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Technology support and knowledge sharing among students at Hadhramout University

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Abstract
This study examines the association of technology support with knowledge sharing behavior among 50 accounting students at Hadhramout University for the academic year 2013/2014. Using a survey-based methodology, the result shows that technology support relates positively to knowledge sharing behavior among accounting students. The result of this study should be useful to educational policy makers in Yemen and elsewhere, as there is an opportunity of enhancing the knowledge sharing in the academic context.

Keywords: knowledge sharing, technology support, students, Hadhramout University

1. Introduction

Alavi and Leidner (1999) [1] and Yang (2007) [28] refer the present economy as "economy depending on knowledge". Norris, Mason, Robson, Lefrere & Collier (2003) [20], explained Knowledge to means presented information within a specific scenario, providing understanding on usage of an application based on that context. Management of knowledge, according to An Fengjie, Qiao & Chen (2004) [9], encompasses the whole course of knowledge sharing, demonstration, keeping, learning, distribution, and discovery in an institution. Knowledge sharing is the most crucial factor in management of knowledge. Knowledge sharing is among the activities of knowledge management, which has been extensively analyzed by scholars and practitioners since it is recorded that there is a positive correlation between institution performance and knowledge sharing. This, therefore, is justified by earlier research, Aamin, Hassan, Ariffin & Rehman, (2009) [2] that can improve institution's resources and lower the time wastage in the experimentation knowledge sharing can also explained as one factor in one cycle of creation of knowledge, distribution as well as using it (Gwin, 2003) [10]. In 2007, Yoo, Lyytinen & Heo, claimed that knowledge sharing is a way of developing a mutual pool of knowledge amongst groups or individuals– the knowledge which a person in the institution already possesses – either indirectly or directly interacting with others. In addition, Shapira, Youtie, Yogeesvaran and Jaafar (2005) [22] explain the phrase knowledge sharing as the degree to which a concept is being distributed. On the same note, Bircham-Connoly, Corner and Bowden (2005) [5] referred to it as the 'procedure of apprehending knowledge or knowledge sharing to a receiver unit from a source unit.

Furthermore, Willem (2003) [25] noted that knowledge sharing refers to the knowledge exchange between more than one party in an interactive process which permit reshaping and comprehension of knowledge in a fresh context. It is further defined as 'a situation where resources are offered by one party and taken by the other one and for information distribution to take place, exchange must be there, (Sharratt and Usoro, 2003). On the same note it is noted that knowledge sharing involves entails an institution and a team; among the aims of sharing knowledge is to pass knowledge from persons to group or institution, (An Fengjie *et al*., 2004) [9]. Sharing Knowledge means a knowledge invention since everyone must include personal understanding while passing knowledge. Therefore, the more the knowledge is distributed, the better the quality of invention is improved. In addition, there is an innate demand to distribute knowledge within an institution. Marks, Polak, McCoy and Galletta (2008) [19] argued that as the members of the organization freely distribute the valuable knowledge, the institution awareness and efficiency can be increased greatly through means which those employee would evade the reiteration in resolving similar challenges.

It is entrenched by latest researches that education level can also impact knowledge sharing. A person pursuing high education can easily share what he knows since he is considered know more (Aamir *et al*., 2009). Additionally, Yaghi, Barakat, Alfawer, Shkokani & Nassuora (2011) [26, 27] claimed that institutional culture in academic can influence the behavior of sharing knowledge by the members. Higher education institutions being a center of knowledge play a crucial role in the creation, generation and dissemination of knowledge. The combined knowledge acquired by learners in the course of their learning session is rooted in their minds and develops the storage of the capital of the educational organization intellects, thus, can be improved if the said knowledge is distributed amongst them. Ardichvili, Page, & Wentling (2003) [3]; Han & Anantatmula (2007) [12]; Lin (2007a); Lin, 2007b; Riege (2005) [17, 18] pointed out that knowledge sharing is disregarded in universities and, in its place, a lot of focus has been directed to the institutional situation which are motivated by profit making organization. A few researches including Wangpipatwong, (2009) [24] and Yaghi, Barakat, Alfawaer, Shkokani & Nassuora (2011) [26, 27] have acknowledged knowledge sharing in the classroom setting. Thus, the scarcity of studies concerning the knowledge sharing in education sector propels the exploration of this factor at the University of Hadhramout. Students of Accounting have been selected purposely of this study. Particularly, much unknown and a lot of questions are still unanswered concerning knowledge sharing in Yemen.

