KNOWLEDGE SHARING AMONG STUDENTS AT PRINCE SATTAM BIN ABDULAZIZ UNIVERSITY: EMPIRICAL EVIDENCE FROM COLLEGE OF BUSINESS ADMINSTRATION

مشاركة المعرفة بين طلاب جامعة الأمير سعود بن عبد العزيز:

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Abstract :

This study examines the relations of individual, classroom and technical factors with knowledge sharing behavior among 200 students from College of Business Administration (CBA) at Prince Sattam bin Abdulaziz University (PSAU) for the academic year 2017/2018. Using a survey-based methodology adopted from Wangpipatwong (2009), the results show that willingness to share, ability to share, competition and instructor support relate positively to knowledge sharing behavior among CBA students. The results of this study should be useful to educational policy makers in Saudi Arabia and elsewhere, as there is an opportunity of enhancing the knowledge sharing in the academic context.

Keywords: Knowledge Sharing, CBA students, PSAU, Saudi Arabia.

ملخص الدراسة:

تتناول هذه الدراسة اختبار تأثير العوامل الشخصية, الصفية والتقنية على سلوك تبادل المعرفة بين طلاب كلية إدارة الأعمال في جامعة الأمير سطام بن عبدالعزيز بالمملكة العربية السعودية للعام الجامعي 2018/2017م. حيث استخدمت هذه الدراسة اسلوب الاستقصاء في جمع البيانات من مجتمع الدراسة. تم تحديد عينة الدراسة والتي اشتملت على 200 طالب من كلية إدارة الأعمال باستخدام طريقة العينة العشوائية. اظهرت نتائج هذه الدراسة ان هناك علاقة طردية ذات دلالة إحصائية بين رغبة الطلاب في تبادل المعرفة, و دعم استاذ المادة , و المنافسة , وبين سلوك تبادل المعرفة. كما أظهرت النتائج أيضاً وجود علاقة طردية ذات دلالة احصائية هامشية بين قدرة الطلاب على تبادل المعرفة , وبين سلوك تبادل المعرفة. توفر نتائج هذه الدراسة اساس معرفي يمكن الاعتماد عليه من قبل واضعي السياسات التعليمية في المملكة العربية السعودية وفي الدول الاخرى طالما ان هناك فرص مستقبلية لرفع المستوى السلوكي لتبادل المعرفة في الاوساط التعليمية.

كلمات البحث الدالة: تبادل المعرفة, طلاب كلية إدارة الأعمال, المملكة العربية السعودية.

1. INTRODUCTION

Today's economy is described as "a knowledge-based economy" (Alavi & Leidner, 1999; Yang, 2007). Knowledge is information presented within a particular context, yielding insight on application in that context (Norris, Mason, Robson, Lefrere & Collier, 2003). Knowledge management refers to the whole process of knowledge acquisition, representation, storage, learning, sharing and innovation in an organization. Knowledge sharing is the most important element in the subject of knowledge management (An Fengjie, Qiao & Chen, 2004). It is one of the knowledge management activities that has been widely discussed by researchers and practitioners because it is documented that there is a positive association between knowledge sharing and organization performance. This, consequently, can increase organization's resources and reduce the time wasted in trial and error (Aamin, Hassan, Ariffin & Rehman, 2009). Knowledge sharing is also described as one element in a single cycle of knowledge creation, sharing and use (Gwin, 2003). Knowledge sharing is a process of creating a mutual stock of knowledge among individuals or groups – the knowledge that someone in the organization already has – through direct or indirect interaction (Yoo, Lyytinen & Heo, 2007). Moreover, Shapira, Youtie, Yogeesvaran and Jaafar (2005) define knowledge sharing as the extent to which knowledge is being shared. In the same line, Bircham-Connoly, Corner and Bowden (2005) define knowledge sharing as the 'process of capturing knowledge or moving knowledge from a source unit to a recipient unit.'

Further, Willem (2003) indicates that knowledge sharing is the exchange of knowledge between at least two parties in a reciprocal process allowing reshape and sense-making of the knowledge in the new context. Sharratt and Usoro (2003) define knowledge sharing as 'a process whereby a resource is given by one part and received by another and for sharing to occur, there must be exchange.' An Fengjie et al. (2004) indicate that knowledge sharing involves individual, team and organization; one of the aims of knowledge sharing is to transfer knowledge from individuals to team or organization. Knowledge sharing could mean a knowledge innovation due to the fact that everybody must add his own understanding when sharing knowledge. Thus, the higher the knowledge is shared, the greater the innovation is increased with a high quality. Furthermore, there is an intuitive appeal to share knowledge throughout an organization. As organization members share valuable information in a free manner, the organization's responsiveness and effectiveness can be greatly increased in a way that those members would avoid the repeat in solving the same problems (Marks, Polak, McCoy & Galletta, 2008).

