

## **Relationship between Perceived Costs, Perceived Benefits and Knowledge Sharing Behaviour among Lecturers in Educational Institution in Malaysia**

**Abdul Hamid, J. and Sulaiman, S.\***

*Institute for Social Science Studies , Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia*

### **ABSTRACT**

Knowledge sharing behaviour has positive impact on individual innovation capability. However, since sharing knowledge is often unnatural, effective strategies and sufficient initiatives need to be deployed to ensure lecturers communicate their teaching experiences with others. This paper examines the extent of knowledge sharing amongst lecturers in an educational institution in Malaysia, and whether their knowledge sharing behaviour is influenced by their perceptions of costs-benefits in knowledge sharing. The analysis is based upon questionnaire surveys of lecturers ( $N=50$ ) on their perception of costs and benefits motivation factors affecting their behaviour in sharing knowledge. While perceived benefits explained better orientation towards knowledge sharing, certain cost factors tended to restrict actual knowledge sharing. The article notes the influence of some perceived benefits dimensions in facilitating knowledge sharing behaviour in academic work setting. Recommendations on maximizing the influence of the related perceived benefits are also discussed.

*Keywords:* Knowledge sharing, perceived benefits, perceived costs, social exchange

### **INTRODUCTION**

In the face of high demand of quality education in higher education, it is essential to deploy knowledge already within the

organization (Wiig, 1993) by sharing it. One of the major requirements for creating and leveraging organizational knowledge is the exchange of information (Nahapiet & Ghoshal, 1998). Knowledge sharing, as defined by Lang (2001), is a process of translating information such as past experiences into a meaningful set of relationships which are understood and applied by individuals who share the

#### **ARTICLE INFO**

##### *Article history:*

Received: 13 June 2011

Accepted: 25 October 2011

##### *E-mail addresses:*

aliah@upm.edu.my (Abdul Hamid, J.),

sulaimansarinah@yahoo.com.my (Sulaiman, S.)

\* Corresponding author

same context of philosophy, experience, values and goals. Through sharing, new perspectives of knowledge emerge in random and in informally systematic process as individuals synthesise and draw insights which they apply in various situations such as at work to achieve organizational goal (Sethumadhavan, 2007).

One theory that has attempted to explain knowledge sharing behaviour is the social exchange theory (Liang *et al.*, 2008). According to Liang, since knowledge sharing is a social activity, a lot of what governs the nature of exchange depends on how people assess the meaningfulness of the encounter and the exchange. Meaningfulness is in turn determined by relevance to one's orientation and goals. According to Cook (1977), social exchange theory is driven by the concept of supplementary-complimentary exchange of resources amongst people via a social exchange relationship. People naturally seek to obtain resources that supplement or complement their efforts to achieve certain goals. The principle of social exchange theory posits that human beings look forward to relationships in order to obtain reward, resource, support and fulfilment. Human beings avoid risks by maximising on benefits and minimising costs, and in their social relationships they look out for encounters and exchanges whereby they obtain more benefits.

A literature review in KS has revealed that there is a strong positive relationship between perceived benefit to the recipient and propensity to share knowledge (e.g., Chu, 2002). In this research, perceived benefit is defined by Constant *et al.* (1994) as

the individual's subjective perception of gain from their behaviours. Knowledge sharing literature that adopted social exchange theory as the theoretical framework in studying knowledge sharing behaviour showed that reputation, reciprocity, reduced work load, professionalism, enjoyment in helping others and knowledge self-efficacy are significantly related to knowledge sharing.

Reputation is a strong motivator in knowledge sharing (Jones *et al.*, 1997). People often seek recognition and status as an expert in their field of work. One seeks for positive judgment of one character, skills, reliability and other personal attributes. Reciprocity is the degree which one believes that one can improve mutual relationships with others through such behaviour (Bock *et al.*, 2005). Employees will intend to share knowledge if they expect reciprocal knowledge sharing in the future (Endres *et al.*, 2007). They believe that current effort on knowledge sharing will lead to future exchange of other knowledge.

Information sharing among team members is associated with higher organizational efficiency and lower workload. In a study by Jamaliah Abdul Hamid (2007) of knowledge management in schools in Malaysia, one finding reveals that sharing knowledge has increased the productivity and knowledge of teachers and students. Team work has been reported to be well-facilitated, thus reducing teachers' workload.

By sharing expertise, knowledge contributors also gain confidence in their ability and thus increase their perception of

self-efficacy (Constant *et al.*, 1994). Fong and Chu (2006) identified 'increasing the level of expertise' and 'improving quality of work' as the second and third highest ranking out of 15 reasons for sharing knowledge.

