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Appraisal on Organizational Readiness towards Digital Information Seeking Behaviour and Use

Hashem Hussein Al Attas

Department of Library and Information Science / Info. Science, International Islamic University Malaysia, P.O. Box 10, 50728, Kuala Lumpur, Malaysia

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ABSTRACT

Background: In this digital age, digital information can be transmitted and stored in digital form. These processes eventually make information easier to transport and store and eventually improve the skills, capabilities and accuracy of knowledge-based systems for individual, institutions and companies. Substantial research on information seeking behaviour has primarily focused on traditional nondigital information. The results of these studies may not apply to electronic information resources, particularly information seeking behaviour in the digital age, which is attributed to the differences in resources. **Objective:** This paper present an exploratory research methodology aimed at investigating the organizational readiness towards digital information seeking behaviour and use. **Results:** The result reveals some factors that directly indicate the readiness and consequences of Digital Information Seeking Behaviour and Use. **Conclusion:** This study evaluate Digital Information Seeking Behaviour and use in an exploratory approach. The study conclude that technology can be considered an enabler in the modern information supply chain in the new information environment, which may be a feature of learning and information seeking.

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INTRODUCTION

Digital Information seeking behaviour (DISB) and its use within an organization is the central part of this study. Previous studies reveal that the role of managers in organizations or firms exhibits special significance in (DISB) and use, because they form the hub through which the majority of strategic information flows (Floyd and Lane, 1997 and 2000). Upward and downward strategic influences of managers also affect an organisation's alignment with the external environment. As the link between a company's strategic and operational domains, managers are constantly busy with streams of diverse information from both inside and outside the organisation. Managers are perceived to play a central role not only in managing information flows in the organisation but also in initiating strategic change that can improve organisational performance (Wooldridge and Floyd, 1990; Mangaliso, 1995).

Managers assume central positions in the organisation, which bestows power and formal authority. They perform a strategic role in the top-down, bottom-up, and lateral information processing and flow; create new knowledge for the company; and work with others to initiate change and improve organisational performance (Asamani *et al*., 2013). Studies reveal that managers rely on people as a source of information (Hodgson and Wong, 2011). Over the last few decades, many changes have occurred in the workplace, which requires paradigm shifts in managerial practices. The emergence and extensive use of information and communication technology has significantly impacted the workplace (Alwis *et al*., 2005). Bin (2009) suggests that organisations continue to search for ways to improve the efficiency of their new product development to ensure their survival, competitive advantage and sustainable growth. The resource-based view of the firm suggests that management capabilities that relate to information acquisition and use are critical to its success in product development.

Based on a body of evidence that was collected over a half century of research, Hales (1986, 1999, and 2001) identifies two common roles that managers are consistently required to serve in their central role of managing information flows: (a) monitoring, filtering and disseminating information or the information role and (b) acting as a liaison by forming and maintaining contacts or the liaison role. The two roles are interdependent and require managers to cultivate extensive networks of contacts

Corresponding Author: Hashem Hussein Al Attas, International Islamic University Malaysia, Department of Library and Information Science P.O. Box 10, 50728, Kuala Lumpur, Malaysia

outside their chain of command both inside and outside the organisation to develop their own information systems (Scanlon *et al*., 2014). Mintzberg (1975) suggests that these informal, private, and verbal contacts are very effective. As a result, managers emerge as individuals who may not know everything but typically know more than the remainder of the staff. The two roles indicate that managers not only occupy central positions in the organisations but also gain formal authority and power from their positions in the hierarchy. This is due to the notion that power is derived from the location of a person in the division of labour and the communication system in the organisation (Pfeffer, 1992).

