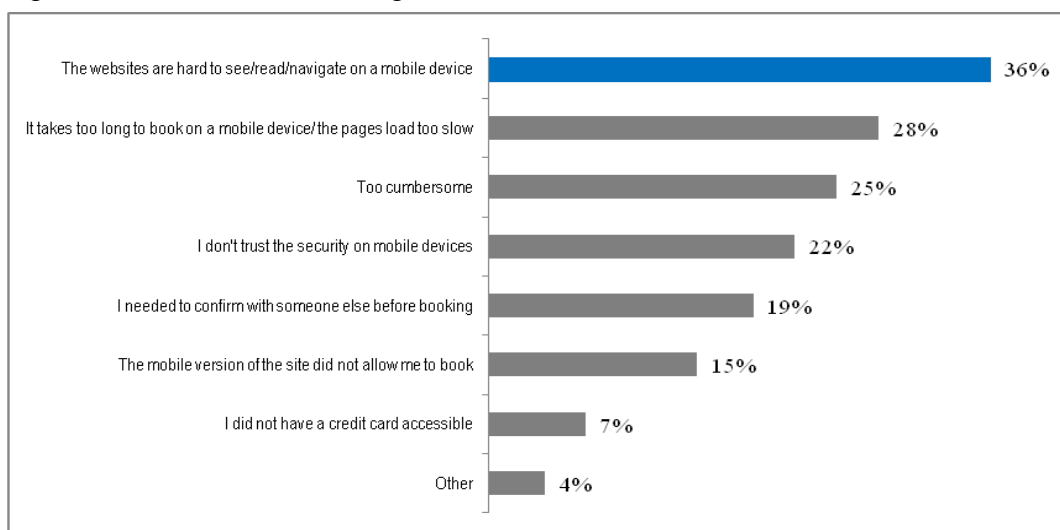
Source: Google and Ipsos MediaCT (2012)

Starkov (2013) described that many travellers start their research and information gathering through their mobile devices such as smartphones or tablets, and later continued through desktops, laptops at the office or at home. Meanwhile, some travellers use personal computers in an early stage of trip planning to view general information about their destinations such as dining, attraction, or events and then mobile devices will be used in later stages of trip planning for searching more specific and detailed information such as the location of accommodations or nightlife activities.

According to TripAdvisor (2013), many people connected to the Internet through their mobile, upload photos of a holiday to social networks and update their social network status to keep their friends and family up-to-date. Mobile applications has been used for ‘checked in’ to a location, booking accommodation, attraction, tour, redeeming a special offers such as discount coupon, writing the online reviews about their accommodation and travel experiences. Consumer also downloaded some specific mobile applications to a certain destination to get detailed information such as travel guides, weather forecasts, find attractions or activities nearby. Furthermore, the survey results revealed that consumer want to stay connected even they are on holidays. Most of them took an average of four devices with them on a trip. 72% of respondents indicated that it is useful that hotels allow them to book accommodation through mobile devices and they would like hotels to engage with them through mobile devices.

Although many consumers were satisfied with using their mobile devices to plan and book the trip, some of them don’t use mobile devices for booking travel because of many reasons. For example, customers found it is difficult to conduct transaction processes and enter in data which are crucial elements for online travel booking, the page of booking process on a mobile device loaded too slowly, and some customers don’t trust the security on mobile devices etc. (Adobe, 2012; Google & Ipsos MediaCT, 2012). Figure 2.7 summarized the main reasons that consumers don’t use mobile devices for booking travel.

Figure 2.7 Reasons for not booking travel on a mobile device



Source: Google and Ipsos MediaCT (2012)

It can be concluded that the use of mobile applications in hospitality and tourism are increased continuously. More and more travelers are turning to their mobile devices not only to research accommodation and travel options, but to book and communicate room preferences directly with the hotel. So, the study relates to this topic is important and this paper will investigate and analyze further how mobile applications influences consumer behavior in hotel decision making process and the reason that consumers don't use mobile devices for booking hotel.

2.3 Mobile Marketing

With the explosive growth of the mobile devices and the development of wireless technologies, mobile marketing have become increasingly significant to many businesses. The mobile phone system has been a new communication channel which was becoming personalized and was recognized as an outstanding interactive marketing tool that the companies can use to do several marketing activities with customer (Bigne, Ruiz, & Sanz, 2005). Mobile marketing involves two- or multi-way communication and promotion of an offer between a firm and its customers using a mobile medium, device or technology. The term of mobile device has been referred to handheld Internet access devices which are mobile phone, smartphone, digital music player, tablet, laptop, etc. (Shankar, Venkatesh, Hofacker, & Naik, 2010).

Mobile marketing is one of the new digital direct marketing technologies; many marketers have viewed mobile devices as the next big direct marketing medium. Mobile devices have been integrated into direct marketing strategy of many companies. The advertising industry has increasingly launched campaigns using the mobile phone as a means of conveying commercial contents to customers (Bauer, Barnes, Reichardt & Neumann, 2005; Kotler & Armstrong, 2011). A recent study of mobile marketing expenditures in United States (figure 2.8) showed that spending on mobile marketing, which includes mobile advertising, mobile customer-relationship management and mobile direct-response marketing on non-mobile media, is increasing every year. At the end of 2013, the spending will reach \$10.46 billion and it will increase to \$20 billion in 2015 (eMarketer, 2013).

Figure 2.8 US mobile marketing spending 2010-2015

US Mobile Marketing Spending, by Type, 2010-2015						
<i>millions</i>						
	2010	2011	2012	2013	2014	2015
Mobile media advertising	\$991	\$1,743	\$3,060	\$4,871	\$7,078	\$9,207
Mobile CRM	\$1,248	\$1,878	\$2,964	\$4,273	\$5,910	\$7,686
Mobile-enhanced traditional advertising*	\$166	\$336	\$669	\$1,312	\$2,174	\$2,912
Total	\$2,405	\$3,957	\$6,693	\$10,456	\$15,162	\$19,806

*Note: numbers may not add up to total due to rounding; *nonmobile advertising enhanced with direct response mobile call-to-action*
Source: Mobile Marketing Association (MMA) and mLightenment, "Mobile Marketing Economic Impact Study" in partnership with IHS Global Insight, May 9, 2013

Source: eMarketer (2013)

According to Sinisalo, Salo, Leppäniemi and Karjaluoto (2005), the Mobile Marketing Association (MMA) defined mobile marketing as a set of practices that enables organizations to communicate and engage with their customers in an interactive and relevant approach through any mobile device or network. It is any form of marketing, advertising or sales promotion activity aimed at consumers and conducted over a mobile channel. Mobile marketing can be used for three different purposes as follows:

1. *Customer acquisition*: mobile marketing can be used to acquire new customers by using direct response strategies such as promotions and competitions.

2. *Customer relationship management*: customer relationship management is a relatively new area for mobile marketing, where it is used as a tool for building and improving relationships with existing customers by enhancing brand awareness and creating ongoing dialogue. Strategies in mCRM involve loyalty, customer retention schemes, and sales support programs.

3. *Driving sales*: mobile marketing can also be effective in stimulating micropayments initiated and fulfilled using the handset, for example buying a banner in some applications to promote a new product or service. Campaigns for more expensive products and services are focused on generating sales leads, such as vouchers that encourage consumers to go to a physical shop or visit a website.

Shankar and Balasubramanian (2009) summarized the differences between mass marketing and mobile marketing which has been showed in Table 2.2. Mass marketing, which typically conducted through mass media such as magazines and television address a broad range of existing and potential customers. In contrast, mobile marketing is restricted to owners of mobile devices especially who opt-in to receive communications from marketers. Mobile marketing can deliver in forms of text, voice, and video but in limited screen size of mobile device and speed capacity. However, the communication through a mobile device can also enable more frequent interactions between the marketer and the customer. Furthermore, mobile marketing can help the companies more accurately target customers at a specific location and time, better measure and track consumer response, and have lower unit costs of communication with the target audience than those associated with mass marketing.

Table 2.2 Differences between mass marketing and mobile marketing

Dimension	Mass marketing	Mobile marketing
Scope of audience	All existing and potential users of the product	Existing and potential product users owning mobile devices who opt-in to receive communication
Potential type of communication	Text, voice, and video in rich formats	Text, voice, and video in very limited visual space with limitations in transmission speed
Typical direction of communication	Marketer-to-consumer	Interactive between marketer and consumer
Ability to deliver message by target location	Low	High
Ability to measure and track response	Low	High
Consumer targetability	Low	Medium
Cost per target audience	High	Low

Source: Shankar and Balasubramanian (2009)

According to Smutkupt, Krairit and Esichaikul (2010), the key unique characteristics of mobile device that makes mobile marketing has becoming the potential marketing strategies are:

Ubiquity: the mobile device is able to be everywhere at once. So, users can receive information and perform transactions wherever they are and whenever they want.

Personalization: the mobile device is highly personal, rarely used by anyone except its owner. So, mobile devices share the closet connection with users and this connection allows businesses to share highly personalized information with users.

Two-way communication: mobile devices allow for greater two-way communication than any other tool because their connectivity always on and they takes short times to set up.

Localization: it is the ability to identify the geographical position of a mobile user by locating the mobile device through various location-based technologies such as GPS. Marketers can offer location-specific products or services to potential customers with location-based service technology in mobile device.

The potential of mobile marketing has been recognized by organizations a few years ago. For example, the model of retailing, which traditionally based on consumers entering the retailing environment, making location the primary source of competitive advantage has been changed by mobile marketing that retailers can enter the consumer's environment and provide services through the mobile device anytime and anywhere. Furthermore, the mobile device is an ideal supplementary channel for virtual e-tailing as well as physical retailing. Retailers can push sales promotions or fulfillment updates to consumers through the mobile channel for the consumers to access instantly (Shankar, Venkatesh, Hofacker & Naik, 2010).

Mobile devices have brought many changes to the hospitality industry. More and more travelers have used the mobile web browser application for searching information about places to go, accommodation, flight, or where to eat and planning the transactions through their mobile devices anytime and anywhere (TripAdvisor, 2013). Therefore, hospitality practitioners have also adopted mobile marketing. For example, car rental services, airlines, and restaurants have started to use mobile marketing to attract their target customers by offering their own mobile applications that allows customers to book the service (Kwon, Bae, & Blum, 2013). The hotel marketers can no longer ignore the importance of mobile channel if they want to reach their customers. Kwon, Bae and Blum (2013) have suggested that hotel companies should responded this trend by using

mobile application in several types to be the marketing tool to reach their potential customers and establish a relationship directly. Some hotels have offered mobile hotel reservation (MHR) which is the system that enables worldwide customers to reserve hotel room through the use of internet-enabled mobile devices (Wang & Wang, 2010). So, this indicates that many businesses perceived the mobile devices as one of their major channels to do the marketing with their target customers.

Mobile marketing is fast growing and increasingly popular. If businesses can focus on the right direction of mobile marketing and implement it on the right way, mobile channel will be one of the effective marketing strategies which bring many great benefits to organizations.

2.3.1 Challenges for the marketers with the emergence of mobile marketing

The new technologies have created both challenges and opportunities for the marketers. Since mobile technology has been on the rise for a decade, the era of mobile marketing has been coming. Mobile devices which provide more mobility and accessibility than other channels have emerged as an important tool for both consumers and businesses and mobile marketing has become increasingly adopted as marketing strategy in many industries (Chan, 2012; Wang & Wang, 2010).

Although the main advantage of mobile marketing is its one-to-one communication ability, marketing communication in mobile channel may be challenging because of the personal nature of the mobile channel. From a consumer perspective, mobile channel is perceived to be more privacy than traditional and email channels. Some customers might not accept any offer or information from companies through mobile channel because they have perceived disturbance from this kind of marketing. Despite increasing frequency of use and increased functionality of mobile devices in the smart phone era, consumers still have had negative attitudes toward mobile marketing communications. Some customers have viewed mobile marketing campaigns from companies as disturbing, and often delete them when received. Even these mobile marketing campaigns regarding incentives such as discounts and gifts are also unwelcome except they sent from the trust companies (Watson, McCarthy & Rowley, 2013). This indicates that consumer's attitude and acceptance are the most significant factors in developing mobile marketing. Marketers have to be very careful to the customers' opinion, permission when creating mobile marketing campaigns (Heinonen & Strandvik, 2003).

According to Chan (2012), the advances in technology are challenged by technology itself. Since there are only limited amounts of Central Processing Unit (CPU) power and memory available on mobile platforms, it is more difficult to design and develop mobile marketing and its tool in comparison to desktop computer. With the many different providers of mobile devices and their individual mobile platforms, marketers have challenged to create and develop marketing campaigns that will run efficiently and smoothly on all types of mobile devices. Moreover, launching or updating of some mobile marketing campaigns require internet connectivity and location-based service in order to process information. Consumers might feel it troublesome to keep up with mobile marketing that are always developing and relearn when new mobile technology is released.

Perceived risk is another factor that influences consumers in doing transactions via mobile devices. Since mobile transactions were conducted through wireless network that might or might not be secured in the eyes of the consumers, they might perceive that any information transferred such as financial and personal location through this channel will be exposed to others, especially when transferred through an unsecured wireless network. In order to reduce perceived risk, marketers have to provide secure methods in doing any transactions to make customers have more trust in mobile marketing (Chan, 2012; Wang & Wang, 2010)

The success of mobile marketing also depends on the content of message that should be relevant to customer's need or interest. Some customers may have high expectation for the relevance of marketing communication messages and this make the disappointment greater when they get undesired messages. Marketers have to create messages that more personal and match customer's interest when delivering it through mobile channel. Another factor that marketers have to concern is mobile infrastructure because it has an impact to mobile marketing strategies development (Heinonen & Strandvik, 2003; Scharl, Dickinger & Murphy, 2005; Shankar & Balasubramanian, 2009).

Sinisalo, Salo, Leppäniemi and Karjaluoto (2005) suggested that mobile marketing should be integrated to the company's marketing communications by examining different options, whether to undertake a new series of campaigns exclusively based on the mobile channel or whether to the integration mobile channel to existing marketing channels. Then, the marketing communicators can create a mobile marketing campaign, which has the same basic principles as

any other traditional marketing campaign, by starting from identifying the target audience, determining communication objectives, designing message, choosing the media through which to send the message, and collecting feedback to measure the promotion's results.

Shankar and Balasubramanian (2009) added that mobile marketers need to balance the advantages and disadvantages of each method when selecting the mobile marketing methods to use for a campaign. Furthermore, mobile marketing should be integrated to the company's marketing communications and the marketers need to evaluate the effectiveness of each mobile marketing campaign in order to develop companies' marketing strategies in the future to deliver the right message to customers.

2.4 Mobile Applications

2.4.1 Definition of mobile application

As the mobile device has become one of the most important electronic devices in today's world, many people always use them as the medium to access the internet and do the transaction such as payment, reservation, finding information, and etc. Cortimiglia, Ghezzi and Renga (2011) mentioned that mobile phones became popular since the diffusion of mobile networks in the 1990s. After that, many features that enhanced usability and consumer value such as push e-mail, internet-access capabilities, color displays, digital cameras, and etc. were added to mobile phones. The latest-generation mobile phones are portable multimedia computing devices that users will be able to enrich and customize these devices with mobile applications. Therefore, it was the big opportunity for providers to create and develop the mobile application for their brands, products or services (Chan, 2012; Kwon, Bae & Blum, 2013).

The mobile application, also known as mobile app, is new information communication technology artifact that helps users to access, navigate on and use the internet on their mobile devices. Mobile applications refer to the software or program that can be installed and executed in mobile devices (mobile phone, tablet, e-reader, or other portable device) and has an operating system that supports stand-alone software. Mobile applications, such as SMS/ MMS clients, browsers and music players, can pre-install on the mobile device as well as can be downloaded by users over the internet from application distribution platforms such as mobile app stores and then install them themselves (Mobile Marketing Association, 2008; Wang, Liao and Yang, 2013).

Mobile applications are a rapidly developing segment of the global mobile market. The survey conducted by Canalys (2013) found that there are over 800,000 applications available in worldwide mobile app stores. There were over 45 billion downloads from worldwide mobile app stores in 2012 (Gartner, 2012). Furthermore, the survey from Accenture (2012) identified that mobile applications are one of the primary drivers of mobile Internet use because mobile applications are extremely convenient gateway to the Internet. Users have changing their lifestyle through using mobile applications as well as mobile applications make their life more convenient and enjoyable. This can be the indicative of consumers' acceptance of mobile applications. Therefore, it is the opportunity for many businesses and marketers to use this tool for direct communication with consumers and mobile applications are being seen as a great opportunity of new revenue source in the mobile communication sector (Wang, Liao and Yang, 2013).

According to Mobile Marketing Association (2008), the main types of mobile applications can be classified into 6 types based on their functions and characteristics (Table 1.3).

Table 2.3 The main types of mobile applications

Mobile Application Types	
Communications:	Games:
- E-mail clients	- Puzzle/ Strategy (e.g. Tetris, Sudoku, Chess)
- Instant message clients	- Cards/ Casino (e.g. Solitaire, Blackjack, Poker)
- Mobile Web & Internet browsers	- Action/ Adventure (e.g. Role-playing Games)
- News & information clients	- Sports (e.g. Football, Soccer, Tennis)
- On-Device portals (JAVA Portals)	- Leisure sports (e.g. Bowling, Pool, Fishing)
- Social networks clients	

Table 2.3 Continue

Mobile Application Types	
Multimedia:	Productivity:
- Graphics/ Image viewers	- Calendar
- Presentation viewers	- Calculator
- Video players	- Diary/ Notepad/ Memo/ Word processors
- Audio players	- Spreadsheet
- Streaming players (audio/ video)	- Directory Services (e.g. yellow pages)
	- Banking/ Finance
Travel:	Utilities:
- City guides	- Profile manager
- Currency converters	- Idle screen/ Screen savers
- Translators	- Address book
- GPS/ Maps	- Task manager
- Itineraries/ Schedules	- Call manager
- Weather	- File manager

Source: Adapted from Mobile Marketing Association (2008)

Figure 2.9 The example of mobile applications



Cortimiglia, Ghezzi and Renga (2011) categorized mobile applications to business-to-business (B2B) applications, which have been developed to support a firm's internal process such as warehouse management, customer relationship management, sales-force automation, and business-to-customer (B2C) applications which have been created to fulfill individual consumer's need and can be classified into three types:

1. *Content-oriented applications* fulfill individual needs for information, entertainment, communication, productivity, and socialization such as instant messaging, email, and social networking.

2. *Marketing-oriented applications* are the applications that companies developed for brand advertising or promotion such as Mango, the fashion store from Spain launched its application that lets users browse its collections and located the its nearest shop.