For others, sharing knowledge brings altruistic satisfaction. There is enjoyment derived by the act of sharing, without expecting anything in return (Smith, 1981; Wasko & Faraj, 2000). Altruistic acts of sharing have a significant impact on the type and extent of knowledge contributions people are willing to engage in (Kankanhalli *et al.*, 2005). The type of information is likely to benefit a large mass of recipients, whether in direct ways or indirectly and can range from tips to the relaying of news, experience and events that are likely to affect people's lives and career. Fukui *et al.* (1998) reported in their study that experts contribute their knowledge into knowledge-bases because they are asked to input it by someone, and therefore, it is a pleasure to help someone else. This is very much related to perceived intrinsic benefit to oneself, and also to others. Wasko and Faraj (2000), in their study, found that 31.3% shared their knowledge due to enjoyment in sharing experiences. They acted with altruism and wanted to contribute to the improvement of the community knowledge.

Meanwhile, there is a significant relationship between the level of knowledge contribution and knowledge self-efficacy, whereby low knowledge self-efficacy people tend to shy away from knowledge sharing because they believe that their

knowledge will not contribute to any significant difference (Draajier, 2008; Kankanhalli *et al.*, 2005). Low knowledge-efficacy people typically have incompetent skills or poor cognition that impedes their ability to acquire, understand and use knowledge. They are likely to under-value their own knowledge and exercise strict self-restraint in knowledge sharing. On the other hand, people with high knowledge self-efficacy are confident of the value of their knowledge and positively seek to expand it through sharing.

Here, knowledge self-efficacy is defined by Kankanhalli *et al.* (2005) as the beliefs that other would value the knowledge that someone holds. 'In order to share knowledge, individuals must perceive that sharing it would be worth the effort to others.' (Wasko & Faraj, 2005, p. 39), such as colleagues and companies (Fong & Chu, 2006), as well as it benefits oneself. Hence, knowledge self-efficacy affects one's perception of benefits or costs in sharing knowledge.

In relating to costs that impede knowledge sharing, past research has confirmed that time constraint is a barrier in knowledge sharing (e.g., Fong & Chu, 2006; Hew & Hara, 2007; Kankanhalli *et al.*, 2005; McDermott & O'Dell, 2001). Knowledge sharing can be too time-consuming as a result of confusing, technically demanding and difficult to use communication technology (Wang & Fesenmaier, 2003). People with language difficulties also find knowledge sharing a demanding and challenging task. In this way, knowledge sharing will be

likely regarded as cost rather than a benefit (McDermott & O'Dell, 2001).

Perceived costs can incur in the form of opportunity costs and actual loss of resources (Molm, 1997). Actual loss of resources may be described as one's perceived or actual loss of power and unique value within the organization (Orlikowski, 1993). Opportunity costs are rewards foregone due to one's decision to forgo actions or behaviours that was required at a particular moment (Molm, 1997). For example, the time and effort spent in codifying and contributing knowledge into electronic knowledge repositories can become an opportunity cost since knowledge contributors were prevented from attending to other important alternative tasks during that time. In the hierarchy of importance, knowledge sharing may lose its level of priority if more individuals believed that it incurs opportunity costs that brought potential harm to their careers.

In specific, Orlikowski (1993) acknowledges that demand on tasks, lost opportunities and loss of knowledge power are among the risks and costs for engaging in knowledge sharing behaviour. Also, sharing knowledge is risky since knowledge contributors do not know how knowledge will be used by the party that receives it (Davenport & Prusak, 1998). Acknowledgement, plagiarism and manipulation of contents are some risks related with information sharing.

It is thus shown in the knowledge sharing literature that what people gain from sharing knowledge does influence their

knowledge sharing behaviour. This means, the higher the benefits gained from sharing knowledge, the higher people's engagement in knowledge exchange (e.g., Chu, 2002). While some elements of perceived benefits (such as reputation) play important roles in affecting human knowledge sharing behaviour, the risk and cost resulted in the act of sharing knowledge also give a negative impact. The findings in knowledge sharing literature hence complement the principle of social exchange theory that highlights people's behaviour in doing cost-benefits analysis before engaging in a social exchange relationship.

## **PROBLEM STATEMENT**

Since in social exchange theory, people do cost-benefits analysis of their exchanges, the question arises as to whether perceived costs or perceived benefits have the most influence on teachers' knowledge sharing behaviour, particularly in the context of the selected educational institution in this study. In addition, there is a need to examine the elements of perceived costs and perceived benefits that most influence one's level of knowledge sharing. Hence, the benefits that are perceived as most influential could be maximized, and the perceived cost that minimizes the act of sharing could be eliminated or reduced.