It is well-established by recent studies that knowledge sharing can be affected by the education level. A person with high education can be more inclined to share his knowledge because he can be perceived to have more knowledge (Aamir et al., 2009). In addition, it is reported that organizational culture in education can affect its members' knowledge sharing behavior (Yaghi, Barakat, Alfawer, Shkokani & Nassuora, 2011). Universities as knowledge-based institutions play a vital role in knowledge creation, production and distribution. The accumulated knowledge gained by students during their study period is set in their minds and establishes the storehouse of an educational institution's intellectual

capital that, therefore, can be increased if this knowledge is shared among them. Knowledge sharing issues are neglected in these educational institutions and, instead, much attention has been paid to the organizational context that are profit-motivated institutions (e.g., Ardichvili, Page, & Wentling, 2003; Han & Anantatmula, 2007; Lin, 2007a; Lin, 2007b; Riege, 2005). A few studies have addressed knowledge sharing in a classroom context (Wangpipatwong, 2009; Yaghi, Barakat, Alfawaer, Shkokani & Nassuora, 2011). Therefore, the paucity of research in knowledge sharing in educational institutions derive the motivation for investigating this issue at Prince Sattam bin Abdulaziz University. College of business Administration students have been selected for the purpose of this research. In particular, little is known and many questions remain unanswered about knowledge sharing in Saudi Arabia. To the best of the researchers' awareness, no empirical evidence exists that allows conclusive determinations to be made of factors influencing knowledge sharing in a classroom context among College of Business Administration students at Prince Sattam bin Abdulaziz university. This paper is an attempted extension to that of Wangpipatwong's (2009) study in the context of Saudi Arabia. It is carried out in a different educational environment with an objective of examining the associations of willingness to share, ability to share, instructor support, competition and technology support with knowledge sharing in College of business Administration at Prince Sattam bin Abdulaziz University.

The remainder of the paper proceeds as follows. The next section briefly discusses the literature review and the hypotheses 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 HYPOTHESES DEVELOPMENT

Yuen and Majid (2007) indicate that students have a willingness to share knowledge as they think that this attitude will benefit them when joining the workforce after graduating. Kristina (2006) find that perceived interpersonal trust and shared cognitive ground influence the level of knowledge sharing. Jain et al. (2007) find that academic staff at business schools in Klang Valley have a willingness to share knowledge with their colleagues. And, they rank low verbal and written communication skills as the second barrier to knowledge sharing. Riege (2005) and Cho, Li and Su (2007) indicate that the more the people possessing communication skills, the higher the knowledge they share. In another word, people owning useful knowledge and good verbal and written communication skills are more likely to be motivated to share knowledge. In the same line, Van De Hoof, Elving, Meeuwsen and Dumoulin (2003) point to the suggestion that there is a positive relationship between the ability and willingness in sharing knowledge and the level of knowledge shared. Further, Wangpipatwong (2009) find a positive relationship between the individual's ability to share knowledge and knowledge sharing. The preceding discussion leads to the first two hypotheses that test the assertion that the higher the student's ability and willingness in sharing knowledge, the more the likely the knowledge is shared:

H_1: Ceteris paribus, there is a positive association between student's willingness to share and knowledge sharing.

H_2: Ceteris paribus, there is a positive association between student's ability to share and knowledge sharing.

Chen, Koch, Chung and Lee (2007) show that intellectual discussions and the effective way of conducting lectures by instructors in classrooms may enhance the knowledge sharing among students. Wangpipatwong (2009) reports a significantly positive association at a 0.05 significant level between instructor's support and knowledge sharing.

Accordingly, it is expected that the more the instructor's support of knowledge sharing, the higher the level the knowledge is shared among students. The above discussion results in the following hypothesis:

H_3: Ceteris paribus, there is a positive association between instructor's support to share and knowledge sharing.

Cho et al. (2007) indicated that people may not share the knowledge they obtain, thinking that they lose their privacy, which they may have acquired with much effort and money spent. The knowledge possessed by a person represents an intellectual property that is distinguishes him from other peers in a manner that he could use such knowledge in obtaining promotions, job excellence and social rank. In the classroom context, students may cease to share knowledge they acquire during their study period to gain a competitive advantage in grades from their classmates. Conversely, Wangpipatwong (2009) reported empirically that the degree of competition is associated positively with knowledge sharing in a classroom context. In a specific, based on the above discussion and on the paucity of

the previous empirical research in the classroom context, it is still ambiguous to identify the direction of the influence of the competition on the knowledge shared. Therefore, the following hypothesis is stated:

H_4: Ceteris paribus, there is an association between competition to share and knowledge sharing.