3. *Service-oriented applications* are the applications that let users perform tasks such as check a flight schedule, book the accommodation, shop online through mobile devices.

Mobile applications have been developed because of the revolution in mobile phone that came with the new mobile telephony communication protocols such as 3G and 3.5G. These new protocols significantly increased the mobile network bandwidth and it makes developers interested in developing the applications to tap on the evolution of mobile technologies. As a result, innovative applications are created to respond the increasingly sophisticated capabilities of mobile devices (Gasimov, Tan, Phang & Sutanto, 2010).

The use of mobile applications as marketing communication tool is still at an early stage and there has been little research on the role of mobile application in marketing communication. According to Kuan-Yu, Yu-Lun and Chia-Chun (2012), mobile applications are specific mobile marketing tools designed for the interchange of information, networking, and leisure. Mobile applications have provided a pull marketing opportunity delivered through a platform that consumers have strong emotional attachment to (Bellman, Potter, Treleven-Hassard, Robinson & Varan, 2011). Moreover, mobile applications have offered the unique benefits of mobile marketing communications. They can be used to engage customers, conduct marketing campaigns, and solicit customer feedback. In addition, mobile applications can help business to improve brand awareness and provide more information and convenience to their customers. Many businesses have created their own mobile applications and used them as a channel to

communicate with customers. Furthermore, mobile application can be used for generating the revenue to the business as customers can buy the products or services through company's mobile application (Chan, 2012; Kim, 2011; Kuan-Yu, Yu-Lun & Chia-Chun, 2012).

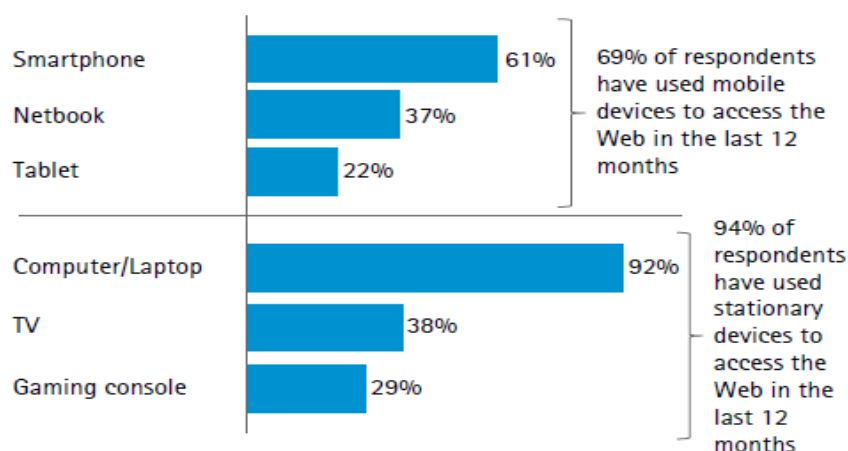
Marketers have interested in mobile applications primarily because of their high level of user engagement and the positive impact from using mobile application which can increase interest in the brand and also whole brand's product category (Bellman et al., 2011). In addition, each smartphone model (iPhone, Android phones, Blackberry, and Windows phone) have provided a strong, built-in marketing and discoverability support for its applications. The applications will be promoted through websites, App stores on personal computer, and App stores installed on the smartphones. So, this marketing support has provided a means for reaching out to worldwide potential users. Moreover, customers can easily access the mobile application with one-click and the developers can see the responsiveness and effectiveness of their mobile applications as smartphone manufacturers have also provided detailed use and download statistics for application developers (Wong, 2012).

In conclusion, mobile application is the new marketing communication strategy that has been increasingly adopted in many industries to communicate and engage with the customers. Marketers should clearly understand the role of mobile application in their businesses and its effectiveness as one of marketing communication tools in order to implement it successfully.

2.4.2 Mobile applications in the hotel industry

In the past decade, due to the less expensive accommodation prices and the efficiency of information offering, hotel industries have been taking advantage of the internet for online promotions and purchases to differentiate themselves from their competitors in the competitive market environment. Recently, with the advancement of mobile technologies, the mobility and accessibility of mobile device, more and more consumers have turned to use mobile device for internet access. A survey from Accenture (2012) reported that 69% of respondents have used mobile devices to access the internet in the past 12 months which smartphones and tablets have become the popular mobile access method to the internet (figure 2.10). Furthermore, 46% of non-mobile internet users were interested in buying an internet-enabled mobile device in the future. These numbers can indicate the growth of mobile device usage among consumers.

Figure 2.10 Mobile devices used in the past 12 months to access the internet



Source: Mobile Web Watch Survey, 2012
 Base: All respondents
 (n=17,225; Excluded Don't know answer)

Source: Accenture (2012)

The travelers have also used mobile devices for searching travel information. Hospitality providers have also realized and responded this trend by using mobile applications as a marketing channel to communicate with customers, improve brand awareness, provide more information, and establish a relationship directly with their customers. Furthermore, customers can purchase products and services anytime and anywhere through mobile applications from travel suppliers, intermediaries, airline companies, and hotels (Kwon, Bae & Blum, 2013; TripAdvisor, 2013; Wang & Wang, 2010).

With the increasing number of mobile users, mobile application marketing has been a new growing sector in the hospitality industry, especially hotel industry. Most hoteliers agreed that mobile technology is becoming an important medium for their organizations. As a result, hoteliers have started turning to mobile channel to stay in touch and deliver their services to existing customers and attract new ones (Chan, 2012). The survey from TripAdvisor (2013) indicated that 74% of accommodation providers thought that it is important to offer a program that allows guests to book their accommodation via mobile device. However, there are few accommodation providers (36%) that have seen mobile marketing strategy is the key priority and only 25% of accommodation providers that have offered the mobile programs to engage with the

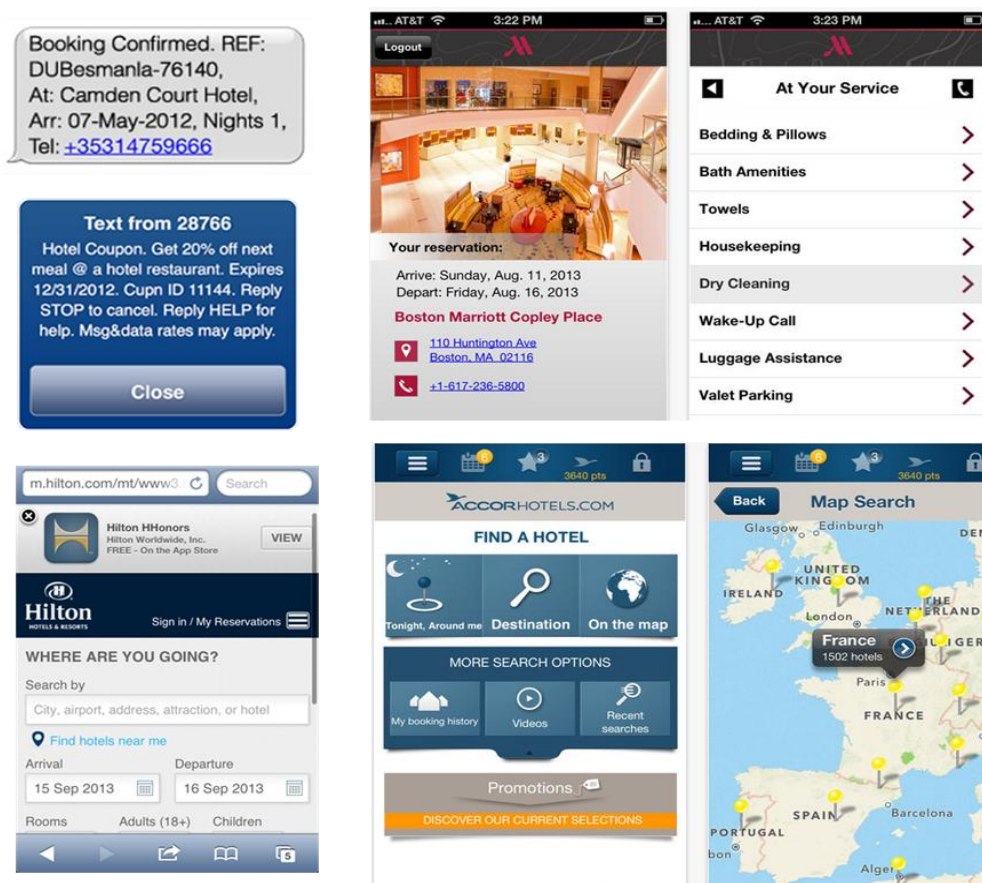
guests. For example, allowing guests to book the room via hotel website on mobile device, providing mobile friendly websites and branded application, offering special benefits to mobile device users, etc.

Mobile applications can be utilized more efficiently to reduce hotels' marketing costs and reach out to potential customers (Kwon, Bae, & Blum, 2013). Many hotels have offered mobile applications with more services. For example, Starwood's W Hotels launched 'W To go' text messaging application where guests are given the option of subscribing to receive reminder text messages during stay at the hotels. Days Inn, an economy-level hotel chain, have also sent text message about their daily hotel specials and restaurant coupons to in-house guests (Chan, 2012). Furthermore, some hotels have offered mobile-enable booking engine and mobile- friendly payment system that allows customers to make hotel bookings and payment via their mobile devices. Some hotels have created their own mobile applications which mostly provided information on hotels, restaurants and bars, as well as nearby attractions and transfer arrangement. For example, Marriott, a large international hotel, have introduced 'Marriott Mobile App' which allows customers to find hotel information, make reservations, register and access their rewards account. Some hotel applications are more advanced by enabling location or map directions, and supporting photo gallery and video sharing through email and social media such as Small Luxury Hotels of the World (SLH), a collection of more than 500 luxury hotels in 70 countries, launched an mobile application which guests can use it to book a hotel, share their favorites with friends and family, and find nearby point of interest through an augmented map function (Chan, 2012; Kuan-Yu, Yu-Lun & Chia-Chun, 2012).

Figure 2.11 illustrates several mobile applications that have been used in hotel industry. Some hotels have use the basic mobile applications by sending SMS or MMS to guests, some hotels have developed mobile friendly version of their websites where customers could easily access all information about hotel by using web browser application on their mobile, for example, the mobile friendly website version of Hilton Hotels & Resorts (<http://www3.hilton.com/en/about/hilton/mobile.html>), InterContinental Hotels Group (<http://www.ihg.com/hotels/us/en/global/support/mobile>), etc. Some hotels offered a mobile program to push deals to mobile device users nearby the properties. Some hotels created the hotel applications or 'hotel apps' which can be downloaded through mobile app stores such as Marriott

launched 'Free Marriott Mobile App' for smartphones and tablet devices (Kuan-Yu, Yu-Lun & Chia-Chun, 2012; TripAdvisor, 2013).

Figure 2.11 Mobile applications usage in hotel industry



In order to support the overwhelming demand for hotel reservations, many hospitality corporations have launched services by adding a mobile phone-based location technology into their reservation services. Customers can find hotels nearby their current location with a single click of button. After that, mobile hotel reservation (MHR) service which is a location based online distribution information system has been developed to enable worldwide customers to reserve hotel rooms anytime and anywhere through internet-enable portable devices such as mobile phone or tablets. Customers can search for nearby hotels by using this mobile hotel reservation service in specific mobile applications (Wang & Wang, 2010). In addition, hotels have launched their branded applications which include hotel information, booking service,

payment service, special benefits, and promotion for direct access to consumers. Mobile applications are the important marketing tool that has allowed consumers to engage with the hotel brands every time and everywhere. Mobile applications can help customers to save their time in search and booking procedure within a few clicks when compare to traditional hotel reservation channels. As a result, hotel brands, and other travel providers have been rushing to create mobile downloadable applications and mobile friendly website version for the millions of business and leisure travelers who rely on their mobile devices to get information (Chan, 2012; Kim, 2012; Kuan-Yu, Yu-Lun & Chia-Chun, 2012; Kwon, Bae & Blum, 2013; TripAdvisor, 2013; Wang & Wang, 2010).

Starkov and Safer (2012) mentioned that location-based service in mobile devices have allowed hotels to reach their target customers by encouraging customers to check-in through location-based applications and then hoteliers can offer special benefits such as mobile coupons or send text message offering a discount for these customers to be used in the hotels. The authors have also suggested that the offering through text message and geo-location applications should become the main key in how hoteliers target travelers not only during their trips but also before and after the trip to increase more customer satisfaction and loyalty in hotel brands. In addition, MiloviĆ (2012) added that the connection of social media and mobile phone technology has also created the big on-site opportunity for the hospitality industry. For example, if mobile geo-location features alert a hotel that a guest is in the building, it creates the opportunity for hotel to provide relevant services, for instance when a guest arrives, management team will encourage guest to come down to the bar and enjoy a complimentary cocktail by sending the SMS or MMS to guest's mobile phone.

With the use of mobile applications, hotel customers are not only able to reserve hotel rooms whenever and wherever they want, but they are also able to gain timely useful information they need. Furthermore, hotels can communicate with the guests directly. The agent fees and some expenses were eliminated and hotels don't need to reduce the room prices offered to reservations agencies. Therefore, the profitability of hotel room reservations will be increased through direct contact with the guest via mobile applications as well as other direct contact methods. In addition, mobile applications can help hotels to increase customer satisfaction as these medium delivered unique and tailored content to the customers (Kim, 2012). However,

some customers might view these mobile applications as unnecessary. To encourage more consumers to download mobile applications, hotel companies have to include unique features in their mobile applications instead of using them only for promotional purposes. Furthermore, the hotels should ensure that their applications work correctly to avoid the negative feedback and bad impression from customers (Kim, 2012; Kwon, Bae, & Blum, 2013).

Starkov and Safer (2012) also added that hotels that only offered a desktop websites and ignore the user experience on mobile devices will face a significant decline in their revenue. Hoteliers that adopt the latest mobile technologies will steal the market share from competitors, decrease dependency on the intermediaries and generate more increment revenues. This is the indicative of how importance of mobile marketing strategy and mobile applications in the hotel industry.

Mobile applications have also been adopted as one of integrated marketing communications' tool by hotels in Phuket. This research will further investigate the use of mobile application by hotels in Phuket. The importance and effectiveness of this marketing channel will also be evaluated from both the hotel and consumer's perspectives.

CHAPTER 3

METHODOLOGY

This study adopted mixed method research that focuses on identifying the usage, importance, and effectiveness of marketing communications via mobile applications for Hotels in Phuket from both customer and hotel sides. The study consists of two main target groups which are Hotels in Phuket and consumer who are mobile device users.

This chapter describes the research method used in this research. It is organized in sections as follows:

3.1 Target population, sample size, and sampling method

3.1.1 Target population

3.1.2 Sample size

3.1.3 Sampling method

3.2 Type of research

3.3 Research instruments

3.4 Data collection

3.5 Data analysis

3.1 Target population, sample size, and sampling method

3.1.1 Target population

The two target groups involved in this study are described as follows:

Group 1: Hotels in Phuket. There are currently different kinds of hotels in Phuket that use mobile applications as one of their marketing communication channels with their customer.

Group 2: The consumers who have used their mobile devices to select and book the hotels. In order to prevent bias, consumers whose mobile devices do not have hotels' mobile applications installed in their devices were also included in the target group.

3.1.2 Sample size

Group 1: Hotels in Phuket

In-depth interviews were planned to conduct with 15 Marketing Department Head or Director of Sales & Marketing from selected hotels in Phuket. These interviews aimed to answering how hotels use mobile applications for their marketing communications and how they evaluate the effectiveness of their marketing communications via mobile applications.

Group 2: The Consumers

Sample size of consumers who are mobile device users was determined by Taro Yamane's theory. According to Yamane (1967), if the population of the study is more than 1 million units, 400 target sample units are the good representatives of population which the confidence interval is at 95%. As the number of consumers who are mobile device users all around the world were more than 1 million people and cannot be exactly identified, the target sample size of this study are 400 consumers who are mobile device users that might or might not have used mobile applications for hotel selection or booking process.

3.1.3 Sampling method

Group 1: In-depth interviews were conducted with Marketing Department Head or Director of Sales & Marketing from hotels in Phuket. Purposive and convenience sampling methods were used in selecting hotels. The researcher identified the hotels that are active in their branded application, mobile website and selected based on this criterion. The researcher used the list of accommodation in Phuket conducted by Tourism Authority of Thailand (TAT) to find which hotels that are active in their branded application by browsing to hotel websites and see whether they promoted their branded application or not. In addition, the researcher searched through mobile App Store to find the mobile application that provided by hotels in Phuket. For mobile website, the researcher entered each hotel name on search engine through mobile browser and went to their websites and choose the hotel that has mobile website. Furthermore, the researcher obtained the name of hotels in Phuket that has mobile website from outsourcing companies who provide service on developing mobile website. Finally, 30 hotels in Phuket were found that they are active in branded application, mobile-friendly website. Among these hotels, the convenience sampling was also used to access the Marketing Department Head or Director of Sales and Marketing by telephone and email, in which 12 hotels have permitted the researcher to

conduct interviews. The interview was conducted using different methods to get the results from different perspectives; independent and chain hotels, different types of medium and upscale hotel to determine if there are any differences or not. Here the data and findings became saturated with 12 hotels interviews conducted.

Group 2: The questionnaire was distributed to consumers who are mobile device users by using convenience sampling method. The questionnaire was posted through several database websites and was distributed by hands to the travelers who are mobile device users at Phuket International Airport's international Departure Lounge, beaches, shopping centers, and famous attractions in Phuket. The researcher planned to achieve 400 return responses within a 2 month period of data collection.

3.2 Type of research

This is exploratory research which uses mixed method of a qualitative and quantitative study.

3.2.1 Qualitative

Qualitative data were gathered from in-depth interviews with the people who are in charge of mobile marketing from the selected hotels in Phuket.

3.2.2 Quantitative

Quantitative data were collected from the questionnaire for the consumers who are mobile device users that might or might not use mobile applications for hotel selection and booking process.

3.3 Research instruments

3.3.1 In-depth interview

In-depth interviews were conducted with Marketing Heads from various hotels in Phuket. The interview questions were adapted from Assenov and Khurana (2012), Chan (2012), Kuan-Yu, Yu-Lun and Chia-Chun (2012), and TripAdvisor (2013). The main topic covered the level of importance and effectiveness of marketing communication via mobile applications. The interview

focused on how the hotels use mobile applications as their marketing communications, its effectiveness and the revenue that mobile applications can generate to hotels.

