Assessing implementation of Knowledge Management Systems in hotels: the case of Ho, Ghana

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Abstract

This study was carried out to determine whether investments made in Knowledge Management Systems have helped Hotels gain competitive advantage or not, and the extent to which the Knowledge Management Systems have helped Hotels in attainment of their corporate objectives. Eighth (8) licensed Hotels by the Tourism Authority of Ghana participated in the survey. The study used structured questionnaires (open and close ended questions) and interview to collect data. Data was analyzed using the SPSS software and presented by use of descriptive statistics.

The study revealed that Knowledge Management Systems are for the tracking and the management of the hotel's operations both internally and externally. It thus handles both front and back office operations and transactions. It also handles both guest and staff data and records. The conclusion reached is that investments in Knowledge Management Systems enable hotels to achieve their objectives and gain a better corporate image and improved performance.

Keywords: Knowledge, Knowledge Management (KM), Knowledge Management Systems (KMS), Hotel Information System (HIS)

INTRODUCTION

It is the knowledge age, truly a time when knowledge is power. More so than ever before, organizations including hotels all over the world are focusing on knowledge as a key resource. Hotels are now using knowledge to gain and sustain a competitive advantage. This is why they understand that what they do not know can become an "Achilles heel" and source of advantage to their competitors. This therefore calls for effective management of knowledge in and by every organization as an organizational asset. Managing knowledge in Hotels have become a necessity and a key asset. Knowledge management (KM) has gained credibility in recent times by virtue of the increased research interest on the subject and also through its increased application as a management tool. It is obvious that knowledge management is now recognized as a valuable intangible asset in its own right and is important for decision making and strategy building. Toh et al. (2013) define a hotel as 'commercial buildings that offer lodging to travelers'. In other words, a hotel is a hospitality institution which deals with the lodging, feeding and additional services to those who need it. It receives members of the public who require temporary accommodation away from home and it provides catering and other services for the general public. With reference to the local setting, the Hotel Proprietors Act -1957 (Act 20: Section 47)a hotel is any hospitality enterprise (whether foreign or Ghanaian) which is issued with a license to carry on the business of lodging. Section 47 of the Act goes further to define the "hotel business" to cover the acceptance of members of the public for lodging and/or feeding purposes and letting space temporarily, whether in whole or in part for public or private events.

Investments in Knowledge Management System (KMS) in the hotel industry have become more of a necessity because the market in which hotels operate is now globalized and the world's economies have transformed to full-fledged knowledge-information based economies. Currently there is information overload/explosion and knowledge all over the world is estimated to double every half decade. A second look at the concept of *knowledge* from being a "necessary evil" to a 'strategic resource' that can engender competitive advantage to ensure survival and prosperity of the hotel industry is necessary. How does a KMS operate in the hotels? What are its impact on the hotels output? Few studies were found on KMS's in the hospitality landscape of Ghana. This has naturally created a gap in knowledge on its ramifications on local hotel performance. The implications of KMS's on hotels performance in Ghana needs to be explored.

OBJECTIVES OF THE STUDY

The aim of the research is to ascertain the role of KMS's in hotel business operations in Ho. Specifically the study attempts to:

- Examine the state of KMS use at the hotels
- Identify the type of data inputted and processed at the hotels
- Assesses the ways KMS have helped in the realization of hotel objectives

LITERATURE REVIEW

Knowledge

The definition of knowledge is complex and controversial and can be interpreted in many different ways. It is used interchangeably in practice as well as in literature, with intangible assets, capabilities, core competence or even skills (Chaudhary, 2005:16). Hey (2004:10) explains that the part of knowledge that is more easily definable involves the accumulation and assimilation of multiple pieces of information, once again providing structure to it in the form of relationships between the information, and internalizing, or personalizing that knowledge by bringing

it from the outside 'in' to the mind. McNabb (2006) also explained that knowledge is accumulated, organized and integrated and held over a longer period. It is the fact or condition of knowing something with familiarity gained through experience or association. It is found in contextual, relevant and actionable form. Frost (2014) presented a definition of knowledge based closely on the definition by Davenport (2008): knowledge as a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. Hara (2000:8) took a social constructivist paradigm: knowledge (knowing) is viewed as both an individual and a social process because knowledge is constructed individually and collectively. According to Hara (2000:8), the knowing is a process of gaining situated understanding that a person or a group of people have acquired through experience in social contexts. This type of knowledge includes know-how, which is directly related to competitiveness and productivity of an organization for the most of the time although it may be transient and incomplete. Nazari (2012:23) on his part identifies three (3) frameworks to explain knowledge.