This research aims at extending the previous study which Investigate the factors influencing digital information seeking behaviour and use among managers of telecommunication companies in Saudi Arabia. This comes as a result of not using the control variable "readiness" which should have highlighted the firm's readiness of changing from the conventional information seeking behaviours to contemporary digital information and use behavior

Related work:

As the business environment becomes intensely competitive, firms are confronted with the challenge to adapt, survive and prosper. Numerous decisions regarding the source and allocation of resources are necessary, and executives require an abundance of information. CEOs desire a continuous overview of their environment, a familiarity with the supply of resources and market conditions, an awareness of these problems and their potential and a store of up-to-date information, opinions and insights, which will facilitate their negotiation and decision-making activities (Jorosi, 2006). Because managers are located at the centre of the information flows, they have unique access to both external and internal information. As managers process received information, direct its flow, and take action based on assimilated information as a key part of their jobs, they perform 'information processing systems' (Mintzberg, 1973, 1994, 1995; Gen *et al*., 2002). Thus, management is labelled an information-intensive activity (Huber, 1980; McCall and Kaplan, 1985), in which gathering and disseminating information is primarily a managerial role (Floyed and Lane, 2000) and the manager serves as the organisation's nerve centre or key informational link. Mintzberg (1973) concludes that the information role ties all managerial work together and the organisation's strategic data bank is not the memory of its computers but the minds of its managers. Jorosi (2006) asserts that managers are able to reactively and pro-actively adapt their organisations to environmental changes through the use of information to survive and prosper.

As prime actors and active manipulators of information, managers need to have accessible recourse to sources of information. The literature reveals a multitude of studies (Keegan, 1974; O;Connell & Zimmerman, 1979, Ghoshal & Kim, 1986; Fletcher, 1991; Grosser, 1991; Auster and Choo, 1994a, 1994b; Chalmers, 1995; Choo, Detlor and Turnbull, 2000; Nied wiedzka, 2003), such as Aguilar's (1967) seminal work, that disclose that managers typically rely on human communication through personal networks and face-to-face conversations. Mintzberg (1973) discloses that managers obtain 75-95% of their information through direct human contact. Preferred human communication sources include people situated both inside and outside the organisation and range from peers and subordinates to business associates and customers. Abell (1994) reveals that when managers are offered requested information at no cost, they prefer face-to-face contact. This typical behaviour of relying on humans is attributed to the following reasons: ease of accessibility, the need for social interaction and the development of meaningful relationships and interactivity that enables personal clarification, instant feedback, and the correction of misconceptions. This behaviour is also attributed to managers who operate in a dynamic, uncertain, and complex environment that is overloaded with information and involves difficult situations (Katzer and Fletcher, 1992). The literature also reveals that managers rely to a lesser degree on formal documentary sources, such as written reports, journal articles and government publications, for information.

For a multitude of reasons, managers need to seek information about their daily work. These reasons range from enabling information flow to developing new knowledge and insights and influencing others (Kirk, 2003). Contextual and individual variables that affect managerial information use include communication networks, the roles and tasks performed by managers, information availability (quantity, quality, content, form and credibility), and individual information processing variables, such as criteria used and processing styles (O'Reilly, 1983). However, irrespective of the variables, information use is part of a dynamic and iterative process that evolves as managers engage in seeking information. The spillover effect of this process of seeking and using information are issues that managers need to address.

The literature identifies information overload (Bawden Holtham and Courteny, 1999; Butcher, 1998; Choo, 2002; Oppenheim, 1997), capability of handling and assessing the quality of information (Bruce, 1999; Cheuk, 1998(a),(b), 2002; Edmund and Morris, 2000; O'Sullivan, 2002; Stanat, 1990), and the unwillingness to share information (Chu, 2003; Lee and Suliman, 2002, Reuters study, 1994; Oppenheim, 1997) as information issues that

managers need to address on a daily basis. The overarching implication is that managers should face the real world, which has rapidly changed in the workplace over the last few decades, which has resulted in a paradigm shift in managerial work practices.