The main questions included are as follows:

1. What are the marketing communication activities that hotels have used, and the effectiveness of those activities?
2. Do the hotels include mobile marketing and mobile applications as one of their marketing strategy? Why they use/ not use this media for their marketing communication. If they use, how they do mobile marketing and which degree they give importance to mobile marketing.
3. Do mobile applications can generate the revenue to hotels and in what ways they measure its effectiveness.
4. The opinion from using mobile applications as marketing communication tool, whether it is effective and how effective it is from a marketer's point of view.

3.3.2 The questionnaire

The questionnaire was used as an instrument to collect data from the consumers' perspective to answer the key questions of demographic profile, and consumer behaviors towards mobile marketing. The questionnaires were distributed by hands and posted on several websites to the consumers who are mobile device users. The survey questions were adapted from Adobe (2012), Google and Ipsos MediaCT (2012), Kwon, Bae, & Blum (2013), Kuan-Yu, Yu-Lun and Chia-Chun (2012), TripAdvisor (2013). The questionnaire consisted of 3 pages of both close- and open-ended questions. The first part relates to respondent demographic information and there are screening questions for all respondents. Only those who have ever traveled to Phuket and use internet-enabled mobile devices can answer the second part of questionnaire. The second part focuses on how consumers use mobile applications in their hotel selection or booking process and the level of importance of mobile applications on the consumers' hotel decision-making process.

3.4 Data collection

3.4.1 In-depth interview

The interviews which are face-to-face interview, telephone interview, and e-mail interview were conducted with Marketing Department Head or Director of Sales & Marketing of hotels in Phuket. The interview schedule was set up based on the interviewee's availability and

convenience. The interview questions were sent by email to interviewee for consideration before the real interview.

3.4.2 The questionnaire

The data were collected from respondents who are mobile device users that might or might not use mobile applications for hotel selection and booking process. The researcher distributed questionnaires to target sample group by hands at Phuket International Airport's international Departure Lounge, beaches, shopping centers, and famous attractions in Phuket and posted to online survey several travel websites and blogs. The period of collecting data for online questionnaire was 2 months.

3.5 Data analysis

3.5.1 In-depth interview

Content analysis was used to summarize and analyze the research findings from both interview and open-ended questions in the questionnaire. Content analysis enables the researcher to examine and evaluate the textual information by compressing many words of text into fewer content categories based on rules of coding.

3.5.2 Questionnaire

After collecting data from the target population through the questionnaires, data was coded, computed and analyzed by using the computer software program. The researcher decided to use descriptive statistics (e.g. frequencies, percentages, average), independent sample t-test, one-way Analysis of Variance (ANOVA), Post-hoc comparison using LSD test and Chi-square test for this study. It also has necessary graphs and tables which generated with computer software program. Each section of the questionnaire was applied with proper statistics to analyze the data.

Independent Sample T-test was used to compare the difference between two groups. It was further used to compare differences between males and females on the importance of mobile applications on the hotel selection process. Interpretation was analyzed at 95% of confidence level with 5% significance.

Analysis of Variance (ANOVA) was also used to compare means of more than two groups to analyze if there are any differences. Interpretation was analyzed at the 95% confidence level with 5% significance. Post-hoc comparison using a LSD test was further employed to find the differences between groups.

The Chi-square test was further used to determine whether there is a significant difference between the expected frequencies and the observed frequencies in one or more categories. It is used to determine the probability that the two categorical variables are associated.

For data analysis, mean is based on the interval level that is calculated as follows:

$$\begin{aligned} \text{The interval width} &= \frac{\text{Maximum} - \text{Minimum}}{n} \\ &= \frac{5 - 1}{5} \\ &= 0.80 \end{aligned}$$

Therefore, the researcher arranged the results of each sub - level as follows:

Mean	Level of important and agreement
1.00 - 1.80	Very Low/ Strongly disagree
1.81 - 2.60	Low/ Disagree
2.61 - 3.40	Medium / Neither agree nor disagree
3.41 - 4.20	High / Agree
4.21 - 5.00	Very High / Strongly agree

Pretest of the survey instrument

Interview questions were modified for more clarification purpose after the first two interviews had been conducted. Some changes in the sequences of the questions were made. In addition, the repetitive questions that could allow the researcher to get more data from the interviewees during an interview were combined when conducting the following interviews. For the questionnaire, a pilot questionnaire test was conducted with a small sampling in order to test its validity and understanding. With 30 feedback questionnaires received, the questionnaires were modified and corrections were made with some phrasing of the questions and adjusted to make them clearer. For examples, in some cases the answering options were specific words such as

online travel agents, so the example of online travel agents were add to make answering option clearer.

CHAPTER 4

RESULTS

This chapter focuses on the results of qualitative and quantitative surveys of this study. The qualitative data was derived from the interview questions which the interviews have been conducted with 12 hotels in Phuket. Appendix C shows details of the surveyed hotels. The quantitative data was derived from questionnaires which valid 418 responses were returned.

The analysis of qualitative data, which was derived from in-depth interviews with Director of Sales & Marketing or relevant Manager of the hotels in Phuket, is presented as below.

4.1 Qualitative Results

In-depth interviews results with 12 hotels in Phuket:

4.1.1 Hotels' Survey

Hotels' marketing practices

The hotels were asked about their marketing communication practices. Both offline and online marketing have been used to promote the hotels concerning different seasons and different characters of various market segments. For instance, hotels have to consider the nationality, age, gender, communication behavior, and travel behavior of each market segment before planning the marketing strategy. All of the hotels have practices in several marketing communication tools which are advertising, personal selling, sales promotion, and online marketing. Eight hotels referred that sales promotion and online marketing are the most widely used because they can help hotels to reach all market segments in every seasons which their costs are cheaper than other marketing communication tools.

For marketing communication through offline channel of hotels in Phuket, most of the hotels promote their hotels via hotel fact sheet, CD, magazines, travel agents' brochures or catalogs, travel & trade exhibitions, road shows, sales call with wholesale market. Some hotels have marketing department in Bangkok to deal with corporate groups, MICE, and travel agents in Bangkok as well. On the other hand, the hotels have also promoted their hotels via online channel which are hotel websites, corporate website, online travel agents, and social media such as Facebook and Twitter. One hotel revealed that 80% of their marketing communications were

performed via online channel because it is easily to control. *“We mostly rely on the online marketing as the hotel has more control on this channel, hotel can set and manage the room rates and allotment by ourselves while conducting the marketing via traditional travel agents is different; hotel have to give more room allotment at the lowest rate and wait them finding customers to stay at our hotel”* said the E-Commerce & Revenue Manager from one of the five-star hotels (personal communication. September 16, 2013). Among all the hotels, four hotels revealed that they have also used email marketing which guests can register and subscribe via hotel websites to receive updated hotel news and information, special discounts and offers via email. Nine hotels indicated that they try to invest in direct marketing as much as possible to increase more direct bookings through their own channel and less rely on intermediaries to reduce the marketing expenses which some intermediaries require 25% of total booking revenue for their commissions. Therefore, these hotels mostly offered more special benefits or discounts to guests who book the rooms with the hotels directly. One of the direct marketing channels that hotels in Phuket have recently practiced is mobile marketing which is become increasingly popular among hotels.

The practice of mobile marketing and mobile applications

The major reasons the hotels in Phuket practice mobile marketing and mobile applications is to offer another direct communication channel between customers and hotels. Ten hotels stated that the growth in mobile device usage is significantly increasing. Customers have changed their communication patterns, the internet and mobile device are getting tremendous important. Customers increasingly use mobile device as the main tool to perform any transaction in their life. One of the hotel’s Marketing head said *“we have started mobile marketing and are paying more attention on it as the number of smartphone users is growing dramatically. More people use smartphone applications to do business, browser news and articles, plan travel and share experience on the way”* (personal communication. October 11, 2013). Eight hotels mentioned that mobile device channel is a great marketing communication channel with their customers anytime as guests always carry their mobile device with them everywhere. With the use of mobile marketing and mobile applications, hotels can reach more customers and can provide more convenient in searching, selecting, and booking process to customers. Furthermore, some of hotels adopted mobile marketing or mobile applications to build brand awareness,

enhance their image, and provide PR for the hotels. Two hotels have also aimed that they can generate more revenue by offering reservation for rooms, and hotel services such as spa treatment, food and beverage, and tour programs on mobile applications. In addition, five hotels mentioned that this channel can enable hotel to learn more about customer preferences, improve guest experiences during their stay, and build a strong Customer Relationship Management (CRM) by allowing guests to easily register hotel's membership program via their mobile devices whenever and wherever they are.

The use of mobile marketing and mobile applications

All of the hotels have allowed guests to book the rooms and make payment via hotel websites on mobile devices. Furthermore, ten hotels have provided hotel websites in mobile version which are specifically designed and optimized for internet-enabled mobile devices' display. The hotel mobile website includes hotel details, such as room description, facilities, hotel services, property overview, information in group accommodation, meeting space, photo gallery, nearby attractions and highlights. One hotel's Sales Manager explained that *"guests can make reservations or cancellations through this mobile website wherever and whenever they want"* (personal communication, September 5, 2013). Another one hotel indicated that mobile website can improve user experience and satisfaction because guests can easily see the content that fit for mobile device's screen. In addition, mobile website is faster downloaded than browsing desktop website on mobile device (personal communication, September 16, 2013).

Three hotels mentioned that they provided special offers and promotions for mobile device users through hotel's mobile website, mobile application, or marketing campaign as well. *"We launched the marketing campaign by offering free breakfast for the users of one mobile network operator in Thailand. Guests can send SMS to specific phone number to redeem this special offer during their stay at the hotel"* stated Operational Manager from one of the economy hotels (personal communication, September 11, 2013). One of the hotels randomly sent mobile coupon to in-house guests which they can use for discount on food and beverage, or other hotel services during their stay at hotel. In addition, two hotels added a check-in special on social media such as offering free welcome drink to customers who 'check-in' hotel location on social media such as Facebook, Twitter, or Foursquare on their mobile devices and present it to hotel's

reception. The hotels mentioned that mobile device is one of the convenient and affordable ways for hotel to create brand awareness among customers and instantly promote special offers.

Among all of the hotels, ten hotels have provided hotel application that smartphone and tablet users can download from mobile App store while two hotels mentioned that they are in process of developing and launching mobile applications for their hotels. With these hotel applications, guests can access to latest special offers and promotions, book hotel directly through their mobile devices, view each hotels room types and facilities, view photo galleries, view hotel's location, make dining reservations, click-to-call property reservation number, and read the latest news and events from hotels. Eight chain hotels have provided corporate mobile application which guests can see and book any of hotels in the chain. Guests can also redeem the points for stays, find hotels near their current location, and explore the hotel area with interactive map. One of the chain hotel respondents stated that *"our application allow customer to filter and view any of hotels in the chain by brand or location throughout Thailand or overseas"* (personal communication. September 11, 2013).

The E-Commerce & Revenue Manager from one independent hotel mentioned that hotel has joined online travel service provider which provided cost-free mobile marketing application for hotels. This application can be accessed on smartphones and tablets and its platform enables hotels to increase brand awareness, build customer relationships, improve guest experience and generate additional revenue by offering reservation system for in-house services such as spa treatment, food and beverage menu, tour program through this application. He said *"We joined Appy Hotel, which hotel can sign up for free to improve guest experience and up-sell for hotel services during their stay. Guests can download this application to their mobile devices and learn more about the hotel services such as food and beverage menu, spa treatments, tour package, and book these services easily by clicking book-button for booking these services"* (personal communication. September 16,2013). The hotel revealed that it didn't launch own mobile application because the cost of application development is high for independent hotel. Furthermore, it is difficult to develop the application for each mobile platform and it takes a long time to get the approval from some mobile device operating system providers such as iOS, Blackberry OS, and etc. Therefore, joining the cost-free mobile marketing application from online

travel service provider is the affordable way for independent hotels that would like to be active in mobile marketing or mobile application.

All of the hotels mentioned that they have just started to practice in mobile marketing and mobile application for 1-3 years. Therefore, the marketing budget allocated for mobile marketing and mobile applications was relatively low. Among all of the hotels, four chain hotels revealed that the marketing budget for mobile channel has been allocated by marketing department from the head office and they can't specify the exact amount or percentage as it was confidential for their properties. Ten hotels mentioned that they spent approximately 5-10% of their total marketing budget for mobile marketing and mobile applications. Some of hotels have included marketing budget for mobile channel in the budget for online marketing. One hotel spent approximately 300,000 THB for hiring outsourcing company to create, develop, and maintain its mobile application. *"We decided to hire outsourcing company at 300,000 THB to create and develop the mobile application for our hotels which the application consist of hotel information, map and location, and reservation system which allow guests to book the rooms and make the payment via this application"* stated a Group eBusiness Director (personal communication, September 7, 2013).

The use of mobile Customer Relationship Management (mCRM)

Although the mobile marketing and mobile applications have become popular among hotels in Phuket, there are four hotels use mobile in customer relationship management by sending SMS to in-house guests about the special offers or dining information which guests' mobile phone numbers has been obtained from hotel's customer database. One of the hotels have sent pre and post stay message to guests. Another hotel has called guests to remind the transfer service, flights or the dining reservations at the hotel as well. In addition, the hotels has offered customer relationship program in their mobile applications which loyalty guests can use their points to redeem benefits. Guests can be hotel's members by creating their accounts and signing in to mobile application and enjoy exclusive offers and benefits. *"The guests who are hotel's members can sign in to our application. They can earn points when they make a hotel booking and redeem these points for free room in their next stays"* explained Sales Manager from one of the four-star chain hotels (personal communication, October 4, 2013).

The majority of the hotels mentioned that they didn't use mobile in customer relationship management because mobile marketing and mobile application just have been adopted or practiced among their hotels. Furthermore, using the mobile devices in CRM is quite complicated and higher expense than using email. However, one of these hotels has planned to use mobile customer relationship management in the near future such as sending SMS to in-house guests about daily special offers. Two chain hotels revealed that they are prohibited by company's policies in calling or sending SMS to guests as these will disturb customer's privacy. *"Our company doesn't allow us to contact or send SMS to guests via mobile phone as the mobile phone number is highly personalized information that shouldn't be used for marketing purpose unless hotel gets the permission from guests"* said Director of Marketing Communication from one of five-star hotels (personal communication. October 10, 2013).

Reaching target marketing through mobile applications

Among all of the hotels, five hotels mentioned that mobile applications can help hotels to reach direct target market. Mobile application can help the hotels in terms of brand awareness and customer satisfaction. A General Manager from one hotel said that *"mobile application is one of marketing channels that help hotel reach worldwide customers immediately"* (personal communication. October 4, 2013). However, the majority of the hotels mentioned that it is still unclear whether mobile application can help hotel to reach direct target market because the use of mobile application in the hotel industry is still in the beginning stage. *"It would help, but mobile application itself needs to grow more mature as well and mobile application may have different influences to different types of hotel. Chain hotels would pay more attention on growing their own application, while independent hotels just need to cooperate with other media channels to reach the target"* argued Marketing head from one of the luxury premium hotels (personal communication. October 11, 2013). One hotel said that the majority of their target market can be reached through travel agents and mobile applications have been offered as the alternative communication channel between guests and hotels. Moreover, mobile application is the pull marketing that hotels have to put a lot of effort to persuade or force customers to use or download mobile applications from the hotels and there are many factors that affect the use of mobile application in hotel industry such as technology infrastructure in the local area, different mobile platforms, and customer perception about the security on mobile devices.

All of the hotels suggested all kinds of customers can be influenced by mobile applications as nowadays everyone has used internet-enabled mobile devices. In addition, they stated that mobile applications will influence or have an important role to the foreigners, young generation, smartphone and tablet users, people staying on social media, business people who work on their travelling. Two hotels mentioned that mobile application have the most important role to loyal guests, backpackers, last-minute bookers and stay for only 1-3 nights in their hotel selection and booking process.

Importance of mobile marketing strategy and mobile applications for the hotels

Ten hotels in Phuket consider mobile application as one of the important marketing communication channels to interact with their customers although the use of mobile marketing strategy in the hotel industry is in the initial stage. They mentioned that many customers have increasingly used mobile devices in their travelling and mobile application is the effective and important way for hotels to response this change. *“Today, guests are always connected, mobile marketing is really important for hotels as guests have changed their communication pattern and the web and mobile is getting tremendous important. Wholesale agents will be reducing the role in the next 10 years as mobile application offer user-friendly, convenient, easy, and quick response”* said a General Manager from one of the economy hotels (personal communication, October 4, 2013). Furthermore, mobile applications provide more convenient to customers in finding hotel information, booking the room and services anytime and anywhere even they are on the road, airport, or in front of hotel’s reception desk. In addition, it enables customers to contact hotel directly with cheaper cost than through intermediaries.

Nine hotels mentioned that mobile marketing and mobile applications help them to promote their hotel’s brand, improve brand awareness, enhance customer satisfaction, and generate the revenue to hotels. Hotels can reach broad target market instantly with updated information as most of customers often have their mobile devices within an arm’s reach by spending the lower marketing expenses for mobile marketing strategy when comparing to other traditional media such as TV commercial, newspaper, and etc. To some hotels, mobile marketing strategy and mobile application are the great CRM and a tool to build customer loyalty. One of the independent hotels said that this is a very important strategy but the hotels need to have proper standard and policy in order to ensure good results as it has both positive and negative responses

from guests. *“Mobile application would bring ‘buzz’ effect to hotel, which any words or comments will spread faster than ever before. Guests can have a realer image of hotel and direct information of promotion”* (personal communication. October 11, 2013). Three hotels stated that they have competitive advantage from early adopting mobile marketing strategy before their competitors. This strategy helps hotel to make a closer relationship with the customer than hotels that do not use mobile marketing strategy. An E-commerce and Revenue Manager from one hotel said that *“the hotels should start to practice mobile marketing and its applications, the hotels that don’t get involve with mobile now will face a trouble later and become a laggard as the use of mobile devices is increasing every year”* (personal communication. September 16, 2013).

Measuring mobile applications effectiveness by hotels

All of the hotels mentioned that it is still hard to really measure the mobile applications effectiveness as they have just adopted and practiced this kind of marketing channel. However, different hotels came up with different ways to measure mobile application effectiveness while few hotels do not have the way to evaluate at all. Many hotels mentioned that they measure its effectiveness by the number of application download, number of booking from mobile channel, source that customers have used to access hotel website. Furthermore, customer ratings and comments on the hotel applications were used to measure the effectiveness of mobile applications as the marketing tool. One hotel measured the effectiveness by giving questionnaires to the guests when they check-in to learn more how customers find and book the hotel. In addition, two hotels revealed that they use Google Analytics (a service offered by Google that generates detailed statistic about an online channel’s traffic and traffic sources) to measure and analyze mobile applications effectiveness. Google Analytics helps hotels to set and track the conversions in terms of purchases, click, or the time customers spent on hotel application. *“Google Analytics for mobile application can tell who uses hotel application, on what devices and where they come from”* explained the E-Commerce & Revenue Manager from one of the five-star hotels (personal communication. September 16, 2013).