Thus:
1. Knowledge is connected. It exists in a collection (collective wisdom) of multiple experiences and perspectives.
2. Knowledge is a catalyst/action. Knowledge is always relevant to environmental conditions, and stimulates action in response to these conditions. Information that does not precipitate action of some kind is not knowledge i.e. Knowledge for the most part exists only in application.
3. Knowledge is applicable in un-encountered environments. Information becomes knowledge when it is used to address novel situations for which no direct precedent exists. Information that is merely

"plugged in" to a previously encountered model is not knowledge and lacks innovation.

Knowledge Management (KM)

According to Jarche (2012), you cannot manage knowledge. 'Knowledge is between two ears, and only between two ears.' To that extent, it's really about what individual workers do with the knowledge they have. When employees leave a company, their knowledge goes with them, no matter how much they have shared (Kotzer, 2001). Due to this, Lee (2012) supported the notion expressed by Nonaka (1994) that "Knowledge Focus" or "Knowledge Creation" is better terms, because they describe a mindset, which sees knowledge as activity not an object. However, KnowledgePoint (2014) believes that both knowledge that reside in persons and systems can be managed as organizational assets, object & processes and as such will require a massive human effort. In concurring with this argument, Frost (2012) explained that technologies help to capture, process, manage, store, and disseminate knowledge. KnowledgePoint (2014) revealed that the management involves organizational processes. Managing it requires turning personal knowledge into corporate knowledge that can be widely shared throughout an organization and appropriately applied. Thus, knowledge is increasingly being recognized as a crucial organizational resource that gives market leverage. Its management is therefore too important to be left to chance. According to Wilson (2002), KM involves both personal and systems, and it can be managed by:

1. Encouraging information exchange among staff. For example, through formal and informal networking and training;
2. Building intranets to provide access to information resources;
3. Creating 'yellow pages' or indexes to expertise; and

4. Creating newsgroups for employees to encourage information exchange.

KM therefore implies a strong tie to organizational goals and strategy, and it involves the management of knowledge that is useful for some purpose and which creates value for the organization (Frost, 2012). It provide the precise tools, people, knowledge, structures (teams, etc.), and culture to enhance learning (Hussain et al, 2004). Frost (2012) again states that KM understands the value and applications of the new knowledge created; store this knowledge and make it readily available for the right people at the right time; and continuously assess, apply, refine, and remove organizational knowledge in conjunction with concrete long and short term factors.

Some basic definitions of knowledge management are:

Kundus (2013)	A multi-disciplinary approach of achieving organizational objectives by making the best use of knowledge. It focuses on processes such as acquiring, creating and sharing knowledge and the cultural and technical foundations that support them.
Frost (2012)	Knowledge management is the systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical & strategic requirements; it consists of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge.
Warier (2009)	The process of creating, capturing, and using knowledge to enhance organizational Performance
Reddy (2007)	KM is a business process that promotes the collaborative and integrative approach to the creation, capture, organization, access, dissemination, and use of information assets, including the tacit, un-captured knowledge of people and formalizes management and leverage of a firm's intellectual assets.

Thus KM is to achieve four major objectives which include:

1. **To create knowledge repositories**: which store both knowledge and information, often in documentary form such as:
a. Those which include external knowledge, such as competitive intelligence.
b. Those that include structured internal knowledge, such as research reports and product oriented marketing materials, such as techniques and methods.
c. Those that embrace informal, internal or tacit knowledge, such as discussion databases that store "know how".
2. To improve knowledge access and transfer: Here the emphasis is on connectivity, access and transfer. Technologies such as video conferencing systems, document scanning and sharing tools and telecommunications networks are central.
3. To enhance the knowledge environment: so that the environment is conductive to more effective knowledge creation, transfer and use. This involves
a. Tackling organizational norms and values as they relate to knowledge.
b. Increase awareness on sharing knowledge embedded in client relationship and engagements.
c. Provide awards for contributions to the university's structured knowledge base.
d. Implement decision audit programs in order to assess whether and how staffs are applying
knowledge in key decisions.
e. Recognize that successful KM is dependent upon structures and cultures.
4. To manage knowledge as an asset: and to recognize the value of knowledge to an organization (Davenport & Prusak, 1998).