## **RESEARCH OBJECTIVE**

The aim of this study was to examine the extent of knowledge sharing amongst lecturers in an educational institution in Malaysia, and whether their knowledge

sharing behaviour was influenced by their perceptions of costs-benefits in knowledge sharing. The objectives of this study are as follows:

1. To determine knowledge sharing behaviour among lecturers in an educational institution in Malaysia;
2. To determine perceived costs and perceived benefits in knowledge sharing as perceived by lecturers;
3. To determine the relationship between perceived costs and benefits factor with the lecturers' knowledge sharing behaviour; and
4. To predict which elements of perceived costs and benefits predict knowledge sharing behaviour among respondents.

The overall view of this study is represented by the research framework illustrated in Fig.1.

## RESEARCH METHODS

This research uses quantitative descriptive correlational research design. The research was conducted on 143 teachers who were attending a training course. Since Neuman (2007) asserted that for a small population (i.e., under 1,000), a researcher needs a large sampling ratio (about 30 percent). Out of 143 total populations, 100 questionnaires were distributed to the lecturers attending the course at one of the educational institutions in Malaysia. Returned questionnaires were 55, giving an average response rate of 55%, but five questionnaires were later excluded

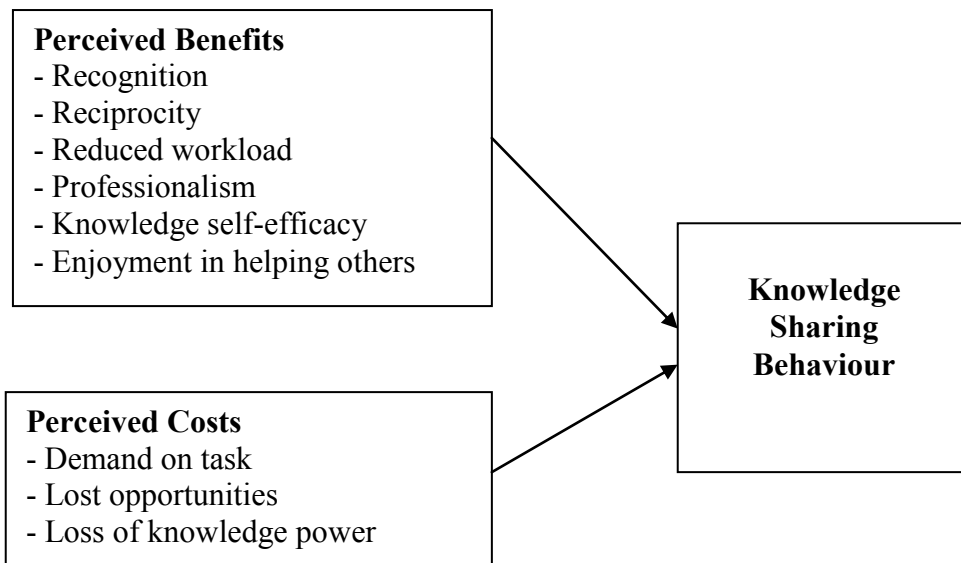


Fig.1: Research framework

due to incompleteness. Thus, the sampling size of this research met the requirement as specified by Neuman. A bigger sample would have been more adequate, but since the nature of this study was exploratory to examine the applicability of social exchange theory of costs and benefits in knowledge sharing amongst Malaysian teachers, the sample of 50 could be considered as quite adequate.

The questionnaire comprised 12 items measuring knowledge sharing behaviour. The items in this scale measured knowledge sharing behaviour in terms of the extent knowledge is shared through discussion, seminar and conference exchanges, peer observation, team teaching and committee work, emails and document sharing and other activities among lecturers as they dealt with their daily teaching tasks. Next, 10 items measured perceived costs of knowledge sharing. These items measured the dimensions of demand on task, lost opportunities and loss of knowledge power. The final section of the questionnaire contained 20 items measuring perceived benefits which measured six dimensions; namely, recognition, reciprocity, reduced work load, professionalism, knowledge self-efficacy and enjoyment in helping others.

All the items were rated on a Likert scale ranging from one (strongly disagree) to five (strongly agree). The Knowledge Sharing Behaviour Scale was guided by the literature review on knowledge sharing strategies applicable in school context (Fernandez-Chung, 2009; Mohayidin *et al.*, 2007; Jamaliah Abdul Hamid, 2007).

