The Effects of Web-Based Technologies on knowledge Sharing

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ABSTRACT

The main issue in Web-based technologies is on how to differentiate and create many fresh opportunities. Internet portals represent an extension of knowledge sharing (KS) for users. In a contemporary knowledge-intensive economy, knowledge is considered a fundamental strategic resource for individuals and a source of sustainable competitive advantage. By sharing existing knowledge from a web based domain to a target such as retention, individuals can learn about a company's products/services. The findings of this study provide useful information and could help organizations managers motivate their employees to engage in KS practices by Web-based technologies. The main finding of this study is that content quality, service quality, systems quality have a positive effect on KS among the employees of organization.

Keywords: Knowledge ،Sharing, Technology, Web-Based.

تأثيرات التقنيات المعتمدة على الانترنت على مشاركة المعرفة

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القضية الرئيسية في التقنيات المعتمدة على الويب هي كيفية التمييز وخلق العديد من الفرص الجديدة. تمثل بوابات الإنترنت امتدادًا لتبادل المعرفة للمستخدمين. في الاقتصاد المعاصر القائم على المعرفة المكثفة، تعتبر المعرفة موردا استراتيجيا أساسيا للأفراد ومصدرا للميزة التنافسية المستدامة. من خلال مشاركة المعرفة الموجودة من مجال قائم على الويب إلى هدف مثل الاحتفاظ، يمكن للأفراد التعرف على منتجات/خدمات الشركة. توفر نتائج هذه الدراسة معلومات مفيدة ويمكن أن تساعد مديري المؤسسات في تحفيز موظفيهم للانخراط في ممارسات مشاركة المعرفة من خلال التقنيات المستندة إلى الويب. والنتيجة الرئيسية لهذه الدراسة هي أن جودة المحتوى وجودة الخدمة وجودة الأنظمة لها تأثير إيجابي على مشاركة المعرفة بين موظفي المنظمة.

الكلمات الدالة: المعرفة، المشاركة، التكنولوجيا، شبكة الإنترنت.

1. Introduction

Web-based technology information system facilitates organizations to make the most of their web presence and deliver their knowledge efforts. The development of such a website helps organizations to communicate their message effectively, increase their knowledge intelligence, and increase their communication and organizational efficiency. The development process of a Web-based technology system is designed to optimize resources and complete the best end product possible. It also helps to save money, time and improve communication with outsiders (consumers, stakeholders, suppliers…),

A web-based technology is also a system that can enhance its ability to deliver the information it contains. It has become more and more difficult for Web users to find relevant information in the large information space they are now forced to navigate. Users become frustrated when they do not find what they need quickly, and they often do not know how to improve their search strategies when they have retrieved too much information, no information, or information that is not directly relevant to their questions [1].

In recent years, numerous researchers and scholars have placed a great deal of emphasis on the need to create a KS culture in organizations and to implement business strategies that are more knowledge friendly. At the same time, organizations worldwide have been trying to undertake initiatives in introducing effective knowledge management (KM) by embedding KS practices in their daily work processes to achieve organizational performance [2]. With this in mind, banking institutions have realized that KS in KM should neither be deserted nor neglected in boosting their survival in this ever-challenging competitive environment. The objective of this research is investigates that content quality, service quality, systems quality have a positive effect on KS among the employees of organization.

2. Problem statement

KS plays a crucial function in discerning competitive and rapidly changing environments, not only because it allows intellectual reuse, but also because it renews the knowledge of Organization employees [3]. Organizations should constantly encourage their employees to share valuable information to leverage their IC [4]. The main objective of KS among individuals in accordance with knowledge creation is to acquire new knowledge that leads to novel combinations of existing individual, shared, or organizational knowledge. In other words, KS is the process of making knowledge available to others throughout the organization [5] .

The problem addressed was that existing knowledge was not being effectively disseminated throughout the organization, resulting in lost productivity and opportunity as a result of failure to exploit available knowledge.Web-based Technologies system can provide global reach of organizations or knowledge industries in marketing their products or services. Web-based Technologies offer share alternatives of knowledge for many organizations. The objective of this research is to enhance organization's' owners to share their knowledge electronically, and provide to them some customers worldwide.

3. Objectives of the study

The present research investigates the effect factors that helps to amplify the engagement of organizations employees with KS during of web base technology.

