

An Investigation of Features and Functions of Smartphone Applications for Hotel Chains

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Abstract

The proliferation of smartphone ownership, the diffusion of applications (apps), and the growth of mobile travel bookings have stimulated hoteliers to develop mobile strategies to satisfy customers' needs. In addition to making their website mobile responsive, hoteliers need to consider deploying and developing apps specific to their property and customer needs. A quantitative approach was applied to identify and rate the most commonly available features and functions on hotel chain apps. The results showed that the most common features and functions are; the contact details, booking & reservation function, directions and maps. Hoteliers are recommended to include more 'At Hotel' functions in hotel apps to capture data and differentiate the app experience.

Keywords: apps, hotels, features, functions, user perception

1 Introduction

The proliferation of smartphones and tablets now extends when and where customers engage with content (comScore, 2013). This rising popularity of smartphones and tablets contributes to the development and diffusion of apps. Though, recent data suggests that apps are reaching their saturation point (Nielsen, 2014), the amount of time spent on apps is expanding. Meanwhile, the European online travel market continues to grow, partially fuelled by bookings made from smartphones and tablets (Phocuswright, 2013). Similarly, mobile travel bookings are projected to triple, with mobile bookings contributing 20% of European travel, with the mobile apps of online travel agencies (OTAs) stimulating growth (Phocuswright, 2013). Most of the mobile access is through apps with consumers showing a preference for mobile apps versus mobile websites (Nielsen, 2014).

Goh, Ang, Lee, and Lee (2010) suggest that travellers prefer basic services such as those providing information about transportation, accommodation and food; but care less about context-aware services and trip planning. From the independent hoteliers' perspectives, the most common available features on the hotel specific mobile apps are; room reservation, property searches, real-time feedback via guest surveys, area information, loyalty account access, restaurant and spa reservations, property maps, etc. (eMarketer, 2013). Nonetheless, there is limited research about functions and features available on hotel chains' apps. Hence, this research intends to contribute to the understanding of apps developed by hotel chains. Thus the overarching research question is, *what are the currently available features and functions of the most widely used hotel apps?*

2 Theory/Issues

The portable nature of smartphones and tablets have led researchers to investigate pre-trip, during trip and post-trip traveller behaviours (Wang et al., 2014; Wang et al., 2012; Eriksson, 2014; MacKay & Vogt, 2012). Other research has focused on consumer behaviour as customers have migrated from passive information receivers to active and mobile information retrievers, deciding when and where they want the interactions (with companies) to take place (Coussement and Teague, 2013). Smartphones have transformed behaviours, information needs, decision making, experiences, documenting and sharing (Lamsfus et al., 2014; Wang et al., 2014).

An application (app) is a computer program that performs a particular task. There are several taxonomies that have been identified by researchers for travel apps. Kennedy-Eden and Gretzel (2012) have specified seven categories, including navigation, social, mobile marketing, transactional, security/emergency, entertainment and information. Wang and Xiang (2012) classify travel apps into eleven categories, identify four main design features and note preferred information services and design features based on app reviews. These eleven categories are; single city destination guide, online travel agency, language assistant, flight manager, theme park and resort guide, facilitators, multiple city destination guide, food finder, entertainment, live camera, and currency converter (Wang & Xiang 2012). Wang (2013) simplifies the categorization with only four categories; communication, information search, entertainment, and facilitation, i.e. based on the services provided. More specifically, Goh, Ang, Lee, and Lee (2010) use Exploratory Factor Analysis/Confirmatory Factor Analysis (EFA/CFA) to group the 40 information and functions needed by mobile travellers into five categories. These are; travel essentials, sightseeing, electronic services, emergency and medical services and trip planning. This research by Goh et al. (2010) is not limited to taxonomy, but identifies the information needed by travellers, hence warranted on mobile apps.

More recently, research by Adukaite et al. (2013) focuses on apps offered by independent hotels, as compared to chains or multiple hotels. They classify content and functions available on hotel apps into six categories; information about the hotel, booking process, features and functions about the destination, social media interaction tools, app settings, and extras. They find the most common features and information are hotel locations, room descriptions, restaurant menu, contact information, room amenities, photo gallery, booking, and phone or e-mail hotel. On the other hand, they find fewer occurrences of social media interaction tools and information about destinations.

Given the intangible nature of many of the hotel services and the ubiquitous nature of smartphones and apps, they seem to offer the potential to assist hotel guests by providing access to online information in before, during, and after phases of travel (Brown & Chalmers, 2003; Gretzel, Fesenmaier, Formica & O'Leary, 2006). Although previous researchers have classified travel apps into different categories and

identified features and functions needed by mobile travellers, there is little investigation of user rankings related to chains and multiple hotel apps.