Perceived Cost Scale was developed based on Molm (1997), Orlikowski (1993), and Thibaut and Kelley (1986). Perceived Benefits Scale was developed based on Bock *et al.* (2005), Constant *et al.* (1996), Kalman (1999), and Wasko and Faraj (2000). The Perceived Costs and Benefits Scale were used in the study by Kankanhalli *et al.* (2005) to identify cost and benefit factors affecting electronic knowledge repositories usage by knowledge contributors.

The Knowledge Sharing Scale obtained a Cronbach's alpha of 0.91. Meanwhile, the Cronbach's alpha for perceived costs was 0.91 and 0.93 for the perceived benefits. The Perceived Costs and Perceived Benefits Scales were also reported by Kankanhalli *et al.* (2005) to have good internal consistency ranging from 0.85 to 0.96. In this study, mean scores and standard deviation were used to assess the levels of knowledge sharing behaviour, perceived costs and perceived benefits. After analysing for the relationship of factors using Pearson's correlation coefficient, Multiple Regression test was then used to test the strength of our proposed relational models between perceived benefits and costs to knowledge sharing behaviour.

## FINDINGS AND ANALYSIS

### *Background of the Respondents*

Referring to Table 1, there were 46% male and 54% female respondents in this study. Meanwhile, 56% of the respondents were above 40 years of age. The majority of the respondents (68%) had Master degree as their highest academic qualification. The

respondents without teaching certificates outnumbered those with teaching qualification at a ratio of 54% to 46%. The respondents with more than 21 years in teaching profession were 22%, while 50% of them have been teaching between six to 20 years. Only 28% of the respondents had five years of teaching experience or less. The majority profile of the respondents therefore appeared to be experienced lecturers, mature in age and, with a high academic qualification, although not necessarily possessing professional certification of teaching competence.

### *Perception of Costs and Benefits and Knowledge Sharing Behaviour among Lecturers*

In Table 2, the levels of perceived benefits and knowledge sharing behaviour were moderate at respective means of 3.62 and 3.43. Perceived costs, however, was low, at 2.23. Generally, these descriptive mean scores showed that the lecturers were more inclined to believe in the positive benefits of knowledge sharing.

The level of each dimension of perceived costs is as displayed in Table 3. The demands in doing knowledge sharing

TABLE 1  
Respondents' profile

<i>Variable</i>		<i>Frequency</i>	<i>Percent</i>
Gender	M	23	46.0
	F	27	54.0
Age	<25 yrs	2	4.0
	25-29	8	16.0
	30-34	5	10.0
	35-39	7	14.0
	40-44	14	28.0
	>44	14	28.0
Highest Degree	BACHELOR	13	26.0
	MASTER	34	68.0
	PHD	3	6.0
Teaching Certification	NO	27	54.0
	YES	23	46.0
Years in Teaching	<= 5	14	28.0
	6 - 13	11	22.0
	14 - 20	14	28.0
	21+	11	22.0

TABLE 2  
Means and standard deviation for perceived benefits, perceived costs and knowledge sharing

	Perceived Benefits	Perceived Costs	Knowledge Sharing
Mean	3.62	2.23	3.43
Std. Dev	.522	.587	.640

acts, fear of lost opportunities and fear of loss of unique value in one's organization due to loss of knowledge power all scored low mean values (less than 3.0), suggesting that the perceptions of costs did not appear to overshadow the perceptions of benefits of knowledge sharing.

TABLE 3  
Mean value of perceived costs

Variable Dimension	Mean
Demand on task	2.55
Lost opportunities	2.13
Loss of knowledge power	1.97

In Table 4, the benefit of altruistic satisfaction in helping others had the highest mean score, while the benefits of earning a reputation and reduced work load were ranked lower, although all were still moderate (i.e. above 3.0).

TABLE 4  
Mean value of perceived benefits

Variable Dimension	Mean
Enjoyment in helping others	3.91
Reciprocity	3.71
Knowledge self-efficacy	3.52
Professionalism	3.51
Reputation	3.46
Reduced work load	3.37

In Table 5, knowledge sharing behaviour mostly were *vis-a-vis* listening to talks concerning teaching and learning, while inviting/doing peer observation to share knowledge was ranked lower. Interestingly, writing to share knowledge via emails, short message service (sms) and articles was the least preferred strategy (mean value less

than 3.0), suggesting that people found writing as a medium of knowledge sharing either taxing, time consuming or simply demanding.