4. Literature Review

4.1 Web-based System

[6] On their research conducted on Gestalt theories proposed that visual design basics and stimulus are significant characteristics in human's interaction with computer systems. However, the power of established design principles from print and motion media has shaped some conflicting ideas on recommendations for the Web design. Computer interfaces are imperative translators of internal functionality; they develop an essential, simplified, designed view of the complex information-processing tasks executed by a computer's circuitry.

In contrast, [7] recommended that successful navigation design must comprise two main elements: a well-designed hierarchical organization scheme and a complimentary navigation system to make available context and to allow the ease of user movement within a Web site. They have afterward found that navigation systems can be designed to hold up associative learning by featuring navigation elements linked to current screen content. Thus, this last would help users as they move in the course of a navigation system by enabling them to discover about topics tangentially related to the content for which they were originally searching.

4.2 Web-based Technology

In the early days of the web, most web sites consisted of individual, self-contained files. With a little knowledge of HTML, anyone with access to a computer could improvise text, images, and a few design elements into a formatted page. The results were not always aesthetically pleasing, but the process was quick and simple. Problems arose, however, when administrators wanted to modify that first generation of web sites. Suddenly, it was not so quick and simple to correct an error in a telephone number or change the color of a headline on dozens, hundreds, or even thousands of pages. Before long, innovative web developers were coming up with ways to use templates, databases, and style guides to make their lives easier. The "content management system" was born. Today, content management systems come in all sizes, shapes, and prices. Bells and whistles aside, however, almost all of them trace their lineage to the same set of basic principles [8].

4.3 Knowledge Sharing

KS is the exchange of information and knowledge among people to assist others connect to their jobs. KS, which is similar to organizational citizenship behavior, is a type of optional and voluntary organization and is one of the methods used to measure KM (i.e., tacit and explicit knowledge) [9]. Knowledge dissemination is the transfer of knowledge from one source to another (i.e., people, teams, or organizations). Explicit knowledge resources, such as documents, databases, and software, can also be adopted. The definition of KM indicates that KS is a key area in the KM process [10].

5. Materials and Methods

The conceptual model tested in this study contains constructs that have demonstrated theoretical support, based on many studies conducted in this area—particularly in the knowledge management area—in different countries [11,16]. The model examines the factors that can possibly affect KS behavior. The conceptual model is shown in Figure 1.

Hypothesis1: A significant relationship exists between Contact Quality and KS.

Hypothesis 2: A significant relationship exists between Service Quality and KS.

Hypothesis 3: A significant relationship exists between System Quality and KS.
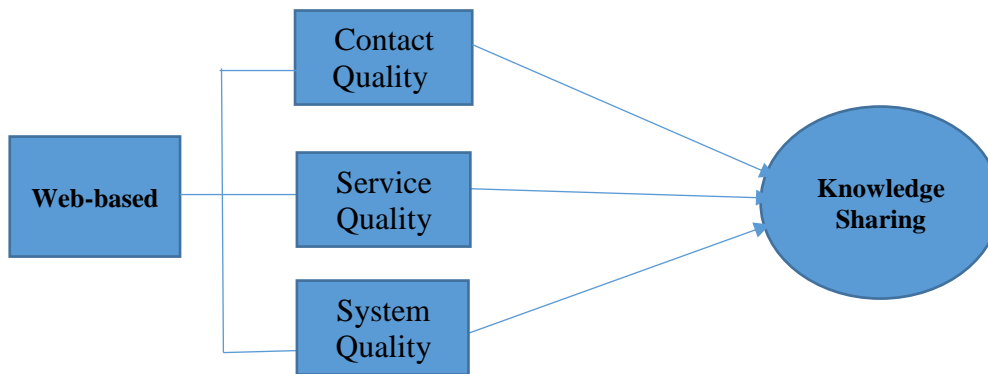
Figure. 1. A Knowledge Sharing (KS) Model Based on Web-based technologies

6.   Research Methods

Connecting the two data types, the researchers realized the need for further data collection to support the results after analyzing the first set of data. Therefore, following the analysis in the initial phase, there should be a second phase of data collection, which is marginal, supportive, and intended to explain the initial results [17]. The results of the second phase are shown in Figure 2.
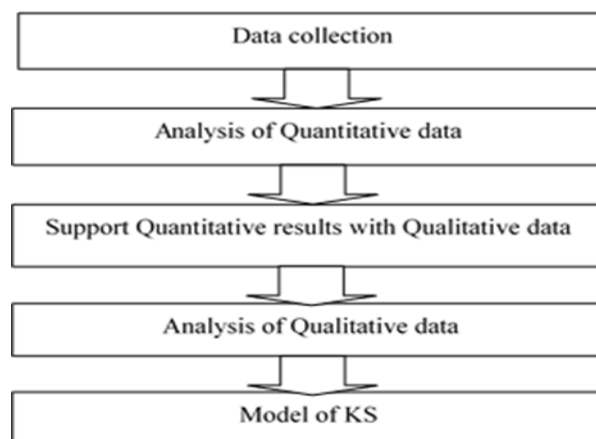

