UNIVERSITY OF CAPE COAST

HOTELS' ADOPTION AND UTILIZATION OF INFORMATION AND

COMMUNICATION TECHNOLOGY (ICT) IN THE KUMASI METROPOLIS,

GHANA

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GHANA

BY

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Master of Philosophy Degree in Hospitality Management

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature…………………… Date……………….

Candidate's Name: Reginald Olympas Akua Awusiedu.

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature…………… Date……………

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ABSTRACT

Despite the role of Information and Communication Technologies (ICTs) in hotels' service delivery and its implications on service efficiency and customer satisfaction, limited number of studies exist in the context of Ghana on ICTs adoption and utilization among hotels. This study examined how hotels in the Kumasi Metropolis adopt and use ICTs in service delivery. Both quantitative and qualitative methods were adopted for the study. Survey data was collected from 174 hotel employees and in-depth interviews (IDIs) conducted among 20 hotel managers using questionnaires and IDI guides respectively. Thematic analysis was used to analyze the qualitative data while frequencies, percentages, independent sample t-test and Pearson chi-square were employed in the analysis of quantitative data. The findings of the study revealed that even though all hotels in the study adopted and used ICT in their service delivery, not all made maximum use of ICT. Managers opined that adoption of ICT in hotel service is relevant since ICT aids access to information, improvement of productivity and makes work easier. The results showed that employees had positive attitude towards the use of ICT. Nonetheless, results from Pearson chi-square established that hotel characteristics had statistically significant association with barriers to the use of ICT in hotel service delivery. It is recommended that managers of hotels that were able to achieve the target of using ICT should maintain such standards and continue to motivate their employees to work with enthusiasm. The study concluded that the assent use of ICT by hotels is as a result of the cognizance hotels have taken of the role ICT play in their service delivery.

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DEDICATION

I dedicate this work to my children: Daniella Akorfa, Mary-magdalene Kekeli,

Hilda Ewoenam and Lordina Selikem Ofori.

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LIST OF ABBREVIATIONS

ATM   Automated Teller Machine

CCTV   Closed Circuit Television Video Surveillance

GDP   Gross Domestic Product

HOD   Heads of Departments

IBM   International Business Machines

ICT   Information and Communication Technology

IDI   In-Depth-Interview

MGT   Management

ORS   Online Reservation System

TAM   Technology Acceptance Model

CHAPTER ONE

INTRODUCTION

This chapter covers the background to the study, statement of the problem, research questions and objectives of the study. It also deals with the justification of the study, the scope of study as well as the organization of the study.

Background to the Study

The influx of information and communication technology has turned the world into a global community. The adoption and use of ICT has become a great global imperative due to its contribution to human development and enhanced socio-economic development (Mokaya, 2012). ICT has emerged as one most important instrument that influences businesses in various sectors for which hotels are not exceptional (Gulbahar & Yildirim, 2015).

This notwithstanding, hotels have adopted different forms of ICTs that include; Wi-Fi, digital conference facilities, mobile communication, fax machines, and voice mail. (Akaba, 2015; Adebayoo, Balogun & Kareem, 2013; Kiveu & Ofafa, 2013). Others include; in-room modem, robots, interactive websites, Automated Teller Machines (ATM), smart cards, photocopiers, the social media, online reservation systems, e-mail, application software and Closed-circuit television video surveillance (CCTV) among others These ICTs are used in hotels for daily activities.

The adoption and utilization of ICT has gained success in the hotel industry since ICT is used to manage human resources which includes organizing databases, communication, training, developing reward programs and getting customers

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informed of services rendered by hotels (Siguaw, Enz, & Namasivayam, 2000; Chahal & Kumar, 2014; Kim, Lee & Law, 2008). The various forms of ICT adopted by hotels facilitate competitive advantage, improve productivity, enhanced financial performance, and guest service expansion (Collins & Cobanoglu, 2008). Hotels have mainly adopted ICT to reduce costs of services rendered to guests, to enhance operational efficiency, and most importantly to improve quality of service and add to customer experience (Collins & Cobanoglu, 2008).   This is accomplished when guests' are able to extract information from hotels' website to enable them transact business as expected. In this regard, it can be deduced that ICT adoption and utilization is essential in hotel business as it facilitates daily routines (Collins & Cobanoglu, 2008).

However, the adoption and use of ICT is not homogeneous to hotels in that, most hotels adopt and use ICT based on size, age of existence, ownership structure and the extent of the desire to gain competitive advantage. In view of this, hotels that provide a wider range of services such as front office, accommodation, restaurant service, conference facilities, sport facilities, spa centers, car rental and golf courses among others rely heavily on information and communication technology (Piccoli & Torchio, 2006). This is due to the fact that, information and communication technology as a global trend has taken over almost all aspects of hotels' functions and influences both back of the house and front of the house operations (Anderson, 2011).

Literature reveals that adoption and use of ICT among hotels in developed countries is on increase with close to 40 percent found in countries like; New

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Zealand, United States, People's Republic of China and Malaysia (Law & Jogaratnam, 2005; Siguaw, Enz, & Namasivayam, 2000). Some related studies include: (Hoque, Abu, Adnan, & Yukum, 2016; Buhalis, 2004; Siguaw, Enz & Namasivayam 2000; Buhalis & Main 1998). Literature has also shown that developing countries have resorted to ICT as a means of communication since these channels fast track service delivery in different fields such as, health, education, agriculture, entrepreneurship, sociology, psychology and tourism and hospitality (Kollberg & Dreyer, 2006).

In Ghana, the intense competition in the recent hospitality sector, specifically the hotel business environment is an indication that every hotel has to work hard to maintain and develop competitiveness since the success of a hotel's business, to some extent, depends on its ability to acquire and utilize current and updated information to assist its management and marketing processes (Asabere, Doku, Kusi-Sarpon & Oppong, 2014). Nevertheless, it is important to note that, the right choice of ICT and its proper use can help to obtain visible organizational benefits and stimulate the growth of the hotel in correlation with global trend.

In achieving organizational goals and values, it is appropriate hotels critically consider their employees attitude towards the use of ICT and focus on the extent of use of ICTs so as to achieve the purpose for which various ICT tools were adopted. Most importantly, management of hotels must find means of reducing barriers to the use of ICT tools in their hotels.

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Statement of Problem

Information and communication technology are viewed as strategic tools for the development of business entities specifically the hospitality and tourism industry (Ansah, blankson & Kontoh, 2012; Petre, Stegerean & Gavrea, 2012). As a result, hotel managers in the developed and developing countries have come to expect benefits from information and communication technology in the form of enhanced customer services and operations (Siguaw et al., 2000)

In Sub-Sahara Africa, there have been notable studies on the adoption and use of ICT in the hospitality industry to include: (Mwai, 2016; Obonyo, Kambona & Okeyo 2016; Nkosana, Skinner & Goodier, 2016; Mupfiga, 2015; Salim, Shayo, Abaho, & Sheik, 2013).

Conferring to the adoption of ICT by some hotels in Ghana, Akaba (2015) investigated electronic marketing and hotel performance in Ghana: Customers' perspective. Issahaku (2012) investigated the adoption and use of the social media, websites, and e-mail by hotels whilst Asabere, et al. (2014) investigated the use of the internet by the hospitality industry in Ghana. Also, Quarshie (2013) studied on the use of ICTs in hotels whereas Ayeh (2008) studied on adoption of information and communication technology in hotel. Ansah, Blankson and Kontoh (2012) wrote on the use of ICTs in front office operations of hotel chains in Ghana. The findings of all the related studies carried out in Ghana revealed that the level of adoption and use of ICT is relatively low.

However, all these studies paid little attention to managers' perception on ICT adoption in hotels. Meanwhile, managers are the major stakeholders that influence the adoption and use of ICT in hotels.

Employee's attitude towards the use of ICT within hotels is of utmost importance because, activities of hotels cannot be executed without employees. Moreover, employees are the key stakeholders in the use of ICTs in hotels since their negative attitude can result in the neglect of ICT use in hotels. It is therefore appropriate that their attitude towards the use of facilities that will aid the accomplishment of work output be considered. Nonetheless, employees' attitude towards the use of ICT affects the effort they put into daily activities which adversely affects hotels' achievement of goals and values (Iacianci, 2015).

The studies outlined in the problem statement did not focus on how the extent of use of adopted ICTs enable hotels to achieve the reasons for which the various ICTs are adopted. Extent of use is the rate at which an ICT adopted by a hotel is put into the execution of activities. The use of ICT in performing a task will to some extent aid a hotel's achievement of its aim of adoption if well monitored. On the other hand, effective monitoring of extent of use will compel employees to use ICT for their related tasks likewise; management of hotels will endeavour to adopt ICT that are job relevant (Sahadev & Islam, 2005). Nevertheless, the use of ICT comes with challenges which include: lack of knowledge on ICT use, lack of proper supervision by hotel managers and lack of physical infrastructure (Nkosana, Skinner & Goodier, 2016). These challenges mostly prevent the appropriate use of ICT adopted by hotels (Salim, Shayo, Abaho & Sheik, 2013). Hotel managers must

therefore strive to find possible means to minimize these challenge so as to enable successful use of adopted ICTs within hotels towards the hotel's attainment of goals and values. In order to address the above mentioned gaps, this study intends to examine the extent to which hotels in the Kumasi Metropolis have adopted and are using ICTs in their service delivery.

Objectives of the Study

The general objective of the study is to examine how hotels in the Kumasi Metropolis adopt and use ICTS in service delivery.

Specifically, the study seeks to:

1. Assess managers' perception about ICT adoption.

2. Assess employees' attitude towards the use of adopted ICTs by hotels in the Kumasi Metropolis.

3. Examine how the extent of use of adopted ICTs aid hotels to attain the reasons for which the ICTs are adopted.

4. Analyze the barriers to the use of ICTs adopted by hotels in the Kumasi Metropolis.

Research Questions

Based on the research gaps pointed out above, the study seeks to provide answers to the following questions:

1. What are managers' perceptions toward ICT adoption?

2. What are employees' attitudes towards the use of adopted ICTs in hotels?

3. How does the extent of use of adopted ICTs in service delivery aid hotels to attain the reasons for which the ICTs are adopted?

4. What are the barriers to the use of adopted ICTs in hotels?

Significance of Study

This study is envisaged to contribute to the broader literature on ICTs and the hospitality industry, especially from the context of Ghana. Specifically, it offers insights into the level of adoption and use of information and communication technologies among hotels in the Kumasi Metropolis of Ghana. This represents a huge contribution to knowledge given that limited information exists on the issue in Ghana.

The study also contributes to practice as the findings of the study may serve as a guide to owners of hotels and hotel managers in making decisions towards the use of ICTs in hotels. In addition, managers may use some suggestions from the study to curb some barriers that impede the use of adopted ICTs in hotels.

Scope of Study

The study took into consideration the extent to which hotels in the Kumasi Metropolis adopt and use information and communication technology in service delivery in their quest to achieve organizational objectives. It also focused on ICT since it has become a global phenomenon and serves as the bedrock for competitive advantage for businesses in most sectors of the economy (Hoque et al., 2016). Emphasis is on hotels because they are establishments among the hospitality industry that provide customers with sleeping accommodation and other services hence, is likely to adopt and use ICT due to the kind of services it renders to customers. The study also sampled twenty (20) hotel managers. It also sampled

heads of ICT unit and employees who were in direct use of ICT in the selected hotels. In all, a total of 194 employees of star rated hotels in the Kumasi Metropolis were used for the study.

Limitations of the Study

Generalization of the result may be limited as the result pertains to only the locality, which is Kumasi Metropolis, within which the study was carried out. Similarly, the study did not emphasize on counterfactuals as a basis for causal inference since the study was descriptive in nature. In addition, this result may differ from results of future studies as it was cross- sectional in nature.

Organization of the Study

The study was organized in five major chapters. The chapter one constitutes the background to the study, problem statement, objectives of the study, research questions, and significance of the study. Chapter two dealt with related literature whilst chapter three was on the research methodology. Specifically, the methodology covered the study area, study design, data and methods, target population, sample size, sampling procedure, research instrument, pre-testing of instrument, ethical issues and data processing and analysis. Chapter four comprised the result and discussions of data gathered for the study whereas chapter five covered the main findings, summary and conclusions.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

This chapter focuses on concepts, definitions and policies relating to the study. Specifically, the chapter is segmented into three including: empirical review, theoretical review and conceptual frame work.

The Concept of ICT

ICT can be described as the kinds of technologies that are used to create, acquire, store, send across, retrieve and control the conveyance of a processed data (Woherem, 2000). On another hand, Madon (2000) defined ICT as an activity which entails data processing, gathering of information and storage of data. It also includes; aggregation of knowledge to accelerate communication. Information and communication technology (ICT) according to Adebisi and Adekola (2016), is perceived as a term that encompasses all communication devices such as mobile phones, televisions, satellite systems, radio, computer software and hardware. Information and Communication Technology (ICT) is a term that encompasses all communication devices such as mobile phones, televisions, radio, computer software and hardware, satellite systems, hand held devices as well as wired or wireless internet (Agboh, 2015). It also covers business productivity software such as enterprise software, spreadsheet, data storage and security as well as network security (Beckinsale & Ram, 2006). Besides, Herselman and Hay (2003) are of the view that, information and communication technology are facilities which facilitates communication and cooperation between individuals and organizations.

They argue that these facilities aid the creation and exchange of knowledge between business entities and their customers.

It involves devices such as computers, software applications, websites, laptops, mobile phones, telephones among others (Yu, 2010). Apulu and Latham, (2011) put across that, ICT comprises the use of electronic devices and programs such as computers, mobile phones, automated machines and fax machines as well as application software like, whatsApp, Imo, viber, smart and networks among others.

However, the adoption and usage of these ICTs depends greatly on the type of organization and its management not forgetting the organization's policies (Ma, Buhalis, & Song, 2003). Information and Communication Technologies are considered key factors in the expansion and growth of business organizations (Zaremohzzabieh, Samah, Muhammad, Omar, Bolong, Hassan & Shaffril, 2015). Also, how and why individuals and these organizations (hotels) choose to adopt ICT tools have become a major concern of research (Ansah, Blankson, & Kontoh, 2012).

Evolution of the hotel industry in Ghana

A hotel according to Mackenzie and Chan (2009) is an establishment which offer sleeping accommodation to any person who is in a fit state to be received and appears able and willing to pay a reasonable sum for the services and facilities provided.

In contrast, the Ghana Tourist Authority (GTA) (2015) defined a hotel as any establishment that provides sleeping accommodation to its guests and have

registered with the GTA. These establishments are put into categories based on the standard of facilities and services provided (Narangajavana & Hu, 2008). The categories include; five star, four star, three star, two star, one star, guest houses and budget hotels (Fernandez, & Bedia, 2004).

The hotel industry, also known as the lodging sector, is one of the most important aspects of a nation's development (Wassenaar, & Stafford, 1991). Hotels worldwide are sole proprietor establishments with a few belonging to the states while some belong to companies (Haktanir & Harris, 2005). Hotels aid in the provision of other services such as; cruise lines, tourism, theme parks and event planning (Choi & Chu 2001). Also, hotels serve as employment avenues to members of the society (Wassenaar, & Stafford, 1991). Hotels, no matter their grade provide economic support to nations (Karatepe & Olugbade 2009).They help to attract local and international tourists into countries whereby these tourists' expenditure adds to the GDP of nations (Buhalis & Main, 1998).

The need for expansion in the tourism industry and other business sectors has led to the emergence of hotels in Ghana (Issahaku, 2012). In order for the hotel industry to be successful, there is the need for effective and efficient incorporation of modern trend of business like ICT that can aid hotels to reach out to its potential customers globally.

Evolution of ICT in the Hotel Industry

The early emergence of hotels did not see the use of information and communication technology (Collins & Cabanoglu, 2008). Old methods of manual systems which involved the use of paper and registers were on the increase

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(O'connor, 2010). This made work tedious and created avenues for the occurrence of avoidable mistakes (Lillis, 2014). As a result, there was a distance between hotels and their customers concerning the kinds of services they provide (Bharucha & Fukey, 2017).

Globally, hotels face the challenge of finding ways of getting their services known to their potential customers. The idea of attaining this has prompted hotels to switch from manual systems of operation to adoption and use of ICT (Ayeh, 2008). ICT evolved within the hotel industry in the late 1970s (Collins & Cabanoglu, 2008). ICT has served as a tool that facilitates hotels to increase competitive advantage, as they are able to make members of the society aware of the various services they provide since these services are intangible and thus, cannot be seen, touched or felt before their purchase (Sigala, 2004). ICTs are adopted to help hotels to be cost effective, to reach out to new customers and generally to enhance operation and establish brand awareness (Bui, Le & Jones, 2006). It can be observed that the emergence of ICT in the hotel industry has replaced the use of manual registers and log books making retrieval of information very easy (Choi & Chu, 2001).

Empirical Review

Forms of ICTs adopted by hotels

Business establishments worldwide use various forms of ICTs (Drigas, Koukianakis & Papagerasimou, 2011). The specific forms of ICT adopted and used by an establishment depend on the policy, management decision and range of activities carried out by the establishment. A study carried out by Siguaw, Enz and

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Namasivayam (2000) in the United States on adoption of ICT in hotels reveals that the forms of ICTs adopted by hotels are put into three main categories which are:

1. ICTs that facilitate improvement of guest service. These entail, in-room modem, in-room internet access and in-room fax machines.

2. The second classification covers voice mail, interactive guide and management e-mail. These categories of ICTs help to improve employee productivity in the hotel industry.

3. The third classification encompasses internet booking, teleconferencing, cell phone rentals and automated teller machines. They are of the view that, the third group of ICTs aid revenue enhancement in hotels. (119).

Nyandoro (2016) reviewed an article on factors influencing information and communication technology acceptance and use by small scale and medium enterprises. Nyandoro (2016) realized that the forms of ICTs that hotels may adopt are classified into three categories. These involve, economic and management perspective, which covers varied application, channel promotion, communication media and instruments for relationship marketing (Drigas, Koukianakis & Papagerasimou, 2011). The forms of ICTs are in two main categories as synchronous and asynchronous (Hrastinski, 2008). Synchronous types of ICTs include those that can be used for face-to-face or distance communication such as telephone communication and instant messaging (Garg, Di Cara, Xenarios, Mendoza, & De Micheli, 2008). It also encompasses Skype, Video, satellite, cell phones and the internet. Asynchronous ICTs are types of ICT tools used in communication where responses are not effected immediately (Abrams, 2003).

Asynchronous ICTs constitute e-mail and message board forum which allows communication on different schedules (Crang, Crosbie & Graham, 2007). Some examples are; the internet, storage media, and remote access. They further identified other forms of ICTs such as content management systems, social networks, Facebook, MySpace and Twitter.

Kiveu, and Ofafa (2013) stated that the most common forms of ICTs hotels adopt include, software application, computers, internet, e-mail, telephone, fax machines, photocopiers, printers and websites. Adebayoo, Balogun and Kareem (2013) conducted an investigation into the factors affecting the adoption of information and communication technology in small and medium scale enterprises in Oyo States, Nigeria, and postulated that, the Internet, Automated Teller Machines (ATMs), mobile phones and Smart Cards, information processing systems and radios were forms of ICTs adopted and used by hotels. In contrast, Buhalis and Main (1998) explored information technology in peripheral small and medium hospitality enterprises in the United Kingdom and their findings indicate that Property Management Systems were used purposely for financial modeling

In Ghana, Akaba (2015) investigated into e-marketing and hotel performance in Ghana. Findings from the study revealed that hotels transact businesses using websites, e-mail and social media. Ayeh (2008) researched into the adoption of ICT by hotels in the Greater Accra Region and found out that, most hotels adopted and used telephone lines, fax machines, scanners, printers, photocopiers and computers. Others include, website, internet and software

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applications. Issahaku (2012) wrote on adoption of e-business and stipulated that, only twenty-three hotels adopted and used active websites in Ghana.