Information and communications technologies (ICTs) have significantly impacted the workplace (Pitt, Murgolo-Poore and Dix, 2001; Gan, Ping, Koh and Wong, 2002). These technologies have produced significant advances in the workplace, offered instant and constant connectivity from their desktops via new information delivery mechanisms and a networked or digital work environment and have offered managers' access to a vast pool of information resources. Time and space are no longer barriers. Instead, accelerated production, circulation, and consumption of information, as well as access to a vast flow of data and information, which can be rapidly and inexpensively communicated and exchanged, have become a phenomenon

Methodology:

Unlike the previous study, the first round of study, exploratory research methodology is carried out to circumvent the weaknesses observed (Hashem and Bakeri, 2014). The exploration of the readiness of DISB and use comes from some formulated research questions as follows:

- How have ICTs changed managerial information seeking and use behaviours?
- What is the preference for information sources?
- What issues are encountered in the process of seeking and using the information?
- Have changes from DISB and use resulted in better information access and flow in the organisation?

In order to answer these questions this research make an in-depth search on findings of studies related to that and ascertains the readiness issues relating to DISB and use.

ICTs Intervention in managerial information seeking and use behaviours?

Steinfeld (1986) provides an overview of computer-mediated communication, whereas Rosenbaum and Newby (1990) reveal that studies about the impact of ICTs on information seeking and user behaviour have been system-centred and that the individual- or user-centred impacts have been of secondary importance. A recent review of use in studies of electronic networks (Savolainen, 1998) shows that the available studies are primarily quantitative and focus on quantity of use that is cross-tabulated with socio-economic factors. He suggests that some of these studies are work-related studies but have typically approached use from the viewpoint of available services, and the role of individuals is reduced to the role of consumers. Since this review, Choo, Detlor and Turnbull (1998, 2000a, 2000b) and Choo and Marton (2003) have contributed studies that can be considered landmarks in information seeking and use. They suggest that the structure of the Web and the functionality of the Web browser facilitate and constrain information seeking, which results in new modes and patterns. Their studies focus on IT managers. However, a great disparity is observed between the extent to which these studies have impacted managers' information seeking and use behaviours at work and the resulting information access and flow in the organisation.

Demographic information about professionals and role-related factors that detail their years of experience, as investigated by Small *et al*. (1998), "revealed that experienced educators often rely on established routines for finding information". This result was consistent with previous studies by Davis (1987) and Ristow (1987). The findings of Summers, Matheson, & Conry (1983) showed that the number of years in teaching had a negligible to slight effect in general information seeking and use by teachers.

However, the number of years in teaching was significant for the following resources: library use (school and district), journals, and research reports. In other professional fields, such as nursing, studies have shown that years of experience in service render significant differences when searching and using information. For example, the study of Benner (1984) found that novice, advanced beginner, competent, proficient, and expert nurses use information and knowledge differently. Novice and advanced beginner nurses use "knowing that" knowledge or theoretical knowledge, which derives from theories, rules, guidelines, and principles from in textbooks, compared with proficient and expert nurses. Proficient and expert nurses, who have worked in clinical practice a minimum of 5 to 6 years, use "knowing how" knowledge or practical knowledge, which derives from their experiences, compared with novice and advanced beginner nurses. In a study that examines the work-related information-seeking behaviours of professional and managerial university staff, Wilkins & Leckie (1997) found no correlation for the number of years employed but the level of education produced statistically significant results. Cross-tabulations of demographic data indicated that users with master's and PhD degrees use libraries more frequently and used LibNet.

Awareness of information availability was an influential factor in some studies. Gosling *et al*. (2004) discovered that more awareness led to more use. Among Australian nurses who learned of the availability of clinical information and the database system, 74 % of these nurses used these resources. Conversely, a study by Cheng & Lam (1996: 38) indicated that the majority of nurses in Hong Kong did not use the databases due to unawareness. Positive attitudes towards information and awareness of information can facilitate information seeking and

uses by school teachers. Negative attitudes towards information and unawareness or lack of information impede information use by school teachers.

The preference for information sources?

The digital or network environment is defined as a technologically driven work environment that enables managers to have instant and constant access to a multitude of information resources from their desktops (Herrington *et al*., 2014; Conole *et al*., 2010). In this study, the confines of the digital work environment are specifically limited to two technologies: the corporate portal and the Internet.