Knowledge Management Systems (KMS)

The issue of knowledge management systems has probably always been the most discussed and debated topic within KM. Even though KMS are not the most

important part of KM, this is still the subject that generates most interest (Frost, 2012).

Some basic definitions of KMS are:

Frost (2014)	Any kind of IT system that stores and retrieves knowledge, improves collaboration, locates knowledge sources, mines repositories for hidden knowledge, captures and uses knowledge or in some other way enhances the KM process
Girard (2013)	The strategies and processes designed to identify, capture, structure, value, leverage, and share organization's intellectual assets to enhance its performance and competitiveness
Yukikaze (2012)	A system (generally IT based) for managing knowledge in organizations for supporting the creation, capturing, storage and dissemination of information. It can comprise a part (neither necessary nor sufficient) of a KM initiative
Techopedia (2011)	A system for applying and using KM principles. These include data driven objectives around business productivity, a competitive business model, business intelligence analysis, and more

Knowledge Management Systems from Technological Perspective

The technological aspects of KM are the tools that facilitate the creation, organization, storage, transfer and sharing of knowledge in the organization (Gupta & Sharma, 2005). These tools support and improve the KM processes and application, and process and generate value from their intellectual and knowledge-based assets.

Most often, generating value from such assets involves sharing them among employees, departments and even with other companies in an effort to devise best practices (Frost, 2012). In other words, KMS are repositories of knowledge from a collection of experts, organized in a manner such that it can be easily accessed (Chandran & Kavitha 2009).

From Bali et al (2009), these technologically based tools include groupware systems & KM the intranet and extranet, data warehousing, data mining, decision support systems, content management systems, document management systems, artificial intelligence tools, simulation tools, semantic networks. Young (2013) also mentioned the portal, profile, collaborative workspaces, urgent requests, document libraries, servers, databases, knowledge bases, blogs, and advanced search tools. Furthermore, Capozzi (2007) mentioned the e-learning tools and communities of practice.

Knowledge Management Systems from Non-Technological Perspective

From the non-technical perspective, KMS are those that are human and organizationally centered (Young, 2013). The focus and emphasis is on how individuals and organizations can be equipped to design and facilitate knowledge processes best. These include cross-functional project teams who are selected and assembled project specialist or expert working together for a common goal, KM training & education, and storytelling (Frost, 2012). That is, KMS are purely human centered and that it takes the human force to capture, process, store and disseminate knowledge. Reddy (2007) also explain that they are built on real knowledge sharing situations, enables individuals to gather in some of the understanding of the storyteller as well as recast the story into their own contextual work environment; hence adding their own understanding to the process. Other non-technological systems include meetings, mentorship, and brainstorming (Frost, 2012).

Hotel Information System (HIS)

Hotel information system covers a wide range of lodging business areas, encompassing all business functions in a typical hotel environment (Al-Abdullah, 2010). They are put in place to change and improve the internal operations and the management of procedures of a hotel (Lucey, 2007). According to Lucey (2007),

the impact of the system is not only to improve the efficiency and effectiveness of all the processes of the hotel but also to create, enlarge and improve certain functions/products, which were not in existence before the information system was inculcated into the hotel. In the view of Baltzan & Philips (2009), an information system is to manage information and assets effectively and efficiently both in the short term and long term. The core products of hospitality institutions are care and information.

The care is derived from the effective management of their information and how they assimilate the information from their guests/clients when needed (Alsajjan & Dennis, 2010). It therefore calls on them to be proactive (Baltzan & Philips, 2009). According to Al-Abdullah (2010), some of the operations that an HIS supports includes: Reservation requests, orders, payment system accounts, counter (*front office*) business operations, loss/found office, treasury operations, back office operations, retail transaction accounts, fixed assets and payroll accounting. Alsajjan & Dennis (2010) also states that information system in hotels is to enable them to analyze the relationship with each guest based on all their reservation accounts, have a faster response time to guest need, process the hotels products, process and manage staff information, risk management, cash flow, process and manage guests information.