Reasons why Hotels Adopt ICTs in Service Delivery

A number of related empirical and theoretical literature has investigated the reasons why hotels adopt ICT tools in their service delivery and came out with varying views. Adeosun et al. (2008) stated that, ICTs are adopted in hotels to enhance strategic management, communication, collaboration and access to information. They further opined that, hotels adopt ICTs to facilitate decision making, data management as well as knowledge management. Buhali (2004 cited in Adeosun, Adeosun, Adetunde & Adagunodo, 2008) also posits that, hotels adopt ICT because it serves as a powerful strategic and tactical tool which aids in the promotion and strengthening of competitive advantage. In contrast, Pavic, Koh, Simpson and Padmore (2007) cited in Adeosun et al. (2008) argued that, most hotels adopt ICT purposely to enhance better quality service, as ICTs enables hotels to decrease cost and increase capabilities by assisting them to shape inter-organizational co-ordination.

A research into hotel information technology by Law and Jogaratnam (2005) indicated that, hotels in Hong Kong adopt ICT to replace paper (manual) work, to improve customer service and to ensure other functions within the hotel are executed effectively. Nwakanma, Ubani, Asiegbu and Nwokonkwo (2014) investigated into factors that affect the adoption of ICT in the hospitality industry in Imo State of Nigeria. Their findings show that hotels adopt and use ICT tools to protect guests. Also Buick (2003) stated that cameras assist in improving security

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measures in hotels. Knowels (1998 cited in Nwakanma, 2014) puts across that, hotels adopt ICT tools to push slower activities which does not move very fast thereby providing better service, improved decision making and increased revenue.

In the Ghanaian context, Akaba (2015) explored electronic marketing and hotel performance in relation to customers' perspectives. His findings pointed out that, hotels adopt ICTs for marketing strategies, enhanced efficiency and effectiveness, customized service and effective competition with their competitors. Issahaku (2012) researched into the adoption of E-business in the hospitality industry in Ghana with emphasis on hotels. Findings from the research unearthed that hotels adopt ICTs for information gathering, handling correspondence, storage, communication, advertisement as well as buying and selling.

Also, Ayeh (2008) studied on the adoption of information and communication technologies by hotels in the Greater Accra Region and buttressed that, hotels have adopted ICT to improve operation efficiency and enhance customer satisfaction. The study established that, hotels use the internet specifically to market their goods and services, receive reservation, and evaluate customer complaints and suggestions.

Ansah, Blankson and Kontoh (2012) analyzed and contrasted the use of ICT in front office operations of hotel chain in Ghana. The outcome of the study unveiled the adoption of ICT by hotels as means of sharing information across chain hotels. They further put across that, computers were adopted by hotels purposely for typing documents, keeping and retrieving information as well as sending and receiving information.

Asabere and Doku (2013) researched into the role of information and communication technologies in measuring customer relationship management in the hospitality industry of some selected hotels in Accra, Ghana. The results of this study showed that selected hotels within the study area adopted ICT for security reasons, data storage, accurate and fast transaction, Customer Relationship Management (CRM) and convenient transactions. The reasons for adoption differ according to various hotels owing to their goals and values. It was realized that the reasons for which hotels adopt and use ICTs are similar in that, as some hotels adopt ICTs to replace manual work, improve customer service and for information gathering, others use ICTs to improve operational efficiency, provide better quality and inform their clients of services they provide (Ansah, Blankson & Kontoh, 2012; Ayeh, 2008 & Issahaku, 2012).

In terms of differences, while some hotels adopt ICTs for marketing strategies and to push slower activities, others adopt ICTs for security reasons (Akaba, 2015; Nwakanma et al. 2014 & Buick, 2003). The researcher is of the view that, due to global trend, it is appropriate hotels adopt and use ICTs for information gathering and sending across information since the services they provide are intangible. This will aid hotels to get in touch with their customers, have a competitive advantage and most importantly, remain in business.

Employees' Attitudes Towards the use of ICT in Hotels

Attitudes are constructs that represent an individual's degree of like or dislike for an item. Generally, attitudes are positive or negative views of a person,

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place or event (Yousaf 2011). In the context of this study, attitude is how well employees' react towards the use of ICTs that hotels have already adopted.

Nevertheless, Icianci (2015), is of the view that employees' attitude towards the use of ICT is based on factors like; external and organizational factors as well as demographic and job background factors. In organizations some ICTs may be new to employees which may lead to misunderstanding as result of ignorance (Nkosana, Skinner & Goodier, 2016). This influences an employee's attitude as he or she may have difficulty in incorporating such ICTs into their routines. (Barney, Wright & Ketchen 2001).

Also, management style of hotels influences attitude towards ICT usage in that, most hotels have rigid and bureaucratic ways of executing functions (Jones & Lockwood, 200). Unfortunately, the sophisticated nature of customers who are in direct contact with employees' demand getting satisfied in various ways that might necessarily not be the laid down policy of the hotel (Keaveney, 1995). Employees therefore find it difficult using technological tools in a flexible manner towards customer satisfaction, in effect, employees feel reluctant to use ICTs to perform certain tasks (Andriessen, 2012).

Jeong, Lee and Nagesvaran (2016) researched on the use of mobile devices and their perceived outcomes in the work place assumed that, employees attitude towards the use of a mobile phone relies extensively on management's ability to provide an enabling environment so as to lure employees towards the use of mobile phones in performing tasks (Andriessen, 2012). An enabling environment as opined by Venkatesh and Davis (2000), is job relatedness of the technological tool.

They argue that, technological tools must support employees' task to be performed to aid effectiveness and efficiency.

Continuous training and management's support encourages employees to develop competency, self-efficacy and realization of the importance of using technological tools to aid their efficiency and increased productivity (Lam, Cho & Qu, 2007). Further, age and working experience drastically influence employees' attitude towards ICT use.

Literature shows that, employees with older age do not easily adapt to innovation. This adversely affects older employees as they are unable to work with complex technological tools (Liebana-Cabanillas, Sanchez-Fermandez & Munoz-Lieva, 2014). In terms of experience in work place, Vogiatzi (2015) posits that long service enhances employees' attitude towards the use of technology. Vogiatzi (2015) further alluded that, employees who have been with an establishment for long may easily adapt to the use of technological tools as they have acquired enough on the job experience compared to employees who may be entirely new in an establishment. This notwithstanding, perceived job performance increases employees attitude towards use of mobile devices as this is seen as how a technology enhances the rate at which employees perform a task (Davis, Baggozi & Warshaw, 1989). Thus, as employees' task performance improves using a technology, the employee intern develops a positive attitude towards the use of such technological tool (Bharwani & Jauhari, 2013). In effect, employees develop new approaches of performing task (Braima, 2016).

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Extent of use of ICT in Hotels Towards the Achievement of Purpose of ICT Adoption

The extent of use of ICT is the frequency at which adopted ICTs are put to use in service delivery by hotels as stated by Bulent and Ozturk, Hancer and Im (2014), when they reviewed literature on whether ICT adoption enhance hotel performance. However, Sahadev and Islam, (2005) as well as Sigala (2005) observed that the extent of use of ICT can be arrived at using the quantum of services carried out with a particular ICT tool. Similarly, Obonyo, Kambona and Okeyo (2016) in their study on determinants of ICT adoption among hotels in Kenya, noticed that the extent of ICT usage in hotels depends on factors such as grade, size and age of a hotel as well as the experience of hotel managers in terms of ICT implementation. They further stated that characteristics which determine hotel size adversely affect all ICT activities (Law, Buhalis & Cobanoglu, 2014).

In Ghana, Ayeh (2008) analyzed literature on hotels adoption of ICT in websites and application software were most used but did not mention how the extent of use of these ICTs helped the hotels to achieve the reasons for adopting the ICTs. Further, Quarshie (2013) examined the use of ICT in hotel operations in the Central Region of Ghana and the outcome of this study showed that telephones, fax machines, and computers were used specifically in 3-star hotels on daily basis compared to the less frequent use by 2-star and 1-star hotels.

Barriers to the use of ICT in Hotel Service Delivery

Despite the technological revolution in the hospitality industry, hotels have lagged behind in the utilization of ICT (Nwakanma, et. al. 2014; Sahadev & Islam, 2005). Similarly, DiPietro and Wang (2010) reviewed literature on key issues for ICT application, impacts and implication for hospitality operation. Their findings revealed that factors that impede the use of ICT can be classified into five categories which are: organizational factors, economic factors, environmental factors, technological factors and political factors.

Organizational Factors

Evidence indicates that a firm's propensity to adopt and use ICT is dependent on several factors, some of which are: type (grade) or size of hotel, firm location, age of hotel and scope of activities carried out by the hotel. In the hotel industry, the type (grade) or size of firm be it a budget hotel, guest house, one star or four star determines its level of adoption of ICT tool (Shadev & Islam, 2005). The adoption of ICTs requires investment of resources. Small hotels may be affected by scarce resources which in effect hinder them from adopting expensive information and communication technologies (Ghobakhloo, Hong, Sabouri & Zulkifli, 2012). They added that, large hotels on the other hand, may be more inclining in the adoption of ICTs. In addition, large hotels usually take risk in adopting ICTs. Small hotels will mostly hold on until an ICT is well stabilized before venturing to adopt in orders to prevent waste of resources (Nwakanma et al. 2014). Large hotels may benefit from the adoption and use of ICT more than small hotels as they have more resources than small hotels (Salwani, et al. 2009). The size

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of a hotel is measured by the number of rooms, number of beds, employees and departments (Ye, Law & Gu, 2009).

Further, the grade of a hotel determines its target class of customers and scope of activities (Hoontrakul & Sahadev, 2004). Luxury hotels with high class customers may adopt ICT system in order to meet the demand of these customers and fast track its scope of activities, since ICTs aid effective integration of functions within hotels. It is therefore assumed that, luxury hotels which have a wide range of activities will turn to adopt ICT system than hotels with lesser range of activities (Nwakanma et al. 2014).

Also, the age of a hotel determines its ICT usage. Nabisam and Wang (2000) contend that, new hotels find it much easier adopting ICTs as this revamps the existing system within the hotel. Some ICTs installation requires quite a large scale of reorganization of the hotel and this may be a very difficult task for old hotels as they are already stable in the system.

Economic Factors

Economic issues are the most crucial resources in any business entity including hotels since they are considered as the bedrock of all other resources in a hotel business (Minguzzi, & Passaro, 2001). In general, hotels suffer from economic factors such as, cost of installation, cost of maintenance, return on investment and inadequate budget towards the use of ICT (Full-Love, 2006). Riemenschneider, Harrison & Mykytyn (2003); Walczuch, Van Braven & Lundgren, (2000) argue that, the high cost of ICT tools and infrastructure hinder

hotels from using ICTs since the hotels cannot afford the cost at which the ICT facilities are sold.

Besides the initial cost of installation, the cost at which ICT tools will be maintained and or repaired serves as another impediment to its use (Sigala, 2003). Care and maintenance aid to prolong the life span of ICT tools, increase the effectiveness as well as productivity (Kasim, & Ern, 2010). On another hand, activities come to a standstill when there is lack of maintenance and this lead to loss of business in the hotel (Buick, 2003). Venkatesh and Brown (2004) are of the view that inadequate budgeting like, under estimation of cost of employee training and development towards the use of ICTs, is a contributing factor to underutilization of ICT, because employees need to be updated in terms of training as regards the use of both new and old forms of ICTs as this helps to facilitate work process, prevent accidents and improve productivity.

Environmental Factors

Wang and Qualls (2007) argued that an organization's technological environment is the organization's degree of ability to facilitate, support, and implement technology projects put in place by the hotel. In view of this, they identified environmental factors such as accessibility of ICT facilities, availability of physical infrastructure and availability of power supply as impeding the use of ICT in hotels (Hashim, 2007). In contrast, Buhalis and Main (1998) in their study on information technology in peripheral small and medium hospitality enterprises'

strategic analysis and critical factors in the United States of America came out that, an environmental factor which impedes the use of ICT in hotels is family arrangements of Small and Medium Hospitality Enterprises proprietors. Another main factor that prevents the successful implementation of ICT as noted by Nkosana, Skinner and Goodier (2016) is the size of a hotel. They indicated that some managers are of the view that some ICT components may not be appropriate for small hospitality industries as compared to bigger hospitality industries.

Competence

Competence is described as the ability, capabilities, expertise, experience and knowledge that enables individuals to manipulate adopted ICTs in a hotel (Le Deist & Winterton, 2005). Technological factors are one of the most important resources which aid effective and efficient use of ICTs in every hotel (Mihalic & Buhalis, 2013). In view of this, Nkosana, Skinner and Goodier (2016) researched into the challenges of ICT adoption and utilization in small rural hospitality industries in the Kwazulu Natal Midland of South Africa and revealed that the major technical factors which serve as barriers to the implementation of ICT include, lack of knowledge on strategic use of ICT. They contended that ICT is constantly evolving due to dynamism, therefore, users of ICT ought to be abreast with the dynamic nature of the environment hence, managers and staff of hotels need to improve upon their initial ICT skills, so as to accept and embrace changes (Sigala, 2005). On another note, DiPietro and Wang (2010) in their study unearthed

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that, employees' level of knowledge on technology projects, lack of expertise and lack of training are some factors which impede the utilization of ICT in hotels.

Buhalis and Main (1998) asserted that, employees' knowledge on technology projects, expertise, management support, ineffective budget for technology and its maintenance are some technological factors which serve as barriers to the use of ICT in hotels. Contrary to the above, (Weeramanthri, Gunawardana & Kulathunga, 2015) observed in their article on "Utilization of Information and Communication Technology to Enhance Entrepreneurship" of which hotels form an aspect in South- East Nigeria that, lack of training, lack of awareness, lack of human technological resources, lack of managers' understanding and lack of successful integration of ICT in department of hotels prevented proper implementation of ICT in hotels.

The hotel as a business and a service industry must emphasize on its capabilities, competencies and skills and these are related to how the hotel uses its resources to deliver customer value (Shaw, Bailey & Williams, 2011). Capabilities, competencies and skills are fundamental to organizations and are underpinned by the organization's values and culture and must therefore be delivered in ways that are usually difficult for others to copy (Ulrich & Lake, 1990).

Ainuddin, Beamish, Hulland and Rouse (2007) postulated that, capabilities are built upon resource and competencies. Resources in this regard are the adopted ICT tool for the hotel's use. Hotel employees as well as other stakeholders must have the capability, competency and skills that will enable them operate whatever ICT system the hotel has adopted as this will aid the hotel to achieve its objective

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for which the ICT system has been adopted (Davern &Kauffiman, 2000). They further observed that, hotels cannot expect to purchase sustained competitive advantage in open markets rather, such advantages must be found in the rare imperfectly imitable and non-substitutable competencies already controlled by the firm (Barney, Della Corte, Sciarelli & Arikan, 2012).

The barriers above support the work of Quarshie and Amenumey (2018), who were also of the view that, lack of trained personnel, unreliable power supply, slow internet connectivity, virus infection of files and lack of ICT facilities affect ICT utilization in the Central Region of Ghana. Implication of this on the hotel industry could be eradication of hotels from the business environment since such hotels cannot use ICT which has become global phenomenon and strategic tool used for service delivery in all sectors (Sigala, Lockwood & Jones, 2001). This statement is in harmony with Foss and Knudsen (2003), who argue that a firm cannot buy a sustainable competitive advantage in the market but rather, has to grow and protect expertise and competencies internally. This means if a hotel has employees with very good expertise, good managerial skills, capabilities, competencies and skills, as well providing necessary resources, input of work will be done with perfection thereby increasing productivity (Frame, 2003).

Theoretical Review

The theories that form the basis of the study are the Technology Acceptance Model 1 (TAM 1) Davies, Bagozzi and Warshaw (1989) and Theoretical Extension of Technology Acceptance Model 2 (TAM 2) (Venkatesh & Davis, 2000). The theories give varied approaches to understanding the concerns of adoption and

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utilization of information and communication technologies in hotels. Three theories were reviewed as they all relate to the topic under study. These are discussed below:

Technology Acceptance Model 1 (TAM)

Davis, Bagozzi and Warshaw (1989) propounded the Technology Acceptance Model (TAM). The theory measures individuals' and organizations' behavioural intentions to adopt and use any form of ICT. Davies, Bagozzi and Warshaw (1989) unveiled that measuring actual system use is difficult hence behavioural intention emphasizes the prediction of actual use of an ICT. In reality, to increase the use of information technology, individuals and organizations need to exhibit strong behavioural intentions towards the use of ICT (Robson, 1994).

It can be deduced that behavioural intention is influenced by individuals and organizations' attitude to use an ICT (Abubakar & Ahmad, 2013). In effect, attitude towards the use of ICT is influenced by perceived ease of use and perceived usefulness (Luarns & Lin, 2005).

Davis, Bagozzi and Warshaw (1989) further opined that perceived usefulness constitutes how the use of an ICT increases the efficiency of a person in a work process whereas perceived ease of use is described as the extent to which an ICT is used with less effort by an individual. These variables are linked by external variables amongst which are system design features, user characteristics, task characteristics, training and demonstration. (Mun & Hwang, 2003). System design features entail the characteristics of the said system (Peterson & Hedman, 2001). The indication being that, perceived ease of use and perceived usefulness are influenced by correctness of a system and its acceptability. (Weeringhe,

Basnayake, Arambepola, Rathnayake & Nawaratne, 2014). On the other hand, the system should be easily understood by the user since this facilitates development, maintenance and change (Von Hippel, 2005). Unless a design is understood, much effort is required for its operation which can hinder adoption and usage Gamma, (1995).