The corporate portal is a private internal network in which access is restricted to authorised users in the organisation and security measures, such as firewalls, are employed to prevent unauthorised users from gaining access, which allows information to be securely managed inside the organisation (Greenlaw and Hepp, 1999; Choo, Detlor and Turnbull, 2000). The corporate portal may be used for data retrieval, email, threaded discussions, newsgroups, shared electronic white boards, and workflow systems, which support two-way dialogue. Despite the availability of an extensive and varied set of functionalities, the portal is primarily used to disseminate basic information such as corporate documents, corporate directories, competitive sales information, human resources and employee benefits statements, policy guides, and company newsletters. Collins (2001) defines a corporate portal as a browser-based application that enables employees "access to, collaborate with, make decisions, and take action on a wide variety of business-related information regardless of the employee's virtual location or departmental affiliation, the location of the information, or the format in which the information is stored."

The second technology is the Internet, which offers information that is external to the organisation via the World Wide Web (WWW) and acts as a computer-mediated communication tool. The Internet refers to a global information system that is logically linked by a globally unique address space based on the Internet Protocol (IP), is able to support communication, and provides, uses or makes accessible, either publicly or privately, high-level services that are layered on communications and related infrastructure (Greenlaw and Hepp, 1999). The Internet consists of a network of networks; its success is dependent on cooperation because no one person, organisation or government is responsible for it. The WWW is a software application that enables the publication and browsing of hypertext documents on the Internet. The reference to a 'web' implies interconnections between documents, which resembles a spider web. The Web uses the Internet as a transport mechanism.

Web-based sharing tools include web browser tools (e.g., File-Send Page by e-mail) and website sharing tools (e.g., e-mail to a friend button), and electronic sharing tools include discussion forums and email sharing (e.g., emailing an attachment, emailing a URL, writing an email, and emailing copy-and-pasted web page information).

The technologically driven work environment is broadly defined as an environment in which a user employs the application of computer and communication technologies for the acquisition, storage, analysis, distribution, and presentation of information (Zmud, 1990).

The digital information environment is defined as the "social context within which ICTs are designed, implemented and used and digital information is created, accessed, manipulated, stored, disseminated, and used" (Rosenbaum, 1999)

The issues encountered in the process of seeking and using the information?

Activities that are performed to identify and fulfil information requirements broadly cover managers' active and passive information behaviours, i.e., how they respond to sources and channels of information and use information on a daily basis. Wilson (2000) defines the term as "The purposeful seeking for information as a consequence of a need to satisfy some goals. In the course of seeking, the individual may interact with manual information systems (such as newspapers or a library), or with computer-based systems (such as the WWW)." Other technological sources of information that can help information seekers solve their information needs include online library catalogues, such as e-journals and other library catalogues, and databases, such as bibliography databases, numerical databases, and full-text databases. An e-journal and other digital libraries can also be useful to information seekers. Due to rapid technological changes in terms of computerised access, digitised information formats, internet resources, access and retrieval, which are the norm in the current telecommunication industry, managers and employees who are traditionally accustomed to manual information systems may encounter substantial future challenges as telecommunication companies are becoming entirely digital.

Some studies suggested that low-cost and sustainable Internet access should be provided to people to improve their familiarity with digital online resources (James, 2003). These benefits may be subsequently extended to people in rural areas (Dulle, 2000). The role of employees in organisations and the availability and ease of modern information sources should be a combined effort of many factors, which would involve governmental and non-governmental organisations. These entities can provide the Internet and related technologies to people to empower the educated and the uneducated.

For the factors that influence information need and seeking behaviours among different categories of people, two factors which have been posited to

influence ISB: the individual and the activities or tasks in which different types of people, such as managers, are engaged. The factors that influence the information seeking behaviours of professionals such as managers in the telecommunication companies may also be divided into two categories: (i) personal factors and (ii) demographic factors (Preez, 2008). These factors are also related to the context of the task and their frequency, predictability, complexity, and importance.