TABLE 5. Mean value of knowledge sharing behaviour

Items	Mean
Listen to talks	3.92
Enjoy talking to friends	3.84
Listening for new ideas through conversation	3.80
Seeking peers' comments	3.78
Being involved in knowledge generation/sharing activities	3.54
Participate in seminars/conferences	3.36
Talking to un/successful colleagues	3.34
Make copies of articles and pass to friends	3.26
Do team teaching	3.24
Ask peers to observe my teaching	3.04
Observe peers' teaching	3.02
Write emails, sms, articles	2.96

*Relationships between Perceived Costs-benefits Factor with Lecturers' Knowledge Sharing Behaviour*

Referring to Table 6, perceived benefits appeared to have significant and positive relationship to knowledge sharing behaviours ( $r = .61, p < .01$ ). On the other hand, the relationship between perceived costs and knowledge sharing behaviour was significant but negative ( $r = -.36, p < .01$ ), indicating that the more people believed that knowledge sharing was going to incur costly risks, the less they would engage in knowledge sharing behaviours.

As shown in Table 7, item-by-item relationship to knowledge sharing showed



moderate relationships between the perceived benefits of earning a reputation, reciprocity, knowledge self efficacy, reduced work load, professionalism and altruistic enjoyment to the practice of knowledge sharing. The relationship coefficient between the benefits of increased professionalism to knowledge sharing behaviour held the highest ranking ( $r=.51, p <.01$ ). It would appear that people who wished to develop their professionalism would engage in more knowledge sharing.

Table 8 shows that in perceived costs, demand on tasks ( $r = -.30, p = 0.04$ ), and lost opportunities ( $r = -.41, p = 0.0001$ ) had significant negative effects on knowledge sharing, with the latter showing a higher degree of likelihood. Interestingly, the fear

of losing knowledge power did not appear to significantly affect knowledge sharing behaviour ( $r = -.24, p = 0.09$ ). This finding suggests that knowledge sharing by itself was not perceived as having a negative effect on one's credibility or status. However, constraints in the forms of task demands and lost opportunities for career progress were real risks affecting knowledge sharing. Institutional managers need to resolve the balance between offering incentives and rewards for knowledge sharing on one hand, and the removal of real fears associated with the time and energy diverted from career and work demands during the act of knowledge sharing.

In relating to the demographic variables, age appeared to have contributed to

TABLE 6  
Correlation analysis between perceived costs and benefits with knowledge sharing behaviour

Knowledge Sharing	Pearson Correlation	Perceived Benefits	Perceived Costs
		.61** ( $p=.00$ )	-.36* ( $p=.01$ )

TABLE 7  
Correlation analysis between perceived benefits and knowledge sharing behaviour

Perceived Benefits	Knowledge Sharing	
	Pearson Correlation	Sig. (2-tailed)
Reputation	.48	.00
Reciprocity	.42	.00
Knowledge self-efficacy	.46	.00
Reduced work Load	.46	.00
Professionalism	.51	.00
Enjoyment in helping others	.48	.00

TABLE 8  
Correlation analysis between perceived costs and knowledge sharing behaviour

Knowledge Sharing	Demand On Task	Lost Opportunities	Loss of Knowledge Power
Pearson Correlation	-.30* ( $p=.04$ )	-.41** ( $p=.00$ )	-.24 ( $p=.09$ )

significant differences amongst the mean scores of knowledge sharing behaviour ( $p < .05$ ). However, neither gender, highest degree, length of teaching experience nor teaching certification contributed to significant differences of knowledge sharing behaviour.

*Regression Model of Knowledge Sharing Behaviour*

In order to explore the fourth research question, linear regression analyses were conducted with perceived costs and benefits as independent variables predicting knowledge sharing behaviour, and knowledge sharing as the dependent variable (see Table 9).

The model was significant, but just moderately strong (adjusted R square .36) for this small group of respondents.

Table 10 shows that perceived benefits ( $t = 4.480, p=0.0001$ ) make the strongest unique contribution to explain knowledge sharing behaviour compared to perceived costs.

In analysing the contributory effects, we analysed the beta contribution of each of the dimensions within perceived costs and benefits to knowledge sharing behaviour. Table 11 shows that lost opportunity ( $t=-2.054, p= .046$ ) is the only dimension that significantly has the strongest unique contribution to explain knowledge sharing behaviour compared to demand on tasks and loss of knowledge power.