The model was tested in a study carried out on information technology users by the originators Davies, Bagozzi and Warshaw (1989) who used TAM in measuring intention to use an information system. It was revealed that perceived ease of use and perceived usefulness have direct and positive influence on behavioural intention to use any form of system. This prompted the elimination of attitude construct from the model. The modified model, therefore, had perceived ease of use, perceived usefulness, intention of use and usage behaviour. These two models are depicted in Figure 1 and 2.
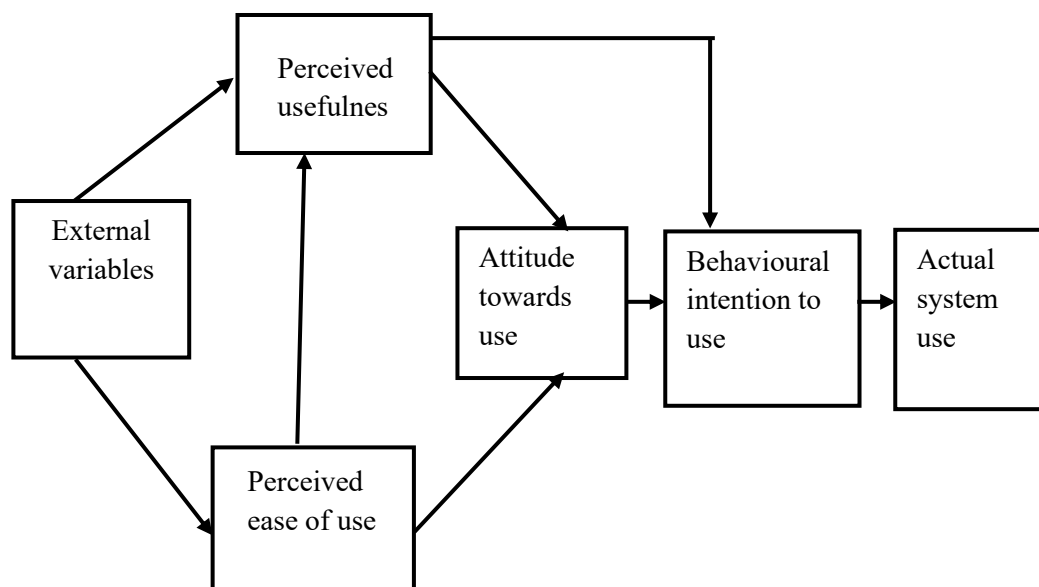
Figure 1: Technology Acceptance Model 1

Source: Davis, Bagozzi and Warshaw (1989).
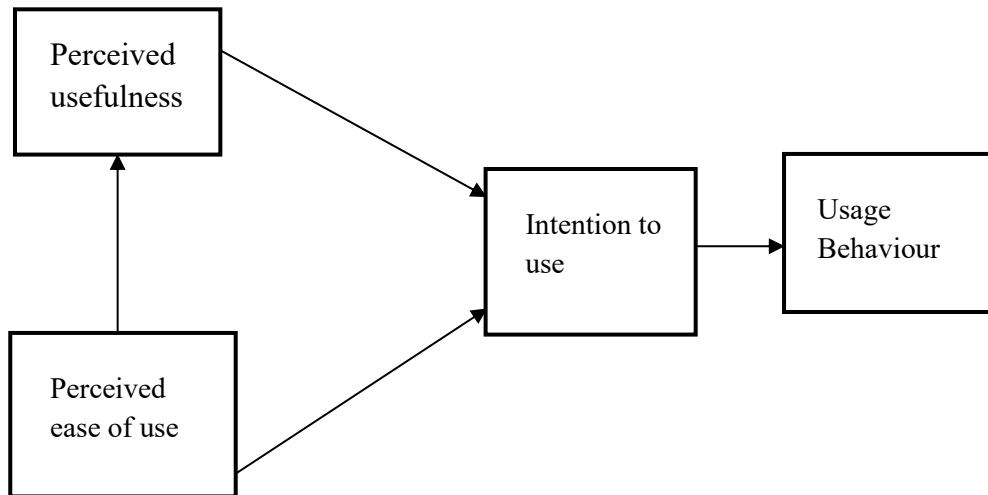
Figure 2: Technology Acceptance Model 2,

Source: Venkatesh and Davis (1996).

The second version of TAM was extended by the Venkatesh and Davis (2000). Its limitations include its inability to showcase the determinants of perceived ease of use and perceived usefulness as stated by Bagozzi, (2007) and Chuttur (2009). They further explained that TAM has emphasized on deploying the adoption and use of information technology in the voluntary environment but not considering much about mandatory environments. In effect, research has indicated that TAM should include environmental variable such as changing from single user to multi users as adopted ICTs may not necessarily be used by only an individual (Liu, Chen, Sun, Wible & Kuo, 2010).

Benbasat and Barki, (2007) argue that the model focused on system use which was very narrow. As a result, a modified and extended TAM 2 was proposed by Venkatesh, and Davis (2000) where they added other two important variables which are, social process determinants and cognitive process determinants. They

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stated that these are the determinants of perceived usefulness and perceived ease of use. The social process determinant encompasses subjective norms, voluntariness, and hotel category whereas the cognitive process determinant entails experience, job relatedness, efficiency and standard of result.

The authors tested the model under obligatory and voluntary circumstances and asserted that, the outcome was perfect. The model is shown in Figure 3.
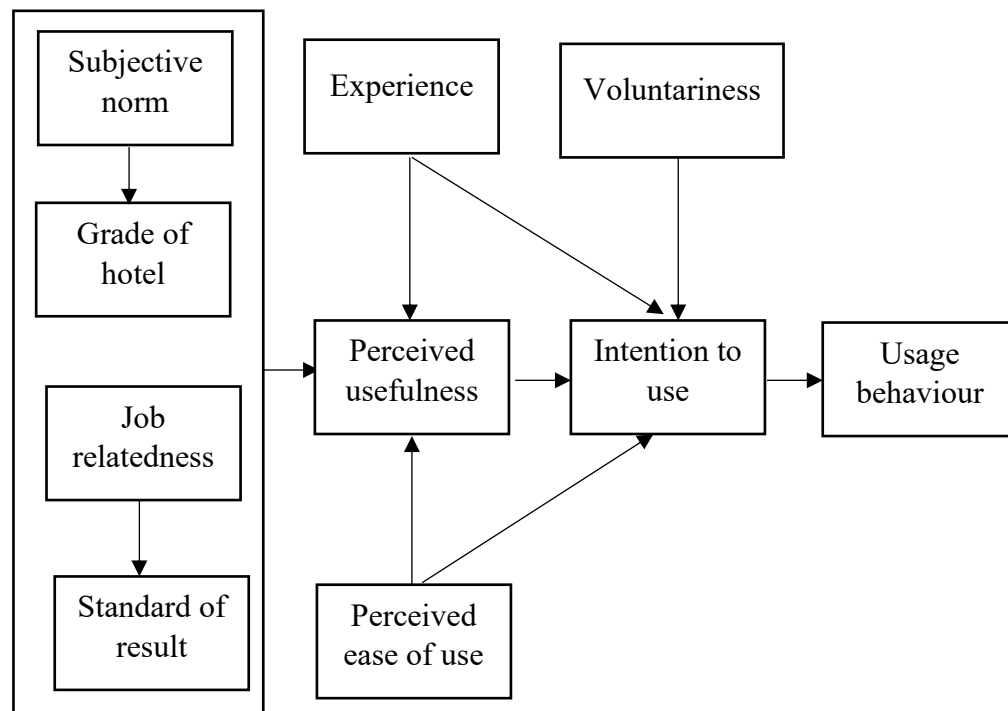
Figure 3: Theoretical Extension of Technology Acceptance Model 2

Source: Venkatesh and Davis (2000)

The implication of the theory on the study is that, each theoretical property emphasizes the need to recognize the various elements that determine an individual and organization's choice of ICT on individual basis and within the business environment (Bock, Zmud, Kim & Lee, 2005). TAM 2 (Theoretical Extension) is considered the most appropriate model for the study since the variables' perceived

ease of use and perceived usefulness have been adopted by almost all other models while adding other constructs.

The study adapted the Theoretical Extension of TAM 2 due to the fact that it took into consideration the three domains of learning. These domains comprise the cognitive, affective and psychomotor skills. A cognitive domain talks about how an individual thinks, understands, analyses, synthesizes and evaluates an adopted information technology (Savolainen, 2002). Also, the individual is able to critique and give conclusion on how well an adopted ICT can aid the execution of functions within an organization (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). These variables can be equated to objective one of the study. The affective embraces attitudes, motivation, intentions and in general terms, willingness to accept a behaviour (Iverson, 1996).

These variables when related to the adoption and usage of information and communication technology focus on the individuals' attitude and intention to adopt and use an ICT. Lastly, the psychomotor domain talks about the individual's ability to manipulate ICT system with his or her skills (Gagné, 2004). It focuses on performing sequence of activities using various forms of ICT adopted in an organization and this is related usage behaviour (Ramalingam, Kaslingam & Chinnavan, 2014). TAM 2 has been adopted in many studies which continuously focuses on substantial aspects of the variance in usage intentions and a variety of ICT (Hong, Thong & Tam, 2006). More so, the direct effect of subjective norms and behavioural intention yielded mixed results in the past (Venkatesh & Davis, 2000). The theory used perceived usefulness and perceived ease of use in place of

subjective norms. TAM 2 is a robust, powerful, and mean model for predicting user acceptance of information technologies (Venkatesh, Morris, Davis & Davis, 2003).

It has been used in many empirical studies and proven to be of quality and statistical reliability Matikiti, Afolabi & Smith, 2012). This notwithstanding TAM 2 ignores some important theoretical constructs and does not reflect the variety of user task environments and constraints (Vogiatzi, 2015).
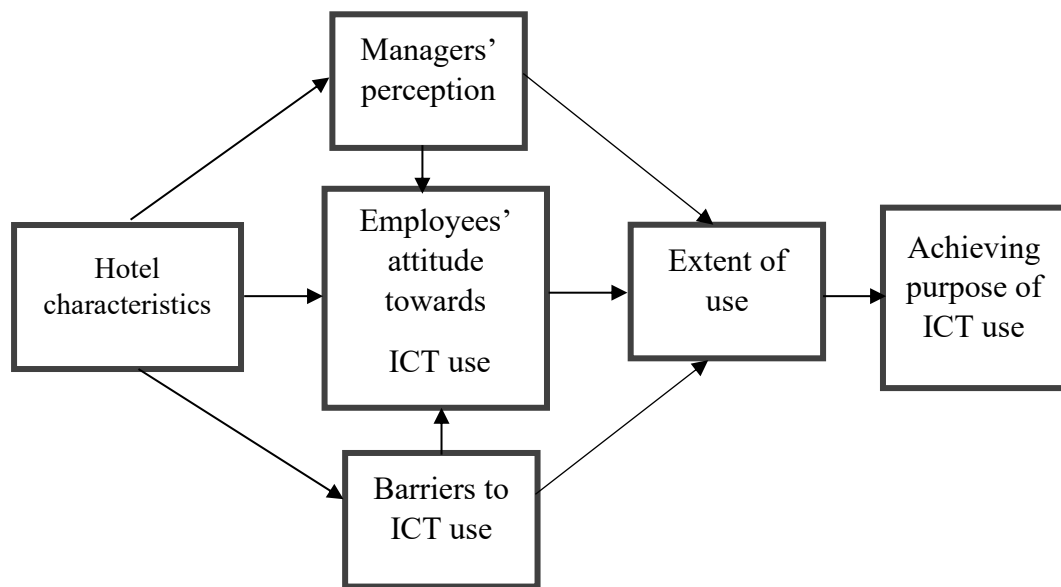
Figure 4: Conceptual Framework for Adoption and use of ICT.

Source: Author's construct, (2018).

In the conceptual framework above, hotel characteristics which include: hotel category, hotel location, accessibility, caliber of employees as well as scope of activities influence managers perception and barriers to ICT use (Hwang & Lockwood, 2006). These variables inform the manager whether it is useful to adopt ICT and if adopted it can be used with ease in the hotel. The manager therefore may provide a supportive system towards the adoption and use of it (Kuo & Lee, 2011).

The above variables as well may determine the types of barriers to ICT use in a hotel in that, hotel category determines the caliber of employees and their level of knowledge and competence in ICT use (Cameron, 2007). In addition, accessibility of internet connectivity depends greatly on hotel location (Sigala, 2003). Managers' perception towards ICT use and barriers to ICT use in effect will influence employees' attitude towards its use on the basis that, how a manager regards the use of ICT will aid him to make an informed decision towards its adoption and also provide a supportive system to facilitate its use. Barriers of ICT use on the other can influence employees to develop either positive or negative attitude towards its use.

Employees' attitude impacts on the extent to which ICT adopted by a hotel may be put to use. A positive attitude however will facilitate the use of ICT and in effect promote the achievement of the purpose for which it is adopted. Moreover, managers' perception towards ICT adoption and barriers to ICT use in a hotel can also influence the extent of use. A manager who perceives that the use of ICT is relevant in hotel service will create an enabling environment for its extensive use and vice versa. Likewise, barriers to ICT use will influence the extent of use even though an employee may have a positive intention to use it. These variables correlate to a hotels' achievement of purpose for which ICT has been adopted.

Summary

This chapter reviewed the theory and concepts that entailed the topic of the study. The various perspectives on hotels adoption and utilization of information and communication technology in hotels, forms of   ICTs adopted by hotels,

managers perception on the reasons for adopting ICT in hotel service delivery and employees attitude towards the use of ICT in hotel service delivery. Others include, the extent of use of ICT in hotel service delivery, as well as barriers to the use of ICT in hotels.

Based on this, a conceptual framework was constructed where the variables, hotel characteristics, managers' perception, employees' attitude and extent of use and barriers to these were discussed in relation to the theory and objectives. A theoretical extension of TAM 2 proposed by Venkatesh and Davis (2000), was adopted for the study as the variables were in connection with the objectives of the study.

It can be deduced that, the forms of ICT according to literature are similar. Moreover, the forms of ICT adopted by the various hotels depend on their reasons for adoption. In the context of this study, there have been adoption of different forms of ICT from different literature which has brought difference between this study and other existing literature. The study emphasized on the following forms of ICT in hotels: computers, fax machines, mobile phones, websites, the internet, social media and e-mail. Others include: application software, automated teller machines, voice mail, photocopiers, printers, smart cards, scanners and any other ICT adopted by the hotels within the study area.

It is therefore relevant that hotels strive to know the extent to which each adopted ICT is used as this will enable management to give priority to the acquisition of the various ICT tools. This is in the sense that some specific tasks may not be easily performed in the absence of ICT tools that may be used very

often. Nevertheless, there will be variation in the barriers to the adoption of ICT among hotels as the plans and intentions for adoption by hotels vary. However, there will be limited impediments to the use of ICT in hotels if hotel policy makers plan strategically and ensure proper implementation of the strategic plans.

Also, enough allocation of funds to ICT in hotels will enable effective and efficient use of required ICT in hotels to meet the hotels' goals and values. The following chapter describes methods used for the study.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter describes the procedures and methods employed to collect data for the study. It covers the profile of the study design, study area, sources of data, target population, sample size, sampling procedure, and research instruments. It also emphasized on data collection procedure, pre-testing of instruments, ethical issues as well as data processing and analysis.

Research Design

In order to effectively answer the research questions involved in the study, a cross-sectional design was employed. Cross-sectional design involves gathering of data at one point in time (Bryman, 2015). However, cross-sectional design is limited in terms of making causal inference (Carlson & Morrison 2009). Cross-sectional design is deemed appropriate for the study since this type of design lends itself to one off data collection to examine a phenomenon, which was the case in this study (Creswell & Creswell, 2017). Again, the design allows investigation between association of dependent and independent variable (Apulu & Latham, 2011). This can be equated to how employees attitude towards ICT use impact the extent of use of ICT to arrive at the purpose of adoption.

Study Area

The study area for this research was the Kumasi Metropolis in Ghana. Kumasi is located in the Ashanti Region of Ghana (Saliu, 2016). The Metropolitan

area shares boundaries with Atwima District, Kwabre East District and Ejisu-Juaben Municipality (Akomea-Bonsu & Sampson 2012).

There is sufficient production and sales of staple foods and meals within the Metropolis (Wireku-Gyebi, & Akyeampong, 2014). An imaginary triangle the Kumasi Metropolis, Cape Coast and Accra as the three points of intersection of its line is described as the Tourism Triangle in Ghana (Boakye, 2010). Kumasi is one of the most industrialized cities with many tourist attraction sites. It has a hub of a beautiful heritage and culture some of which are; the Kumasi Zoological Gardens, Komfo Anokye Sword Site, Manhyia Palace, Kejetia Market, Ghana National Cultural Centre and Armed Forces Museum (Adam, 2012). Akwasidae and Akwasidae Kese festivals are among the famous cultural events (Adjoe, 2015). Cultural artefacts as well are common in the Metropolis the craft villages at Pankorono and Ntonso add up to the tourist attractions of the city. Various forms of businesses, including the hotel and telecommunication businesses, thrive in Kumasi. The Kumasi Metropolis has 57 star rated hotels (Ghana Tourism Authority, 2015). The profile is depicted in the Table 1 on next page.

Table 1: Profile of Star Rated Hotels within Kumasi Metropolis

Star rating	Number of hotels
Four star	1
Three star	7
Two star	26
One star	23
Total	57

Source, GTA (2015).
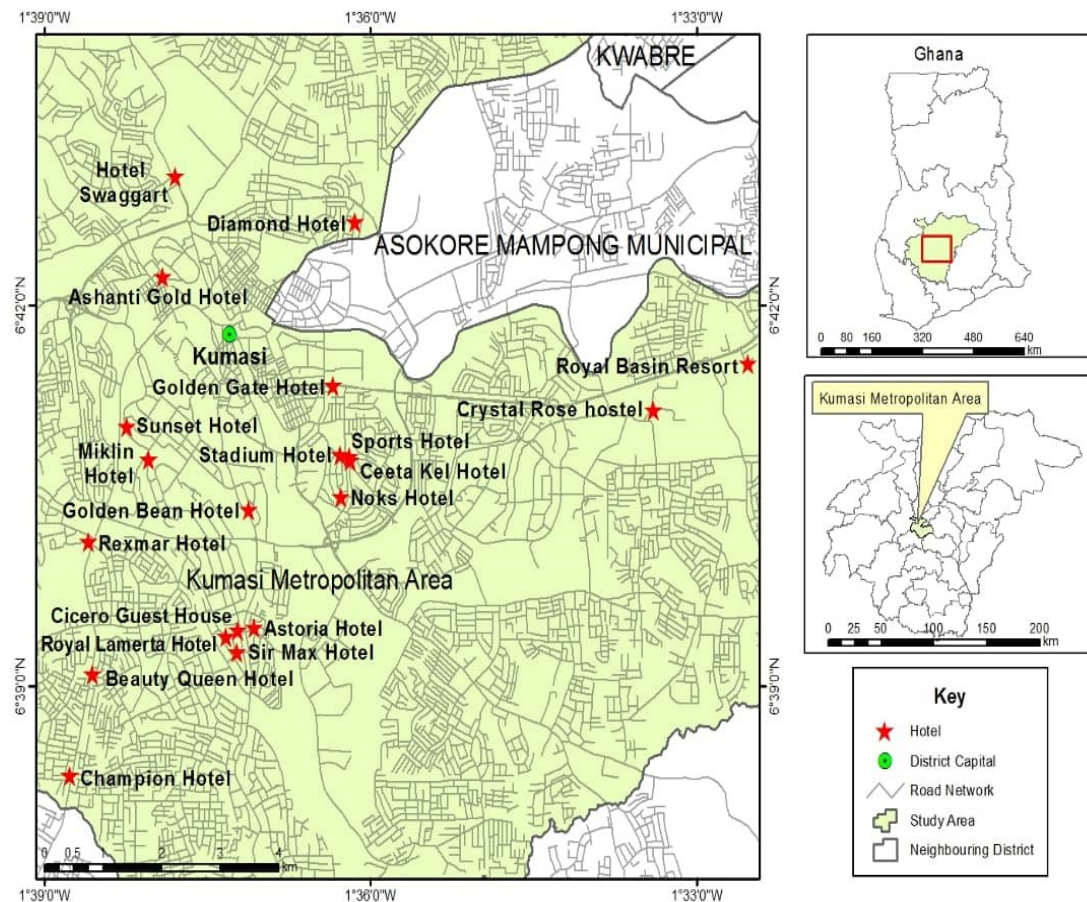
Figure 5: Map of Kumasi Metropolis.

Source: Cartographic Unit of University of Cape Coast, (2018).

Ghana in the year 1990 was in the lead of liberation of telecommunication to attract investors. The country was successful by luring four main networks including the MTN, Vodafone, Tigo, and Expresso into the country (Osiakwan, 2003). These networks are all in active operation in the Metropolis. Network penetration in Kumasi as at the year 2009 to 2010 increased from 50 cell sites to 230 (Akomea-Bonsu & Wireku-Gyebi, 2012; Kotoua & Ilkan, 2017; Saliu, 2016; Osei, 2009). It can, therefore, be deduced that hotels within the Metropolis have optimal access to internet services that can facilitate the use of almost all forms of information and communications technologies in transacting business. Hence, the hotels have no excuse not to adopt and use ICT in the Metropolis.

In addition, looking at the number of star rated hotels and range of services provided, the hotels are likely to adopt and use various forms of ICT to aid in meeting both national and international customer needs precisely, tourists as well as business persons. Due to the above reasons, the Metropolis was deemed a suitable research setting on the study of adoption of ICT technologies among hotels.