The individual, unique or personal characteristics that managers may possess are likely to influence their lives, including the way in which they seek information. Personal or individual factors may also include the knowledge possessed by the individuals seeking information, which may be attained through education or experiences acquired on their jobs (Gralewska-Vickery, 1976). This situation can be related to managers in companies, such as the amount of time spent in schools or universities, where they tend to depend on reading as a source of information. When the same managers are employed by companies such as telecommunication companies, they need to upgrade their sources of knowledge to new sources, such as field experience and specialisations to understand the real working experience. If managers do not change their university information seeking behaviours, they may lack information that is crucial for his their role as managers (Gralewska-Vickery, 1976; Preez, 2008).

DISB and use resulted in better information access and flow in the organisation:

Several studies on information seeking behaviour have been performed; however, few studies have focused on telecommunication companies. Studies on information seeking behaviours in Malaysia (Zawawi & Majid, 2001) and Argentina (de Tiratel, 2000) discovered that information users preferred information sources than information seeking behaviours. The studies of developing countries such as Ghana (Borzekowski, Fobil, & Asante, 2006) and Uganda (Gitta & Ikoja-Odongo, 2003) revealed that information users prefer the Internet as their primary source of information.

Tiratel (2000) discovered that scholars used different methods for seeking information. For example, researchers would consult colleagues, visit libraries, and read publications with few informal and semi-formal channels in sharing information (Dutta, 2009). Another study on the information seeking behaviour of health science professionals in Malaysia revealed that researchers primarily relied on journals and books to bridge their information gaps (Zawawi & Majid, 2001). Although online digital resources are available, researchers preferred printed material and information networks, such their friends in the same field or professionals in the same areas of specialisation.

Some studies of the developing world revealed that information behaviour is similar within the groups that use it with significant differences in the information needs and information seeking behaviours of the educated populace in developing countries (Momodu, 2002; Chakrabarti, 2001; Uta, 1993; Mooko, 2005). Other studies discovered that the information seeking behaviours of poor people, such as people in rural areas in developing countries, are centred on colleagues and society and they most rotate around the day-to-day survival basics (Kalusopa, 2005; Musib, 1991; Ikoja-Odongo & Ocholla, 2003; Njoku, 2004). A study of the information seeking behaviour of engineers in South Africa revealed that engineers seek information from colleagues, customers, vendors, and potential suppliers (Allen, 1988). The discussions among engineers, suppliers and customers provide the engineers with specific information about their products, which they share with the public. However, the use of these resources may not be suitable because the information is not authentic and the engineers may depend on it to make construction decisions (Preez, 2008).

Other studies of areas with limited resources, such as Malawi, which is considered to be the poorest country in the world, discovered no coordinated method of information seeking (Uta, 1993), as many people provided contradictory messages or information. A study of the information needs and information seeking behaviours of women in Botswana revealed that their information needs were related to health matters (Mooko, 2005). They desired information to help them eradicate the diseases that affected their communities. In Botswana, a significant number of women had low educational levels; more than 75% of the women only had a primary school education.

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Conclusion:

This study serves as a transition from seeking and using nondigital information seeking and use to digital information seeking and use. It is deemed significant on two levels. First, from a theoretical perspective, it is expected to solve the and contribute to the theory and knowledge that relates to information seeking and use by managers in the ICT environment. It is also expected to serve as a guide for replication in other environments. Furthermore when looking at it from a practical perspective, findings are expected to emerge, which may help provide some guidelines and strategies for facilitating companies and corporate information professionals to attain a better understanding of how to support information seeking and use habits of managers. It is also going to be as an enabling service provider, such as content providers and corporate information professionals, to identify information gaps and determine how they can serve as drivers for managing the supply of adequate information to the right user at the right place at the right time in the right format. The study also shows how allowing system developers a better understanding of user needs to enable them to develop practical systems and provide offering corporate information professionals insights into source preference and use by managers, which can enhance the effectiveness of the products and services that are offered to remain relevant to prevent being viewed as peripheral and irrelevant.

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