The hotels were asked about their revenue from using mobile marketing communication tool. The majority of hotels mentioned that the revenue from this channel is relatively low as this tool is still new for hotels and customers. These hotels revealed that mobile channel can generate approximately 5-10% of total revenue to their hotels which is higher than

the expectations because they only consider this channel as PR tool which cannot generate the revenue to hotels. Few hotels stated that mobile channel cannot generate the revenue to hotels because they have recently practiced mobile marketing and mobile application and their target customers prefer to book the hotel through travel agents because they can book other services such as flight, transfer, and tour package in the same time as well. Two economy hotels mentioned that the revenue from mobile channel, which includes room and hotel services bookings through hotel website on mobile devices, hotel application, corporate application, and marketing campaign for mobile device users, is 30-40% of total revenue to hotel in the year 2012.

For one hotel, although there is no standard technique to measure the effectiveness of mobile marketing communication tool and it is still unclear whether this marketing tool is effective or not. The hotel has to adopt and practice this kind of marketing because mobile device is another channel that customers are increasingly used. Therefore, the hotel should offer the convenience to customers to interact with the hotel. *"It is the hotel's responsibility to offer the communication ways that enable customers conveniently reach hotel as much as possible"* stated a Director of Marketing Communications (personal communication, October 10, 2013). On the other hand, one of the chain hotels commented that mobile marketing communication tool enables hotel to provide up-to-date information and to receive customer feedback which hotel can further improve their products and services and lead to more revenue from this channel.

In conclusion, the use of mobile applications for hotels marketing communications is effective for almost every hotel. The hotels can get many benefits from this channel as the hotels do not need to spend more money to launch big marketing campaigns to reach broad customers. Mobile application acts as great PR tool, build brand awareness, build positive image, improve user experience, enhance customer relationship and further acts as revenue generating channel. All of the hotels suggested that hotels in Phuket should aware the importance of mobile marketing and prepare themselves to adopt this kind of marketing tool in the near future. However, hotels must be more caring of guest satisfaction in order to keep hotel's positive image and reputation. One of the hotels commented that the use of mobile applications should more focus on improving customer experience than generating the revenue. In addition, mobile application is still new for some customers and many of them still worry about the security of this channel; the hotels should provide more knowledge about the use of mobile application to

customers in order to enhance the effectiveness of mobile application usage in their hotel selection and booking process.

4.1.2 Consumers' Surveys-Qualitative Questions

Consumers' experiences on the use of mobile applications in their hotel selection and booking process.

Many of the respondents used mobile applications to gather information prior to their hotel selection and booking process. They mentioned that *"I have downloaded mobile applications for searching some hotel information"*. Some of the respondents also used mobile applications during their traveling. *"I can use mobile application during my trip to find attractions, restaurants, and shopping center nearby the hotel or my current location"*, said one of the respondents. The respondents further stated that mobile applications provide the convenience to them while traveling as they can use mobile applications to perform any transactions without any need to carry the laptop or find the nearest computer corner to access the internet. They mentioned that *"Mobile applications are making finding information much easier. They are hand to use, always updated and comfortable"*. They can find any information fast and as well as easily gather useful information about the offers and promotions of hotels, nearest attractions, restaurants, and etc.

Many of the respondents only used mobile applications in gather hotel information but they still make the booking and payment via computers or laptops. *"I often use my mobile for research when I am away from my computer but I still only book and pay from my laptop"*, said one of the respondents. Furthermore, the respondents also mentioned that mobile applications enable them to look the information that they want privately. Some of the respondents mentioned that the use of mobile applications is easy and helpful for the unplanned trips and last-minute bookers. They can used mobile applications while they are on the way to find or select the hotel and make the booking instantly.

However, for some respondents mobile applications have many disadvantages. One respondent said that *"When I used mobile applications on phones or iPad, I have never register successfully, it almost hang up"*. A few respondents indicated that the use of mobile applications in hotel selection and booking process also depends on many factors such as the internet connection and the compatibility of the applications into the mobile devices. *"Mobile*

applications are useful sometimes but there are a lot of factor to consider such as strong internet connection, and compatibility of the applications into the device”, said one of the respondents. Also, some respondents mentioned that although mobile applications are helpful and convenient, they tend to use computer and laptop in hotel booking process as the computer and laptop still provide better information with wider screen than the mobile devices to customers.

In addition, some respondents mentioned that they don't use mobile applications in hotel booking process because the security on mobile devices is not trusty. One of the respondents said that *“I don't use mobile applications in booking the hotel as I worry the booking may lost; the payment through this channel is not trusty”,* and so they avoid using mobile applications in hotel booking process because of the security reason. One respondent also mentioned that *“Even the mobile applications from the banks are not secured, so I don't believe in any hotel's mobile application”.*

Furthermore, they mentioned that some information on mobile applications cannot reliable. *“Some information is hidden or mentioned on website which will be leading to confusion and problems”,* said one of the respondents. Some of the respondents also suggested that hotels should provide truly information to the tourists as they sometimes found that some mobile applications do not provide the real information and it can make tourists unhappy. In addition to this, the respondent mentioned that *“the use of mobile applications is a trend and it will pass”.*

With many of the mobile device users who have different views both positive and negative, there are still many of respondents who do not use mobile applications at all while some use only a very little. Some respondents do not use mobile applications as they have never realized about this technology but they are interested to use mobile applications in the near future. *“I never used them before but I should try it someday”,* said one of the respondents. In addition, one respondent added that *“the use of mobile applications in hotel selection and booking process is just in the beginning stage, but it would be very useful in the future”.* Moreover, one respondent suggested that hotels have to increase customers' confidence on mobile's financial security in order to increase the use of mobile applications in hotel selection and booking process.

In conclusion, many hotel companies are started to use mobile applications in as one of their marketing communication tool to connect with the customers. Meanwhile, the mobile applications have been mostly used by many customers in gathering the information about the

hotels, and travel destinations prior to their travels and for selecting hotels to stay. Mobile applications have been used to make the hotel booking in some situations such as unplanned trips or last-minute booking as well. During the trip, some of the respondents also used mobile applications to find nearest attractions, restaurants, and shopping center or upload the photos and share the status to their social networks. However, there are still many of the respondents who do not use this tool for choosing their hotels due to the *reliability, security, and accuracy* reasons.

4.2 Quantitative Results

The quantitative findings are derived from the 418 valid questionnaires that were returned. The results are presented and illustrated through tables and figures. The collected data were analyzed by computer software program. Data were analyzed by using descriptive statistics, Independent sample t-test, one-way ANOVA and Chi-square test.

4.2.1 Profile of respondents

The respondents consist of 215 females and 203 males. Most of the respondents are between 25-34 years followed by 35-44 years' category. More than half of the respondents have bachelor degree, followed by graduate degree. The respondents are mostly private employees, self-employed/ entrepreneur and in professionals job respectively. The majority of the respondents are Europeans, followed by Asians and Oceania.

Table 4.1 Profile of respondents

	Demographic factors	Frequency	Percent (%)
Gender (n= 418)	Female	215	51.40%
	Male	203	48.60%
Age (n= 418)	Below 25 years	39	9.30%
	25-34 years	181	43.30%
	35-44 years	97	23.20%
	45-54 years	69	16.50%
	55 years up	32	7.70%

Table 4.1 Continue

	Demographic factors	Frequency	Percent (%)
Education (n= 418)	High School or lower	20	4.78%
	Diploma	53	12.68%
	Bachelor Degree	267	63.88%
	Graduate Degree	78	18.66%
Occupation (n= 418)	Private Employee	140	33.49%
	Self Employed/ Entrepreneur	117	27.99%
	Professionals	68	16.27%
	Government Employee	46	11.00%
	Retired	25	5.98%
	Students	22	5.26%
Nationality (n= 418)	Europeans	158	37.80%
	Of which:		
	Russians	47	29.75%
	Scandinavians	38	24.05%
	UK	29	18.35%
	Germans	19	12.02%
	French	13	8.23%
	Others	12	7.60%
Nationality (n= 418)	Asians	153	36.60%
	Of which:		
	Thai	78	50.98%
	Chinese	21	13.73%
	Filipino	16	10.46%
	Indian	12	7.84%
	Japanese	10	6.54%
	Korean	9	5.88%
	Others	7	4.57%
	Oceania (Australians and New Zealand)	58	13.90%
	USA	39	9.30%
Other (North America, Latin, South Africa)	10	2.40%	

4.2.2 Consumer behavior of mobile device users in the hotel industry

Mobile applications downloaded

Surveying the respondents' behavior in the use of mobile applications found that 23% of the respondents have downloaded both hotel applications and online travel agent applications while 35% of the respondents have downloaded only online travel agent applications which respondents also provided the name of these online travel agents such as Agoda, Expedia, Booking.com, Trip Advisor, Hotels.com and etc. However, only 1% of the respondents have downloaded hotel applications only such as Marriott App, Ibis App, ACCOR App, and etc. In addition, the results also show that 40% of the respondents have never downloaded either hotel applications or online travel agent applications.

Table 4.2 Mobile applications downloaded

Mobile applications downloaded (n= 418)	Frequency	Percent (%)
Hotel applications only	5	1.20%
OTA applications only	146	34.93%
Both hotel & OTA applications	98	23.44%
None	169	40.43%

Booking channel for the accommodation in Phuket

Table 4.3 shows the channel that respondents used for booking the accommodation in Phuket. The result showed that 28% of the respondents booked the accommodations through hotel's website on computer while 22% of them booked the accommodations through online travel agents' website on computer. In addition, the result also showed that 14% of the respondents booked the accommodations in Phuket through hotel applications while 6% of the respondents booked the rooms via online travel agent applications.

Table 4.3 Booking channel for the accommodation in Phuket

Booking channel (n=418)	Frequency	Percent (%)
Through hotel's website on computer	117	28.00%
Through OTA's website on computer	90	21.50%
Through hotel's mobile application	58	13.90%
Through traditional travel operators/ agents	33	7.90%
Through OTA's website on mobile devices	27	6.50%
Through OTA's mobile application	25	6.00%
Email to hotel directly	24	5.70%
Through hotel's website on mobile devices	18	4.30%
Other	14	3.30%
Telephone to hotel directly	12	2.90%

Consumer behavior of mobile device users

According to the results referred to in table 4.4, it was found that mobile applications have been mostly used during the trip to upload pictures of hotel to social network, followed by check-in to a hotel location on a social network, share about the stay to social network (e.g. Facebook, Twitter, Trip Advisor, and etc.) and find attractions or activities around hotel. In addition, 44% of the respondents used mobile applications after the trip to review their stay to social network as well.

The results also showed that mobile website is another channel that the respondents moderately used during the trip to find attractions or activities around hotel, book the attractions, tour, etc., and redeem the hotel's special offers (e.g. discount coupon).

The majority of the respondents used desktop website as a channel to perform all activities in hotel selection and booking process which are searching hotel information before booking, comparing alternative hotels before booking, sending email or enquiry to the hotel and booking the hotel for their stay.

Table 4.4 Consumer behavior of mobile device users

Channel mostly used to perform following activities:		Frequency	Percent (%)
Search hotel information before booking (n=418)	Mobile Application	120	28.70%
	Mobile Website	72	17.20%
	Desktop Website	226	54.10%
Compare alternative hotels before booking (n=418)	Mobile Application	84	20.10%
	Mobile Website	77	18.40%
	Desktop Website	257	61.50%
Send email/ enquiry to hotel (n=418)	Mobile Application	82	19.60%
	Mobile Website	69	16.50%
	Desktop Website	267	63.90%
Book the hotel (n=418)	Mobile Application	92	22.00%
	Mobile Website	61	14.60%
	Desktop Website	265	63.40%
'Check-in' to a hotel location on a social network (n=402)	Mobile Application	226	56.22%
	Mobile Website	47	11.69%
	Desktop Website	129	32.09%
Upload pictures of hotel to social network (n=395)	Mobile Application	230	58.23%
	Mobile Website	48	12.15%
	Desktop Website	117	29.62%
Share about your stay to social network e.g. Facebook, Twitter (n=395)	Mobile Application	224	56.71%
	Mobile Website	46	11.65%
	Desktop Website	125	31.65%
Review your stay to social network (n=396)	Mobile Application	174	43.94%
	Mobile Website	52	13.13%
	Desktop Website	170	42.93%
Redeem hotel's special offers (e.g. discount coupon) (n=390)	Mobile Application	89	22.82%
	Mobile Website	91	23.33%
	Desktop Website	210	53.85%

Table 4.4 Continued

Channel mostly used to perform following activities:		Frequency	Percent (%)
Find attractions or activities around hotel (n=418)	Mobile Application	141	33.70%
	Mobile Website	97	23.20%
	Desktop Website	180	43.10%
Book the attraction, tour, etc. (n=409)	Mobile Application	86	21.03%
	Mobile Website	94	22.98%
	Desktop Website	229	55.99%

Advantages of mobile applications in hotel selection and booking process

As shown in table 4.5, the majority of the respondents perceived that mobile applications can enable them to act on interest immediately (mean= 3.9277), and mobile applications allow the respondents to look at what they want privately (mean= 3.9181). In addition, the respondents also agreed that mobile applications help them to collect more information about the hotel conveniently and offer more information than what they really want. Furthermore, mobile applications enable them to book hotel easily, and make payment for hotel reservation easily.

Table 4.5 Advantages of mobile applications in hotel selection and booking process

Advantages of mobile applications		Frequency	Percent (%)	Level of agreement
Mobile application enables me to act on interest immediately (n=415)	Strongly Disagree	4	0.96%	AGREE
	Disagree	13	3.13%	
	Neither agree nor disagree	93	22.41%	
	Agree	204	49.16%	
	Strongly Agree	101	24.34%	
<i>Mean = 3.9277</i>				

Table 4.5 Continue

Advantages of mobile applications		Frequency	Percent (%)	Level of agreement
Mobile application generally offers more information than what I really want (n=415)	Strongly Disagree	2	0.48%	AGREE
	Disagree	29	6.99%	
	Neither agree nor disagree	111	26.75%	
	Agree	189	45.54%	
	Strongly Agree	84	20.24%	
<i>Mean = 3.7808</i>				
Mobile application enables me to look at what you want privately (n=415)	Strongly Disagree	3	0.72%	AGREE
	Disagree	16	3.86%	
	Neither agree nor disagree	97	23.37%	
	Agree	195	46.99%	
	Strongly Agree	104	25.06%	
<i>Mean =3.9181</i>				
Mobile application enables me to collect more information about the hotel conveniently (n=415)	Strongly Disagree	3	0.72%	AGREE
	Disagree	14	3.37%	
	Neither agree nor disagree	129	31.08%	
	Agree	195	46.99%	
	Strongly Agree	74	17.83%	
<i>Mean =3.7783</i>				
Mobile application enables me to book hotel easily (n=404)	Strongly Disagree	2	0.50%	AGREE
	Disagree	30	7.43%	
	Neither agree nor disagree	143	35.40%	
	Agree	172	42.57%	
	Strongly Agree	57	14.11%	
<i>Mean =3.6238</i>				
Mobile application enables me to make payment for hotel reservation easily (n=404)	Strongly Disagree	2	0.50%	AGREE
	Disagree	41	10.15%	
	Neither agree nor disagree	155	38.37%	
	Agree	155	38.37%	
	Strongly Agree	51	12.62%	
<i>Mean =3.5248</i>				

* **Note:** Likert Scale of 1 to 5 was used to mark the agreement of each advantage, where 1- Strongly Disagree, 2- Disagree, 3- Neither agree nor disagree, 4- Agree and 5- Strongly Agree

Disadvantages of mobile applications in hotel selection and booking process

Table 4.6 shows that the majority of the respondents perceived that the security on mobile application is trusty (mean= 2.5627) and it didn't take too long time to book the room through mobile application (mean= 2.5577). Furthermore, the results show that the respondents also perceived that the information are not hard to see or read when using mobile applications in hotel selection and booking process and it is not difficult to book the room through mobile applications.

Table 4.6 Disadvantages of mobile applications in hotel selection and booking process

Disadvantages of mobile applications		Frequency	Percent (%)	Level of agreement
The information are hard to see or read through mobile application (n=407)	Strongly Disagree	47	11.55%	DISAGREE
	Disagree	150	36.86%	
	Neither agree nor disagree	155	38.08%	
	Agree	50	12.29%	
	Strongly Agree	5	1.23%	
<i>Mean = 2.5479</i>				
It takes too long time to book the room through mobile application (n=407)	Strongly Disagree	45	11.06%	DISAGREE
	Disagree	153	37.59%	
	Neither agree nor disagree	147	36.12%	
	Agree	61	14.99%	
	Strongly Agree	1	0.25%	
<i>Mean =2.5577</i>				
It is difficult to book the room through mobile application (n=407)	Strongly Disagree	47	11.55%	DISAGREE
	Disagree	154	37.84%	
	Neither agree nor disagree	151	37.10%	
	Agree	53	13.02%	
	Strongly Agree	2	0.49%	
<i>Mean =2.5307</i>				

Table 4.6 Continued

Disadvantages of mobile applications		Frequency	Percent (%)	Level of agreement
The security on mobile application is not trusty (n=407)	Strongly Disagree	43	10.57%	DISAGREE
	Disagree	158	38.82%	
	Neither agree nor disagree	143	35.14%	
	Agree	60	14.74%	
	Strongly Agree	3	0.74%	
<i>Mean =2.5627</i>				

* **Note:** Likert Scale of 1 to 5 was used to mark the agreement of each disadvantage, where 1- Strongly Disagree, 2- Disagree, 3- Neither agree nor disagree, 4- Agree and 5- Strongly Agree

The Importance of mobile applications in customers' hotel selection and booking process

According to the results referred to in table 4.7, it was found that both of hotel applications and online travel agent applications are important for the respondents when they select and book the hotels. However, most of the respondents consider online travel agent applications (mean = 3.3505) are more important in their hotel selection and booking process than hotel applications (mean = 3.1054).