Research Philosophy

The philosophy underpinning the study was pragmatism. Pragmatism considers thought as an instrument for prediction, problem solving and actions rather than functions being described or represented (Ulrich & Ralph, 2012). It is also perceived as a means that permits the researcher to choose methods, techniques and procedures that best suits the purpose of a study (Creswell, 2014). On the other hand, pragmatism must necessarily cover both qualitative and quantitative approaches (Morgan, 2013).

Pragmatism is appropriate for the study since the researcher aimed at using the mixed methods approach which is one of the bases for using pragmatism (Creswell, 2014). The mixed method approach combines results obtained from two or more approaches. The approach is considered to enrich research in a way that a single method cannot. Further, mixed method provides a more complete and comprehensive understanding of research problem than one approach (Hussein, 2015). Nevertheless, the mixed method needs extensive data collection. In effect, the concurrent triangulation approach of mixed method was used. This enabled the researcher to collect data simultaneously and helped in the validating results of the two approaches.

Specifically, qualitative and quantitative methods were employed. The qualitative approach aims at bringing out the meaning and perceptions of respondents in relation to a phenomenon under study (Strauss & Corbin, 1990). Respondents are interviewed for a specific duration to determine their personal experience concerning a research problem. The qualitative approach is deemed appropriate for the study since it helped the researcher to interview managers concerning their informed decision making with regard to the reasons for adopting the various forms of ICTs used in hotels within the study area. In other words, the choice of this approach facilitated understanding of the reasons for adoption and use of ICT in the study hotels. Yin (2009) postulates that qualitative research helps to explain complex issues, within the natural settings of the research phenomenon.

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Quantitative research, however, aims at determining the relationship between dependent and independent variables with numerical data (Yilmaz, 2013). It uses deductive reasoning where the researcher may form hypothesis and collect data during the process of investigating. In deductive approach, a well-structured methodology is adopted to facilitate replication (Croom, 2010). However, both qualitative and quantitative data were collected concurrently. This was to enable the researcher to work within the time frame.

The choice of this technique is appropriate since part of the study's objective dealt with numbers and structured method of data collection, which enabled the researcher to explain the relationship between the variables under study. Besides, the quantitative (deductive) approach according to the view of Litvin, Goldsmith and Pan (2008) and Robson, (2002) is adopted when a research aims at creating awareness of a specific situation. This idea was the target of the topic under study**.**

Study Population

The target population for this study involved, general managers, heads of ICT unit and employees who were in direct use of ICT in the various hotels. Reasons for this choice are in the researcher's view that managers specifically have an influence on the adoption of ICT whilst the heads of ICT units and the other respondents were directly involved in the use of the various ICTs adopted by the hotels and can, therefore, give valid information concerning the topic under study.

Sample size

In order to arrive at the sample size for the study, Fishier, Laing, Stoeckel and Townsend (1998) formula was adopted. This formula is depicted below:

$$n = \frac{z^2 \, pq}{d^2}$$

Where-:

n = the desired sample size when the population is unknown.

z = the standard normal deviation, set at 1.96, which corresponds to 95% confidence level.

p = the proportion in the target population estimated to have similar characteristic is equal to 80%

q = 1.0 – p

d = the degree of accuracy desired, here set at 0.05 corresponding to the 1.96.

In substitution,

$$n = \frac{1.96^2(0.80)(1 - 0.80)}{(0.05)^2}$$

n = 245.8624

$$n = 246$$

Out of the sample size of two hundred and forty-six (246), twenty (20) general hotel managers were used for qualitative data whilst two hundred and twenty-six (226) were used for quantitative data. The researcher used twenty general hotel managers for the qualitative as these were the only respondents who

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were willing and availed themselves to be interviewed among the target respondents of 47 general hotel managers. The managers of the rest of the hotels either refused to be interviewed or failed to avail themselves even after several calls and appointments. 53 heads of departments and 121 other employees who were in direct use of ICT were sampled.

Sampling Procedure

The study used purposive and convenience methods of sampling to select respondents. According to the classification of GTA (2015), the hotels were categorized into star rating. Therefore, purposive sampling was adopted to select all-star rated hotels for the study. Heads of the ICT units of the hotels were also purposively sampled as they were few and directly involved in the distribution and use of ICT in hotels. The convenience sampling method was used for general managers. This was to enable managers who were available and willing to be interviewed to do as such. Two employees each from the front office and the restaurant were selected. One employee was sampled from the housekeeping department.

Also, some heads of departments (sales manager, human resource manager) that were in direct use of ICT were sampled. The general managers were sampled for the qualitative since they were the only group of people who could help the researcher to ascertain facts in relation to the adoption and the reasons for adoption of ICT as they are involved in the hotel's policy making.

The lottery method of simple random sampling technique was used to select all other respondents who were in one way or the other users of ICT in the hotels.

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The inscription Yes and No was written on different sheets but mixed in one container. Each of the 121 employees (respondent) was made to pick one piece of paper after which the remaining pieces of papers were tossed well before another employee picked. The process was repeated in all the hotels sample for the study until the target sample size was attained.

Precisely, all the respondents sampled for the study were on morning and afternoon shifts. This was due to the fact that the researcher could gather data only within the stipulated time frame for convenience and safety reasons.

Data and Methods

The study adopted primary data to answer the research questions. The primary data was solicited directly from the respondents using interview guide and structured questionnaire.

Research Instruments

The study used interview guide and structured questionnaire to gather data. The interview guide covered all aspects of the objectives of the study. Nonetheless, the semi-structured interview precisely laid emphasis on the first objective which was on managers' perception about adopting ICT in hotel service delivery. It also dealt with the demographics of the various managers. Interview guide was chosen as an instrument for data collection because it provides the context where respondents can seek for clarification. On the other hand, interview enables respondents to have the chance to elaborate on ideas and explain perspectives in their own words.

Moreover, the researcher aimed at understanding the reasons why hotels have adopted and are using some forms of ICTs in their service delivery. The instrument helped managers to give out their perception about the reasons for which hotels have chosen these particular forms of ICTs and how the use of the ICTs facilitates the achievement of purpose for which the ICTs were adopted (Yousaf, 2011).

Nevertheless, the questionnaire was structured into six sections. Section one covered the forms of ICTs adopted by hotels. Section two entailed details on objective two which emphasized on employees' attitude towards the use of ICT by hotels. The third section consisted of issues on the extent of use of adopted ICTs in relation to achievement of the purpose of ICTs adopted by the hotels. Issues of barriers to the use of ICTs by hotels was captured in section four. The last section captured the demographics of respondents. Most items in each section were composed of close-ended and few open-ended questions. A four-form likert scale (1= Strongly disagree, 2= Disagree, 3= Agree and 4 = Strongly Agree) was employed in measuring questions on employees' attitude, the impact of extent of use and barriers to the use of ICTs in hotels. In gathering data on extent of use of ICT in hotels, the scale (1= Seldom, 2= Occasionally, 3= Often and 4= Very often) was used. Items were drawn from (Bulent & Hancer 2014; Ansah, Blankson & Kontoh, 2012; Kim, Ritchie & McCormick, 2012; Issahaku, 2012 & Noor, 2008).

The items were composed in English Language since it was assumed that the general managers and employees might have had at least some formal education which can enable them read and write English.

Questionnaire is the most appropriate instrument used under quantitative data collection (Babbie, 2015). It does not require much time. Questionnaire is easy and simple to tabulate and analyze. It is also reliable as it has fixed alternatives (Peterson, 2002). However, there are some demerits associated with the use of questionnaire in a research. Some examples are: (i) the researcher may coerce respondents against their wish which may not represent the true phenomenon; (ii) Respondents may choose or write wrong answers if questions are ambiguous and they do not seek for clarification. This, however, will not reflect the true situation as it exists (Churchill, 1995). Both instruments were chosen to make room for understanding and generalization of results. Again, as (Creswell, 2014) asserted, diverse types of data collection provide a more understanding of a research problem than only one means of data collection.

Data Collection Procedure

The researcher booked an appointment with the management of the hotels involved in the study. Data was collected from all the hotels sampled between the periods of February 2018 and April 2018. The period was chosen as December is a peak season for hotels. This will therefore not allow respondents enough time for interview as well as answering questionnaires. The periods chosen are lean seasons hence managers and other employees of the hotels will be less busy and can therefore have ample time to be interviewed and also respond to the questionnaire appropriately.

Specifically, interviews on qualitative data were conducted within three (3) weeks. Discussions were held based on the schedule of the manager as that was

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when the interviewee could spare time. The maximum number of discussions held on a day was two (2) and the minimum was one, (1). Average duration for interview was between forty to fifty (40-50) minutes based on the understanding level of respondents.

Quantitative data was however solicited through self-administered questionnaires. The researcher and the field assistant explained misconceptions to respondents where there was a need. Answered questionnaires were retrieved from respondents who were able to respond to their questionnaires at the close of the day the questionnaires were administered. On the other hand, extra time was allotted to employees who were unable to complete their questionnaires. These questionnaires were retrieved as and when the researcher was called. In all, eight (8) weeks was used to gather quantitative data for the study.

Pre-testing of Instruments

Fieldwork for the study started with pre-testing of instruments in 10 hotels for one week in January 2018 within the Cape Coast Metropolis. Cape Coast was chosen for pre-testing of the instruments as it has a hub of hotels and tourist attractions as well as heritage sites just as in the Kumasi Metropolis. Pre-testing of instruments was deemed necessary as it enabled the researcher to test for the reliability, validity and also make amendment in the instruments before the actual data collection.

Based on the outcome of the pre-testing, ambiguous questions were clarified whereas some open-ended questions were restructured to close-ended

questions. This was to enable the respondents to answer every question to help the researcher to arrive at the objectives of the study.

Training of Field Assistant

One field assistant was trained to help the researcher in data collection for the study. The field assistant holds a Higher National Diploma in Hotel Catering and Institutional Management. The training was held during the period of January 2018 and lasted for only three (3) days. Precisely, the field assistant was trained on taking records of audio and written interviews and administered and retrieved questionnaire. Similarly, the training covered how to cross check answered questionnaires and politely request respondents to complete any questionnaire that was not fully answered.

Actual Field Work

Data was collected between the period of February 2018 and April 2018. Before the commencement of interviews and administering of questionnaires, the purpose of the study was explained to respondents. This was deemed necessary so as to help respondents to explain answers well so that the researcher can achieve the objectives of the study.

During interview sections, the researcher took written notes on the interviews whilst the field assistant took audio records of the interviews. Questionnaires were administered and retrieved by the researcher and the field assistant. Respondents were politely requested to fully answer questionnaires which were not completed before handing over to the data collection team. However,

among the two hundred and twenty-six (226) data collection instruments sent to the field, one hundred and seventy-four (174) answered questionnaires were retrieved from the field. In all, twenty general hotel managers, fifty-three heads of departments and one hundred and twenty-one other employees making a total of (194) respondents, suggesting a response rate of 79% was used for the study

Fieldwork Challenges

A major challenge encountered during data collection was tight work schedule for some managers because of which they could not have adequate time to attend to the researcher. As a result, the researcher had to visit some of these hotels on three to four occasions before conducting one interview. This delayed the period allotted for qualitative data collection.

In addition, some managers did not allow the research assistant to take audio record of interviews. This made interviews longer than the time stipulated. Even though the questionnaires were self-administered and points explained, most employees delayed in answering them due to misunderstanding of some questions. Other employees thought they were being disturbed and, therefore refused to answer the questionnaire. In order to arrive at a meaningful sample size, the researcher increased the number of respondents in hotels where employees' were willing to answer the questionnaire. In certain instances, employees misplaced questionnaires so the researcher had to incur extra cost to replace them.

In effect, some questions were not answered whilst some were also not retrieved. One other challenge was that management of some hotels totally disagreed with the researcher to collect data from their hotels with reasons that

answering questionnaire takes a lot of their time and moreover, researchers always gather data from their establishment for their own benefit.

Ethical Issues

The researcher was duly given an introductory letter by the Hospitality and Tourism Department of University of Cape Coast. Consent was sought from all respondents. The purpose of the study was appropriately explained to all respondents before each exercise begun.

Most importantly, none of the respondents was coerced to participate in answering questionnaires or to avail himself or herself to be interviewed. Anonymity was strictly adhered to. Hence, neither the name, mobile numbers nor the names of respondent's work place was included in the interview guide or the questionnaire.

Data Processing and Analysis

Qualitative data was analyzed using thematic analysis. Raw data from in-depth interview was transcribed, coded and grouped under four themes according to the objectives of the study manually. Information in relation to the main themes were further classified in to sub-themes. The researcher read through the extracts interconnected to the codes to certify that they were in line with the themes.

In order to establish validity and reliability of the coding, peer briefing technique was used. Some tutors of one of the Colleges of Education, with MPhil in statistics and general agriculture read through the transcripts and also listened to

the audio record of interview and compared the codes to the themes. It was established that the codes collaborate with themes. This relates to the work of Braun and Clarke (2006) who opine that data within themes should fit together meaningfully.

The quantitative data was analyzed using IBM statistics version 21. Descriptive statistics were employed in analyzing the data. Frequencies and percentages were used to analyze the demographic characteristics of respondents, hotel characteristics and forms of ICTs use by hotels as well as employees' attitude towards the use of ICT and the extent of ICT use by hotels. An independent sample t-test was used to establish the difference between employees' attitude towards ICT use and the extent of ICT use by hotels. The independent sample t-test was appropriate since the variables involved in the analysis were categorical and continuous as is one of the assumptions of the independent sample t-test. Achievement of purpose of ICT `use was also analyzed using percentages.

Lastly, the barriers to the use of ICT were first analyzed using descriptive statistics. Pearson chi-square was used to ascertain the association between hotel characteristics and barriers to the use of ICT.

Summary

This chapter presented the methods used to collect the data for the study. Precisely, the chapter entailed: the research design, the study area which described the locality within which data was collected, research philosophy and study population. The chapter equally emphasized on procedures used to sample respondents for the study, instruments used to collect data and the procedures

involved in the data collection. This chapter again covered pre-testing of the instruments, training of field assistant, actual field work likewise challenges encountered during field work. This chapter also touched on ethical issues and data processing and analysis.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter entails a detailed discussion of results of the study. Specifically, the chapter covers demographic characteristics of the respondents, their job characteristics as well as the characteristics of the hotels from which they were sampled. The chapter further profiled the forms of ICTs adopted by hotels. It further provides analysis on managers' perception for adopting ICT, employees' attitude towards the use of ICT, extent of use of ICT in aid of achieving the purpose of using ICT as well as barriers to the use of ICT in hotel service delivery.

Socio-Demographic Characteristics of Respondents

Human resources are the greatest assets of every organization. It is therefore appropriate that organizations including hotels recruit people to befit the standard of service (Ramshida & Manikandan, 2013). Table 2 shows that more than half (52.3%) of the respondents were males while 43.7 percent were females. It could be reasoned perhaps there were more male workers compared to their female counterparts in the hotels. The male dominance in the sample can be attributed to the technique adopted which was convenient in nature. The table also indicates that the majority (65.3%) of the respondents were less than 30 years followed by those between the ages of 31-40 (27.7%), the least (6.9%), were above the age of 41years. This could be an indication that the majority of hotel workers are within the youthful age of 18 - 29. It also ascertain the fact that work in the hotel industry is

tedious and needs the youth who have exuberant energy compared to the elderly who have less energy (Lee, Moon, Lee & Kim 2014).

With respect to education, 42.4 percent of the respondents had diploma certificates whereas 25.6 percent had vocational training, 23.3 percent were secondary/technical school certificate holders but the least group (8.7%) had university degree certificates. It can be established that the hotel industry is a formal sector that deals with people from all walks of life. It is, therefore, expected that the hotels will recruit people who have had some kind of formal education that would enable them attend to guests without much difficulty.

Regarding the respondents' religion, majority (79.9%) of them were Christians while a few (9.8%) of them were Muslims. The low percentage of Muslims in hotels within the study area ascribe the affirmation that, hotel business involves service of alcoholic beverages, foods prepared with pork, gambling and accommodating unmarried couple which are taboos in Islamic religion (Al-Balushi & Atef, 2017).

In relation to monthly income, 20.7 percent earned less than 500 cedis and only 8.6 percent earned above 901 cedis. The result shows that the majority of the respondents were paid an amount that equates to Ghana's minimum wage from January to December 2018 which stand at 9.68 cedis. The minimum wage multiplied by the number of working days translates to monthly income. However, many people are paid above the minimum wage. (Mywage.org/Ghana). There is an indication therefore that all the respondents earned above Ghana's minimum wage.

Additionally, 61.5 percent of the respondents were single. This affirms the assertion that, most married people do not affiliate to hotel work due its nature and the perception of the society about hotel workers. The study approves the fact that hotels operate 24/7 specifically on shift basis. More so, employees are exposed to occupational hazard, so, couples may see it unsafe for their partners to work in such environments (Lee et. al. 2014).

Table 2: Socio-Demographic Characteristics of Respondents (n = 174)

Characteristics	Frequency	Percentage
Gender		
Males	91	52.3
Females	76	43.7
Age of respondent		
<30	113	65.3
31-40	48	27.7
>41	12	6.9
Educational level		
Secondary/Technical	40	23.3
Diploma	73	42.4
Vocational Training	44	25.6
University Degree	15	8.7
Religious affiliation		
Muslims	17	9.8
Christian	139	79.9

Source, Field work, Awusiedu (2018).

Table 2 continued

Income level		
<500	51	20.7
501-700	12	5.2
701-900	10	5.7
901and above	15	8.6
Nationality		
Ghanaians	163	93.7
Foreigners	2	1.2
Marital status		
Single	107	61.5
Married	65	37.4
Employment characteristics		
Employee category		
Frontline employee	78	43.5
Frontline supervisors	21	12.1
Frontline managers	39	22.4
Head of ICT unit	14	8.0
Cashier	22	12.6
Employment tenure		
<5years	112	70
6-10years	33	20.6
>10years	15	9.4

Source: Field Work, Awusiedu (2018).

More so, Table 2 shows that frontline employees were dominant (43.5%) in hotels used for the study. Frontline managers recorded 22.4 percent. This was followed by cashiers (12.6%), frontline supervisors (12.1%) and heads of ICT unit (8.0%) respectively. It can be deduced that frontline employees form majority of employees in the hotel used for the findings since they come into direct contact

with hotel's guests. Besides, frontline managers and supervisor play supervisory roles which motivates subordinates in the performance of their daily activities. The result confirms the study of Karlsson, Skålén and Sundström (2014); Navarro, Andreu and Cervera (2014), who argued that, frontline employees with their experience, contribute to service innovation hence, most hotels turn to recruit more front line employees as compared to other employees'.

Concerning employment tenure of respondents, the majority of respondents (70.0%) were less than five years on the job, 20.6 percent were between 6-10 years on the job whilst 9.4% had more than 10 years tenure on the job. This result is in line with the study of Rice, Geels, Hacket, Trafimow, McCarley, Schwark and Hunt (2012) who posited that experience in the work place enhances employees' performance since they are already abreast with the policies of the establishment and also have broader knowledge on manipulation of functions compared to newly recruited employees'

Hotel Characteristics

The characteristics of a hotel may be a contributory factor to the adoption and use of ICT as this determines the target customers and the kind of services such hotel may wish to offer (Sigala, 2005)**.** Results on table 3 indicate that more than half (51.0%) of the hotels within the study area were 2 star rated hotels followed by 1 star hotels (34.0%) whereas 3 star hotels were the least (14.8%).   It was also established that less than half (44.6%) of the hotels were above10 years whilst 19.1 percent fell below 5 years. In relation to ownership structure, it was observed that most of the (89.3%) number of hotels were self-owned and only 10.6 percent were

management companies. The findings may be due to the fact that the study area is still in its developing stage so hotels are locally owned and self-managed. The result is consistent with hotels directorate which spelt out the number of licensed hotels to include: 1 star (23), 2 star (26), 3 star (7) and 4 star (1) (GTA, 2015).