TABLE 9  
The regression analysis between knowledge sharing behaviour and perceived costs and benefits

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.62a	.39	.36	.51

a. Predictors: (Constant), Perceived Costs, Perceived Benefits

TABLE 10  
The effects of perceived benefits and costs on knowledge sharing behaviour

Predictor	B	Std. Error	Beta	t	Sig.
Perceived Benefits	.693	.155	.565	4.480	.000
Perceived Costs	-.126	.137	-.115	-.914	.365

TABLE 11  
The effects of perceived costs on knowledge sharing behaviour

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.271	.375		11.373	.000
	Demand on task	-.106	.170	-.101	-.623	.536
	Lost opportunities	-.370	.180	-.445	-2.054	.046
	Loss of knowledge power	.108	.169	.127	.642	.524

a. Dependent Variable: knowledge sharing

Table 12 shows that none of the dimensions of perceived benefits makes uniquely significant contribution to explain knowledge sharing behaviour, suggesting that all these dimensions accumulatively interact to influence knowledge sharing behaviour.

## DISCUSSION AND RECOMMENDATIONS

The present study sets out to examine the knowledge sharing strategies used by the lecturers in one educational institution in Malaysia. It also examined the perceived costs and benefits factors affecting knowledge sharing behaviour of the lecturers. Generally, the respondents tended to practice personal social strategies such as through interaction, observation and discussion in knowledge sharing, more than codification strategy such as through writing, e-mails and publication. Peer observation, although a very likely medium for knowledge exchange, was found to be least preferred. This scenario might be due

to the fact that in the school context, people were being rewarded for individual effort instead of teamwork, and they tended to be reserved when it came to sharing expertise (Petrides & Guiney, 2002). Earlier study on peer observation by Fernandez-Chung (2009) also found that peer observation was not commonly practiced in Malaysian Higher Educational Institutions as a result of time constraints, as well as extra burden to the lecturers. Thus, it is suggested that the institutional management rationalize the objectives of peer observation as one of the best practices for knowledge sharing. Information from observations should be used for personal and team growth instead of for appraisal purposes.

Meanwhile, enjoyment in helping others was found to be the most influential factor in knowledge sharing. Wasko and Faraj (2000) also found that enjoyment and the feeling of satisfaction in helping people encouraged knowledge sharing. Another significant perceived benefit is the anticipation of reciprocal exchange and relationship. In

TABLE 12  
The effects of perceived benefits on knowledge sharing behaviour

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.032	.652		1.581	.121
Reputation	.029	.215	.031	.133	.895
Recognition	.183	.165	.192	1.112	.272
Knowledge self efficacy	.162	.280	.125	.581	.565
Reduced work load	.036	.302	.053	.119	.905
Professionalism	.127	.409	.163	.310	.758
Enjoyment in helping others	.122	.196	.135	.620	.539

a. Dependent Variable: knowledge sharing

their works, Davenport and Prusak (1998) and Bock *et al.* (2005) also cited anticipated reciprocal relationships as having a positive impact on the attitudes essential for knowledge sharing. However, knowledge deficiency will occur if people attempt to free-ride and enjoy the contribution of knowledge of others without contributing back to others. Fortunately, many research has shown that people who have received help in the past feel a moral obligation to contribute what they know (Hew & Hara, 2007; Wasko & Faraj, 2000; Tohidinia & Mosakhani, 2009). Reciprocity is a strong tenet in Social Exchange Theory which attempts to explain the behaviour of sharing knowledge among humans.

Knowledge self-efficacy was significantly related to knowledge sharing; suggesting that this group of lecturers were competent in their field of specialisation, and they believed that their knowledge contribution would make some difference. Hence, we suggest that in order to leverage on the knowledge self-efficacy of individual contributions, the management of educational institutions must attempt to provide feedback loops which inform contributors whenever their knowledge contribution has been referred to or used by others. Cabrera and Cabrera (2002) observed that feedbacks from other users are a motivation for contributors to continue to contribute. Such feedback may include rating scales or a simple message alert. Furthermore, employees who may not know what types of experience are worth sharing or how to put their experience into words

will find such feedback helpful.

Increased professionalism was also a benefit of knowledge sharing behaviour. Hew and Hara's (2007) study confirmed this. Reduced workload, however, was the least perceived benefit from knowledge sharing. This may suggest to us one possible reason, i.e., the lecturers do not necessarily know or bother to translate their knowledge into direct use or application within their work. Knowledge being shared is mostly at the conceptual level, not at the practice-operational level. Therefore, we need to develop and foster a culture of contributing practical material that can effectively reduce work load for instance, in terms of teaching material and classroom management. Lecturers as communities of practice need to encourage each other to contribute practical types of knowledge forms that are readily usable by fellow colleagues.