Table 4.7 The Importance of mobile applications in customers' hotel selection and booking process

Types of mobile applications		Frequency	Percent (%)	Level of agreement
Hotel applications (n=408)	Least important	42	10.29%	MEDIUM
	Slightly important	99	24.26%	
	Important	111	27.21%	
	Very important	86	21.08%	
	Most important	70	17.16%	
<i>Mean =3.1054</i>				

Table 4.7 Continue

Types of mobile applications		Frequency	Percent (%)	Level of agreement
OTA applications (n=408)	Least important	40	9.80%	MEDIUM
	Slightly important	79	19.36%	
	Important	91	22.30%	
	Very important	94	23.04%	
	Most important	104	25.49%	
<i>Mean =3.3505</i>				

* **Note:** Likert Scale of 1 to 5 was used to mark the importance of each mobile application, where 1-Least Important, 2- Slightly important, 3- Important, 4- Very important and 5- Most important

4.2.3 Independent t-test, ANOVA analysis and Chi-square test

In table 4.8 an Independent sample t-test was conducted to compare the importance of mobile applications between male and female. There were statistically significant differences at $p \leq 0.05$ among genders in the importance of mobile applications in hotel selection and booking process.

Table 4.8 Independent t-test for differences between genders in the importance of mobile applications in hotel selection and booking process

Variables	Mean		t-test	
	Male	Female	t-stat	p-value
Importance of hotel applications in hotel selection and booking process	2.9505	3.2573	-2.509	.006*
Importance of OTAs applications in hotel selection and booking process	3.1683	3.5291	-2.804	.003*

Note: *Indicates statistically significant differences at $p \leq 0.05$

In table 4.9, an Independent sample t-test was used for analyze data in which p-value of importance of hotel applications and OTAs applications in hotel selection and booking process are 0.00. Thus, there were statistically significant differences at $p \leq 0.05$ among groups of mobile

applications users in the importance of mobile applications in hotel selection and booking process.

Table 4.9 Independent t-test for differences between groups of mobile application users in the importance of mobile applications in hotel selection and booking process

Variables	Mean		t-test	
	Mobile application users	Non-mobile application users	t-stat	p-value
	Importance of hotel applications in hotel selection and booking process	3.5451	2.4512	9.655
Importance of OTAs applications in hotel selection and booking process	3.8279	2.6402	10.010	.000*

Note: *Indicates statistically significant differences at $p \leq 0.05$

In table 4.10, an Independent sample t-test was conducted to compare the importance of mobile applications between mobile application users and non-mobile application users. Unsurprisingly, there were statistically significant differences at $p \leq 0.05$ among groups of mobile application users in the advantages of mobile applications in hotel selection and booking process.

Table 4.10 Independent t-test for differences between groups of mobile application users in the advantages of mobile applications in hotel selection and booking process

Variables	Mean		t-test	
	Mobile	Non-mobile	t-stat	p-value
	application users	application users		
Mobile application enables me to act on interest immediately	4.1417	3.6131	6.678	.000*
Mobile application generally offers more information than what I really want	4.0202	3.4286	7.263	.000*
Mobile application enables me to look at what you want privately	4.1741	3.5417	8.141	.000*
Mobile application enables me to collect more information about the hotel conveniently	4.0607	3.3631	9.625	.000*
Mobile application enables me to book hotel easily	3.9421	3.1481	10.582	.000*
Mobile application enables me to make payment for hotel reservation easily	3.7810	3.1420	7.871	.000*

Note: *Indicates statistically significant differences at $p \leq 0.05$

In table 4.11, an Independent sample t-test was used for analyze data in which p-value of the disadvantages of mobile applications in hotel selection and booking process are 0.00. Thus, there were statistically significant differences at $p \leq 0.05$ among groups of mobile application users in the disadvantages of mobile applications in hotel selection and booking process.

Table 4.11 Independent t-test for differences between groups of mobile application users in the disadvantages of mobile applications in hotel selection and booking process

Variables	Mean		t-test	
	Mobile	Non-mobile	t-stat	p-value
	application users	application users		
The information are hard to see or read through mobile application	2.2980	2.9259	-7.375	.000*
It takes too long time to book the room through mobile application	2.3184	2.9198	-7.103	.000*
It is difficult to book the room through mobile application	2.735	2.9198	-7.779	.000*
The security on mobile application is not trusty	2.9816	2.9877	-8.453	.000*

Note: *Indicates statistically significant differences at $p \leq 0.05$

The results in table 4.12 from one-way ANOVA shows that there were statistically significant differences in the importance of hotel applications in hotel selection and booking process among different age groups at $p= 0.000$ in the scores of importance of hotel applications [$F= 8.989, p= 0.000$] and there was statistically significant differences in the importance of OTA applications in hotel selection and booking process among different age groups at $p= 0.000$ in the scores of importance of OTA applications [$F= 9.941, p= 0.000$].

The result of LSD post hoc test indicated that the younger respondents in the age group of below 25 years perceived hotel applications as more important in hotel selection and booking process than older respondents in the age groups of 45-54 years and 55 years up. In addition, the results also show the younger respondents in the age group of 25-34 years perceived hotel applications as more important in hotel selection and booking process than older respondents which are the age groups of 35-44 years, 45-54 years and 55 years up. Furthermore, the respondents in age group of 35-44 years perceived hotel applications as more important in hotel selection and booking process than the age group of 55 years up.

In term of online travel agent applications, the result of LSD post hoc test indicated that the younger respondents in the age groups of below 25 years perceived online travel agent applications as more important in hotel selection and booking process than older respondents which are the age groups of 45-54 years and 55 years up. In addition, the results also show the respondents in the age groups of 25-34 years perceived online travel agent applications as more important in hotel selection and booking process than the age groups of older respondents which are the age groups of 35-44 years, 45-54 years and 55 years up.

Table 4.12 One-Way ANOVA tests for difference in the level of importance of mobile applications in hotel selection and booking process among different age groups

Variables	Age groups					One-way ANOVA	
	Below 25 years	25-34 years	35-44 years	45-54 years	55+ years	F-stat	p-value
Importance of hotel applications in hotel selection and booking process	3.1842 a,b	3.4469 a	2.9677 b,c	2.6716 c,d	2.3871 d	8.989	.000*
Importance of OTAs applications in hotel selection and booking process	3.4474 a,b	3.7486 a	3.0860 b,c,d	2.9254 c,d	2.6452 d	9.941	.000*

Note: *Indicates statistically significant differences at $p \leq 0.05$

The results in table 4.13 from one-way ANOVA shows that there were statistically significant differences in the importance of hotel applications in hotel selection and booking process among different nationalities at $p= 0.008$ in the scores of importance of hotel applications [F= 3.485, $p= 0.008$].

Post-hoc comparison using LSD test indicated that Europeans perceived hotel applications as more important in hotel selection and booking process than Asians, Oceania and

other nationality. However, there are no significant differences between other groups of nationalities.

Table 4.13 One-Way ANOVA tests for difference in the level of importance of mobile applications in hotel selection and booking process among nationalities

Variables	Nationality					One-way ANOVA	
	Europeans	Asians	Oceania	USA	Others	F-stat	p-value
Importance of hotel applications in hotel selection and booking process	3.3595 a	3.0134 b	2.8793 b	3.0000 a,b	2.3000 b	3.485	.008*
Importance of OTAs applications in hotel selection and booking process	3.5425	3.3490	3.0517	3.1579	2.9000	2.098	.080

Note: *Indicates statistically significant differences at $p \leq 0.05$

In table 4.14, Analysis of Variance (ANOVA) was used to compare the means of different groups in which there were no statistically significant differences at $p \leq 0.05$ among different education level in the importance of hotel applications and online travel agent applications in hotel selection and booking process.

Table 4.14 One-Way ANOVA tests for difference in the level of importance of mobile applications in hotel selection and booking process among different educational groups.

Variables	Education				One-way ANOVA	
	High School or lower	Diploma	Bachelor Degree	Graduate Degree	F-stat	p-value
Importance of hotel applications in hotel selection and booking process	2.5500	3.3396	3.1115	3.0667	2.000	.113
Importance of OTAs applications in hotel selection and booking process	2.8000	3.6226	3.3462	3.3200	1.967	.118

A Chi-square test was conducted to test the significant difference of the mobile applications downloaded between males and females. As shown in table 4.15, there was significant difference between males and females in which 65% of the female respondents more likely downloaded online travel agent applications than male respondents.

Table 4.15 Chi-square test for testing the mobile application downloaded between genders

		Male	Female	Chi-Square
Have you ever downloaded mobile applications provided by hotels?	Yes	27.67%	27.44%	Pearson Chi-Square = 1.870 p = .171 d.f. = 1
	No	72.33%	72.56%	
Have you ever downloaded mobile applications provided by OTAs?	Yes	51.23%	64.65%	Pearson Chi-Square = 7.726 p = .005* d.f. = 1
	No	48.77%	35.35%	

Note: *Indicates statistically significant differences at $p \leq 0.05$

In table 4.16, a Chi-square test was conducted to test the significant difference in the mobile application downloaded among different age groups. The results showed that there were statistically significant differences among age groups in mobile application downloaded. In term of hotel applications, the age group of 35-44 years more likely downloaded hotel applications than other age groups. In addition, the results also showed that the age group of 25-34 years more likely downloaded online travel agent applications than other age groups.

Table 4.16 Chi-square test for testing the mobile application downloaded among the different age groups.

		Below 25 years	25-34 years	35-44 years	45-54 years	55+ years	Chi-Square
Have you ever downloaded mobile applications provided by hotels?							Pearson Chi-Square
Yes		25.64%	28.18%	32.99%	13.04%	3.13%	= 17.856
No		74.36%	71.82%	67.01%	86.96%	96.87%	p = .001*
							d.f. = 4
Have you ever downloaded mobile applications provided by OTAs?							Pearson Chi-Square
Yes		51.28%	64.40%	62.89%	46.38%	25.00%	= 26.396
No		48.72%	35.60%	37.11%	53.62%	75.00%	p = .000*
							d.f. = 4

Note: *Indicates statistically significant differences at $p \leq 0.05$

In table 4.17, a Chi-square test was conducted to test the significant difference in mobile application downloaded among different nationalities. The results showed that there were no statistically significant differences in the mobile application downloaded among different nationalities.

Table 4.17 Chi-square test for testing the mobile application downloaded among different nationalities

		Europeans	Asians	Oceania	USA	Others	Chi-Square
Have you ever downloaded mobile applications provided by hotels?							Pearson Chi-Square = 1.506
Yes		26.58%	21.57%	27.59%	25.64%	20.00%	
No		73.42%	74.83%	72.41%	74.36%	80.00%	p = .826
							d.f. = 4
Have you ever downloaded mobile applications provided by OTAs?							Pearson Chi-Square = 6.780
Yes		54.43%	59.48%	51.72%	74.36%	70.00%	
No		45.57%	40.52%	48.28%	25.64%	30.00%	p = .148
							d.f. = 4

In table 4.18, a Chi-square test was conducted to test the significant difference in the mobile application downloaded among different educational groups. The results showed that there were statistically significant differences among different educational groups in which 63% of respondents in graduate degree have downloaded online travel agent applications.

Table 4.18 Chi-square test for testing the mobile application downloaded among different educational groups

		High School or lower	Diploma	Bachelor Degree	Graduate Degree	Chi-Square
Have you ever						Pearson Chi-
downloaded mobile	Yes	20.00%	20.75%	23.60%	32.05%	Square = 3.127
applications	No	80.00%	79.25%	76.40%	67.95%	p = .372
provided by hotels?						d.f. = 3
Have you ever						Pearson Chi-
downloaded mobile	Yes	25.00%	54.72%	59.93%	62.82%	Square = 10.332
applications	No	75.00%	45.28%	40.07%	37.18%	p = .016*
provided by OTAs?						d.f. = 3

Note: *Indicates statistically significant differences at $p \leq 0.05$

A Chi-square test was conducted to test the significant difference in the consumer behavior of mobile device users between genders. Female respondents more likely used mobile applications and mobile website than male respondents to search hotel information before booking, check-in to a hotel location on a social network, upload pictures of hotel to social network, review their stay to social network, and redeem hotel's special offers. On the other hand, male respondents more likely used desktop website to perform these activities than female respondents. Table 4.19 describes only the statistically significant differences and further results are presented in Appendix E.

Table 4.19 Chi-square test for testing the consumer behavior of mobile device users between genders.

		Male	Female	Chi-Square
Search hotel information before booking	Mobile Application	25.62%	31.63%	Pearson Chi-Square = 9.901 p = .007* d.f. = 2
	Mobile Website	12.80%	21.40%	
	Desktop Website	61.58%	46.97%	
'Check-in' to a hotel location on a social network	Mobile Application	53.89%	58.37%	Pearson Chi-Square = 6.146 p = .046* d.f. = 2
	Mobile Website	8.81%	14.36%	
	Desktop Website	37.30%	27.27%	
Upload pictures of hotel to social network	Mobile Application	54.12%	62.19%	Pearson Chi-Square = 6.720 p = .035* d.f. = 2
	Mobile Website	10.31%	13.93%	
	Desktop Website	35.37%	23.88%	
Review your stay to social network	Mobile Application	41.20%	46.50%	Pearson Chi-Square = 7.090 p = .029* d.f. = 2
	Mobile Website	9.80%	16.30%	
	Desktop Website	49.00%	37.10%	
Redeem hotel's special offers (e.g. discount coupon)	Mobile Application	19.50%	26.20%	Pearson Chi-Square = 8.105 p = .017* d.f. = 2
	Mobile Website	19.50%	27.20%	
	Desktop Website	61.00%	46.70%	

Note: *Indicates statistically significant differences at $p \leq 0.05$

As shown in table 4.20, there are significant differences with different age groups and their behavior in terms of activities related to hotel selection and booking process such as searching hotel information before booking, comparing alternative hotels before booking, etc. The respondents in age group of 25-34 years ranked the top in using mobile applications to perform activities related to hotel selection and booking process.

Table 4.20 Chi-square test for testing the consumer behavior of mobile device users among different age groups.

		Below 25 years	25-34 years	35-44 years	45-54 years	55 years up	Chi-Square
Search							
hotel	Mobile Application	20.50%	37.00%	29.90%	18.80%	9.40%	Pearson Chi-Square = 31.738 p = .000* d.f. = 8
information	Mobile Website	30.80%	14.80%	16.50%	11.60%	6.30%	
before	Desktop Website	48.70%	44.20%	53.60%	69.60%	84.40%	
booking							
Compare							
alternative	Mobile Application	17.90%	28.70%	17.50%	10.10%	3.10%	Pearson Chi-Square = 34.081 p = .000* d.f. = 8
hotels	Mobile Website	20.50%	22.10%	20.60%	8.70%	9.40%	
before	Desktop Website	61.50%	49.20%	61.90%	81.20%	87.50%	
booking							
Send email/							
enquiry to	Mobile Application	15.40%	29.30%	15.50%	11.60%	0.00%	Pearson Chi-Square = 35.315 p = .000* d.f. = 8
hotel	Mobile Website	20.50%	18.80%	19.60%	7.20%	9.40%	
	Desktop Website	64.10%	51.90%	64.90%	81.20%	90.60%	
Book the							
hotel	Mobile Application	17.90%	30.40%	19.60%	11.60%	9.40%	Pearson Chi-Square = 28.743 p = .000* d.f. = 8
	Mobile Website	23.10%	17.10%	14.40%	8.70%	3.10%	
	Desktop Website	59.00%	52.50%	79.70%	66.00%	87.50%	
‘Check-in’							
to a hotel	Mobile Application	45.90%	69.30%	53.70%	44.60%	24.10%	Pearson Chi-Square = 47.932 p = .000* d.f. = 8
location on	Mobile Website	24.30%	12.50%	8.40%	9.20%	6.90%	
a social	Desktop Website	29.70%	18.20%	37.90%	46.20%	69.00%	
network							
Upload							
pictures of	Mobile Application	47.20%	70.10%	59.80%	43.80%	27.60%	Pearson Chi-Square = 49.032 p = .000* d.f. = 8
hotel to	Mobile Website	27.80%	12.60%	7.60%	10.90%	6.90%	
social	Desktop Website	25.00%	17.20%	32.60%	45.30%	65.50%	
network							

Table 4.20 Continued

		Below 25 years	25-34 years	35-44 years	45-54 years	55 years up	Chi-Square
Share about your stay to social network e.g. Facebook, Twitter							Pearson Chi- Square = 49.494 p = .000* d.f. = 8
Review your stay to social network							Pearson Chi- Square = 52.424 p = .000* d.f. = 8
Redeem hotel's special offers (e.g. discount coupon)							Pearson Chi- Square = 45.763 p = .000* d.f. = 8
Find attractions or activities around hotel							Pearson Chi- Square = 42.991 p = .000* d.f. = 8
Book the attraction, tour, etc.							Pearson Chi- Square = 44.816 p = .000* d.f. = 8

Note: *Indicates statistically significant differences at $p \leq 0.05$

A Chi-square test was conducted to test the significant difference in consumer behavior of mobile device users among different nationalities. Table 4.21 describes only the statistically significant differences and further results are presented in Appendix E. 43% of USA respondents used mobile applications prior the trip to search hotel information before booking, send email or enquiry to hotels and book the hotel. In addition, the respondents from other nationalities which are North America, Latin, South Africa, etc. used mobile applications during the trip to check-in to hotel location on a social network, and upload photos of hotel to social network.

In terms of activities after the trip, 67% of the respondents from other nationalities used mobile applications to review their stay to social network, followed by European and Oceania respondents.