To the top of the awareness by the scholars, no statistical evidence are there which allows summative determinations to be reached concerning issues affecting knowledge sharing in a classroom situation amongst students of accounting at Hadhramout university. Wangpipatwong (2009) [24] report has been extended by this article in relation to research Yemen context. It is undertaken in a new educational scenario.

The remainder of the paper proceeds as follows. The next section briefly discusses the literature review and the hypothesis development. The third section describes the methodology. The empirical results and discussions of the study are reported in the fourth section while in the final section, conclusions and implications are drawn.

2. Literature review and hypothesis development

Technology is an important element influencing sharing of the knowledge amongst stakeholders in a social setting in a way which it will more effective and easier. Many research done by Wangpipatwong (2009) [24]; Van den Hooff *et al*.,(2003) [23]; Riege (2005) [21]; Bhatt (2001) [4]; Kim, Suh & Hwang (2003), justified that as a result of technology, long distance association will be enabled; consequently promoting the connection amongst individual. The research documented by Jain *et al*. (2007) [14] showed that the teaching staff positions technology to be the second approach to be effected by schools offering business related courses in Klang Valley so as to promote knowledge sharing. Similarly, Han and Anantatmula (2007) [12] argued that usability and availability of technology are linked to extent of knowledge sharing. In 2005, Kim and Lee found that application of IT is among the major variables influencing knowledge sharing process. Wangpipatwong (2009) [24] claim that enhancement of technology has a substantial positive correlation with knowledge sharing amongst learners. In light of the above discussion, the following hypotheses are proposed:

H_1: Ceteris paribus, there is a positive association between technology support and knowledge sharing.

3. Methodology

Riege (2005) [21] indicates that there is a positive association of technological support with knowledge sharing. Unlike the study of Riege (2005) [21] that has been carried out in an organizational context, Wangpipatwong (2009) [24] adopts and modifies Riege's (2005) [21] study to be applicable for an educational institution as her study examines knowledge sharing among university students. In her study, factors associated with knowledge sharing have been divided into three groups; individual, classroom, and technological factors. Yaghi *et al*. (2011) [26, 27] examine the Jordanian undergraduate students' perception of knowledge sharing at Applied Science Private University. Their study identifies several dimensions including university culture, university structure, students, and information resources. In addition, at the university level, Cheng, Ho and Lau (2009) [7] examine the knowledge sharing among academics at Multimedia University in Malaysia. In their study, factors influencing the level of knowledge sharing are classified into organization, individual and technological factors. Jain, Sandhu and Sidhu (2007) [14] carry out a study to investigate the knowledge sharing among academic staff at business schools in Klang valley universities. In their study, the respondents are asked to ascertain their views of the significance of knowledge sharing, strategies to encourage knowledge sharing, and strategies to identify the barriers in knowledge sharing.

Based on the theories developed and derived from the prior literature (Cheng *et al*., 2009; Yaghi *et al*., 2011; Riege, 2005; Jain *et al*., 2007; Chen, Koch, Chung & Lee, 2007; Han & Anantamtmula, 2007; Lu, Leung & Koch, 2006; Van Den Hoof & Huysman, 2009; Wangpipatwong, 2009; Cheng *et al*., 2009) [7, 21, 14, the present study uses a survey-based methodology to obtain data from the respondents. This study adopts and modifies a self-administrative survey questionnaire that has been developed to be applicable for the academic context. The questionnaire was divided into two sections, namely; section A and section B. Section A comprised 6 questions designed to ascertain the views of the accounting students on factors influencing their knowledge sharing among each other. A five-point Likert scale was used in this section and the respondents were required to state the extent to which they agreed or disagreed with the statements in the questionnaire. Section A comprised questions eliciting demographic characteristics. The sample of the study comprised 50 accounting students enrolling for the academic year 2013/2014 at Hadhramout University in Yemen. A total of 83 questionnaires were distributed to all accounting students during classroom time using a simple random sampling. Students were asked to return back the questionnaires after two weeks. The response rate for this study was 60.2%.