In regards to perceived costs, our findings refuted major claims such as Harris and Clark (2007) and Davenport and Prusak (1998), who asserted that fear of loss of knowledge power would inhibit knowledge sharing behaviour. They maintained that it was only natural for humans to hoard knowledge since most people were afraid of losing superiority. However, our study showed otherwise. Instead, work demands and career related risks were two factors that appeared significant in off-setting the willingness to engage in knowledge sharing. Previous work by Fong and Chu (2006) acknowledged that their respondents ranked 'heavy work load and busy nature of work' as the highest out of 11 organizational

barriers in sharing knowledge. If knowledge sharing is to take off as an institutional culture, managers will then need to seriously consider knowledge sharing as a part of work performance and to give adequate space for its institutionalisation.

In this research, our findings show that the effort and time spent in knowledge sharing may be affected by language and/or technological incompetence. Harris and Clark (2007) had also pointed to the obstacle of poor technological skills in knowledge sharing. Therefore, it is suggested that if sharing knowledge involves technology, these technological systems will then need to be well-designed and user-friendly for knowledge transfer (Cabrera & Cabrera, 2002).

Gender, educational level and work experience all were not significantly related to knowledge sharing (see also related findings by Ojha, 2005; Riege, 2005; Wasko & Faraj, 2005; Hew & Hara, 2007). Instead, Ojha (2005) found that age was the single significant factor in explaining the differences of mean scores in knowledge sharing behaviour. Other related findings also revealed that age differences were likely to affect knowledge sharing (Keyes, 2008; Ojha, 2005; Riege, 2005). Leiter *et al.* (2009), in their study, found that Generation X's respondents reported to have a more negative evaluation of personal knowledge sharing involvement. It was also found that age-compatible team members were more likely to share knowledge (Keyes, 2008). Moreover, the respondents might

differ with regard to their familiarity with information technology, whereby older workers are sometimes technology resistant (Keyes, 2008). Hence, information on age differences might be useful in guiding the management to plan for knowledge sharing activities that accommodate the respondents' distinct learning styles.

## CONCLUSION

The results of this study are preliminary in the sense they are derived from a relatively small sample from one educational institution. The findings should not be considered as a representative of the Malaysian educational institutions. However, the findings of this study may be useful in guiding the interventions for knowledge sharing initiatives in institutions. Some of the findings relating to the demographic data were inconsistent with previous research on this topic. This might be due to the small sample size that had limited the power of the relationships identified. Therefore, it is suggested this study be replicated using a larger sample. In addition, combining questionnaires survey with interviews could examine closely how the cost-benefit analysis factors affect lecturers' sharing of knowledge in the school context.

## REFERENCES

- Bock, G. W., Zmud, R. W., Kim, Y. G., & Lee, J. (2005). Behavioural intention formation in knowledge sharing: examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS Quarterly*, 29(1), 87-111.

- Cabrera, A., & Cabrera, E. F. (2002). Knowledge Sharing Dilemmas. *Organization Studies*, 23(5), 687-710.
- Chu, J. (2002). *Systems Engineering Frameworks: Integrating the Balanced Model to Knowledge Management across Organizations*. PhD Thesis.
- Constant, D., Kiesler, S., & Sproull, L. (1994). What's Mine Is Ours, or Is It? A Study of Attitudes about Information Sharing. *Information Systems Research*, 5(4), 400-421.
- Cook, H. (1977). Empathy and Altruism. *Journal of Personality and Social Psychology*, 32(6), 1132-1146.
- Davenport, T. H & L. Prusak. (1998). *Working Knowledge: How Organizations Manage what They Know*. Boston: Harvard Business Press.
- Draaijer, R. (2008). *Why Share? An empirical investigation of knowledge contribution within electronic networks of practice*. Master Thesis, University of Twente Enschede, The Netherlands.
- Endres, M. L., Endres, S. P., Chowdhury, S. K., & Alam, I. (2007). Tacit knowledge sharing, self-efficacy theory and application to the Open Source community. *Journal of Knowledge Management*, 11(3), 92-103.
- Fernandez-Chung, R. M. (2009). *Peer Observation as a Mechanism to Identify and Promote Quality Teaching in Higher Education*. Paper presented at What Works Conference on Quality of Teaching in Higher Education, Turkey. October 2009.
- Fong, P. S., & Chu, L. (2006). Exploratory Study of Knowledge Sharing in Contracting Companies: A Sociotechnical Perspective. *Journal of Construction Engineering and Management*, 9, 928-939.
- Fukui, M., Sasaki, K., Shibazaki, Y., Ohtake, Y., & Nakamura, Y. (1998). Practice of know-how sharing in office environment using knowledge and knowledge-sharing system. *IPSJ SIG Notes*, 27(3), 13-18.
- Harris, M., & Clark, T. (2007). Knowledge sharing as a key driver of professional learning and development for an ageing VET practitioner workforce and for VET organizations.
- Hew, K., & Hara, N. (2007). Empirical study of motivators and barriers of teachers online knowledge sharing. *Educational Technology Research & Development*, 15(6), 573-595.
- Jamaliah Abdul Hamid. (2007). *Knowledge Management for School Development*. Serdang, Selangor: Universiti Putra Malaysia Publishers.
- Jones, L. Hesterly, B., & Borgatti, N. (1997). Antecedents to willingness to participate in planned organizational change. *Journal of Applied Communications Research*, 22, 59-60.
- Kalman, M. E. (1999). *The Effects of Organizational Commitment and Expected Outcomes on the Motivation to Share Discretionary Information in a Collaborative Database: Communication Dilemmas and Other Serious Games*. PhD. Thesis, University of Southern California, USA.
- Kankanhalli, A., Tan, B. C. Y., & Wei, K. K. (2005). Contributing Knowledge to Electronic Knowledge Repositories: An Empirical Investigation. *MIS Quarterly*, 29(1), 113-143.
- Keyes, J. (2008). *Identifying the Barriers to Knowledge Sharing in Knowledge Intensive Organizations*.
- Lang, J. C. (2001). Managerial concerns in knowledge management. *Journal of Knowledge Management*, 5(1), 43-57.
- Leiter, M. P., Jackson, N. J., & Shaughnessy, K. (2009). Contrasting burnout, turnover intention, control, value and congruence and knowledge sharing between Baby Boomers and Generation X. *Journal of Nursing Management*, 17, 100-109.