Figure 2. Connecting the data mixed method

7.   Data Analysis

The data will be analyzed using SPSS 20 statistical software and smartPLS software version 2 to compute different descriptive statistics and compare means when testing the established reliability and validity of the research. Factor analysis techniques in smartPLS will be used to validate the adopted measurements employed to test the hypothesized model. Researchers such as [18-21] concluded that surveys require a reliability of 0.70 or higher (obtained on a substantial sample) before using an instrument as a rule of thumb. The higher the Cronbach's alpha, the stronger the correlation that can be determined between items and variables.

As recommended by [22], the current study used a two-stage model building process for analyzing data. The adequacy of the measurement model is assessed in the first stage. The structural relationships are examined in the second stage.

4.4 Reliability Analysis

Reliability analyses were conducted on the independent and dependent variables. As a rule of thumb, a value close to 1.0, and typically higher than 0.70, signifies high reliability [23]. The reliability testing results are shown in Table 1.

Table 2 presents the AVE analysis. The bolded diagonal elements in the table represent the square root of the AVE scores. The off-diagonal elements are the correlations between constructs. As can be seen, the square root of AVE values range from 0.76 to 0.95 exceeding 0.5 recommended value. AVE for each construct is significantly larger than any correlations involving the construct. That is all constructs share greater variance with their own measures than with other constructs in the model, thus establishing discriminant validit**y**.

Table-1. Composite Reliabilities and Average Variance Extracted of the Constructs

Measures	Items	AVE	Composite Reliability
Contact Quality	5	0.7536	0.9009
Service Quality	5	0.8524	0.9452
System Quality	5	0.6867	0.8676
Knowledge Sharing	4	0.5736	0.8431
Web-Based	5	0.814	0.9456

Table 2 AVE and Correlation between Constructs

	Contact Quality	Service Quality	System Quality	Knowledge Sharing	Web-Based
Contact Quality	0.87				
Service Quality	0.38	0.92			
System Quality	0.34	0.54	0.83		
Knowledge Sharing	0.50	0.59	0.65	0.76	
Web-Based	-0.30	0.15	-0.17	-0.19	0.90

ªThe Pink diagonal elements are the square root of the AVE scores*.*

8. **Results**

With the adequacy of the measurement model established, the structural model was evaluated and the hypotheses were tested. The structural model indicates the causal relationships among the latent constructs in the research model. The assessment of the structural model was conducted by determining the predictive power of the model, and subsequently, by analyzing the hypothesized relationships among the latent constructs proposed in the research model. The R^2 values of the dependent variables determine the predictive power of the research model, and the path coefficients evaluate the strength of the hypothesized relationships. The quality indices for model (R^2) values, path coefficients size, t value, and significance (p) values are shown in Table 3, 4.

Table 3. R2, Path Coefficients, and Significance Levels

Constructs		R^2	Path coefficient	*t* value	p value
KS		0.578139			
	Contact Quality		0.144543	2.519181 (**)	<0.05
	Service Quality		-0.276638	8.039487 (***)	<0.01
	System Quality		0.108301	5.395514 (***)	<0.01
	Web-Based		0.484889	8.871462 (***)	<0.01

Table 4. Results of Hypothesis Testing

H#	Hypothesis	Results
H1	A significant relationship exists between Contact Quality and KS.	Supported
H2	A significant relationship exists between Service Quality and KS.	Supported
H3	A significant relationship exists between System Quality and KS.	Supported

9. Conclusion

The results show that all of these factors have significant positive effects on KS. The study has made an important contribution in the fulfilment of the aim to increase the understanding of the importance of the effect of these factors on KS. Technology web-based also offers an avenue through which people become more willing to share their knowledge, particularly those who are shy or busy and as such, avoid face-to-face interaction. Technology web-based is an infrastructure that supports the information platform for accessing and distributing knowledge. The quality of the content individuals receives, the quality of the service experienced during the interaction, and the quality of the computer system used to access the information enhance the individual's experience when using web-based services.

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