Table 3: Hotel characteristics (n = 47)

Hotel category	Frequency	Percentage
1 Star	16	34.0
2 Star	24	51.0
3 Star	7	14.8
Age of hotel		
< 5 years	9	19.1
6-10 years	17	36.1
>10 years	21	44.6
Ownership structure		
Sole proprietorship	42	89.3
Management Company	5	10.6
Services		
Accommodation	47	29.6
Food and beverage	38	23.9
Entertainment	38	23.9
Laundry	31	19.5
Car rental	5	3.2
Total	*159*	*100*
Facilities		
Business center	18	31.0
Conference facility	40	68.9
Total	*58*	*100*

Source: Field work, Awusiedu (2018).

Moreover, Table 3 shows that among the services provided by hotels, accommodation service recorded the highest (29.6%), food and beverage and entertainment had 23. 9 percent each and the least among the services was car rental (3.2%). With regards to facilities, the majority (68.9%) of hotels provided conference facilities but only a few (31. 0%) of these hotels had a business center.

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Use of ICT by Hotels in Kumasi

Other studies notably, Siguaw, Enz, and Namasivayam (2000) and Temizkan and Timur (2016), have mentioned that Information and Communication Technology (ICT) is a modern tool that has had a great influence on hospitality business. In this regard, hotels have switched to the use of ICT in transacting daily activities. This study sought to find out how hotels use ICT in their service delivery.

Table 4 shows that out of 47 hotels used in the study, about 40 hotels, representing 85.2 percent made maximum use of ICT in their service delivery and only 7 which is 14.8 percent did not make maximum use of ICT in their service delivery. The most hotels using ICTs could be as a result of it being considered a strategy to lure customers since generally hotels are increasingly adopting ICTs in service. Each hotel will therefore, attempt to provide the best quality of service by using ICT to entice modern sophisticated customers who are abreast with the use of ICT to their hotels. This result is confirmed in the study of Turan and Urkmez, (2010) who stated that coupled with the growing need for enhancement and improving customer satisfaction, hotels have become more reliant on the adoption and use of ICT as a step towards quality service, competitiveness and attraction of customers.

Table 4: Participant's Response to the use of ICT by Hotels in Kumasi Metropolis (n = 47)

Use of ICT	Frequency	Percentages (%)
Maximum use		
Yes	40	85.2
No	7	14.8
Training on ICT use		
Yes	38	80.8
No	9	19.1
Frequency of training		
Seldom	5	10.6
Occasionally	8	17.0
Often	22	46.8
Very often	12	25.5
Benefits of training		
Yes	38	80.8
No	9	19.1

Source: Field Work, Awusiedu (2018).

Also, the Table further indicates that the majority (80.8%) of respondents agreed that their hotels train them in the use of ICT whereas (19.1%) of the respondents did not have training in ICT use. In terms of frequency of training in the use of ICT, it was revealed that 46 percent of the respondents often had training and 25.5 percent had training very often. 17.0 percent occasionally had training and a few (10.6%) seldom had training. With regard to benefit of training on the use of ICT, 80.8 percent were of the view that the training was beneficial to them and only 19.1 percent indicated otherwise.

Training is identified as an important aspect in running a meaningful business in the hotel industry due to the intangible nature of the services provided to guests and thus highly susceptible to service failure Vogiatzi (2015). Hoteliers of late therefore, provide on the job training as training aids the provision of quality service and in effect, aid to retain guests.

This observation supports the statement that on the job training helps to equip employees with requisite skills needed in the transaction of their daily activities as it adds to employees' skills and facilitates work process (Lam, Cho & Qu, 2007). The result from the study implies that hotels within the study area are likely to retain old customers and also attract new customers as well as maximize profit due to the importance they have attached to ICT use. This supports the contention that implementing ICT in hotels serves as decrease in cost, greater productivity, increased revenue, improved service quality and satisfaction of clientele (Aziz, Bakhtiar, Syaquif, Kamaruddin & Ahmad 2012).

Forms of ICTs used by Hotels

Literature revealed that there are many forms of ICTs from which hotels can adopt and use in service delivery. This study, therefore, tried to find out the forms of ICTs adopted and used by hotels in the Kumasi Metropolis. Findings from the survey illustrate that among all the forms of ICTs considered in the current study, almost all the hotels (45) representing 95.7 percent used computers in their service delivery. About 43 hotels (91.4%) used mobile phones, 40 hotels (85.1%) used telephones, 33 hotels (70.2%) used web sites, internet and e-mail respectively and only 6 hotels (12.7%) each used ATM and voice mail.

It is assumed that the forms of ICT used by a particular hotel may be due to the hotels target guest, purpose of adoption and probably its scope of activities. Results of the study is in line with Akaba, (2015) Kiveu, and Ofafa (2013); Adebayoo, Balogun and Kareem (2013) and Ayeh (2008). The outcome of these studies revealed that, telephone lines, computers, e-mail, internet, website and photocopiers are the commonest forms of ICTs used by hotels in service delivery.

Table 5: Forms of ICTs used by Hotels in Kumasi Metropolis

Forms of ICTs	Frequency	Relative	Absolute
Computer	45	10.1	95.7
Fax machine	30	6.8	63.8
Mobile phone	43	9.7	91.4
Website	33	7.4	70.2
Internet	33	7.4	70.2
Social media	26	5.9	55.3
E-mail	33	7.4	70.2
Application software	22	4.9	46.8
Automated Teller Machine (ATM)	6	1.4	12.7
Voice mail	6	1.4	12.7
Photocopier	30	6.8	63.8
Printer	30	6.8	63.8
Smart card	7	1.6	14.8
Scanner	26	5.9	55.3
Mobile money services	10	2.3	21.2
Telephone	40	9.0	85.1
CCTV	30	6.8	63.8
Total	443	100.5	944.1

Multiple response

Source: Field work, Awusiedu (2018).

Managers' Perception on the Adoption of ICT in Hotel Service Delivery

The main idea behind this objective was to find out managers' perception on whether the adoption of ICT is relevant in hotel service delivery. All the hotel managers interviewed confirmed that the adoption of ICT in hotel service delivery is indeed very relevant. Themes that arose from the interview in relation to the relevance of ICT adoption were, accessibility of information, improvement of communication, making of work easier and improvement of productivity.

Accessibility of Information

Managers were of the view that access to information in hotel business is an important aspect of service provided by hotels to satisfy and sustain customers. The managers reiterated that many of these information services like websites and the internet for example, aid in sharing and disseminating information to guests. Such information helps these guests or customers at least to have a fair idea about services available at the hotels. Guests are, therefore, able to make choices to suit their standard and do not become disappointed upon reaching hotel premises. The managers further established that guests' fair idea of services provided by a hotel is necessary since services in hotels are intangible. Literature affirms that individuals and organizations use ICT as an informative channel to create the awareness of products and services they provide (Issahaku, 2012; Mupfiga, 2015). One of the managers noted that:

> *Gone are the days when guests just walk into hotels based on word of mouth or experience as a result of repeat visit. With the latest development of ICT, guests get access to information about hotels on their websites. Since our*

> *services are intangible, it is necessary we keep in touch with our guests, get them informed about things they should know so that they are not turned away from us and snatched by our competitors* (41- year-old male manager of a 3- star hotel).

Another respondent observed that:

> *In the past, customers of hotels had to order catalogs or travel to physical facilities before they could compare prices, services and attributes. Today, ICT has enabled the emergence of electronic catalogs and web pages for guests with updated information in relation to services and prices. Our guests are always pleased to retrieve information from our website wherever they are and request for clarification* (38 -year-old manageress of a 3- star hotel).

Further, managers based their understanding of access to information not only on the benefit to hotel guests but also on other important roles to the hotel establishment. Management of hotels are able to get feedback from either guests directly or from the website, internet or any other form of ICT concerning their (guests) satisfaction and dissatisfaction towards services provided. One manager remarked that:

> *White men lodged in our hotel a lot until somewhere last two years when a white man who came to lodge in the hotel saw a cockroach in his room. All of a sudden, the number of whites visit to the hotel reduced drastically. But thank God I was browsing on my phone when I came across this information on the net that our rooms are full of cockroaches hence, even access to our website was blocked. I will say,*

*had it not been ICT I wouldn't have come across such
information so easily. Then after, employees have been
educated to always be cautious of carrying out their daily
activities especially when it comes to cleaning of our rooms
and other surrounding areas* (36 -year-old manager of a 2-
star hotel).

Improves Communication

Discussions with managers revealed further that good communication is
one of the cardinal reasons hotels use ICT in service delivery. They were also of
the view that ICT utilization is an effective channel of communication with
suppliers and guests and thus enhances efficiency and effectiveness unlike the
manual system that delays communication so much. Effective communication in
hotel management attracts guests and the public to the services rendered in hotels.
On the other hand, communication with sister hotels is easier and awareness is
created towards the future. This result relates to the literature of Buhalis and Jun,
(2011) and Jenckovia and Abraham, (2015) which established ICTs facilitates two
way communication between the hotel and its stakeholders so, they influence hotel
promotions and sale.

In this vain, one respondent highlighted that:

*Initially, the hotel relied on the manual system where we
used only telephone and sent documents by posting which
caused a lot of delays. In order to prevent this occurrence,
the hotel now uses a website and e-mail. Presently we
communicate with our suppliers and guests online and we*

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are aware when new stock will be brought so we make

necessary arrangements to receive them (26 -year- old

manageress of a 2- star hotel).

Similarly this view is captured in the following text from one of our discussions:

> *We have purposefully adopted ICT to aid easy*
> *communication across departments within the hotel and,*
> *reach out to sister hotels. ICT actually facilitates easy access*
> *to our guests. We send wish well messages to our loyal*
> *guests in a form of building cordial relationship so they*
> *don't switch to sister hotels* (36- year-old manager of a 3-
> star hotel).

Makes Work Easier

Another relevance of adoption of ICT that the interviews revealed relates to how ICT makes hotel service delivery easier. It was revealed that the adoption and utilization of ICT in hotel service delivery has significantly replaced works that were done manually. In certain instances, ICT services in hotels such as billing, payment, and check-in and check-out become easy to deal with. In other situations, managers described ICT as user friendly. Managers were also of the view that employees in their hotels accept devices that make their work easier as errors are reduced. This correlates with the study of Choi & Chu, 2011 who stated that the emergence of ICT in the hotel industry has replaced the use of manual registers and log books making retrieval of information very easy.

> *In this vein a manager remarked that:*
> *ICT is very relevant in hotel business because it helps*
> *employees to carry out their duties easily. For instance,*

> *preparing vouchers, check-in and check- out of guests as well as billing with the computers is very easy unlike the manual system where employees had to be extra careful as the process is difficult. The manual system takes a lot of time and energy to accomplish. Even the process sometimes is full of mistakes unrealized. With the use of computers, some mistakes are underlined which draw the attention of the operator* (27 –years-old manager of a 1-star hotel).

Yet another respondent added that:

> *ICT helps us to manage the hotel's operation easily. Without ICT, work is very difficult. For instance, if the hotel has to run photocopies for guests during conferences, it is easier since the hotel owns a photocopier. The hotel does not go through stress and use other resources like time, energy and money for photocopies outside its premises. We are also sure we keep such information confidential for our customers* (30-year- old manageress of a 2 - star hotel)

Improves Productivity

Interviews held with managers further revealed maximizing productivity is what the hotel industry strives for. They were of the view that ICT serves as a major tool to improve hotel's productivity. Companies, including hotels, that use advanced ICT increase productivity and profitability compared to non-ICT users. As ascertained in the work of Daria (2016), ICT has a quantifiable influence on hotel productivity since it enhances employees' performance and facilitates management procedures. These were confirmed in the statement of one respondent who remarked that:

The integration of ICT in the work we do as service providers increases employees' productivity. I have realized that subordinates work better with ICT tools. They are able to cater for quite a number of guests when our computers are in good condition. With ICT tools and power available, the volume of work and customer turnout is great. (27 year-old- manager of a 1-star hotel)

Managers explained that in the absence of ICT tools, customer turnout and productivity are relatively low. One manager lamented that:

Because of the inconsistent power supply nowadays we cannot use our computers throughout working hours. As a result, our hotel has not made any progress in the work we do. Employees who need a source of electricity to perform their duties come to work and sit idle as if they have nothing doing. Hmmmm my sister, customers also do not turnout but we hope things will turn around for better productivity. (28-year- old manager of a 1 star hotel)

The above finding portrays that managers of hotels have identified the role ICT plays in the dissemination of information, improving communication, making work easier and improving productivity in hotel service delivery and hence, have cling to the adoption and use of ICT in their daily activities.

Unfortunately, faster communication associated with the use of ICT in hotels can be detrimental as employees in various hotels quickly learn about the better working conditions their colleagues enjoy and ask for same conditions. Employer-employee relations may become poor where employers fail, for any reason, to grant those demands for similar better conditions. Productivity may fall. Skilled and experienced workers may resign, forcing the hotel to employ new and

very probably inexperienced people. The resulting high labour turnover may be difficult to remove.

Costs of on the job training may increase. Hotels may incur extra costs to acquire more ICT tools in an attempt to reduce the number of staff, to dodge higher wage and salary demands. Costs of maintenance may also rise. Yet, hotels which are unable to acquire and use ICT for service delivery and maintain its employees will lag behind its competitors and eventually be out of business.

Reasons for Adopting ICT in Hotel Services Delivery

This aspect of the study also sought to find out the reasons why hotels in the Kumasi Metropolis adopt ICT in their service delivery. Marketing, competitive advantage and quality of service were themes that emerged from discussions held as reasons for adopting ICT in hotel service delivery.

Marketing

Hotel managers revealed that marketing hotel products was one main reason for adopting ICT in service delivery. They (managers) ascertained that marketing enables hotels to achieve their target of advertising and promoting services offered to their clients. Managers argued that with the aid of television, radio, website, e-mail and the internet, an avenue is created for customers to interact with hotels and this helps eliminate disappointments of guests'. Managers' view on marketing is asserted in the study of Mupfiga, (2015) who stated that the internet is used by organizations to promote their products and services to potential customers. For instance one manager stated that:

ICT serves as an essential marketing tool in the hotel business. With the aid of ICT tools like the television, the website and radio, our hotel has been able to market our products by creating avenues for customers on our website to value our services. As we market our services, guests send us their complaints which we are able to handle by providing services that satisfy them (guests) (22 year-old-manager of a 1- star hotel).

Similarly, another respondents indicated that:

ICT is a fundamental tool used to market hospitality services. Specifically, our hotel uses radio and television stations to market our products and services. Formerly, guests walk to the hotel without knowing much about the hotel hence, some turn away when they are not satisfied with our facilities and services. Now due to the marketing strategies put in place, we are able to educate our clients before their visit to the hotel. (34 year-old-manager of a 2- star hotel)

Competitive Advantage

Managers established that they have switched to adoption and use of ICT to compete with growing competition in the hotel sector. They were of the view that the emergence of ICT has made the world a global village and further explained that, new hotels all over the metropolis have developed strategies in order to stand at a competitive advantage. The managers argued that hotels which do not make good use of ICT to the expectation of guests loose even their loyal customers to hotels with sophisticated ICT facilities. It is established in literature that extensive management of ICTs helps to build competitive advantage by maintaining price

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leadership in a market and differentiating products and services (Akaba, 2015 & Xiaoqiu, Dimitrios & Haiyan, 2003).

> *ICT has made the world and the hotel industry to look like a small village where members of the village know each other very well. The same applies to hotels that use ICT to get into contact with their guests. These guests become part of such hotels and will hardly lodge in any other hotel. So, it is important that all hotels use ICT if the hotels want to be able to compete with sister hotels. In fact, work in the hotel industry has become very competitive here in Kumasi since hotels are many in the city. If you do not adapt to current trend you will be left behind.* (32 –year-old manager of a 2-star hotel).

Again, another interviewee added her voice that:

> *Due to the latest development of ICT worldwide, every hotel must endeavour to adopt and use ICT in order not to be left behind. Some years back, we had only telephones and televisions in our hotels. This caused us a lot because our sister hotels always had more guests on their premises than we had. This prompted us to also adopt new forms of ICT which has enabled our business to boost.* (29-year-old-manageress of a 1- star hotel).

Quality Service

Further, discussion with managers revealed that quality of service is of utmost importance in hotel business. Besides, hotels encounter high demand from guests since the requirement for quality grows with an increased use of hotels' services. The loyalty of existing customers is more important. Likewise, the

attraction of new customers is more crucial than retaining existing customers. This is affirmed in Pavic, Koh, Simpson & Padmore (2007) in Adeosun et al (2009) in their argument that, most hotels adopt ICT purposely to enhance better quality service. The consequences of neglect of quality of service were highlighted. In a related study, it was revealed that messages sent via the multimedia attracts customers. Also, ICT use in hotel allows hoteliers to establish recognition for guests profile and these enable them improve customize services (Chevers, 2015) and Zeithaml, Parasuraman, Berry & Berry (1990). A respondent observed:

> *We try as much as possible to maintain our guests by providing them with quality services. Since the guest might have finished payment for a service to be rendered, we ensure they (guests) are provided with the best quality of service. We do this through keeping clean environment, our décor is of standard, and there is consistency in supply of ICT facilities for guests use. Also, front office employees with the aid of computers attend to guests promptly, handle guests' complaints tactfully whiles complaints which are above their control are referred to a higher authority.* (25 year-old-manager of a 1-star hotel).

On the contrary, an interviewee lamented:

> *Oh! My sister, it is a problem having loyal customers of late. We are surrounded by hotels of higher standards who provide the same services. Even though our rates are lower, some of our guests have started switching to these sister hotels as we are not able to meet their demand. I mean because we don't have the facilities those hotels have and can therefore not provide the kind of service guests demand.*

We are thinking of creating a website and internet so we have contact with our customers online.
(27 year-old-manager of a 2- star hotel).

Findings of the study disclose that almost every hotel in the Kumasi Metropolis strives to adopt and use ICT in its service delivery due to the positive attributes hotel managers and other employees as well as guest attach to its use. In order for the hotels not to be left out, they are well abreast with global trend of business transaction though some hotels are unable to meet this target. It was again observed that hotels have an opportunity to achieve a competitive advantage from ICT through innovation, marketing and better quality of service.

Implication of findings relating to reasons for adopting ICT in hotel service implies that hotels that were able to attain their target must endeavor to remain in business. To this effect, there is the need for these hotels to consistently provide services to meet guests' standard. On the other hand, hotels which were unable to meet their target must adopt the necessary ICT facilities and collaborate with their employees by giving them the required training to equip them with the requisite skills so that they will be able to provide guests with the required services.

Another implication of the study relates to the fact that the face-to-face interaction which is an important aspect of the hospitality service will be totally eliminated if every single hotel adopts and uses ICT in its service delivery.

Employees' Attitude Toward the use of ICT in Hotels

The study also assessed employees' attitude towards the use of ICTs in hotels service delivery. In order to achieve the objective of the study, the attitudes

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were re-categorized under three main dimensions as, perceived usefulness, perceived ease of use and perceived risk of use where a descriptive analysis was run as indicated in Table 6. Under perceived usefulness, it was observed that a substantial proportion (90.6%) of the respondents agreed that ICT use was vital in the performance of their duties.