Table 4.21 Chi-square test for testing the consumer behavior of mobile device users among different nationalities

		Europeans	Asians	Oceania	USA	Others	Chi-Square
Search hotel information before booking	Mobile Application	25.90%	23.50%	39.70%	43.60%	30.00%	Pearson Chi-Square = 19.360 p = .013* d.f. = 8
	Mobile Website	15.20%	24.80%	12.10%	7.70%	0.00%	
	Desktop Website	58.90%	51.60%	48.30%	48.70%	70.00%	
Send email/ enquiry to hotel	Mobile Application	23.40%	11.80%	22.40%	30.80%	20.00%	Pearson Chi-Square = 21.968 p = .005* d.f. = 8
	Mobile Website	13.30%	24.20%	17.20%	2.60%	0.00%	
	Desktop Website	63.30%	64.10%	60.30%	66.70%	80.00%	
Book the hotel	Mobile Application	27.20%	13.70%	24.10%	30.80%	20.00%	Pearson Chi-Square = 21.295 p = .006* d.f. = 8
	Mobile Website	12.00%	22.20%	12.10%	2.60%	0.00%	
	Desktop Website	60.80%	64.10%	63.80%	66.70%	80.00%	
'Check-in' to a hotel location on a social network	Mobile Application	59.60%	54.70%	46.40%	60.50%	66.70%	Pearson Chi-Square = 26.200 p = .001* d.f. = 8
	Mobile Website	4.60%	20.90%	12.50%	5.30%	0.00%	
	Desktop Website	35.80%	24.30%	41.10%	34.20%	33.30%	

Table 4.21 Continued

		Europeans	Asians	Oceania	USA	Others	Chi-Square
Upload							Pearson Chi-
pictures of	Mobile Application	60.90%	58.00%	50.90%	56.80%	66.70%	Square = 16.536
hotel to	Mobile Website	6.60%	19.60%	10.90%	8.10%	11.10%	p = .035*
social	Desktop Website	32.50%	22.40%	38.20%	35.10%	22.20%	d.f. = 8
network							
Review							Pearson Chi-
your stay to	Mobile Application	51.00%	39.60%	40.00%	32.40%	66.70%	Square = 25.563
social	Mobile Website	7.90%	22.20%	12.70%	2.70%	0.00%	p = .001*
network	Desktop Website	41.10%	38.20%	47.30%	64.90%	33.30%	d.f. = 8

Note: *Indicates statistically significant differences at $p \leq 0.05$

A Chi-square test was conducted to test the significant difference in consumer behavior of mobile device users among different educational groups. There are significant differences with different educational groups and their behavior in terms of activities related to hotel selection and booking process. The results showed that the respondents with graduate degree mostly used mobile applications prior the trip to search hotel information before booking, and compare alternative hotels before booking. Table 4.22 describes only the statistically significant differences and further results are presented in Appendix E.

The results also showed that 62% of the respondents with bachelor degree used mobile applications during the trip to check-in to hotel location on social network, and upload photos of hotel to social network while 67% of the respondents with diploma used mobile applications to share about their stay to social network.

Table 4.22 Chi-square test for testing the consumer behavior of mobile device users among different educational groups

		High School or lower	Diploma	Bachelor Degree	Graduate Degree	Chi-Square
Search hotel information before booking	Mobile Application	10.00%	26.40%	27.70%	38.50%	Pearson Chi-Square = 17.023 p = .009* d.f. = 6
	Mobile Website	25.00%	3.80%	20.20%	14.10%	
	Desktop Website	65.00%	69.80%	52.10%	47.40%	
Compare alternative hotels before booking	Mobile Application	0.00%	22.60%	18.00%	30.80%	Pearson Chi-Square = 16.515 p = .011* d.f. = 6
	Mobile Website	30.00%	7.50%	20.20%	16.70%	
	Desktop Website	70.00%	69.80%	61.80%	52.60%	
'Check-in' to a hotel location on a social network	Mobile Application	20.00%	56.90%	62.00%	45.20%	Pearson Chi-Square = 21.484 p = .002* d.f. = 6
	Mobile Website	20.00%	5.90%	10.10%	19.20%	
	Desktop Website	60.00%	37.30%	27.90%	35.60%	
Upload pictures of hotel to social network	Mobile Application	25.00%	60.80%	62.60%	50.00%	Pearson Chi-Square = 17.425 p = .008* d.f. = 6
	Mobile Website	15.00%	7.80%	10.60%	20.0%	
	Desktop Website	60.00%	31.40%	26.80%	30.00%	
Share about your stay to social network	Mobile Application	20.00%	66.70%	60.20%	47.10%	Pearson Chi-Square = 18.215 p = .006* d.f. = 6
	Mobile Website	25.00%	7.80%	9.80%	17.10%	
	Desktop Website	55.00%	25.50%	29.90%	35.70%	

Note: *Indicates statistically significant differences at $p \leq 0.05$

CHAPTER 5

SUMMARY

This chapter is designed to conclude, and discuss based on the main research findings of the survey, followed by a discussion of the results based upon the research objectives which identified in Chapter 1 as follows:

1. To determine the importance of mobile applications on consumer hotel decision-making process.
2. To identify how hotels in Phuket use mobile applications for their marketing communications.
3. To identify the effectiveness of mobile applications for hotels' marketing in Phuket.

This study revealed the perspectives of both the hotels and consumers on the emergence of mobile applications as a marketing communication tool in the hotel industry. Therefore, a mixed method was used. In-depth interviews were conducted with the Director of Sales and Marketing or relevant Manager of 12 hotels in Phuket; and the quantitative survey returned 418 valid questionnaires through convenience sampling. The questionnaires were distributed to consumers whom use mobile applications in their hotel selection and booking process. To avoid the bias, consumers whose mobile devices do not have hotel or online travel agent applications installed in their devices were also included in the target group.

The quantitative data was analyzed by using the computer software program in terms of descriptive statistics, Independent Samples t-test, One- Way ANOVA and Chi-Square test. Content analysis was used to summarize and analyze qualitative data in order to aggregate themes.

5.1 Summary of Main Findings

5.1.1 Hotels' Perspectives

This study is the first of its kind examining the marketing communications via mobile applications of hotels in Phuket. For many hotels, mobile applications are still a new marketing communication tool that has been recently adopted and practiced as another direct communication channel between customers and hotels. Most of the hotels mentioned that the mobile device channel is a great marketing communication channel as their guests always carry their mobile device with them everywhere.

Hotels in Phuket have practiced mobile marketing and mobile applications to offer another direct communication channel between customers and hotels. Mobile marketing and mobile applications can help hotels to reach more customers and to provide more convenient searching, selecting, and booking process to customers. Some hotels adopt mobile marketing or mobile applications to build brand awareness, enhance their image, and provide better PR. In addition, some hotels mentioned that this channel can enable them to learn more about customer preferences, improve guest experiences during their stay, and build a strong Customer Relationship Management (CRM) by allowing guests to easily register hotel's membership program via their mobile devices whenever and wherever they are.

All of the hotels have engaged with mobile marketing and mobile applications in several ways: allowing guests to book rooms and make payment via hotel websites on mobile devices, providing hotel websites in mobile version which are specifically designed and optimized for internet-enabled mobile devices' display. Some hotels also provided special offers and promotions for mobile device users through hotels' mobile websites, mobile applications, or marketing campaigns such as sending mobile coupon to in-house guests which they can use for discount on food and beverage, or other hotel services during their stay at the hotel, and offering free welcome drink to customers who 'check-in' hotel location on social media such as Facebook, Twitter, or Foursquare. The majority of the hotels have provided hotel applications that smartphone and tablet users can download from a mobile App store. Guests to access the latest special offers and promotions, book hotel directly through their mobile devices, view each hotels room types and facilities, view photo galleries, view hotel's location, make dining reservations, click-to-call property reservation number, and read the latest news and events from hotels via

these mobile applications. Among all of the hotels, eight chain hotels have had corporate mobile applications which guests can see and book any of the hotels in the chain, redeem points for stays, find hotels near their current location, and explore the hotel area with interactive map. In addition, one independent hotel had joined an online travel service provider's application which is the affordable way for independent hotels that would like to be active in mobile marketing or mobile applications. This application is the cost-free mobile marketing application with limited offers for hotels. It enables hotels to increase brand awareness, build customer relationships, improve guest experience and generate additional revenue by offering a reservation system for in-house services such as spa treatment, food and beverage menu, and tour programs through this application. Hotels can choose to upgrade with monthly payment for higher packages that hotels can add more pages, more promotions, and more photos.

The marketing budget of hotels in Phuket allocated for mobile marketing and mobile applications is relatively low as the hotels had just started to practice mobile marketing and to use mobile applications for 1-3 years. The majority of the hotels mentioned that they spent 5-10% of their total marketing budget for mobile marketing and mobile applications. Some of hotels have included the marketing budget for mobile channels in the budget for online marketing. Although the use of mobile marketing strategy in the hotel industry is in the initial stage and mobile applications are not yet directly generating revenue for hotels, most of the hotels in Phuket consider mobile applications as one of the important marketing communication channels to interact with their customers. The majority of hotels mentioned that the revenue from this channel is relatively low. Some hotels revealed that mobile channel can generate approximately 5-10% of the total revenue to their hotels. Two economy hotels mentioned that the revenue from the mobile channel, which includes room and hotel services bookings through hotel website on mobile devices, hotel application, corporate application, and marketing campaign for mobile device users, was 30-40% of the total revenue to hotel in the year 2012.

Although it is still early and hard to really measure the mobile applications effectiveness due to their recent adoption, some hotels have come up with different ways to measure mobile application effectiveness while others do not have the way to evaluate at all.

Many hotels mentioned that they measure its effectiveness by the number of application downloads, number of bookings from mobile channels, sources that customers have used to

access hotel websites. Furthermore, customer ratings and comments on the hotel applications were used to evaluate the effectiveness of mobile applications as a marketing tool. One hotel measured the effectiveness by distributing questionnaires to the guests when they check-in to learn more about how customers find and book the hotel. In addition, two hotels revealed that they use Google Analytics (a service offered by Google that generates detailed statistics about an online channel's traffic and traffic sources) to measure and analyze mobile applications' effectiveness. Google Analytics helps hotels to set and track the conversions in terms of purchases, clicks, or the time customers spent on hotel applications.

The use of mobile applications for hotels marketing communications is effective for almost every hotel. Hotels in Phuket can get multiple benefits from this channel as they do not need to spend much money to launch big marketing campaigns to reach a broader range of customers. Mobile applications act as an efficient PR tool, build brand awareness, build positive image, improve user experience, enhance customer relationship and are increasingly important as a revenue generating channel.

5.1.2 Consumers' Perspectives

From 418 valid returned surveys, the respondents consist of 215 females and 203 males. Most of the respondents were between 25-34 years, followed by 35-44 years' category. Based on the survey results, only 23% of the respondents have downloaded both hotel applications and online travel agent applications while 40% of the respondents have never downloaded either hotel applications or online travel agent applications. Furthermore, online travel agent applications such as Agoda, Expedia, Booking.com and TripAdvisor have been more downloaded than hotel applications. The majority of the respondents booked the accommodation in Phuket through the hotel's website on computer. However, 14% of the respondents booked the hotel through hotel applications when they stayed in Phuket. In terms of consumer behavior of mobile device users, mobile applications has been mostly used during the trip to upload pictures of hotel to social network, followed by check-in to a hotel location on a social network, share about the stay to social network (e.g. Facebook, Twitter, Trip Advisor, and etc.) and find attractions or activities around hotel.

The majority of the respondents perceived that the use of mobile applications can enable them to act on interest immediately and allow them to look at what they want privately. In

addition, the respondents also agreed that mobile applications help them to collect more hotel information conveniently and offer more information than what they really want. Furthermore, the respondents can book the hotel and make the payment for hotel reservation easily through mobile applications.

In terms of the importance of mobile applications in customer's hotel selection and booking process, the results indicated that both hotel applications and online travel agent applications are important for the respondents when they select and book the hotels. However, the respondents consider online travel agent applications are more important than hotel applications in their hotel selection and booking process.

Independent t-test was conducted, and it was found that there are statistically significant differences between males and females in the importance of mobile applications in hotel selection and booking process. In addition, there were statistically significant differences between mobile application users and non-mobile application users in the importance of mobile applications in hotel selection and booking process. Furthermore, there were statistically significant differences between mobile application users and non-mobile application users in the advantages and disadvantages of mobile applications in hotel selection and booking process.

One-Way ANOVA tests for differences in the importance of mobile applications in hotel selection and booking process among different age groups. The results showed that there were statistically significant differences in the importance of mobile applications in hotel selection and booking process among age groups. The result of LSD post-hoc test indicated that the younger respondents which are the age groups of 25-34 years and under 25 years perceived mobile applications as more important in their hotel selection and booking process than the older respondents in age groups of 45-54 years and 55 years up. One-Way ANOVA test was also conducted to test the difference in the importance of mobile applications in hotel selection and booking process among different nationalities. There were statistically significant differences in the importance of hotel applications among nationalities in which Europeans perceived hotel applications as more important in their hotel selection and booking process than Asians, Oceania and other nationalities.

A Chi-square test was conducted to test the significance of the differences in mobile application downloaded and consumer behavior of mobile device users between males and females. The results showed that female respondents are more likely to download online travel agent applications than male respondents and female respondents used mobile applications in prior trip to search hotel information before booking, during the trip to check-in to a hotel location on social network and upload hotel photos to social network, and after the trip to review their stay to social network.

A Chi-square test was also conducted to test the significance of the differences in the mobile applications downloaded and consumer behavior of mobile device users among age groups. The age group of 35-44 years was more likely to download hotel applications than other age groups while the age group of 25-34 years has more downloaded online travel agent applications than other age groups. Among different age groups, the age group of 25-34 years ranked the top in using mobile applications to perform activities related to hotel selection and booking process such as searching hotel information before booking, uploading the hotel photos to social network, finding attractions or activities around hotels, etc.

A Chi-square test was also conducted to test the significant difference in mobile applications downloaded and consumer behavior of mobile device users among different educational groups. The results showed that the respondents with graduate degree have more downloaded online travel agent applications than other educational levels. In addition, the respondents with graduate degree mostly used mobile applications prior the trip to search hotel information and compare alternative hotels before booking. On the other hand, the respondents with bachelor degree used mobile applications during the trip to check-in to hotel location on social network, and upload photos of hotel to social network while 67% of the respondents with diploma also used mobile applications to share about their stay to social network.

Many of the respondents used mobile applications to gather information prior to their hotel selection and booking process. Some of the respondents also used mobile applications during their traveling. The respondents mentioned that mobile applications provide more convenience to them while traveling as they can use mobile applications to perform any transactions and they can easily find any information as well as immediately gather useful information about the offers and promotions of the hotels, nearby restaurants or attractions.

However, most of the respondents still book and make payment for the hotel reservation via desktop website as they feel it is more secure and easy than mobile devices. Some of the respondents indicated that they have never successfully booked or made the payment via mobile applications as it might depend on the speed of the internet connection and the compatibility of the applications on mobile devices. Most of the respondents mentioned that mobile applications have been used to make the hotel booking in some situations such as unplanned trips or last-minute booking. During the trip, some of the respondents also used mobile applications to find nearest attractions, restaurants, and shopping center or upload the photos and share the status to their social networks. However, there are still many of the respondents who do not use this tool for choosing their hotels due to the *reliability, security, and accuracy* reasons.

5.2 Discussion

In this part, the researcher discusses marketing communications via mobile applications in the perspectives of consumers and hotels in Phuket based on the primary data collected from 418 questionnaires and 12 interviews conducted with the hotels and the secondary data gathered from books, journals, articles, and websites which were also used on in the study.

5.2.1 Objective 1: Determining the importance of mobile applications on consumer hotel decision-making process.

The respondents were sorted by demographic factors: gender, age, nationality and educational group. Half of the survey's respondents were females. The majority of age groups are around 25-34 years old, followed by 35-44 years old. Most of the respondents have bachelor degree and they were mainly Europeans followed by Asians.

Mobile application downloaded: Only 23% of the respondents have ever downloaded both hotel applications and online travel agent applications. Online travel agent applications are mostly downloaded by the respondents. However, there are 40% of the respondents have never downloaded either hotel applications or online travel agent applications. These results showed that the use of mobile applications in consumer's hotel selection and booking process is not popular yet. Some of the respondents have never known about this technology while others still prefer to use desktop website to perform activities related to hotel selection and booking process.

This result can indicate that customers have just started to use mobile applications in hotel selection and booking process.

The use of mobile applications in hotel selection and booking process: Mobile applications have been used prior the trip to search hotel information before booking, during the trip to upload pictures of hotel to social network, followed by check-in to a hotel location and find attractions or activities around hotels, and after the trip to review their stay to social network as well. The findings were found to be similar with the survey of TripAdvisor (2013) that many people connected to the Internet through their mobile, upload photos of a holiday to social networks. Mobile applications has been used for 'checked in' to a location, booking accommodation, attraction, tour, redeeming a special offers such as discount coupon, writing the online reviews about their accommodation and travel experiences. In addition, this result is supported by the study of Assenov and Khurana (2012) that customers mostly use various technology innovations such as social media to gather information and compare the alternatives about the places to go, eat, and stay in today's world. Furthermore, Starkov (2013) also mentioned that some travelers start their research and information gathering through their mobile devices and later continue through desktops. Meanwhile, some travelers used mobile applications during the trip only. The results also found that mobile applications have been mostly used to make the hotel booking in some situations such as unplanned trips or last-minute booking because it is the most convenient way to perform the activities while the consumers are on the road or face with some unplanned problems during the trip. This result is supported by the study of Kwon, Bae and Blum (2013) that mobile devices have two major functions which are mobility and broad reach can allow consumers to conduct business and be reached through mobile devices every time and everywhere.

The importance of mobile applications in consumer's hotel selection and booking process among demographic factors: Both hotel applications and online travel agent applications are important for the respondents when they select and book the hotels. Consumer behavior is distinguished by gender, age group, nationality and educational level as follows:

Gender: 65% of female respondents downloaded online travel agent applications while 51% of male respondents did. Female respondents tend to use mobile applications prior the trip to search hotel information before booking, during the trip to check-in to a hotel location on

social network and upload hotel photos to social network, and after the trip to review their stay to social network.

Age group: In different age groups, the younger respondents downloaded more hotel applications and online travel agent applications than the older respondents. 32% of the respondents between 35-44 years have downloaded hotel applications while 63% of the respondents between 25-34 years have downloaded online travel agent applications. In addition, the respondents between 25-34 years mostly used mobile applications in every stage of hotel selection and booking process such as searching hotel information before booking, comparing alternative hotels before booking, sending email/ enquiry to hotel, etc.

Nationality: Europeans perceived hotel applications as important in hotel selection and booking process which is different from Asians, Oceania and other nationalities. In addition, Europeans ranked the top in using mobile applications during the trip to upload pictures of hotel to social network, share about their stay to social network and find attractions or activities around hotels while USA respondents ranked the top in using mobile applications prior the trip to search hotel information before booking, send email or enquiry to hotels, and book the hotel.

Educational level: The results showed that 63% of the respondents with graduate degree have downloaded online travel agent applications. In addition, the results also showed that the respondents in higher educational level mostly used mobile applications in their hotel selection and booking process. The respondents with graduate degree mostly used mobile applications prior the trip to search hotel information before booking, and compare alternative hotels before bookings. On the other hand, the respondents with bachelor degree have used mobile applications during the trip to check-in to a hotel location on social network such as Facebook or Twitter, upload hotel photos to social network, and share about their stay to social network such as TripAdvisor.