- Liang, T., Liu, C., & Wu, C. (2008). *Can Social Exchange Theory Explain Individual Knowledge Sharing Behaviour? A Meta Analysis*. Paper presented at International Conference on Information Systems (ICIS) 2008 Proceedings, Taiwan.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and organizational advantage. *Academy of Management Review*, 23, 242-66.
- Neuman, W. L. (2007). *Basics of Social Research*. USA: Pearson Education, Inc.
- McDermott, R., & O'Dell, C. (2001). Overcoming culture barriers to knowledge sharing. *Journal of Knowledge Management*, 5(1), 76-85.
- Mohayidin, G., Nor Azirawani, M., Norfaryanti, K., & Mar Idawati, M. (2007). The Application of Knowledge Management in Enhancing the Performance of Malaysian Universities. *The Electronic Journal of Knowledge Management*, 5(3), 301-312.
- Molm, L. D. (1997). *Coercive Power in Social Exchange*. New York: Cambridge University Press.
- Ojha, A. K. (2005). Impact of team demography on knowledge sharing in software project teams. *South Asian Journal of Management*, 12(3), 67-78.
- Orlikowski, W. J. (1993). Learning from Notes: Organizational issues in Groupware Implementation. *Information Society*, 9(3), 237-251.
- Petrides, L. A., & Guiney, S. Z. (1992). Knowledge Management for school leaders: an ecological framework for thinking schools. *Teachers College Record*, 104(8), 1702-1717.
- Riege, A. (2005). Three dozens knowledge sharing barrier manager must consider. *Journal of Knowledge Management*, 9(3), 18-35.
- Sethumadhavan, R. (2007). Importance of Knowledge Sharing for Organization. *Journal of Knowledge Management*, 4(1), 33-37.
- Smith, D. H. (1981). Altruism, volunteers, and Volunteerism. *Journal of Voluntary Action Research*, 10(1), 21-36.
- Thibaut, J. W., & Kelley, H. H. (1986). *The Social Psychology of Groups*. New Brunswick: Transaction Books.
- Tohidinia, Z., & Mosakhani, M. (2009). Knowledge sharing behaviour and its predictors. *Industrial Management and Data Systems*, 110(4), 611-631.
- Wang, Y., & Fesenmaier, D. R. (2003). Assessing motivation of contribution in online communities: An empirical investigation of an online travel community. *Electronic Markets*, 13(1), 33-45.
- Wasko, M., & Faraj, S. (2000). It is what one does: Why people participate and help others in electronic communities of practice. *Journal of Strategies Information Systems*, 9, 155-173.
- Wasko, M. & Faraj, S. (2005). Why Should I Share? Examining Social Capital and Knowledge Contribution in Electronic Networks of Practice. *MIS Quarterly*, 29(1), 35-57.
- Wiig, K. M. (1993). *Knowledge Management Foundations: Thinking about thinking: How people and organizations create, represent and use knowledge*. Arlington: Schema Press.