With respects to the variables under perceived usefulness, 91.2 percent of the respondents agreed ICT improves their performance. Result of the study correlates with the findings of Davis, Bagozzi and Warshaw (1989) who argued that perceived usefulness constitutes how the use of an ICT increases the efficiency of a person in a work process. It could be deduced that ICT has become a global phenomenon and a modern tool that almost all establishments, including the hospitality industry, adopt in their service delivery 89.4 of the respondents supported the notion that ICT improves their performance while 89.3 percent stated that ICT enhances their performance. This is related to the theory propounded by Venkatesh and Davis (2000) which acknowledged that perceived usefulness of ICT is the degree to which the ICT increases or enhances the job performance of the user.

Table 6: Employees Attitude Towards ICT Use in Hotels (n = 174)

Attitudes	Frequency in agreement	Percentage in agreement	Frequency in disagreement	Percentage in disagreement
Perceived usefulness	154	90.6	16	9.4
Using ICT improves my performance in my job	155	91.2	15	8.8
Using ICT in my job increases my productivity	152	89.4	18	10.6
Using ICT enhances my effectiveness in my job	151	89.3	18	10.7
Perceived ease of use	134	78.4	37	21.6
I find the use of ICT clear	141	84.9	25	15.1
Using ICT does not require a lot of my mental effort	126	75.0	42	25.0
I find ICT to be easy to use due to experience of frequency of use of ICT in the hotel	110	64.7	60	35.3
I find it difficult to use ICTs	58	35.2	107	64.8
I find it easy using ICT to do what I want to do	149	89.2	18	10.8
Management's support encourages me to use ICT	91	54.8	75	45.2
As a middle age person I struggle to use ICT	25	15.1	141	84.9
Use of ICTs in hotel service is difficult	13	7.8	153	92.2
Perceived risks of use	*10*	*5.8*	*161*	*94.2*
Use of ICTs in hotel service delivery is a waste of time	9	5.3	161	94.7
Use of ICTs in hotel service delivery is a waste of money	10	5.9	160	94.1
It is risky using ICT in hotel service delivery	51	32.1	108	67.9

Source: Field Work, Awusiedu (2018)

The qualitative data supports the above result where managers explained that ICT is the latest tool used in service delivery worldwide. In the hotel industry, employees who have expertise in the use of ICT become excited to use ICT to carry out their duties but do not perform well in the absence of ICT tools. Employees who lack expertise in the use of ICT are also able to work very well with ICT tools upon training. One manager observed:

> *Due to the latest development of ICT worldwide, most employees nowadays have positive interest in the use of ICT in carrying out their duties compared to the manual system of long and tiring processes. My subordinates are not able to work to expectation when their machines are down. This indicates that the machines increase their performance. Each employee works with enthusiasm due to the training we give them on the use of ICT.*
> (40-year-old Manager of a 2- star hotel*).*

Yet again, an interviewee comments:

> *Employees in this particular hotel take delight in using ICT tools available to carry out their duties most especially those employees who already have broad knowledge in ICT. During my encounter with one of them (employee), he made me to know that the computers we have introduced to help them in the sale of beverages in the bar really boosts their morale because, they do not struggle flipping through books to check for prices of drinks whilst customers wait on them* (29-year-old Manager of a 2- star hotel).

Similarly, another interviewee remarked:

> *When I asked one employee how she felt when using ICT*
> *tools, she said it enhances her performance because she is*
> *able to do a lot of transactions within a short period. She*
> *added that, during the last conference meeting held , there*
> *were three different groups who needed to be registered and*
> *she could not have done that manually within a short period*
> *but with the aid of the computer, she was able to register and*
> *also allocate rooms within a short period* (33-year-old
> Manager of a 2- star hotel).

With the second category, ease of use, 78.4 percent of the respondents agreed they found it easy using ICT. Even though the respondents agreed with all the seven variables under ease of use, using ICT to do what I want to do recorded the highest response with 89.2 percent whereas I find the use of ICT clear recorded 84.9 percent. Since the manual system of executing functions takes a long time, employees turn to accept ICT tools that facilitate the process of their day to day activities. As opined by Vogiatzi (2015), continuous use of ICT enables the user to develop either a positive or negative attitude towards the use of the equipment based on how the user finds it easy operating the said equipment.

It was disclosed from interviews with managers that the use of ICT in carrying out activities reduces fatigue and error since the process involved in the performance of the duty is easier with the aid of ICT compared to the manual system.

An interviewee narrated that:

> *Working with computers make your work easier because it help to reduce the stress of using the manual system. It also reduce mistakes. It makes the work much easier and relaxing there by reducing the duration and energy involved in performing a task identified.* (29-year-old Manager of 3-star hotel).

The result established that employees' find ICT use the easiest way to carry out their duties to perfection. Therefore, any ICT tool which has positive influence on employees' job performance is grabbed. Pertaining to perceived risk of use, a vast number of the respondents (92.2%) disagreed the use of ICT was risky. Result from Table 7 implies that employees had positive attitude towards the use of ICT in performing their tasks. This could be as a result of an enabling environment created by management towards ICT use. As the study of Jeong, Lee and Nagesvara (2016) suggests that an employee's attitude towards the use of a particular form of ICT relies on the ability of management to entice employees in the use of ICT to carry out a task.

Extent of use of ICT by Hotels

The extent of use of ICT is the rate at which adopted ICTs are put to use in service delivery by hotels. Nonetheless, the kind of services a hotel provides will determine its extent of use of ICT **(**Bulent & Hancer, 2014).

The result on extent of use shows that all forms of ICTs used in the study area, with the exception of digital conference facility, were very often used by respondents in the performance of their duties. Though almost all ICTs were used

very often, the majority (88.1%) used computers very often whereas the least 33.9 percent used digital conference facilities often. The findings however contradicts other related studies particularly, Akaba (2015), Asabere, et al. (2014), Quarshie (2013), Issahaku (2012) and Ansah, Blankson and Kontoh (2012) which remarked that the adoption and use of ICT in Ghana is relatively low. This could be due to the fact that Kumasi is a point of transit to travelers and business men and women. It also attracts a lot of tourists to its tourist centers and cultural heritage. These groups of people may use ICT to get into contact with business partners, families and friends back home. On the other hand, Kumasi has a cluster of hotels for network systems.

Therefore, there is a likelihood of high competition among these hotels where each hotel will use ICT facilities to attract guests. The extent of use of ICT however can possibly aid hotel's achievement of purpose of ICT adoption.

Table 7: Extent of Use of ICT by Hotels in Kumasi (n = 174)

Forms of ICTs	Extent of use								
	Seldom		Occasionally		Often		Very often		
	N	%	N	%	N	%	N	%	Mean
Computer	2	1.2	7	4.2	11	6.5	148	88.1	3.82
Fax machine	13	9.7	22	16.4	19	14.2	80	59.7	3.24
Mobile phone	1	0.6	9	5.4	15	9.0	142	85.0	3.78
Website	7	4.5	10	6.4	19	12.2	120	76.9	3.62
Internet	1	0.6	9	5.7	24	15.3	123	78.3	3.71
Social media	16	12.9	10	8.1	24	19.4	74	59.7	3.26
E-mail	16	11.2	8	5.6	28	19.6	91	63.6	3.36
Application software	25	22.5	17	15.3	21	18.9	48	43.2	2.83
ATM	11	10.4	15	14.6	22	21.4	55	53.4	3.17
Voice mail	9	7.0	14	10.9	29	22.7	76	59.4	3.34
Photocopier	8	5.8	10	7.2	29	20.9	92	66.2	3.47
Printer	9	6.6	5	3.7	30	22.1	92	67.6	3.51
Smart card	10	9.1	9	8.2	32	29.1	59	53.6	3.27
Scanner	4	3.1	6	4.7	34	26.8	83	65.4	3.54
Wi-fi	8	7.4	11	10.2	17	15.7	72	66.7	3.42
Digital conference facility	11	16.2	16	23.5	21	33.9	20	29.4	2.74
Interactive guide	5	5.3	6	6.4	24	25.5	59	62.8	3.46

Scale: 1-1.49 = Seldom, 1.5-2.49 = Occasionally, 2.5-3.49 = Often and 3.5-4.0 = Very often.

Source: Field Work, Awusiedu (2018).

Employees' Attitude by Extent of ICT use in Hotels

To compare the extent of ICT use scores for employees who agreed and disagreed that ICT use in the hotels was beneficial, an independent sample t-test was computed. In order to arrive at this successfully, the researcher compressed the forms of ICT used by

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hotels in the study area into four categories. These are: Web-based ICT, Communication based ICT, Computer and computer accessories and Financial based ICT. The classification is in relation with the studies of (Siguaw, Enz and Namasivayam (2000); Nyandoro (2016) and Mun & Hwang, 2003).

The result indicates that there is a statistically significant difference in scores of perceived usefulness and web-based ICT in that, those who agreed (M =3.66) that web-based ICT was beneficial to them, very often used web based ICT as opposed to their counterparts who disagreed that web based ICT was beneficial (M = 3.09) therefore, often used web based ICT. However, there was no statistically significant difference between the score of benefit of use of communication-based ICT, computer and accessories and financial based ICTs against perceived usefulness.

With regard to perceived ease of use, there was statistically significant difference in the scores of ease of use and web based ICT. The result recorded (M = 3.68) of agreement (very often) for employees who found it easy using web based ICT as against employees who disagreed (M = 3.39) that web based ICT was beneficial to them hence, used it often.

However, there was no statistically significant difference in the scores of perceived risk and web based ICT, communication based ICT, computer accessories and financial based ICTs. Also, employees (M = 3.63) disagreed that the use of ICT in hotel service delivery was risky. This group of employees turned to use ICT very often. The result explains that respondents in the hotel industry did agree that they found it easy and beneficial using web-based ICT in the execution of their tasks and this made them use this category of ICT very often. This result is in relation to the study of Lim and Ting, (2012), who argued that perceived ease of use and perceived usefulness influence the

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acceptance and extent to which a system may be put to use. This could be as a result of an enabling environment in terms managers' positive perception on ICT adoption and limited barriers to the use of ICT in hotels. This relates to the study's conceptual framework where managers perception and barriers to ICT use either positively or negatively influence extent of ICT use in hotels.

Findings from the study denotes that employees positive attitude towards ICT use improves their interest in performing their duties, reduce labour turnover and in the long run aid hotels' achievement of using ICT in service delivery. This reinforces the fact that the use of ICT in work process has led to the emergence of job quality issues, promotion of sustainable productivity and increase in employees' performance in hotels (Hannif, Cox & Almeida, 2014).

Table 8: Employees' Attitude by Extent of ICT use in Hotels (n= 174)

Attitudes	Web based		Communication based		Computer and accessories		Financial based	
	N	Mean	N	Mean	N	Mean	N	Mean
Perceived usefulness	t = -2.750, p = 0.007*		t = 1.900, p = 0.59		t = 1. 449, p = 0.149		t = -0.557, p = 0.578	
Disagree	11	3.09	16	3.25	15	3.33	10	.50
Agree	153	3.66	154	3.61	153	3.62	144	.59
Perceived ease of use	t = 2.218, p = 0.028*		t = -0.618, p = 0.537		t = -1.415, p = 0.159		t = 0.067, p = 0.947	
Disagree	33	3.39	37	3.51	36	3.44	29	.58
Agree	132	3.68	134	3.59	133	3.63	126	.57
Perceived risk of use	t = 1.085, p = 0.280		t = -0.542, p = 0.589		t = 0.432, p = 0.666		t = 0.156, p = 0.876	
Disagree	155	3.63	161	3.57	159	3.60	146	.58
Agree	10	3.40	10	3.70	10	3.50	9	.55

Source: Field Work, Awusiedu (2018).

Achieving the Purpose of ICT use by Hotels

It is the wish of every hotel to achieve the purpose for which it has adopted ICT in its service delivery (Xiaoqiu, Dimitrios & Haiyan, 2003). However, not all hotels are able to achieve this target. Figure 6 illustrates achievement of purpose of ICT use by hotels where the majority (72%) of the respondents agreed that their hotel achieve the purpose for which they use ICT in their service delivery. On the other hand, 28 percent of the respondents disagreed that their hotels achieve the purpose for which ICT is used in service delivery. The result proves that though most hotels in the study area make maximum use of ICT, not all hotels achieve the purpose of using ICT in their service delivery.
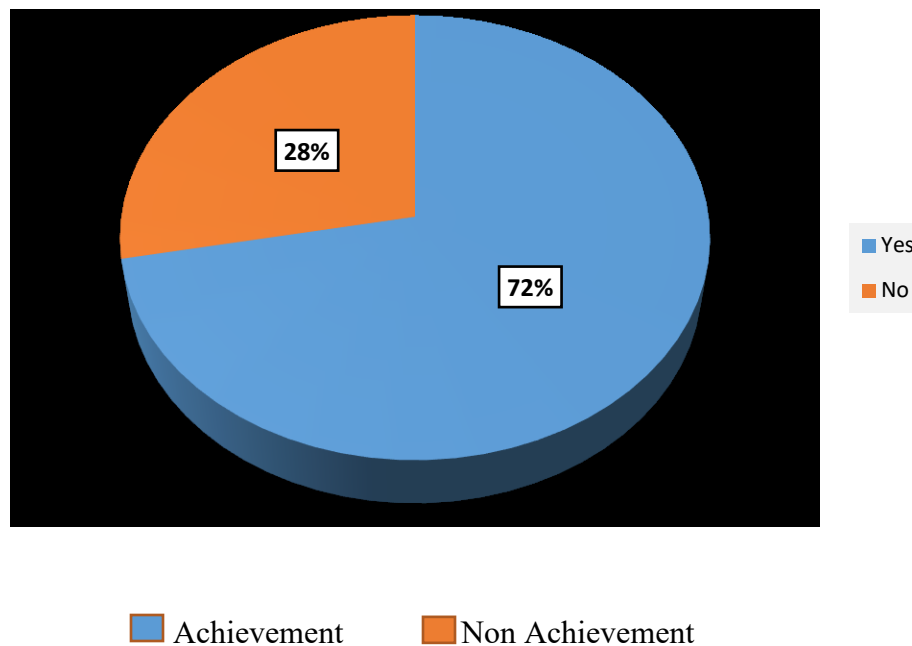
Figure 6: Achievement of Purpose of Using ICT in Hotel Service Delivery

Source: Field Work, Awusiedu (2018).

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Reasons for Achievement and Non-Achievement of Purpose of ICT use

As regards the reasons for non-achievement of ICT use, 11 reasons were provided to the respondents to respond to. The majority of respondents agreed to 10 out of the 11 items as the reasons for hotels non-achievement of purpose of using ICT. Specifically, lack of proper supervision recorded the highest agreement (66.7%), followed by unfair distribution of ICT tools (63.2%) and lack of inspection by management on ICT use (60.0%). In contrast, 77.5 percent disagreed that lack of skills was a reason for non-achievement of the purpose of using ICT in hotel service delivery. In vice versa, respondents agreed to all other 11 items as reasons for achieving ICT use. In view of this, ICT tools are always put into use had the highest response of 95.5 percent whilst enough training on ICT use had the lowest response of 84.5 percent.

It was observed that hotels have realized the importance of ICT use in their business, hence strive to find means of making their employees to use ICT to the core of its (ICT) adoption. The result correlates with the study of Obonyo, Kambona and Okeyo (2016) who are of the view that organizations with strong base internal capabilities adopt and use ICTs to achieve positive results and the main idea for adopting ICT. Implication of the result is that hotels will want to develop a more strategic approach to harness and exploit the use of ICT by proving adequate training and ICT facilities in the hotel since they have realized the importance of ICT use in service delivery (Weeringhe, Basnayeke, Arambepola, Rathnayake & Nawaratne, 2014).

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It was affirmed in the in-depth interview that the use of ICT is very helpful. Employees therefore work tirelessly to achieve the purpose for which ICT was integrated as a tool in the hotel service

A respondent remarked that:

> *Employees' are given incentives based on departmental basis to urge them to always use ICT tools with caution. Last year, we rewarded our employees' in the front office department as they were able to meet the hotel's target of using ICT in the front office. The motivation has served as a form of competition among departments of the hotel. This year God willing, departments will be rewarded if the hotel is able to meet its target.* (27- year-old manageress of 1- star hotel).

Furthermore, another interviewee added her voice:

> *I think we are on course. Our employees work with enthusiasm especially during peak season. They use all ICT equipment as they have been instructed. We explain to them (employees) why the hotel uses ICT. Being aware of this information, they always ensure they perform their duties accordingly. This helps us to achieve reasons why we incorporated ICT as a tool in our business* (28-year-old manageress of 3- star hotel).

The result implies that, it has come to the notice of hotel managers that ICT has taken over almost all aspects of hotel business.

Table 9: Reasons for Achievement and Non- Achievement of Purpose of Adopting ICT in Hotels (n = 174)

Reasons for non-achievement	Frequency in agreement	Percentage in agreement	Frequency in disagreement	Percentage in disagreement
Unfair distribution of ICT tools	24	63.2	14	36.8
ICT tools are not task related	18	45.0	22	55.0
ICT tools are not used for task related jobs	19	47.5	21	52.5
Lack of skills in ICT use	9	22.5	31	77.5
Lack of training on ICT use	17	42.5	23	57.5
Lack of feedback to management on efficiency on ICT use	20	55.6	16	44.4
Unreliable source of power supply	14	35.0	26	65.0
Lack of inspection by management on ICT use	24	60.0	16	40.0
Lack of proper supervision on ICT use	26	66.7	13	33.3
Unwillingnes of employees to take instructions	17	42.5	23	57.5
Ineffective use of ICT tools	20	50.0	20	50.0

Source: Field Work, Awusiedu (2018).

Table 9 continued

Reasons for chievement				
Fair distribution of ICT tools	119	90.2	13	9.8
ICT tools are task related	122	93.1	9	6.9
ICT tools are used for task related jobs	125	94.0	8	6.0
Employees' have expertise in ICT use	122	92.4	10	7.6
Enough training on ICT use	109	84.5	20	15.5
There is feedback to management on ICT use	120	92.3	10	7.7
Reliable source of power supply	125	95.4	6	4.6
Enough inspection of ICT tools	116	87.9	16	12.1
Adequate supervision on use of ICT tools	123	92.5	10	7.5
Willingness of employees' to take instructions	137	94.5	8	5.5
ICT tools always put into use	126	95.5	6	4.5

Source: Field Work, Awusiedu (2018).

Suggestions on Improvement of ICT use in Hotels

Figure 2 illustrates suggestions of respondents on the improvement of ICT use in hotels within Kumasi Metropolis. The suggestions were categorized under four themes. Out of these, the majority (90.20%) of the respondents suggested that ICT tools should be in good order. Another 89.70 percent were of the view that there should be in-service training whereas (83.80%) stated that there should be fair distribution of ICT tools to departments within hotels and the least (82.20%) agreed management should recruit experts in use of ICT. Result of the study revealed that there is the need for hoteliers to improve upon the use of ICT in the transaction of business in order to remain in business. This confirmed the study of Nelson (2016), who remarked that coupled with the growing need for enhancement and efficiency hoteliers must strive to improve on ICT use by providing ICT tools that aid employees to work and also get easy access to hotel guests.
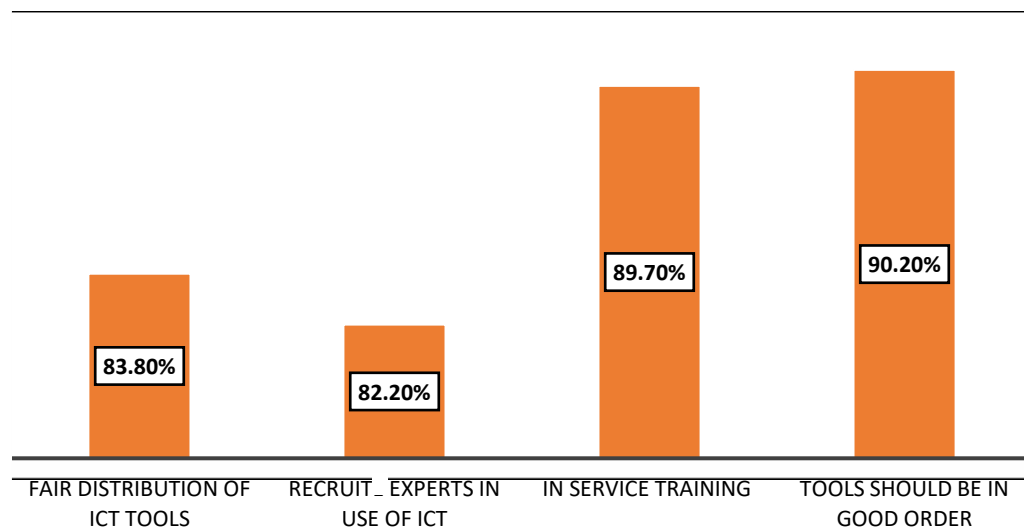
Figure 7: Suggestions on improvement on the use of ICT in hotel

Source: Field work, Awusiedu (2018).