The variable included in the model of this study is technology support to identify reasons contributing to knowledge sharing behavior among students. Knowledge sharing is used as the dependent variable in the model. To measure the impact of the technological support, a 3-item measure was used to examine the technology support on the knowledge sharing behavior. The dependent variable "knowledge sharing" is measured using a 3-item measure to determine the extent to which knowledge is shared among students. The functional equation of simple regression model is utilized to determine the extent of the association of the independent variable on knowledge sharing as shown in Equation (1):

$$KS = \beta 0 + \beta 5 \text{ tech. Support} + e \ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

4. Empirical result and discussions

4.1 Respondent's Profile

Demographic characteristics of students in this study are age and gender as shown in Table 1.

Table 1: Profile of respondents

Demographic characteristics	Frequency (n= 50)	Percent %
Age		
21- <24	49	98
24- <27	1	2
Gender		
Male	40	80
Female	10	20

Based on the demographic information depicted in Table 1, the majority of students (98%) were between 21 and less than 24 years. In terms of gender, the majority of students (80%) are male.

4.2 Reliability Test

The dependent and independent variable examined in this study were tested for their reliability as shown in Table 2. The reliability indicates to the accuracy which concerns on

stability, dependability and consistency of an instrument. In this study, the Cronbach's alpha coefficient is used, which based on the average correlation of items within a test if the items are standardized. Hari, Anderson, Tatham and Black (1998) [11] document that the lower limit of acceptability may be .60.

Table 2: Mean scores and analysis of internal consistency

Variables	No. of Items	Mean	SD	Cronbach's Alpha
Technology support	3	4.061	.852	.835
Knowledge sharing	3	3.726	.798	.634

As displayed by Table 2 that all the alpha coefficients exceed the recommended minimum cutoff level of 60. Thus, the items measuring the variables are considered acceptable. In another word, the instruments are reasonably accepted for the purpose of reliability.

4.3 Regression Results

Table 3 shows that the coefficient of determination (R2) for the model is equal to 5.4 per cent which means that the variable accounted for 5.4% of the variance in knowledge sharing. The table also depicts that the model is a statistically significant where the F test statistic = 3.816 with a p-value < 0.057.

Table 3: Summary of the model

R	*R* square	Adjusted *R* square	F	Sig.
.271	.074	.054	3.816	.057

Variables	Expected sign	Coeff.	*t*	*p*-value
(Constant)		2.694	4.996	.000
Technology support	+	.271	1.95	.057

Table 4 shows the beta coefficients for the independent variables. The t statistics of technology support is -1.95 (p-value < 0.057) which illustrates that the technology support influences positively knowledge sharing behavior. This result is in line with that found by Wangpipatwong (2009) [24]. Thus, hypotheses H1 was supported.

5. Conclusions and Implications

The main objective of this study is to examine the association of technology support with the knowledge sharing behavior. A sample of 50 accounting students at Hadhramout University in Yemen enrolling for the academic year 2013/2014 is used for distributing out a survey questionnaire as a means of collecting data. Importantly, technology support is determined as a contributing factor influencing the extent to which knowledge is shared among students. Using the simple regression, consistent with the previous studies, this study finds that the technology support is important factors influencing the level of knowledge sharing among accounting students.

This implies that Yemeni government, educational policy makers and universities should motivate educational environment by building up students' knowledge and enhance their confidence in sharing this knowledge. One technique of doing so is by designing short teaching method courses through which university lecturers can learn how to run successful classes and encounter the students' different necessities. In addition, lecturers should encourage students to involve in library activities and assigning library hours in students' schedule. Further, colleges should conduct conferences, seminars and workshops that enhance the students' ability in using IT applications. More so an attempt should be made to update and keep pace with the current developments and issues in academic research and database.

One limitation of this study could be attributed to the self-reporting bias. Filling in the survey questionnaire, students may misreport their opinions to make the surveys look better. Another limitation of this study is the number of factors introduced in the model. The results of this study will be of interest to the educational policy makers, researchers and academic community due to a lack of formal research body addressing the issues of knowledge sharing in Yemen and, therefore, this study will provide with substantial information about issues in the educational context of Yemen to count on, in the future, as premise data. Regarding future line of research, efforts should be put at introducing other individual and classroom factors such as individual attitudes, IT applications and library databases. Future line of research may investigate the knowledge sharing behavior among academic and administrative staff. Further research should replicate this model to determine its validity in different contexts of GCC countries, in different time periods, and with different sample size. These limitations may motivate more future research in the GCC setting.

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