The results are supported by the study of Gretzel, Fesenmaier and O'Leary (2006) that the consumers tend to increasingly use the Internet technologies in their tourism consumption stage. In addition, the study of Buhalis and Law (2008) also mentioned that the new and powerful information and communication technologies which allow consumer to access the information anytime and anywhere have played the vital role in consumer purchase decision. This study found that mobile applications have been used by some customers to obtain information necessary prior

to their travels and in selecting hotels, In addition, they further used mobile applications during the trip to upload hotel photos to social network and find attractions or activities around the hotels.

5.2.2 Objective 2: Identify how hotels in Phuket use mobile applications for their marketing communications.

The hotels were asked on how they used mobile applications for their marketing communications. As per the findings, most of the hotels in Phuket have engaged with customers via mobile marketing and mobile applications as follows:

- Allow guests to book rooms and make payment via hotel websites on mobile devices. This finding is similar to the study of Wang and Wang (2010) that many hotels have offered mobile hotel reservation (MHR) which is the system that enables worldwide customers to reserve hotel room through the use of internet-enabled mobile devices.

- Provide hotel websites in mobile version which are specifically designed and optimized for internet-enabled mobile devices' display. The hotel mobile websites include hotel details, such as room description, facilities, hotel services, property overview, information on group accommodation, meeting space, photo gallery, nearby attractions and highlights. The mobile websites can help hotels to improve user experience and satisfaction because guests can easily see content that fits for mobile devices' screens. Moreover, a mobile website is faster downloaded than browsing desktop website on mobile device.

- Provide special offers and promotions for mobile device users through hotel's mobile website, mobile application, or marketing campaign such as sending mobile coupon to in-house guests which they can use for discount on food and beverage, or other hotel services during their stay at hotel, and offering free welcome drink to customers who 'check-in' hotel location on social media such as Facebook, Twitter, or Foursquare. As stated by Starkov and Safer (2012), hotels can use location-based service in mobile devices to reach their target customers by encouraging existing customers to check-in through location-based applications for promoting the hotels to existing customers' friends and then hotels can offer special benefits to compliment these customers.

- Provide hotel applications that smartphone and tablet users can download from a mobile App store. Some hotels have developed their branded mobile applications while one

hotel has joined an online travel service provider which provides cost-free mobile marketing application with limited offers for hotels. However, hotels can choose to upgrade with monthly payment for higher packages that hotels can add more pages, more promotions, and more photos. The mobile applications enable guests to access the latest special offers and promotions, book hotel directly through their mobile devices, view each hotels room types and facilities, view photo galleries, view hotel's location, make dining reservations, click-to-call property reservation number, and read the latest news and events from hotels. In addition, hotels have used mobile applications as the channel to offer value added services for in-house guests. For example, guests can book the cooking class, spa treatment, or dining reservation through mobile applications during their stay at the hotel.

Most of the surveyed hotels in Phuket indicated that mobile applications can help hotels to increase brand awareness, improve guest experience, and generate the revenue by offering a reservation system for rooms and additional services such as spa treatment, food and beverage menu, and tour programs through the applications which guest can book and make payment immediately. Mobile applications can help hotels in CRM to build customer relationships as this channel can enable hotels to learn more about customer preferences and their behavior. These findings are supported the study of Sinisalo, Salo, Leppäniemi and Karjaluoto (2005) who summarized that mobile marketing can be used to acquire new customers by using direct response strategies such as promotions and competitions, improve the relationships with existing customers by enhancing brand awareness and customer satisfaction, and drive the sales. Furthermore, the findings are consistent with the results from Chan (2012), Kim (2012), Kuan-Yu, Yu-Lun and Chia-Chun (2012) who stated that mobile applications can be used to engage customers, conduct the marketing campaigns, solicit customer feedback. Moreover, mobile applications can help business to improve brand awareness, increase customer satisfaction, and deliver their services to both existing customers and the new ones.

5.2.3 Objective 3: Identify the effectiveness of mobile applications for hotels' marketing in Phuket.

Most of the hotels in Phuket consider mobile applications as one of the important marketing communication channels to interact with their customers, although the use of mobile marketing strategy in the hotel industry is in the initial stage and mobile applications are not yet

directly generating revenue for hotels. They mentioned the majority of customers can be influenced by mobile applications as nowadays many customers increasingly use internet-enabled mobile devices in their travelling and mobile applications are an effective and important way for hotels to response this change. Furthermore, mobile applications provide more convenience to customers in finding hotel information, booking rooms and services anytime and anywhere - on the road, airport, or in front of the hotel's reception desk. In addition, it enables customers to contact hotel directly lower cheaper cost than through intermediaries.

Most hotels mentioned that mobile marketing and mobile applications help them to reach broad target markets instantly with updated information by spending lower marketing expenses for mobile marketing strategy when comparing to other traditional media such as TV commercial, newspapers, etc. To some hotels, mobile marketing strategy and mobile application are a great CRM and a tool to build customer loyalty. In addition, mobile applications not only help hotels in generating the revenue from bookings, but also generating the revenue from value added services. Similarly, Bigne, Ruiz, and Sanz (2005) stated that the mobile phone system has been a new communication channel which was becoming personalized and was recognized as an outstanding interactive marketing tool that the companies can use to do several marketing activities with customer. One of the independent hotels said that this is a very important strategy but the hotels need to have proper standard and policy in order to ensure good results as it has both positive and negative responses from guests. Three hotels stated that they have competitive advantage from early adopting mobile marketing strategy before their competitors. This strategy helps hotels to make a closer relationship with the customer than hotels that do not use mobile marketing strategy.

Measuring mobile applications effectiveness by hotels

It is still early and hard to really measure the mobile applications effectiveness due to their recent adoption and this tool is still new for hotels and customers. In addition, people have used multiple channels when they select and book the hotel. Some customers have gathered hotel information through their mobile devices and later continued through desktops or laptops. However, different hotels come up with different ways to measure mobile application effectiveness while few hotels do not have the way to evaluate at all. Many hotels mentioned that they measure its effectiveness by the number of application downloads, number of bookings from

mobile channels, sources that customers have used to access hotel websites. Similarly, Kuan-Yu, Yu-Lun and Chia-Chun (2012) mentioned that the effectiveness of using mobile application as IMC tool can measure from the number of hotel apps downloaded, the number of hotel reservations made through the mobile application, and the revenue attributes to the mobile applications. Furthermore, customer ratings and comments on the hotel applications were used to evaluate the effectiveness of mobile applications as a marketing tool. One hotel measured the effectiveness by distributing questionnaires to the guests when they check-in to learn more about how customers find and book the hotel. In addition, two hotels revealed that they use Google Analytics (a service offered by Google that generates detailed statistics about an online channel's traffic and traffic sources) to measure and analyze mobile applications' effectiveness. Google Analytics helps hotels to set and track the conversions in terms of purchases, clicks, or the time customers spent on hotel applications.

The hotels were asked about their revenue from using mobile marketing communication tool. Although the hotels rejected to reveal their accounting and financial reports that show the specific revenue from this channel, the majority of hotels mentioned that the revenue from mobile channel is relatively low. Some hotels revealed that mobile channel can generate approximately 5-10% of the total revenue to their hotels which is higher than their expectations because they had only considered this channel as a PR tool rather than a revenue-generating tool. Other hotels stated that the mobile channel cannot generate revenue to hotels because they have only recently started practiced mobile marketing and mobile application and their target customers prefer to book the hotel through travel agents because they can book other services such as flights, transfers, and tour packages in the same time as well. Two economy hotels mentioned that the revenue from the mobile channel, which includes room and hotel services bookings through hotel website on mobile devices, hotel application, corporate application, and marketing campaign for mobile device users, was 30-40% of the total revenue to hotel in the year 2012.

Although there is no standard technique to measure the effectiveness of mobile marketing communication and it is still unclear whether it is effective or not, all of the interviewed hotels in Phuket agreed that the hotels had to adopt and practice this kind of marketing in order to offer the convenience to customers to interact with the hotel. This is similar

to the findings of Kuan-Yu, Yu-Lun and Chia-Chun (2012) that there is no standard measurement to determine the outcomes in using the mobile application as marketing communication tool because using mobile applications is a relatively new development in hotel marketing and mobile application tracking tools and surveys are limited. On the other hand, one of the chain hotels commented that mobile marketing communication tool enables hotels to provide up-to-date information and to receive customer feedback through which hotel can further improve their products and services and lead to more revenue from this channel.

The use of mobile applications for hotels marketing communications is effective for almost every hotel. The hotels can get multiple benefits from this channel as they do not need to spend much money to launch big marketing campaigns to reach a broader range of customers. Mobile applications act as an efficient PR tool, build brand awareness, build positive image, improve user experience, enhance customer relationship and are increasingly important as a revenue generating channel. Hotels in Phuket and elsewhere should be aware of the importance of mobile marketing and prepare themselves to adopt this kind of marketing tool in the near future. However, hotels must be more mindful of guest satisfaction in order to keep hotel's positive image and reputation. The use of mobile application should focus more on improving customer experience than on generating revenue. Mobile applications are still new for some customers and many of them still worry about the security and reliability of this channel; the hotels should make their mobile applications more transparent to customers in order to enhance the effectiveness of mobile application usage in the hotel selection and booking process.

Recommendations on improving the effectiveness of hotel marketing communication through mobile applications

Marketing communication through mobile applications can be very effective for hotels in Phuket if each hotel can assign one employee or a team to take care and be responsible for mobile channel only. For some hotels, mobile channel can be taken care by e-commerce team as the marketing through mobile channel is quite similar to the online platform. So, the hotels can save the cost to perform and maintenance this channel. Based on the interviews conducted, many hotels stated that mobile applications is becoming increasingly important, however not many of them have assign an employee to take care or implement it officially. In addition, hotels can use

mobile applications to sell vacant rooms of each day by offering special deals through mobile channel for last minute bookings or bookings with short period of stay.

There are different ways to gain advantages from mobile applications if implemented and monitored efficiently. The key to success with marketing communication is to monitor and measure it continuously as the marketing through mobile channel takes time to generate the revenue and show its performance. The following table summarizes the recommendations to improve effectiveness of the hotel's marketing communication via mobile applications.

Table 5.1 Recommendations for improving the effectiveness of the hotel's marketing communication via mobile applications

<u>Target</u>	<u>Recommendations</u>
Improve efficiency of the communications	Hotels should officially assign the employee or team to take care the marketing communication via mobile applications. In addition, hotels need to train and delegate their staff with clear responsibilities to engage and control mobile channel for effective marketing communication via mobile applications. Furthermore, the hotels should maintain their applications working correctly to avoid the negative feedback and bad impression from customers.
Develop better marketing campaigns	To encourage more consumers to download and use mobile applications, hotels should include unique features in their mobile applications. Marketing campaigns on hotel websites can be promoted via mobile applications as well. The hotel can use this media as a channel to give special offers to the users and attract new customers at the same time. Additionally, hotels can offer special rate or benefits for last minute bookings to encourage customers book the vacant room on each day through this channel. This helps in generating traffic and revenue to the hotels, and can also assist hotels in measuring the effectiveness of these media.

Table 5.1 Continued

Target	Recommendations
Improve the visibility of the hotel	Hotels should monitor and update their activities through mobile applications. For instance, updating hotel activities, event offers, weather or PR news. This helps hotel to increase brand awareness among hotels' existing customers and to enhance exposure to the new potential customers. The hotels should ensure that the information in mobile applications is up to date.

5.3 Suggestions for the Future Research

1. Future research should conduct the interviews with more hotels, especially independent hotels, about their opinion on the use of mobile applications as a marketing communication tool.

2. Future research should conduct the interviews with online travel agents, which also provide their services through mobile applications as well, in order to identify the features of their applications and compare the performance between hotels' applications and travel agents' applications.

3. Any similar research could be conducted in other destinations.

4. Given the dynamic change of trends in mobile applications, this study leaves the gap and opportunity for future research reflecting the most recent trends in mobile applications in the tourism and hospitality industry.

5.4 Contributions of the Study

1. The findings of this study can contribute to the literature related to the use of mobile applications in the hotel industry and its impact on hotel's marketing strategies and consumer decision making process.

2. The findings can be used for hotel marketers to develop, utilize and improve their marketing strategies through the mobile applications.

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Appendix

Appendix A



Questionnaire

Mobile Applications in the Hotel Industry “A Case Study of Hotels in Phuket”

Dear Respondents,

I am an MBA student in Business Administration, Faculty of Hospitality and Tourism, Prince of Songkla University, Phuket Campus, Thailand. The purpose of this survey is to collect data for my MBA thesis on *“Mobile Applications in the Hotel Industry: A Case Study of Hotels in Phuket”*. Kindly assist in filling out this survey. The data collected in this survey will be used for academic purposes only. Your opinions will be kept completely confidential.

Thank you very much for your kind participation!

Kanokwan Wongklang (081-9580141)

Please write down your answer or mark \surd in the box which corresponds to your answer

Part I: Respondent Demographics Information

1. Gender Male Female
2. Age

<input type="checkbox"/> under 25 years	<input type="checkbox"/> 25-34 years
<input type="checkbox"/> 35-44 years	<input type="checkbox"/> 45-54 years <input type="checkbox"/> 55 years up
3. Nationality _____
4. Education

<input type="checkbox"/> High School or lower	<input type="checkbox"/> Diploma
<input type="checkbox"/> Bachelor degree	<input type="checkbox"/> Graduate degree
5. Occupation

<input type="checkbox"/> Students	<input type="checkbox"/> Retired
<input type="checkbox"/> Government Employee	<input type="checkbox"/> Self Employed/ Entrepreneur
<input type="checkbox"/> Private Employee	<input type="checkbox"/> Professionals (e.g. lawyers, doctors)
6. Have you ever traveled to Phuket?

<input type="checkbox"/> Yes, I have traveled to Phuket (when)
<input type="checkbox"/> No, I have never visited Phuket

14. Do you agree in the following sentences?

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Mobile application enables me to act on interest immediately					
Mobile application generally offers more information than what I really want					
Mobile application enables me to look at what you want privately					
Mobile application enables me to collect more information about the hotel conveniently					
Mobile application enables me to book hotel easily					
Mobile application enables me to make payment for hotel reservation easily					
The information are hard to see or read through mobile application					
It takes too long time to book the room through mobile application					
It is difficult to book the room through mobile application					
The security on mobile application is not trusty					

15. Please rank the importance of mobile applications in your hotel selection and booking process?

	Least important	Slightly important	Important	Very important	Most important
Hotel's mobile application					
OTA's mobile application					

16. Please provide any other comments on your experience with using mobile applications in relation to your hotel selection and travels

Thank you very much for filling out the form!

Appendix B



Interview Questions Mobile Applications in the Hotel Industry “A Case Study of Hotels in Phuket”

Dear Respondents

I am an MBA student in Business Administration, Faculty of Hospitality and Tourism, Prince of Songkla University, Phuket Campus, Thailand. The purpose of this interview is to collect data for my MBA thesis on “*Mobile Applications in the Hotel Industry: A Case Study of Hotels in Phuket*”. Kindly assist in sharing your thoughts and ideas on this topic. The data collected will be used for academic purpose only. Your opinions will be kept completely confidential.

Thank you very much for your kind participation!

Kanokwan Wongklang (081-9580141)

Questions

1. How do you promote or do your hotel marketing?
2. What kinds of marketing communication does your hotel practice? (e.g., advertising, personal selling, sales promotion, online marketing...)
3. Have your hotel currently practice mobile marketing or mobile application? Why?
4. What is the percentage of your marketing budget spent for mobile marketing and mobile application?
5. How does your hotel engage with customers through mobile applications?
 - Allow guests to book rooms via hotel website on mobile devices
 - Have a mobile friendly website
 - Make special offers available to mobile device users
 - Offer branded apps (hotel apps) for smartphones
 - Offer mobile program to push deals to mobile users nearby property
 - Others.....
6. Have your hotel use mobile in customer relationship management? How?
7. How’s about the revenue from mobile marketing communication tool that hotel uses?
8. How important do you think is your mobile marketing strategy? Do you have a way to measure its effectiveness?
9. Do the mobile application really help hotel to reach direct target market? In your opinion, who is likely to be influenced by mobile applications?
10. Do you have any comments relate to the use of mobile applications by the guests?

Appendix C

List of the hotels interviewed:

Hotel no.	Types of business operations	No. of rooms	Star rating	Position
1.	Inter chain	211	Five	Sales Manager
2.	Local chain	275	Four	eBusiness Director of Kata Group Resorts
3.	Local chain	262	Five	Sales Coordinator
4.	Inter chain	258	Three	Operations Manager
5.	Local hotel	78	Five	E-Commerce & Revenue Manager
6.	Inter chain	154	Three	Senior Sales & Marketing Executive
7.	Inter chain	247	Five	Director of Marketing Communications
8.	Local hotel	244	Four	Executive Director
9.	Inter chain	405	Four	Sales Manager
10.	Inter chain	265	Five	Senior Marketing Communications Manager
11.	Inter chain	277	Three	General Manager
12.	Local hotel	97	Five	Sales & PR Coordinator

Appendix D

Interview Transcript with one of the Marketing head in Phuket

Questions:

1. How do you promote or do your hotel marketing?

Hotel uses mix-marketing which consists of 80% for online marketing and 20% for traditional marketing.

2. What kinds of marketing communication does your hotel practice? (e.g., advertising, personal selling, sales promotion, online marketing...)

Hotel practices different types of marketing especially online marketing which 50% is direct online marketing such as e-mail marketing, mobile marketing and 30% is marketing from OTAs. Hotel doesn't do too much on traditional marketing because it is difficult to decide whether it is worth or not. For online marketing, hotel can use pay-per-click, Hotel also uses Google Adwords, and do some radio advertising. So, it can summarize that 95% of marketing is online marketing as the hotel has more control on this channel.

3. Have your hotel currently practice mobile marketing or mobile application? Why?

Hotel has mobile website and just recently join mobile application because the hotel found that around 28% of all hotel's website traffic comes from mobile and tablet. One year ago, the use of mobile and tablet is around 17% and it has increased to 28% in this year. So, it can see that the growth in mobile device usage is significantly increasing. In addition, the hotel invest in mobile website firstly because there are many types of mobile devices, different screen size and when people use mobile to access hotel website, it is awful and turn to bad conversion. So, mobile website has developed to improve the conversion. Normally, people who access mobile website have clear objective such as they want to book quickly, want quick hotel information. The hotel uses the specific system to build mobile website by itself.

For mobile application, the hotel just recently joined with Appy Hotel which is a free application that hotel can sign up for free. This app can help hotel to up-selling for in-house activities such as spa, food and beverage and hotel can improve guests experience during stay. Guest can download the app and see the food menu, room service, spa menu, and etc. The

hotel doesn't launch own mobile application because it got a long process and because of different mobile platforms. Developing app for Android is easy and quickly approve.