METHODOLOGY

Majority of the respondents (69.1%) were female. Most of the respondents (58.2%)

Due to the sensitive nature of the study, the convenience sampling technique (a form of non-probability sampling) was used to collect data, which is a faster way of collecting huge number of completed questionnaires more quickly and efficiently from the Ho hotels. Eight (8) licensed hotels and listed by the Volta Regional Tourism Authority Office were selected for this study. This method of sample selection enabled the researcher to do a more exhaustive internal analysis of the Hotels, vis-à-vis the role of the KMS in the management of records, files and information at the Hotels. Data was collected from both secondary and primary sources. With regard to the primary source questionnaires were used. The researcher designed and administered ten (10) questionnaires to each hotel directly by visiting the hotel personally. This constituted two hundred and seventy (70) questionnaires. The questionnaire consisted of both open-ended and close-ended questions. The closed-ended questions were designed on a five point-Likert scale having options 1 to 5 in which 1 stand for strongly disagree, 2 for disagree,3 for neutral, 4 for agree and 5 for strongly agree. The researcher was able to retrieve all the 70 questionnaires distributed. After the data collection, the SPSS version 20 was used to analyze the data for presentation and findings.

RESULTS AND DISCUSSION

Profile of Respondents

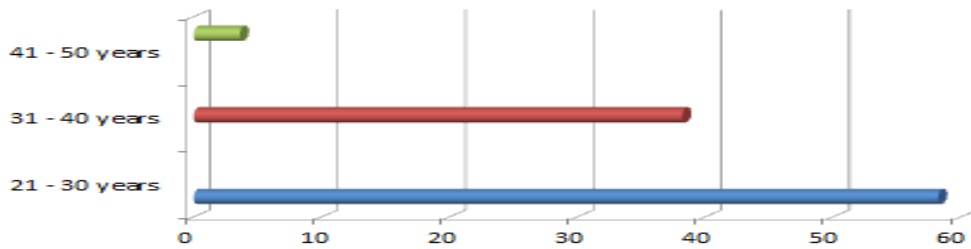aged between 21 – 30 years with a handful (3.6%)in the 41 -50 age range (Fig 1)

Figure 1   Age of Respondents

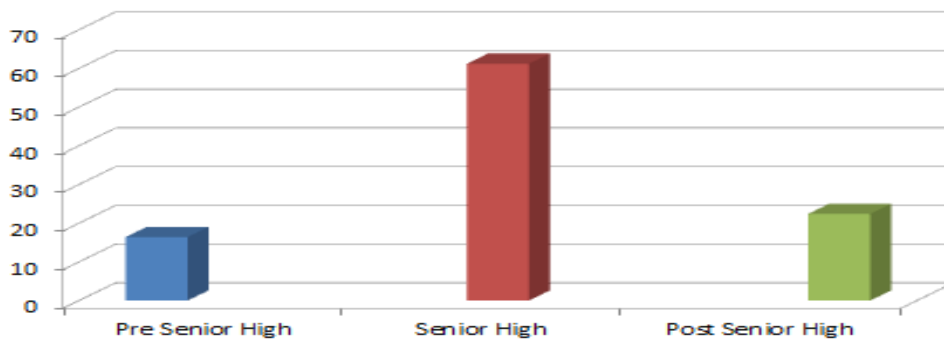Educationally majority of the hotel workers (61.2%) were Senior High School (SHS) leavers(Fig.2)

Figure 2 Formal Educational Attainment of Respondents

A few (16.4%)had formal education lower than Senior High School and the rest (22.6%) held various post Senior High School certificates including professional ones and diplomas such as HND, 812/1 812/2etc. The ratio of non-mangers to managers is eight is to two (8: 2) Majority of the respondents(56%) have between 2 – 5 years' work experience in hotel organizations.

Application of Information Technological Resources in the Hotels

Few general respondents (5.5%) affirmed possessing practical and working knowledge of computers prior to joining the hotel organizations (Figure 2). Account and front officers ((72%) however reported having working knowledge of computers before their engagement in the hotel.
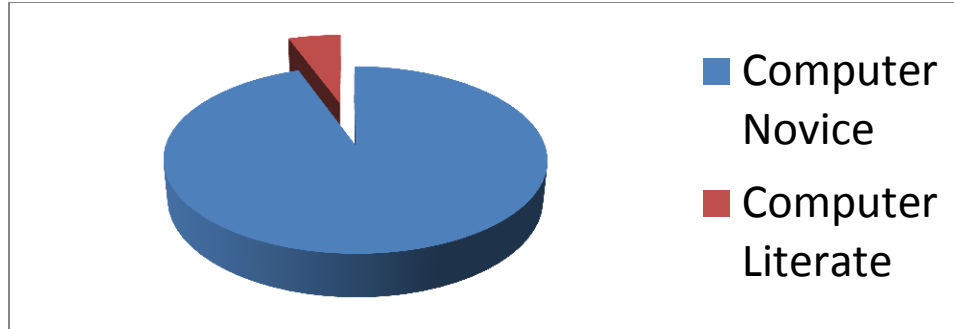
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Figure 3Computer Literacy Statuses of Employees on Appointment

Minority of the respondents (15.5%) recognized that their hotel's operations and systems are somehow automated and relies on information systems/data bases. Again only a handful (12%) of respondents testified that their hotel's operations and data processing for guests and themselves was computer-based.