Wang et al. (2012) recommend future research should focus on the influence of mobile devices on travel planning, because travellers' decisions will be impacted by innovative and emerging information channels such as mobile apps. Goh, Ang, Lee, and Lee (2010) further state that there is a lack of study of the travellers' desired services on mobile apps. Apps developed for hotel chains covering multiple properties may be perceived as more useful than apps specific to one hotel. Hence, this research answers the call for more research (Lamsfus et al., 2014; Wang et al., 2014) and examines the apps developed by hotel chains, which may have more economic resources and could leverage economies of scale, provide more detailed customer information and improve the overall online experience. Therefore the main research questions addressed in this paper are; *what are the key categories of information provided, what are the main functions of these apps, what are the social media functions and the additional features found on hotel chain apps?*

3 Methods/Procedures

This study was both exploratory and quantitative. Content analysis identified the main features and functions of 20 hotel chains' apps. These hotel apps had to meet the criteria of serving several hotels from different locations, hence hotel apps focusing on one property or multiple brands were excluded. A total of 20 apps from hotel chains were identified and downloaded from Apple's iTunes AppStore for Switzerland in August 2013. These hotel chains were Ritz Carlton, Waldorf Astoria, W Hotels, Ibis, Fairmont, Kempinski, Hilton, Shangri-La, InterContinental, Hyatt, Hotel Indigo, Holiday Inn, NH Hotels, Crown Plaza, Conrad, Radisson, Pullman, Novotel, Sofitel, and Mercure. All apps were installed, tested for available features and functions, and the results were recorded in a grid for aggregate analysis (Adukaite et al., 2013; Kennedy-Eden & Gretzel, 2012). Features or content were identified in various formats, i.e. text, pictures, or videos; while functions were identified by the actions that can be performed by the app user, such as searching or booking (Adukaite et al., 2013).

4 Results

Table 1 presents the features and functions available on the 20 hotel apps. These are grouped into five categories, i.e. Reservation Information, Hotel Information, At Hotel functions, Social Media Links, and Additional Features. All hotel apps have the following features and functions; reservation tool, hotel search, map, localization, contact details, photos, hotel overview, services/amenities/features, and facilities. These are functions and content that could be considered as basic requirements in an app i.e. to facilitate the purchase decision and booking. These features and functions were similarly identified by Adukaite et al. (2013) as frequently present on apps for independent hotels in Germany, Austria, and the German-speaking part of Switzerland.

Table 1. Features and Functions available on Hotel Chain Apps

Reservation Information	Hotel Information	At Hotel Functions	Social Media Links	Additional Features
Booking & Reservation (20)	Check-in/out info. (12)	Spa reservation (1)	Facebook (9)	QR Code Scanner (3)
Personal History (13)	Photos (20)	Table Reservation (5)	Foursquare (2)	Flight Tracker (1)
Hotel Search (20)	Hotel Overview (20)	Call Operator (4)	Twitter (9)	Submit your Story (2)
Weather Forecast (8)	Rooms & Suites (19)	Wake-Up Call (1)	Instagram (2)	App Info (20)
Map (20)	Dining (14)	Schedule a taxi (1)	Email (12)	App Settings (9)
Localization (20)	Spa (13)	Check-in/out (1)	YouTube (3)	Art in Hotel (1)
Directions (14)	Area & Activities (11)	Housekeeping (7)		Online Store (1)
Contact Details (20)	Family (8)	Resort map (1)		World Clock (1)
Loyalty program (17)	Services/Amenities (20)	Room Service (3)		Newspapers (1)
Package/Special Offer (17)	Meetings/Events (3)	Activity Calendar (4)		Music Player (1)
	Facilities (20)	Concierge Tips (8)		Feedback (9)
	Transportation (5)			Chain news/info (5)

5 Conclusions

The proliferation of smartphone ownership and apps, and the growth of mobile travel bookings drive hoteliers to understand and develop mobile strategies to satisfy customers' needs. The results show that apps from hotel chains focus more on reservation and hotel information, while less on At Hotel functions. Most features of hotel apps belong to Reservation Information and Hotel Information. In many cases, it appears that the apps are a migration, or cut down versions, of the hotel website, i.e. content and information rich with booking capacity. Yet, the At Hotel Functions are hotel service related and represent opportunities to interact with customers, provide customized service, and to enhance customers' experience while they are on property. Yet, most hotel apps do not provide these functions and this is an area where a competitive advantage and more intense engagement could be exploited. Hoteliers

cannot compete with OTA apps or social apps and should focus on improving At Hotel Functions to remain relevant and reach the customer.

As an exploratory study, this research was based on a convenience sample which limits its generalizability. This research focused on identifying features and functions of hotel apps developed by hotel chains. The next step is to evaluate the perceived importance and performance of these features and functions by travellers. Future research will further investigate the spillover effect, the duration and longevity of specific app use and how and when apps are deployed by customers in relation to hotel stays.

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