Technology is a crucial factor facilitating the knowledge sharing among members of a social system in a manner that it becomes easier and more effective. This is because technology enables long distance collaboration that, in turn, enhances the connectivity among people (Wangpipatwong, 2009; Van den Hooff et al., 2003; Riege, 2005; Bhatt, 2001; Kim, Suh & Hwang, 2003). The study of Jain et al. (2007) document that the academic staff rank technology as a second strategy to be implemented by business schools in Klang Valley to encourage knowledge sharing. Kim and Lee (2005) find that IT applications are one of the key variables affecting knowledge sharing activities. Wangpipatwong (2009) reports that technology support has a significantly positive association with knowledge sharing among students. In light of the above discussion, the following hypotheses are proposed:

H_5: Ceteris paribus, there is a positive association between technology support and knowledge sharing.

3. METHODOLOGY

Riege (2005) indicates that there is a positive association of individual, organizational, and technological factors with knowledge sharing. Unlike the study of Riege (2005) that has been carried out in an organizational context, Wangpipatwong (2009) adopts and modifies Riege's (2005) 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) 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) examine the knowledge sharing among academics at Multimedia University Malaysia. In their study, factors influencing the level of knowledge sharing are classified into organization, individual and technological factors. Jain, Sandhu and Sidhu (2007) 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), 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. In particular, section A comprised questions eliciting demographic characteristics. Section B comprised 21 questions designed to ascertain the views of the College of Business Administration's 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. The sample of the study comprised 200 College of Business Administration's students enrolling for the academic year 2017/2018 at Prince Sattam bin Abdulaziz University in Saudi Arabia. A total of 220 questionnaires were distributed to College of Business Administration's 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 92%.

Variables included in the model of this study are individual, classroom, and a technological factor 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 individual factors, a 3-item measure was used to examine the willingness to share and a 3-item measure was used to test the ability to share on knowledge sharing behavior. Regarding the competition, a 3-item measure was used to examine this variable. As for classroom factor, a 3-item measure was used to examine the instructor’s support in classrooms on the knowledge sharing behavior. In terms of the technological factor, 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 regression model is utilized to determine the extent of the association of each of the independent variable on knowledge sharing as shown in Equation (1):

$$KS = \beta 0 + \beta 1\ Willingness + \beta 2\ Ability + \beta 3\ Competition + \beta 4\ Classroom + \beta 5\ Tech.Support \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

4. EMPIRICAL RESULTS AND DISCUSSIONS

4.1 Respondent's Profile

Demographic characteristics of students in this study are specialization, age, and level of study as shown in Table 1.

Table 1: Profile of respondents

Demographic characteristics	**Frequency (*n* = 200)**	**Percent %**
Specialization:		
General	62	31.0
Accounting	19	9.5
HRM*	36	18.0
Finance	15	7.5
MIS**	11	5.5
BA (Evening Parallel Education) ***	31	15.5
Law	26	13.0
Total	200	100%
Age:		
18-20	41	20.5
21-25	123	61.5
26-30	11	5.5
31-35	22	11.0
36 and above	2	1.0
Total	200	100%
Level of study:		
First Grade	23	11.5
Second Grade	60	30.0
Third Grade	86	43.0
Fourth Grade	31	15.5
Total	200	100%

* HRM refers to Human Resource Management
** MIS refers to Management Information System
*** BA Business Administration (Evening Parallel Education)

It is worth to mention that the specialization in the College of Business Administration starts from the third level. Therefore, students are free to choose the major of the field they are interested in. Based on the demographic information depicted in Table 1, students specialized in general, accounting, HRM, finance, MIS, BA (parallel evening education) and law were 31%, 18%, 9.5%, 7.5%, 5.5%, 15.5% and 13%, respectively. With regard to the age, the majority of students (61.5%) were between 21 and less than 25 years. As for the level of the students, the students enrolled in the first level, second level, third level and fourth level were 11.5%, 30%, 43% and 15%%, respectively.