4. What is the percentage of your marketing budget spent for mobile marketing and mobile application?

The hotel spent around 5-10% of total marketing budget for mobile marketing and mobile application but it doesn't converse too much because people use mobile application for quick action.

5. How does your hotel engage with customers through mobile applications?

- Allow guests to book rooms via hotel website on mobile devices.
- Have a mobile friendly website.
- Make special offers available to mobile device users, the hotel offered mobile coupon to mobile device users which they can use for discount on food and beverage, or other hotel services.
- Join Appy Hotel app to offer hotel services to in-house guest. Guests can find information about facilities, amenities, and services such as food & beverage, spa, tour at Serenity Resorts. Furthermore, they can make reservation for these services and enjoy special offers
- Offer mobile program to push deals to mobile users nearby property, the hotel had offer free one welcome drink to customer who check-in hotel location on Facebook and show it to reception team.

6. Have your hotel use mobile in customer relationship management? How?

Yes, the hotel has also used mobile in customer relationship management. The hotel has sent SMS in-house guests such as "Today, we have Thai Night, BBQ Night" The hotel gets the mobile number from customer database.

7. How's about the revenue from mobile marketing communication tool that hotel uses?

Mobile marketing can generate 5% of total revenue for hotel.

8. How important do you think is your mobile marketing strategy? Do you have a way to measure its effectiveness?

Mobile marketing strategy is important in hotel industry even at the moment mobile can't generate the high revenue for hotel but it is the part of branding process and part of

customer decision making process because customers always check the best deal through every channel before booking. The hotel mostly uses Google Analytics, which is a service from Google that generates detailed statistics about an online channel's traffic and traffic sources, to measure the effectiveness of mobile marketing communication. Google Analytics for mobile application can tell who uses hotel application, on what devices and where they come from. Google Analytics can show the channel of booking. The hotel can see that some customers search hotel information by using mobile device but book through the computer. So, hotel can see that mobile device is in the part of the customer decision but not in the final process.

9. Do the mobile application really help hotel to reach direct target market? In your opinion, who is likely to be influenced by mobile applications?

It is difficult to target the market by using mobile application. Hotel has to try a lot of effort to force people to download it. It is pull marketing. In hotel's opinion, younger generation, last-minute bookers, need hotel for short stay, and book for low hotel category are likely to be influenced by mobile applications. Although there are many barriers such as technology, different mobile platforms, IT staff and high investment cost in developing mobile marketing and mobile application, the hotels have to adopt mobile marketing quickly. The hotels which don't get involved with mobile now will face a trouble later as the traffic through mobile channel is increasing every year.

10. Do you have any comments relate to the use of mobile applications by the guests?

In Phuket, mobile marketing and mobile application in hotel industry is in the early stage. Still has slow response from many independent hotels. Mobile application should focus on improving customer experience, up-selling, and maximize the revenue from in-house guests. It is still new for people. Some people still worry for about payment through mobile application but mobile application can make people more conveniently to search and book the hotel.

Appendix E

Completed results of Chi-square tests

Table E1 Chi-square test for testing the consumer behavior of mobile device users between gender

		Male	Female	Chi-Square
Search hotel information before booking	Mobile Application	25.62%	31.63%	Pearson Chi-Square = 9.901 p = .007* d.f. = 2
	Mobile Website	12.80%	21.40%	
	Desktop Website	61.58%	46.97%	
Compare alternative hotels before booking	Mobile Application	18.23%	21.86%	Pearson Chi-Square = 4.429 p = .109 d.f. = 2
	Mobile Website	15.27%	21.40%	
	Desktop Website	66.50%	56.74%	
Send email/ enquiry to hotel	Mobile Application	18.72%	20.47%	Pearson Chi-Square = 5.964 p = .051 d.f. = 2
	Mobile Website	12.72%	20.47%	
	Desktop Website	68.96%	59.06%	
Book the hotel	Mobile Application	23.65%	20.47%	Pearson Chi-Square = 2.636 p = .268 d.f. = 2
	Mobile Website	11.82%	17.20%	
	Desktop Website	64.53%	62.33%	
'Check-in' to a hotel location on a social network	Mobile Application	53.89%	58.37%	Pearson Chi-Square = 6.146 p = .046* d.f. = 2
	Mobile Website	8.81%	14.36%	
	Desktop Website	37.30%	27.27%	
Upload pictures of hotel to social network	Mobile Application	54.12%	62.19%	Pearson Chi-Square = 6.720 p = .035* d.f. = 2
	Mobile Website	10.31%	13.93%	
	Desktop Website	35.37%	23.88%	
Share about your stay to social network e.g. Facebook, Twitter	Mobile Application	54.60%	58.70%	Pearson Chi-Square = 5.963 p = .051 d.f. = 2
	Mobile Website	8.80%	14.40%	
	Desktop Website	34.60%	26.90%	
Review your stay to social network	Mobile Application	41.20%	46.50%	Pearson Chi-Square = 7.090 p = .029* d.f. = 2
	Mobile Website	9.80%	16.30%	
	Desktop Website	49.00%	37.10%	

Table E1 Continued

		Male	Female	Chi-Square
Redeem hotel's special offers (e.g. discount coupon)	Mobile Application	19.50%	26.20%	Pearson Chi-Square = 8.105 p = .017* d.f. = 2
	Mobile Website	19.50%	27.20%	
	Desktop Website	61.00%	46.70%	
Find attractions or activities around hotel	Mobile Application	32.52%	34.90%	Pearson Chi-Square = 4.302 p = .116 d.f. = 2
	Mobile Website	19.70%	36.50%	
	Desktop Website	47.78%	38.60%	
Book the attraction, tour, etc.	Mobile Application	19.21%	22.81%	Pearson Chi-Square = 3.156 p = .172 d.f. = 2
	Mobile Website	20.20%	25.73%	
	Desktop Website	60.59%	51.46%	

Table E2 Chi-square test for testing the consumer behavior of mobile device users among different age groups

		Below 25 years	25-34 years	35-44 years	45-54 years	55 years up	Chi-Square
Search hotel information before booking	Mobile Application	20.50%	37.00%	29.90%	18.80%	9.40%	Pearson Chi-Square = 31.738 p = .000* d.f. = 8
	Mobile Website	30.80%	14.80%	16.50%	11.60%	6.30%	
	Desktop Website	48.70%	44.20%	53.60%	69.60%	84.40%	
Compare alternative hotels before booking	Mobile Application	17.90%	28.70%	17.50%	10.10%	3.10%	Pearson Chi-Square = 34.081 p = .000* d.f. = 8
	Mobile Website	20.50%	22.10%	20.60%	8.70%	9.40%	
	Desktop Website	61.50%	49.20%	61.90%	81.20%	87.50%	
Send email/enquiry to hotel	Mobile Application	15.40%	29.30%	15.50%	11.60%	0.00%	Pearson Chi-Square = 35.315 p = .000* d.f. = 8
	Mobile Website	20.50%	18.80%	19.60%	7.20%	9.40%	
	Desktop Website	64.10%	51.90%	64.90%	81.20%	90.60%	

Table E2 Continued

		Below 25 years	25-34 years	35-44 years	45-54 years	55 years up	Chi-Square
Book the hotel	Mobile Application	17.90%	30.40%	19.60%	11.60%	9.40%	Pearson Chi- Square = 28.743 p = .000* d.f. = 8
	Mobile Website	23.10%	17.10%	14.40%	8.70%	3.10%	
	Desktop Website	59.00%	52.50%	79.70%	66.00%	87.50%	
'Check-in' to a hotel location on a social network	Mobile Application	45.90%	69.30%	53.70%	44.60%	24.10%	Pearson Chi- Square = 47.932 p = .000* d.f. = 8
	Mobile Website	24.30%	12.50%	8.40%	9.20%	6.90%	
	Desktop Website	29.70%	18.20%	37.90%	46.20%	69.00%	
Upload pictures of hotel to social network	Mobile Application	47.20%	70.10%	59.80%	43.80%	27.60%	Pearson Chi- Square = 49.032 p = .000* d.f. = 8
	Mobile Website	27.80%	12.60%	7.60%	10.90%	6.90%	
	Desktop Website	25.00%	17.20%	32.60%	45.30%	65.50%	
Share about your stay to social network e.g. Facebook, Twitter	Mobile Application	47.20%	69.50%	57.60%	39.10%	27.60%	Pearson Chi- Square = 49.494 p = .000* d.f. = 8
	Mobile Website	30.60%	9.20%	9.80%	12.50%	6.90%	
	Desktop Website	22.20%	21.30%	32.60%	48.40%	65.50%	

Table E2 Continued

		Below 25 years	25-34 years	35-44 years	45-54 years	55 years up	Chi-Square
Review your stay to social network	Mobile Application	37.80%	55.70%	48.90%	23.40%	10.30%	Pearson Chi- Square = 52.424 p = .000* d.f. = 8
	Mobile Website	29.70%	10.90%	14.10%	9.40%	10.30%	
	Desktop Website	32.40%	33.30%	37.00%	67.20%	79.30%	
Redeem hotel's special offers (e.g. discount coupon)	Mobile Application	25.00%	31.40%	20.00%	11.10%	3.40%	Pearson Chi- Square = 45.763 p = .000* d.f. = 8
	Mobile Website	41.70%	26.20%	23.30%	9.50%	13.80%	
	Desktop Website	33.30%	42.40%	56.70%	79.40%	82.80%	
Find attractions or activities around hotel	Mobile Application	30.80%	42.00%	30.90%	27.50%	12.50%	Pearson Chi- Square = 42.991 p = .000* d.f. = 8
	Mobile Website	33.30%	28.70%	21.60%	11.60%	9.40%	
	Desktop Website	35.90%	29.30%	47.40%	60.90%	78.10%	
Book the attraction, tour, etc.	Mobile Application	15.80%	28.80%	19.10%	14.70%	3.10%	Pearson Chi- Square = 44.816 p = .000* d.f. = 8
	Mobile Website	34.20%	29.90%	20.20%	8.80%	9.40%	
	Desktop Website	50.00%	41.20%	60.60%	76.50%	87.50%	

Table E3 Chi-square test for testing the consumer behavior of mobile device users among different nationality

		Europeans	Asians	Oceania	USA	Others	Chi-Square
Search hotel information before booking	Mobile Application	25.90%	23.50%	39.70%	43.60%	30.00%	Pearson Chi-Square = 19.360 p = .013* d.f. = 8
	Mobile Website	15.20%	24.80%	12.10%	7.70%	0.00%	
	Desktop Website	58.90%	51.60%	48.30%	48.70%	70.00%	
Compare alternative hotels before booking	Mobile Application	23.40%	13.70%	22.40%	28.20%	20.00%	Pearson Chi-Square = 14.944 p = .060 d.f. = 8
	Mobile Website	15.20%	24.80%	20.70%	7.70%	0.00%	
	Desktop Website	61.40%	61.40%	56.90%	64.10%	80.00%	
Send email/enquiry to hotel	Mobile Application	23.40%	11.80%	22.40%	30.80%	20.00%	Pearson Chi-Square = 21.968 p = .005* d.f. = 8
	Mobile Website	13.30%	24.20%	17.20%	2.60%	0.00%	
	Desktop Website	63.30%	64.10%	60.30%	66.70%	80.00%	
Book the hotel	Mobile Application	27.20%	13.70%	24.10%	30.80%	20.00%	Pearson Chi-Square = 21.295 p = .006* d.f. = 8
	Mobile Website	12.00%	22.20%	12.10%	2.60%	0.00%	
	Desktop Website	60.80%	64.10%	63.80%	66.70%	80.00%	

Table E3 Continued

		Europeans	Asians	Oceania	USA	Others	Chi-Square
'Check-in' to a hotel location on a social network	Mobile Application	59.60%	54.70%	46.40%	60.50%	66.70%	Pearson Chi-Square = 26.200 p = .001* d.f. = 8
	Mobile Website	4.60%	20.90%	12.50%	5.30%	0.00%	
	Desktop Website	35.80%	24.30%	41.10%	34.20%	33.30%	
Upload pictures of hotel to social network	Mobile Application	60.90%	58.00%	50.90%	56.80%	66.70%	Pearson Chi-Square = 16.536 p = .035* d.f. = 8
	Mobile Website	6.60%	19.60%	10.90%	8.10%	11.10%	
	Desktop Website	32.50%	22.40%	38.20%	35.10%	22.20%	
Share about your stay to social network e.g. Facebook, Twitter	Mobile Application	58.90%	55.20%	52.70%	56.80%	66.70%	Pearson Chi-Square = 14.690 p = .065 d.f. = 8
	Mobile Website	6.00%	18.90%	10.90%	10.80%	0.00%	
	Desktop Website	35.10%	25.90%	36.40%	32.40%	33.30%	

Table E3 Continued

		Europeans	Asians	Oceania	USA	Others	Chi-Square
Review your stay to social network	Mobile Application	51.00%	39.60%	40.00%	32.40%	66.70%	Pearson Chi-Square = 25.563 p = .001* d.f. = 8
	Mobile Website	7.90%	22.20%	12.70%	2.70%	0.00%	
	Desktop Website	41.10%	38.20%	47.30%	64.90%	33.30%	
Redeem hotel's special offers (e.g. discount coupon)	Mobile Application	27.90%	19.90%	17.90%	21.60%	22.20%	Pearson Chi-Square = 14.607 p = .067 d.f. = 8
	Mobile Website	18.40%	31.20%	26.80%	8.10%	22.20%	
	Desktop Website	53.70%	48.90%	55.40%	70.30%	55.60%	
Find attractions or activities around hotel	Mobile Application	32.30%	32.70%	32.80%	46.20%	30.00%	Pearson Chi-Square = 10.005 p = .265 d.f. = 8
	Mobile Website	20.90%	28.80%	24.10%	7.70%	30.00%	
	Desktop Website	46.80%	38.60%	43.10%	46.20%	40.00%	
Book the attraction, tour, etc.	Mobile Application	24.10%	15.10%	19.30%	34.20%	20.00%	Pearson Chi-Square = 13.477 p = .096 d.f. = 8
	Mobile Website	20.30%	29.50%	24.60%	7.90%	20.00%	
	Desktop Website	55.70%	55.50%	56.10%	57.90%	60.00%	

Table E4 Chi-square test for testing the consumer behavior of mobile device users among different educational groups

		High School or lower	Diploma	Bachelor Degree	Graduate Degree	Chi-Square
Search hotel information before booking	Mobile Application	10.00%	26.40%	27.70%	38.50%	Pearson Chi-Square = 17.023 p = .009* d.f. = 6
	Mobile Website	25.00%	3.80%	20.20%	14.10%	
	Desktop Website	65.00%	69.80%	52.10%	47.40%	
Compare alternative hotels before booking	Mobile Application	0.00%	22.60%	18.00%	30.80%	Pearson Chi-Square = 16.515 p = .011* d.f. = 6
	Mobile Website	30.00%	7.50%	20.20%	16.70%	
	Desktop Website	70.00%	69.80%	61.80%	52.60%	
Send email/enquiry to hotel	Mobile Application	10.00%	18.90%	19.50%	23.10%	Pearson Chi-Square = 5.426 p = .490 d.f. = 6
	Mobile Website	15.00%	9.40%	16.90%	20.50%	
	Desktop Website	75.00%	71.70%	63.70%	56.40%	
Book the hotel	Mobile Application	10.00%	22.60%	22.10%	24.40%	Pearson Chi-Square = 4.545 p = .603 d.f. = 6
	Mobile Website	15.00%	7.50%	15.70%	15.40%	
	Desktop Website	75.00%	69.80%	62.20%	60.30%	
'Check-in' to a hotel location on a social network	Mobile Application	20.00%	56.90%	62.00%	45.20%	Pearson Chi-Square = 21.484 p = .002* d.f. = 6
	Mobile Website	20.00%	5.90%	10.10%	19.20%	
	Desktop Website	60.00%	37.30%	27.90%	35.60%	
Upload pictures of hotel to social network	Mobile Application	25.00%	60.80%	62.60%	50.00%	Pearson Chi-Square = 17.425 p = .008* d.f. = 6
	Mobile Website	15.00%	7.80%	10.60%	20.0%	
	Desktop Website	60.00%	31.40%	26.80%	30.00%	

Table E4 Continued

		High School or lower	Diploma	Bachelor Degree	Graduate Degree	Chi-Square
Share about your stay to social network e.g. Facebook, Twitter	Mobile Application	20.00%	66.70%	60.20%	47.10%	Pearson Chi-Square = 18.215 p = .006* d.f. = 6
	Mobile Website	25.00%	7.80%	9.80%	17.10%	
	Desktop Website	55.00%	25.50%	29.90%	35.70%	
Review your stay to social network	Mobile Application	20.00%	51.00%	47.20%	33.80%	Pearson Chi-Square = 10.513 p = .105 d.f. = 6
	Mobile Website	15.00%	13.70%	11.80%	16.90%	
	Desktop Website	65.00%	35.30%	40.90%	49.30%	
Redeem hotel's special offers (e.g. discount coupon)	Mobile Application	0.00%	25.50%	23.50%	25.00%	Pearson Chi-Square = 6.691 p = .350 d.f. = 6
	Mobile Website	30.00%	19.60%	23.50%	23.50%	
	Desktop Website	70.00%	54.90%	53.00%	51.50%	
Find attractions or activities around hotel	Mobile Application	15.00%	26.40%	35.20%	38.50%	Pearson Chi-Square = 9.956 p = .127 d.f. = 6
	Mobile Website	15.00%	20.80%	24.70%	21.80%	
	Desktop Website	70.00%	52.80%	40.10%	39.70%	
Book the attraction, tour, etc.	Mobile Application	0.00%	20.80%	21.70%	24.70%	Pearson Chi-Square = 8.754 p = .188 d.f. = 6
	Mobile Website	20.00%	18.90%	25.10%	19.20%	
	Desktop Website	80.00%	60.40%	53.20%	56.20%	

VITAE

Name Miss Kanokwan Wongklang

Education Attainment

Degree	Name of Institution	Year of Graduation
Bachelor of Business Administration	Chulalongkorn University	2010

Work-Position and Address

Assistant eBusiness Manager

Kata Group Resorts, Thailand

1 Pakbang Road, Karon, Mueang, Phuket 83100

Tel: 081-9580141

Email: amk_kanokwan@hotmail.com

List of Publication and Proceeding

Wongklang, K. and Assenov, I. (2013). *Mobile applications in the hotel industry: A case study of hotels in Phuket*. Paper presented at Silapakorn 70th Anniversary International Conference 2013, Bangkok, Thailand, December 1st-3rd 2013.