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Barriers to the use ICT in Hotels

Information and communication technology has become a global means for businesses to contact their clients. Hotelier are equally compelled to strive to use ICT as a means of getting in touch with their customers by creating awareness of their services. On the contrary, hotels encounter issues that hinder them from using these ICT tools (Nwakanma, Ubani, Asiegbu & Nwokonkwo, 2014; Sahadev & Islam, 2005).

Table 10 shows the descriptive statistics on barriers to the use of ICT in hotels in the Kumasi Metropolis. In all, there were 11 items. The items were further grouped into four main categories. The first category measured issues related to organizational factors. Among the three variables, lack of management's support recorded the highest (70.7%) response as an impediment to ICT use. It could be as a result where managers sometimes use the autocratic system of ruling which prevents subordinates from working with enthusiasm in aid of achieving organizational goals. In a related literature, it was deduced that managers use authoritative leadership style which results in little participation of others and this retards progress of implementing functions (Lamelas & Filipe, 2011; Tracey & Hinkin, 1994).

Scope of activities followed with (63.2%) of responses. Result on scope of activities could be that, hotels carry out activities that likely do not require the use of ICTs adopted. As posited by Nwakanma et al. (2014), luxury hotels with wide range of activities adopt more ICT system than hotels with less range of activities.

The second barrier accounted for issues of economic factors. Among the four items that were captured, cost of maintenance of ICT tools recorded the highest

(75.4%) rating as a constraint to ICT use while return on investment of ICT tools had the least (59.8%). Under issues of environmental factors, the highest (63.6%) constraint was lack of physical infrastructure. Unreliable source of power supply was the least with (57.4%). The last barrier was concerned with issues of competence. About 84.2 percent noted that lack of supervision was the greatest barrier followed by lack of knowledge on ICT (75.0%). The result generally suggests that all respondents agreed that there were barriers that impede the use of ICT in hotel service delivery. The above findings can be equated to the study of (Wang & Qualls 2007; Full-Love, 2006).

Table 10: Barriers to the use of ICT in Hotels (n = 174)

Barriers	Frequency in agreement	Percentages in agreement	Frequency in disagreement	Percentages in disagreement
Organizational factors				
Size of hotel	97	57.7	71	42.3
Scope of activities	106	63.2	62	36.9
Lack of management's support	123	70.7	42	24.1
Economic factors				
Cost of installation of ICT tools	114	65.5	41	23.6
Cost of employee training on ICT use	120	74.1	42	25.9
Cost of maintenance of ICT tools	126	75.4	42	24.6
Cost of payment of electricity bills	108	64.7	59	35.3
Return on investment of ICT tools	97	59.8	68	41.2
Environmental factors				
Lack of access to ICT facilities	98	59.8	66	40.2
Lack of source of power supply	100	60.6	65	39.4
Lack of physical infrastructure	105	63.6	60	36.4
Unreliable source of power supply	97	57.4	72	42.6
Competence				
Lack of knowledge on ICT use	126	75.0	42	25.0
Lack of physical expertise	123	73.7	44	26.3
Lack of proper supervision	139	84.2	26	15.8

Source: Field Work, Awusiedu (2018).

Hotel Characteristics by Barriers to the use of ICT

In order to find the association between hotel characteristics and barriers to ICT use, Pearson chi square test was computed. In all, three hotel characteristics: hotels category, ownership structure and age of hotels were computed against the barriers. The table demonstrates that, there is statistically significant association between hotel category and barriers 10 (lack of physical infrastructure, $p = 0.022$), barrier 11 (unreliable source of power supply, $p = 0.029$), barrier 12 (lack of knowledge on ICT use, $p = 0.002$), barrier 13 (lack of experience on the use of ICT, $p = 0.01$) and barrier 14 (lack of proper supervision on ICT use, $p = 0.000$). It can be inferred that the size of a hotel can impede the use of ICT as size of an establishment greatly determines its facilities, skills and experience of its employees and most importantly, its management style.

The result portrays that lack of proper supervision recorded the highest association and unreliable source of power supply recorded the lowest association (0.029). The result also affirmed the study of Nkosana, Skinner and Goodier (2016) who argued that, the size of hotels is a major contributing factor in the use of ICT since most hotel managers applaud that only certain ICT components can be used by either big or small hotels.

Table 14 further indicates that, among the three hotel characteristics, ownership structure has statistically significant association with only barrier 8 (return on investment, $p = 0.004$). It is assumed the ownership of a hotel determines how the hotel is run based on financial issues which in effect may regulate the financial status of the hotel.

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Furthermore, the table explains that there was a statistically significant association between age of hotel and four barriers. Among these, barrier 14 (lack of experience on ICT use recorded the highest p = 0.000). On the other hand, barriers 11 and 12 (lack of source of power supply and lack of physical infrastructure) had the same statistically significant value (0.001). However, barrier 13 (lack of knowledge on ICT use was the least with (p = 0.002). The result suggests that among the barriers that recorded statistically significant association, lack of physical expertise highly impedes the use of ICT in hotel's service delivery in the Kumasi Metropolis. This correlates with the conceptual framework in which hotels characteristics either positively or negatively affects the adoption and use of ICT in hotels since the range within which a hotel falls determines the kinds of facilities used and how they are managed. The findings in addition equates to the study of Quarshie and Amenumey (2018) who are also of the view that, lack of trained personnel, unreliable power supply, slow internet connectivity, virus infection of files and lack of ICT facilities affect ICT utilization in the Central Region of Ghana.

The result was in conformity with the qualitative data where it was unveiled that even though hotels attempt to incorporate the use of ICT in the execution of their service delivery, some factors impede the success of using these ICT tools. Some of these factors identified include: lack of knowledge in the use of ICT, cost of installing ICT facilities, source of power supply, improper supervision and sometimes natural disaster like heavy down pour.

An interviewee narrated that:

> *Lack of knowledge on ICT use, cost involved in the installation of ICT, unreliable power supply and*

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unstable network are the common barriers to ICT use in our hotel (28 year-old manager of a 2-star hotel).

Another discussant was of the view that:

Power factor like electricity put the use of ICT on a standstill. The electricity is needed to power the equipment and if there is no light they cannot be powered.
(28 year-old manager of a 1-star hotel).

Another manager equally narrated:

In our hotel for example, lack of skills on the part of employees is a hindrance to the use of ICT equipment. Sometimes it is rainfall. Since ICT systems use waves, if the waves are not stable due to rainfall, the machines cannot be used. Also, if there is a fault on the machine, it can prevent its use. (30 year-old manager of a 1-star hotel)

Table 11: Hotel Characteristics by Barriers to the use of ICT

Characteristics	Barriers to the Use of ICT															
	B1		B2		B3		B4		B5		B6		B7		B8	
	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
Hotel category	$X^2 = 0.025$		$X^2 = 0.262$		$X^2 = 0.156$		$X^2 = 0.114$		$X^2 = 0.592$		$X^2 = 0.249$		$X^2 = 0.574$		$X^2 = 3.604$	
	$P = 0.902$		$P = 0.877$		$P = 0.925$		$P = 0.944$		$P = 0.744$		$P = 0.883$		$P = 0.751$		$P = 0.165$	
3 star	0.025	0.902	0.262	0.877	0.156	0.925	0.114	0.944	0.592	0.744	0.249	0.883	0.574	0.751	3.604	0.165
2 star	55.7	59.2	56.6	59.7	56.1	59.5	56.1	53.7	59.2	52.4	57.1	58.5	55.6	61.0	51.5	64.7
1 star	22.7	21.1	22.6	19.4	22.8	21.4	21.9	24.4	20.8	23.8	23.0	19.5	23.1	18.6	22.7	20.6
Ownership structure	$X^2 = 3.689$		$X^2 = 5.618$		$X^2 = 4.676$		$X^2 = 17.437$		$X^2 = 18.351$		$X^2 = 5.147$		$X^2 = 5.576$		$X^2 = 11.086$	
	$P = 0.158$		$P = 0.060$		$P = 0.097$		$P = 0.052$		$P = 0.062$		$P = 0.076$		$P = 0.062$		$P = 0.004*$	
Sole proprietorship	88.3	95.8	90.2	93.5.	89.9	97.6	88.3	100.0	87.9	100.0	88.5	100.0	87.6	98.3	85.1	100.0
Management Company	10.6	2,8	9.8	3.2	9.2	-	9.9	-	10.3	0.0	1.6	0.0	10.5	1.7	12.8	0.0
Age of hotel	$X^2 = 0.441$		$X^2 = 0.391$		$X^2 = 0.891$		$X^2 = 3.066$		$X^2 = 3.737$		$X^2 = 3.532$		$X^2 = 2.023$		$X^2 = 2.700$	
	$P = 0.802$		$P = 0823$		$P = 0.641$		$P = 0.216$		$P = 0.154$		$P = 0.171$		$P = 0.364$		$P = 0.259$	
<5	59.	140.9	61.2	38.8	71.2	28.8	68.3	31.7	73.0	27.0	69.2	30.8	60.0	40.0	50.8	49.2
6-10	59.2	40.8	68.0	35.7	78.3	21.7	81.5	18.5	82.4	17.6	82.9	17.1	64.8	35.2	63.8	37.9
> 10	52.0	48.0	63.6	32.0	75.0	25.0	70.8	29.2	64.0	36.0	73.1	26.9	76.0	24.0	64.0	36.0

*P < 0.05,

Source: Field work, Awusiedu (2018).

Table 11 continued

Characteristics	Barriers to the Use of ICT												
	B9		B10		B11		B12		B13		B14		B15	
	A	D	A	D	A	D	A	D	A	D	A	D	A	D
Hotel category	$X^2 = 2.456$		$X^2 = 7.659$		$X^2 = 7.093$		$X^2 = 13.438$		$X^2 = 9.047$		$X^2 = 10.769$		$X^2 = 2.166$	
	$P = 0.293$		$P = 0.022*$		$P = 0.029*$		$P = 0.001*$		$P = 0.011*$		$P = 0.005*$		$P = 0.339$	
3 star	24.5	15.2	28.0	12.3	27.6	10.0	30.9	8.3	27.0	7.1	27.6	6.8	24.5	11.5
2 star	53.1	63.6	49.0	69.2	52.4	65.0	47.4	69.4	50.0	73.8	48.8	75.0	54.0	65.4
1 star	22.4	21.2	23.0	18.5	20.0	25.0	21.6	22.2	23.0	19.0	23.6	18.2	21.6	23.1
Ownership structure	$X^2 = 3.134$		$X^2 = 4.845$		$X^2 = 3.606$		$X^2 = 3.434$		$X^2 = 2.453$		$X^2 = 0.569$		$X^2 = 0.389$	
	$P = 0.209$		$P = 0.089$		$P = 0.165$		$P = 0.180$		$P = 0.293$		$P = 0.752$		$P = 0.823$	
Sole proprietorship	88.4	95.4	88.5	96.9	88.2	96.7	88.3	95.8	90.2	97.6	91.7	90.9	91.2	92.3
Management Company	10.5	3.1	10.4	1.5	9.8	3.3	9.6	4.2	8.2	2.4	7.5	6.8	7.4	7.7
Age of hotel	$X^2 = 3.531$		$X^2 = 8.320S$		$X^2 = 14.180$		$X^2 = 15.021$		$X^2 = 12.689$		$X^2 = 22.820$		$X^2 = 9.985$	
	$P = 0.171$		$P = 0.016$		$P = 0.001*$		$P = 0.001*$		$P = 0.002*$		$P = 0.000*$		$P = 0.007$	
<5	53.8	46.2	49.2	50.8	53.0	47.0	43.3	56.7	60.9	39.1	53.1	46.9	73.0	27.0
6-10	68.7	31.3	72.9	27.1	79.7	20.3	74.6	25.4	87.5	12.5	88.9	11.1	91.7	8.3
>10	53.8	46.2	54.2	45.8	45.8	54.2	48.0	52.0	73.1	26.9	80.0	20.0	91.7	8.3

* $P < 0.05$

Source: Field Work, Awusiedu (2018).

Even though there may be impediments to the use of ICT by hotels in their service delivery, it is also appropriate hotel managers and hoteliers find possible solutions to ICT use so as to remain in business and be competitive (Adeosun, et al. 2009).

Figure 5 shows suggestions from respondents on the improvement on use of ICT. Responses were categorized under four major headings. Among these, the majority (90.40%) of the respondents stated that there should be adequate support from management on ICT use whiles 89.90 percent were of the view that, hotels should provide adequate infrastructure. Again, 82.50 percent responded there should be proper supervision on ICT use in hotels within the metropolis while 81.80 percent suggested that management of hotels should provide adequate and available finance towards ICT use. Similarly, one interviewee commented on this follows:

> *There should be constant check on the stability of networks. Workers should be given some sort of training on the use of ICT for intercom and if possible, people who have knowledge on the use of ICT devices must be employed.*
> (38 year-old manager of a 2- star hotel).

Similarly, there was another narration:

> *There should be a stand-by generator. Management has to give workers on the job training. Lastly, there should be good maintenance culture provided by management of the hotel.* (45 years-old-Manager of a 2- star hotel).

Again, a manager added that:

> *There should be a stand-by generator to provide constant power to users of ICT when there is power outage, network providers must ensure accessibility is always available and there should also be training for employees*
>
> (30-year-old Manager of a 1-star hotel)
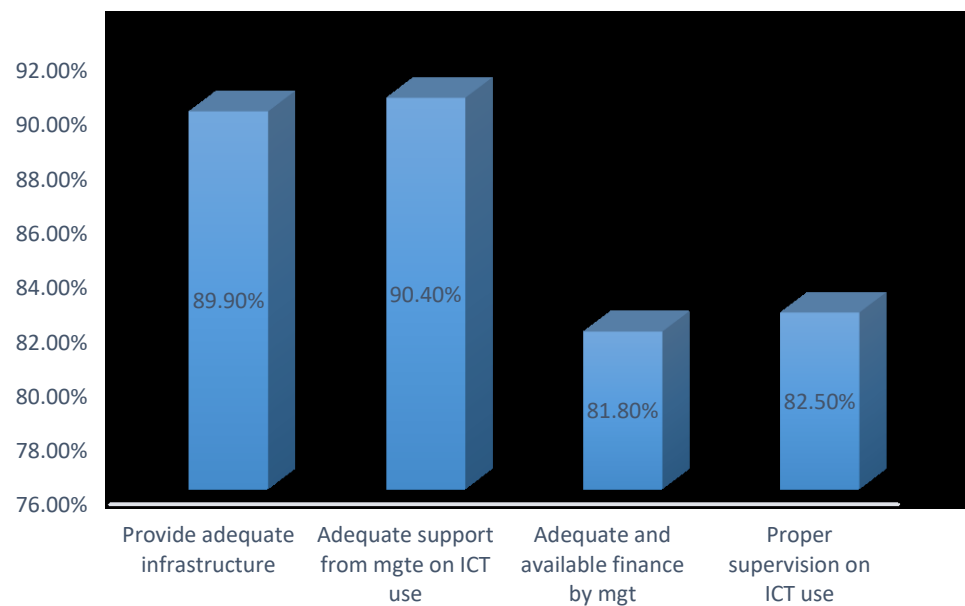
Figure 8: Suggestions on how to reduce barriers to ICT use

Source: Field Work, Awusiedu (2018).

Summary

The chapter discussed the findings of the study in relation to the objectives, theory and conceptual framework. The results indicate that managers were of the view that adoption and use of ICT was relevant in hotel service delivery since it aids in accessing information, improving productivity and making work easier. Further, employees had positive attitude towards ICT use in the performance of

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their daily routines. It was also unearthed that majority of hotels in the study area used adopted ICT very often in service delivery which has led to the achievement of purpose of ICT adoption by hotels even though not all hotels attained this. In addition, it was revealed that lack of knowledge on ICT use, lack of power supply and improper supervision on ICT use were some barriers to ICT use in hotels. The result again established that there was a statistically significant association between hotel characteristics and some barriers to ICT use in hotels. These include: lack of proper supervision on ICT use, lack of experience on the use of ICT, and lack of physical infrastructure among others. The chapter in addition spelt out some implications of the findings on the hotel industry within the study area. Summary, conclusions and recommendations are spelt out in the next chapter.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the overview of the study and draws conclusions and recommendations. It summarizes the thesis, emphasize on the main findings of the study and draws conclusions based on the result. Recommendations are made towards improving on ICT use in hotels.

Summary of Thesis

The main objective of the study was to examine how hotels in the Kumasi Metropolis adopt and use Information and Communication Technologies in their service delivery.

The specific objectives were to

1. Assess managers' perception about the reasons for ICT adoption;

2. Assess employees' attitude towards the use of adopted ICTs by hotels in the Kumasi Metropolis;

3. Examine how the extent of use of adopted ICTs aids hotels to attain the reason for which the various hotels adopt ICTs

4. Analyze the barriers to the use of ICTs adopted by hotels in the Kumasi Metropolis.

The researcher developed a conceptual framework based on the objectives of the study. The main variables in the framework comprise manager's perception on ICT adoption, employees' attitude towards ICT use, extent of use of ICT in aid

of achieving the purpose of ICT adoption and barriers to the use of ICT in the Kumasi Metropolis. The study adopted a mixed method approach and a cross-sectional data was collected from all respondents.

The first objective of the study which was to evaluate managers' perception on reasons for adopting ICT in hotel service delivery was accomplished using qualitative approach. An interview guide was used to gather primary data from 20 hotel managers. The data was manually analyzed using thematic analysis. Themes that emerged from the data collected were: accessibility of information, improves communication, makes work easier and improves productivity. Other themes were, marketing, competitive advantage and quality of service.

Quantitative data was collected from 174 respondents using self-administered questionnaires. The data was analyzed using frequency and percentages, the independent samples t-test and Pearson chi-square.

Summary of Main Findings

The study discovered that all hotels which participated in the study had adopted and were using ICT in their service delivery. It was disclosed that the majority of hotels made maximum use of ICT in their service delivery. The study established that the majority of the hotels train their employees on ICT use. The results also revealed that while some of the respondents often had training in ICT use, others very often, occasionally and seldom had training in ICT use. It was further established that the majority of the respondents found the training in ICT use beneficial.

Again, the study discovered that the majority of the respondents had positive attitude towards ICT use in hotel service delivery. Specifically, the issues, perceived usefulness and perceived ease of use were highly applauded whereas the third issue perceived risk of use was opposed. Furthermore, the results depict that all forms of ICT except digital conference facilities were used very often. Significant differences were identified between employees' attitude, perceived usefulness and web-based; perceived ease of use and web based ICTs.