The main type of data inputted into the hotel information system was that of guests, staff and hotel inventory. Majority of the Hotels (68%) perform abysmally in terms of data input and processing in soft format.

Figure 4 Mode of Data Input in Hotels

Data inputting, organization, analysis/processing, and storage/preservation were observed to be mainly manual. Staff also appears reeling under their tasks due to hard '*data overload'* at the front office and records units.

Impact of KMS on Hotel Operation and Output
Investments in KMS's were noted to have some ramifications for Hotels. (Table 1)

Table 1: Impact of KMS's on Hotels

Competitiveness in the lodging industry
Enhancement of corporate image
Benchmark for other hotels in the lodging sector
Creation of conducive environment for teamwork and Motivation
Demonstration of good corporate citizenship
Application of high ethical standards with guests

Source: Fieldwork 2015

It can be adduced from the above result that implementation of KMS's in the hotels studied was embryonic. The use of the internet and software programmes for reservations and self -registration is yet to cover the hotel community in Ho. This indicates the local nature of their clientele. This rhymes with Asiedu et al 2008 that local patrons of our hospitality facilities outnumber the international patrons in real terms. The type of data sought and captured was again simplistic covering that of hotel inventory and guest and staff particulars. Guest perception of services and suggestions can also be collected for management use. The Hotel information system covers all business functions in the hotel environment (Al-Abdullah, 2010). They must be put in place to change and improve the internal operations and the management of procedures of the hotels. According to Lucey (2007), the impact of the system is not only to improve the efficiency and effectiveness of all the processes of the hotel but also to create, enlarge and improve certain functions/products, which were not in existence before the information system was inculcated into the hotel. In the view of this, an information system to manage information and assets effectively and efficiently both in the short term and long term is required.

The core products of hospitality institutions are care and services. The care is derived from the effective management of their information and how they assimilate the information from their guests/clients when needed (Alsajjan & Dennis, 2010). It therefore calls on hotel workers to be proactive. Some of the operations that an effective hotel information system supports includes reservation requests, orders, payment system accounts, counter (*front office*) business operations, loss/found office, treasury operations, back office operations, retail transaction accounts, fixed assets and payroll accounting.

This is in harmony with Alsajjan & Dennis (2010) who also states that information system in hotels enables hoteliers to analyze the relationship with each guest based on all their reservation accounts, have a faster response time to guest need, process the hotels products, process and manage staff information, risk management, cash flow, process and manage guests information.

CONCLUSION

Ho Hotels invested minimally in the implementation of KMS. Investments in KMS's are worthwhile. KMS's are the heart of hotels. It is assists in the tracking and the management of the hotel's operations both internally and externally. Departments of the hotel, to a large extent rely on the KMS. The KMS thus handles both front and back office operations and transactions. It also handles both guest and staff data and records. Even though only few of the Hotels with their staffs were computer biased, there are concrete plans by the hotels to effectively apply and operate KMS's. The conclusion reached is that investments in KMS's enables hotels to achieve their objectives and helps it gain a better corporate image and improved performance. This research work therefore contributes towards the provision of literature on the essence of periodic evaluation of investments in information systems and bridging the information gap for planning, decision and policy making in hotels.

RECOMMENDATIONS

It is recommended that investments in KMS's should be user-oriented to reflect the needs of the users who are the employees of the hotel. Hotels should attend to the non-technical aspects that are the human and organizational aspects of changing technology and operations. Secondly an integrated approach to organizational and technical change should be adopted. The new technologies should be organized and designed to suit the needs and requirements of the staff, guests and changing societal and competitive

environment. Hotel Managers and users should be initially involved in the installation and implementation of the information systems. Considerable attention should be paid particularly to the impact of the new and evolving technologies on organizational structures, processes and job designing.

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