4.2 Reliability Test

The dependent and independent variables examined in this study were tested for their reliability as shown in Table 2. The reliability indicates to the accuracy which concern on stability, dependability and consistency of an instrument. In this study, the Cronbach's alpha coefficient is used, which is based on the average correlation of items within a test if the items are standardized. Hari, Anderson, Tatham and Black (1998) 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
Willingness to share	3	3.940	2.977	**.899**
Ability to share	3	3.673	2.517	**.728**
Instructor support	3	3.462	3.293	**.842**
Competition	3	3.427	2560	**.632**
Technology availability	3	3.559	2.220	.133
Technology support	3	3.208	.3.352	**.875**
Knowledge sharing	3	3.625	2827	**.782**

As exhibited in Table 2 that all the alpha coefficients exceed the recommended minimum cutoff level of .60 except one factor which is technology availability. In specific, items of

technology availability were dropped off because their alpha coefficients were less than .60. Thus, the items measuring the variables (willingness to share, ability to share, instructor's support, competition and technology support) are considered acceptable. In other words, the instruments are reasonably accepted for the purpose of reliability.

4.3 Correlation Analysis

Table 3: Correlation Analysis

	Willingness	Ability	Classroom	Competition	Tech.Support
Willingness	1				
Ability	.541**	1			
Classroom	.345**	.348**	1		
Competition	.256**	.293**	.309**	1	
Tech.Support	.251**	.239**	.393**	.306**	1

Table 3 shows the correlation among variables. Since there is no correlation value in the correlation matrix exceeds 0.80 or 0.90 and all the correlations are less than .541, this means that there is no multicollinearity problem.

4.4 Regression Results

Table 4 shows that the coefficient of determination (R^2) for the model is equal to 49.8 per cent which means that all the variables accounted for 49.8% of the variance in knowledge sharing. The table also depicts that the model is a statistically significant where the *F* test statistic = 37.691 with a p-value < 0.000.

Table 4: Summary of the model

R	R square	Adjusted R square	F	Sig.
.706	.498	.485	37.691	.000

Table 5: The results of the regression

Variables	Expected sign	Coeff.	*t*	*Sig*	Tolerance	VIF
(Constant)			.668	.505		
Individual factors						
Willingness to share	+	.378	6.015	.000	.668	1.496
Ability to share	+	.114	1.802	.073	.662	1.509
Classroom factor						
Instructor support	+	.240	3.984	.000	.729	1.371
Competition		184	3.257	.001	.832	1.202
Technological factor						
Technology support	+	.072	1.253	.212	.797	1.255

Table 5 shows the beta coefficients for the independent variables. The largest *t* statistics is -6.015 (*p*-value < 0.01) which is the willingness to share. This indicates that the College of Business Administration students' willingness to share knowledge has a degree of importance in explaining the knowledge sharing behavior. This result is similar to that found by Wangpipatwong (2009). The second largest *t* statistics is 3.984 (*p*-value < 0.01) which is the instructor support in the classroom to share knowledge. This shows that the instructor support in the classroom to share knowledge has a significantly positive association with knowledge sharing behavior. This results is consistent with what Wangpipatwong (2009) has documented. The third largest *t* statistics is 3.257 (*p*-value < 0.01) which is the competition. This result is in line with the finding reported by Wangpipatwong (2009). This illustrates that the competition influences positively knowledge sharing behavior. This result is in line with that found by Wangpipatwong (2009). The fourth largest t statistics is 1.802 (p-value < 0.073) which is the ability to share. This result is consistent with the result reported by Wangpipatwong (2009). This indicates to the positively impact of ability to share with knowledge sharing behavior. Thus, hypotheses H_1, H_2, H_3 and H_4 were supported.

5. CONCLUSIONS AND IMPLICATIONS

The main objective of this study is to examine the factors influencing the knowledge sharing behavior. A sample of 200 College of Business Administration's students at Prince Sattam bin Abdulaziz University in Saudi Arabia enrolling for the academic year 2017/2018 is used for distributing out a survey questionnaire as a means of collecting data. Three groups that comprise of five factors; individual factors (willingness to share and ability to share), classroom factor (instructor support and competition) and technological factors (technology support), are determined as contributing factors influencing the extent to which knowledge is shared among students. Using the multiple regression, consistent with the previous studies, this study finds that the willingness to share, ability to share, instructor support and competition are important factors influencing the level of knowledge sharing among students of College of Business Administration.

This study suggests that individual characteristics of students such as their willingness and ability to share knowledge, instructor support and competition are among the most influential factors determining the extent of knowledge sharing among College of Business Administration's students in Saudi Arabia. This implies that Saudi 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 Kingdom of Saudi Arabia and, therefore, this study will provide with a substantial information about issues in the educational context of Saudi Arabia 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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