Another finding revealed that most hotels achieved the purpose for which they have adopted the various forms of ICT. It was also ascertained that, always putting ICT tools into use, employees' willingness to take instructions on use of ICT and using ICT tools for their related task were some of the reasons that enabled hotels to achieve the purpose of ICT use. The finding further explained that some hotels do not achieve the purpose for ICT use. Reasons such as lack of proper supervision and unfair distribution of ICT tools to departments accounted for non-achievement of ICT use in these hotels.

Additionally, the result established there was statistically significant association between hotel characteristics and some barriers. These include: ownership structure and return on investment, hotel category and lack of physical infrastructure, unreliable source of power supply, lack of knowledge on ICT use and lack of experience in the use of ICT. Another barrier was lack proper supervision on ICT use. The last but not the least statistically significant association was identified between age of hotel and lack of physical expertise, lack of source of power supply, lack of physical infrastructure and lack of knowledge in ICT use respectively.

Lastly, the result relates with the variables in the conceptual framework which emphasized that hotel characteristics, managers' perception, barriers to ICT use, and employees' attitude towards ICT use impacts on the extent of use of ICT in hotel service delivery. Also, finding of the study correlates with the theory of the study which stated that, grade of hotel, perceived usefulness, perceived ease of use and standard of result as well as experience greatly impact on the adoption and use of ICT in service delivery. The study denotes that there exists an association between the variables and use of ICT in hotels.

Conclusions

The study provides conclusions based on the specific objectives and findings from the study. It concluded that all hotels in the study area adopted and used ICTs. The most popular among these ICTs were computers, Fax machines, mobile phones, web site, internet, social media, photocopier and printer. Others include, ATM, voice mail and smart card. The first seven ICTs are similar with Akaba, (2015); Asabere, et al. (2014), Quarshie (2013), Issahaku (2012) and Kwansah, Blankson and Kontoh (2012), the last three ICTs are peculiar to Kumasi Metropolis. It can be established that the most popular adopted ICTs are those ICTs that hotels used most in their service hence their high level of adoption.

Accessibility of information, improves communication, makes work easier, improves productivity, marketing, competitive advantage and quality of service, were some relevant reasons behind hotels' adoption and use of ICT in service delivery in the Kumasi Metropolis. This means that, managers' of hotels have noticed the important role ICT plays in hotel's service delivery and therefore have

integrated ICT as a tool towards achieving their (hotels') business target. The result reinforces the assertion that perceived usefulness motivates individuals and business entities to adopt and use ICT to provide services. In contrast, a previous study concluded that hotels adopt ICT purposely to enhance strategic management, data management, decision making and access to information (Adeosun et. al. 2008). Therefore, it can be concluded that there is no homogeneity in the reasons for which hotels adopt and use ICT in service delivery.

Evidence exists that most employees had positive attitude towards the use of ICT in hotels. This was specified in their satisfaction that, they found the use of ICT useful and easy in the performance of their duties. However, employees disagreed that the use of ICT was risky in hotel service delivery. This could be as a result of the enabling environment hotels have created for these employees in the use of ICT during the performance of their daily routines. Theoretically, the study has provided an empirical support for the theoretical extension of TAM 2.

It was confirmed that all the forms of ICTs used in the study were used very often with the exception of digital conference facilities which were used often. Achievement of purpose of ICT adoption in hotels was also attained by some hotels. Hence, it can be concluded that the extent of use of ICT enabled the hotels to achieve their purpose of adopting ICT. However, not all hotels were able to achieve the purpose of adopting ICT in their service delivery. This has an implication on the hotel industry, in that, globally, ICT has become a common tool that most business entities especially the service industry use to get access to its customers. Therefore, any hotel that lags behind in the use of ICT may run out of business as a result of its loyal customers switching to other competitors.

Finally, it is concluded that there is statistically significant association between ownership structure and return on investment; age of hotel and lack of experience in ICT use, lack of source of power supply and lack of physical infrastructure; hotel category and lack of physical infrastructure, unreliable source of power supply, lack of knowledge on ICT use, lack of physical expertise and lack of proper supervision on ICT use,

Recommendations

Since ICT usage by hotels in the study area turns to improve the productivity, hotel managers should also consider increasing the use of ICT in order to facilitate their financial transaction

Besides, since attitude of employees towards ICT use greatly impacts on achieving the purpose of ICT use in hotel service delivery, management of hotels must endeavour to motivate employees by providing training, enough ICT facilities and moreover, educate employees on the importance of using ICT in hotels' service delivery as this will help maintain employees' positive attitude towards ICT use in hotels in aid of achieving purpose of adopting ICT.

Similarly, management of hotels which were unable to achieve the purpose for using ICT in their service delivery must provide adequate support to ICT use in hotels. This may be done by dedicating attention to the distribution of ICT tools to departments within hotels and also provide adequate supervision on the use of ICT tools.

Most importantly, hoteliers should provide adequate physical infrastructure as well as a stand-by generators so as to curb the problems of limited source of power supply in the use ICT facilities in hotels.

Likewise, internet service providers can take advantage of problems hotels encounter in the use of internet service. This may be achieved by conducting surveys in hotels in order to come out with other problems hence, ensure stability and consistency in providing network services to hotels.

Suggestion for Further Studies

Based on the limitations and findings of the study, a detailed study is deemed appropriate on hotels adoption and utilization of information and communication technology in a wider study area, comparing the level at which specific category of hotels' use ICT in service delivery. Further, future studies should endeavour to validate the result of this study given its exploratory nature in the metropolis.

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APPENDIX A

FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF HOSPITALITY AND TOURISM MANAGEMENT
MPHIL HOSPITALITY MANAGEMENT
QUESTIONNAIRE FOR EMPLOYEES

Dear Respondent,

The aim of the research is to examine the extent to which hotels within the Kumasi Metropolis adopt and use information and communication technology in service delivery so as to meet their organizational objectives. Your participation in answering the questionnaire will enable me complete the thesis successfully I therefore require your full cooperation for the success of the study. Any information given will be treated with confidence. Kindly respond to the items as they apply to you. For enquiry contact the following numbers 0200814657/0549118271 or reginaldawusiedu@gmail.com. Thanks for your cooperation.

Section 1: Forms of information and communication technology (ICT) adopted by hotels in the Kumasi Metropolis.

Instruction: Please Tick (√) in the space provided the most appropriate answer to your view.

Q1. Has your hotel adopted information technology tools in service delivery?

a. Yes ( )   b. No ( )

Q2. Do you think your hotel is making maximum use of the technological equipment adopted?

a. Yes ( )   b. No ( )

If yes proceed to question 4 and if no proceed to question 3

Q 3. If no why? Please specify why not……………………………………………………………

Q 4. Which of the following ICT tool is your hotel currently using in service delivery? Tick **(√)** as many as applied.

a.   Computers…………………   ( )

    b. Fax machines………………….   ( )

    c. Mobile phones ……………   ( )

    d. Websites…………………   ( )

    e. The internet ………………   ( )

    f.   Social media (example: face book)   ( )

    g. e-mail…………………   ( )

    h. Application software……   ( )

    i.   Automated teller machines (ATM)   ( )

    j.   Voice mail…………………   ( )

    k. Photocopiers……………………... ( )

    l.   Printers…………………………... ( )

    m. Smart cards………………………   ( )

    n. Scanners…………………………. ( )

    o. Mobile money……………………   ( )

    p. Others Please specify…………….. ( )

Section 2: Employees' attitude towards the use of ICT in hotels.

Q5.State the extent to which you agree or disagree with the following statements provided in the table below SA=Strongly Agree, A=Agree D=Disagree SD=Strongly Disagree. Please tick (√) as appropriate to your view.

Attitudes	SD	D	A	SA
Using ICT improves my performance in my job				
Using ICT in my job increases my productivity				

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Using ICT enhances my effectiveness in my job				
I find the use of ICT clear				
I don't find the use of ICT clear				
Using ICT does not require a lot of my mental effort				
I find ICT to be easy to use due to experience of frequency of use of ICT in the hotel				
I find it difficult to use ICTs				
I find it easy using ICT to do what I want to do				
Management's support encourages me to use ICT				
As a middle aged person I struggle to use ICT				
Use of ICTs in hotel service is difficult				
Use of ICTs in hotel service delivery is a waste of time				
Use of ICTs in hotel service delivery is a waste of money				
It is risky using ICT in hotel service delivery				

Section 3: Extent of use of ICTs by hotels

Q6. **To what extent do you use each of the following ICT tool in service delivery at your hotel? Please Tick (√) as appropriated to your view.**

Type of ICT tool	Extent of Use			
	Seldom	**Occasionally**	**Often**	**Very often**
Computers				
Fax machines				
Mobile phones				
Websites				
The internet				
Social media				
E-mail				
Application software				
Automated teller machines				
Voice mail				
Photocopiers				
Printers				
Smart cards				
Scanners				
Online reservation systems				
Wi-Fi				
Digital conference facilities				
Interactive guide				
Any other, Specify and rate				

Please Tick (√) in the space provided the most appropriate answer in your view.

Q 7.Do you think the extent of use of ICT tools will enable the hotel to achieve the reasons for adopting the particular ICT tool?

a. Yes ( )   b.   No   ( )

If YES, proceed to **Q9** and if NO proceed to **Q8**

Q8. Complete the table stating the extent to which you agree or disagree with the statement concerning reasons why you think the hotel cannot achieve its purpose of adopting ICT tools Tick (√) as appropriate in your view. SD=Strongly disagree, D=Disgree, A = Agree SA=Strongly Agree.

Reasons	SD	D	A	SA
There is Unfair distribution of ICT tools to departments in the hotel				
ICT tools in my department are not task related				
ICT tools are not used for their related task in my department				
Employees in my department lack the skills in the use of ICT tools				
Employees in my department are not trained in the use of ICT tools				
My department does not give feedback to management on the efficiency of ICT tools				
Unreliable source of power supply in the hotel				
Management does not inspect ICT tools in my department to ensure they are in good order				

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Lack of proper supervision on the use of ICT tools in my department				
Employees in my department do not willingly take instructions on the use of ICT tools from supervisors				
ICT tools in my department are not put into effective use				

Q9. Complete the table stating the extent to which you agree or disagree with the statement concerning reasons why you think the hotel can achieve its purpose of adopting ICT tools Tick (√) as appropriate in your view.

	SD	D	A	SA
ICT tools are fairly distributed to departments in the hotel				
ICT tools sent to my department are task related				
ICT tools are use for their related task in my department				
Employees are often trained on the use of ICT tools				
Employees in my department have expertise on the use of ICT tools				
My department gives feedback to Management on the efficiency of ICT tools				
There is a reliable source of power supply to enable the use of ICT tools within the hotel				
Management often inspects ICT tools in my department				

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There is adequate supervision on the use of ICT tools in my department				
Employees in my department willingly take instruction from supervisors on the use of ICT tools				
ICT tools in my department are always put into use				

Q10. What do you think should be done by management of the hotel to improve on the extent of use of ICT tools in the hotel? Please specify

    a.   There should be fair distribution of ICT tools to all departments in the hotel

    b.   Employees who are competent in using ICT tools in carrying out tasks should be recruited

    c.   Management should provide in-service training to employees

    d.   Management should provide ICT tools always in good order

    Others, please specify………..

Section 5 : Barriers to the use of ICT tools adopted by hotels.

Q11. Complete the table below stating the extent to which you agree or disagree with the following statements as an impediment to the use of ICT tool in the hotel. Please Tick (√) as appropriate to your view.

Organizational factors	SD	D	A	SA
The size of the hotel				
Scope of activities carried out by hotel				
Lack of management's support				
Economic factors				
Cost of installation of ICT tools				
Cost of employee training on the use of ICT tools				
Cost of maintenance of ICT tools				

Cost of payment of electricity bills				
Return on investment of ICT tools				
Environmental factors				
Lack of access to ICT facilities				
Lack of source of power supply				
Lack of physical infrastructure				
Unreliable source of power supply				
Competence				
Lack of knowledge on ICT usage				
Lack of physical expertise on ICT usage				
Lack of proper supervision on the use of ICT tools				

Q12. What do you think can be done management of the hotel to minimize the barriers to the use of ICT tools in your hotel? Please specif**y**

  a. Management should provide adequate physical infrastructure
  b. There should be adequate support from management on the use of ICT
  c. Management should make adequate and available finance
  d. There should be proper supervision by management on the use of ICT
  Others, please specify.

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Section 5: Socio demographic characteristics. Please Tick (√) in the space provided the most appropriate answer.

Q13. Gender?   A. Male ( )   b. Female ( )

Q 14. Age………………………years

Q15. Marital status?

a. Single   ( )

b. Married   ( )

c. Divorced   ( )

d. Widowed   ( )

Q16. What is your highest level of educational attainment?

a Secondary/ technical   ( )

   b   Vocational training   ( )

c.   Diploma   ( )

d   Degree   ( )

Q17. Religious affiliation

a. Muslim   ( )

b. Christian   ( )

c. Traditionalist (   )

d. Others , Please specify

Q18. Monthly income……………………………………..

Q19. Nationality…………………………………………

Q20. How long have you been working in this hotel……………………………years

 Q21. Which department are you attached to?

a.   Front office   ( )

b.   Restaurant   ( )

c.   Housekeeping   ( )

d.   ICT   ( )

Q22. What is your job title?

    a. Manager   (   )

    b. Head of ICT unit   (   )

    c. Restaurant supervisor   (   )

    d. Front office manager   (   )

    e. Cashier   (   )

     f. Housekeeper   (   )

    g. Waiter   (   )

    Q23. Do you use smart phone? A Yes (   )   b.   No   (   )

    Q24. Do you find it easy using smart phones? A. Yes (   ) b. No (   )

    Q25. Are you given training on the use of ICT tool? a. Yes (   ) b. No. (   )

    Q26. How often is the training given? a. Seldom ( )   b. Occasionally ( ) c. Often (   )

       d. Very often   (   )

        Q29. Does the training given you benefit you in the use of ICT tools?

        a. Yes (   ) b. No (   )

    Q27. What is the hotel's star rating?

    a. 1 star   (   )

    b. 2 star   (   )

    c. 3 star   (   )

    d. 4 star   (   )

Q28. How long has the hotel been in existence?

………………………………………..years

Q29. What is the ownership structure of the hotel?

a.   Sole proprietorship   (   )

d. Management company   (   )

Q30. Which of the following services does your hotel provide? Please tick **(√)** as many

as applies to the hotel

a. accommodation service   (   )

b. food and beverage service   (   )

c. conference facility service   (   )

d. entertainment   ( )

e. laundry service   ( )

f. car rentals   ( )

g. children's playground.   ( )

h business centre   ( )

i   internet facility   ( )

j. tour guide services   ( )

k. Forex bureau   ( )

APPENDIX B

UNIVERSITY OF CAPE COAST

FACULTY OF SOCIAL SCIENCES

DEPARTMENT OF HOSPITALITY AND TOURISM MANAGEMENT

MPHIL HOSPOTALITY MANAGEMENT

INTERVIEW GUIDE FOR HOTEL MANAGERS

Dear Respondent,

The aim of the research is to examine the extent to which hotels within the Kumasi Metropolis adopt and use information technology in service delivery so as to meet their organizational objectives. Your participation in answering the questionnaire will enable me complete the thesis successfully. I therefore require your full cooperation for the success of the study. Any information given will be treated with confidence. Kindly respond to the items as they apply to you. For enquiry, contact the following numbers 0200814657/0549118271 or reginaldawusiedu@gmail.com. Thanks for your cooperation

Section 1: Forms of ICTs adopted by hotels.

Q1. Which of the following forms of ICT tools is the hotel currently using in service delivery?

a. Computer…………………   ( )

b. Fax machines……………….   ( )

c .Mobile phones ……………   ( )

d. Websites…………………   ( )

e. The internet ………………   ( )

f. Social media ………………   ( )

g. e-mail…………………   ( )

g. Application software……   (   )

  h. Automated teller machines   (   )

   i. Voice mail   (   )

k. Photocopiers   (   )

l. Printers   (   )

m. Smart cards   (   )

n. Scanners   (   )

o. Others Please specify……………………………..

Section 2: Managers perception on reasons for adopting ICT by hotels

Q2. Do you think the adoption of ICT by the hotel is relevant?

   If yes, how is it relevant to the hotel?

   If no, why do you think it is not relevant?

Q3. What is your perception concerning the reasons for which the hotel has adopted ICTs?

Probe further when necessary.

Q4. What are your employees' attitude towards the use of ICT in the hotel?

   Probe further.

Section 4: Extent of use of ICT tools by the hotel.

Q5. To what extent do you think each ICT tool in question one above is put to use by employees in the hotel? Probe further.

Q6. Do you think there is a need for improvement on the extent of use of ICT tools in the hotel?

Q7. What in your view should be done to improve on the extent of use of ICT tool in the hotel?

Q8. Do you think the extent of use of ICT tools can enable the hotel to achieve its purpose of adopting the various ICT tools?

Q9. Does the hotel provide training to employees on the use of ICT tool in the hotel?

Probe further

Q10. How often does the hotel provide training to its employees?

Probe further

Q11. Does the training given to employees help them in using ICT tools adopted by the hotel

Probe further

Section 5: Barriers to the use of ICT tool in hotels

Q12. What in your view are some barriers to the use of ICT tool in your hotel?

Q13. What are some suggestions to reduce the barriers to the use ICT tools in the hotel?

Section 6: Socio demographic Checklist

Q14. What is your age? ……………………………year

Q15. Marital status?
a. Single   ( )
b. Married   ( )
c. Divorced   ( )
d. Widowed   ( )

Q16. What is your highest level of educational attainment?
  a. Secondary/Technical   ( )
  b. Vocational training   ( )
  c. Diploma   ( )

d.   University Degree   ( )

Q17. Religious affiliation

a. Muslim   ( )

b. Christian   ( )

c. Traditionalist   ( )

d. Others, Please specify…………………….

Q18 Monthly income……………………………………..

Q19. Nationality………………………………………………

Q20. How long have you been working in this hotel

……………………………years

Q21. How long have you served as a manager in the hotel?..........................years

Q22. What is the hotel's star rating?

   a. 4 star   ( )

   b. 3 star   ( )

   c. 2 star   ( )

   d. 1 star   ( )

Q25. How long has the hotel been in existence……………………………years

Q26. What is the hotel's ownership?

   a. Sole proprietorship   ( )

   b. Franchising   ( )

   c. Subsidiary   ( )

   d. Management company   ( )

Q27. Which of the following services does your hotel provide? please tick (√) as many as applies to the hotel

a. Accommodation service   ( )

b. food and beverage service   ( )

c. conference facility service   ( )

d. live band entertainment   ( )

e. laundry service   ( )

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f. car rentals   ( )

g. children's playground.   ( )

h business centre   ( )

i   Internet facility   ( )

j. tour guide services   ( )

k. Forex bureau   ( )

APPENDIX C

BARRIERS TO THE USE OF ICT IN HOTELS

B1	The size of the hotel
B2	Scope of activities carried out by hotel
B3	Lack of management's support
B4	Cost of installation of ICT tools
B5	Cost of employee training on the use of ICT tools
B6	Cost of maintenance of ICT tools
B7	Cost of payment of electricity bills
B8	Return on investment of ICT tools
B9	Lack of access to ICT facilities
B10	Lack of source of power supply
B11	Lack of physical infrastructure
B12	Unreliable source of power supply
B13	Lack of knowledge on ICT usage
B14	Lack of physical expertise on ICT usage
B15	Lack of proper supervision on the use of ICT tools