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Research Article

Job Satisfaction and Knowledge Sharing among Computer and Information Science Faculty Members: A Case of Malaysian Universities

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Abstract: Job satisfaction and knowledge sharing are the topics which have gained the attraction of researchers and practitioners over the years. These two areas have great importance for the overall well-being of an organization. This study explored the relation between job satisfaction dimensions and knowledge sharing behaviour. Job satisfaction dimensions were adapted from Minnesota Satisfaction Questionnaire. Knowledge sharing was categorized as explicit knowledge donation, explicit knowledge collection, implicit knowledge donation and implicit knowledge collection. Data was collected from Malaysian universities and only CIS academicians were requested to participate in the study. Faculty members from Universiti Teknologi PETRONAS, Universiti Teknnology Mara, Universiti Malaya and Multimedia Univesiti participated in the study. Questionnaire method was used to collect data and both online, hard-copy methods were used. Results showed that data was highly reliable. Company policies and practices, achievement, recognition, co-workers and moral values are the factors which showed significant correlations with various categories of knowledge sharing.

Keywords: Academicians, computer and information science, explicit and implicit knowledge collection, explicit and implicit knowledge donation, job satisfaction

INTRODUCTION

An adequate amount of research has already been done on knowledge sharing, knowledge transfer or knowledge exchange but still there is room to fill the gap between unexplored areas (gray areas) of knowledge sharing. Besides the existence of vast literature on knowledge sharing and the willingness of an individual motivation to share, this topic still remains unexplored and poorly understood (Osterloh *et al*., 2002; Milne, 2007). As knowledge resides in the minds of human so there are numerous factors which can hinder human minds and can cause hesitation for knowledge sharing.

Considering that this topic is unexplored and poorly understood, this study will look at knowledge sharing through the glasses of job satisfaction as it is considered one of the most important areas for employees (Akfopure *et al*., 2006) at all levels of management. Thus study will focus that how job satisfaction impacts knowledge sharing among Computer and Information Science (CIS) faculty members. Rationale for selecting academicians and specifically from CIS department is that very limited studies have been done on job satisfaction of academicians (Stevens, 2005) plus due to rapid development in Information Technology (IT), importance of CIS and IT faculty members is increasing day by day. As it has been one of the most rapidly changing fields thus it is crucial to provide job satisfaction to those who provide training and education in this field. Among them the educationists are the forerunners. Rapid development in IT was also mentioned by Lee (1999) in which it was concluded that:

"Few professions in human history have seen such rapid changes in their knowledge base and work requirements as the field of IS today. These changes are driven not just by the unprecedented amount of new technical knowledge ... but also by the changing business environment ... and the changing role of IS within organizations".

Academicians while dissatisfied may not properly perform which can lead to lower job performance

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(Awang *et al*., 2010) and knowledge sharing. If they do not share their newly obtained knowledge (related to changes in technology) with their colleagues then students will suffer who in future will have to contribute towards the economy of the country. Thus dissatisfied faculty members may not only create problems for their school, college or university, ultimately their dissatisfaction will lead to poor economy of the country. Therefore it is important to come up with those factors which help academicians to share their knowledge based on job satisfaction dimensions.

Over the years, researchers have determined many components of job satisfaction and knowledge sharing but still this process is continued. Very few studies have been done which extensively explore the relationship between job satisfaction and knowledge sharing or vice versa in the field of academics. Therefore as pointed by Almahamid *et al*. (2010), that relationship between knowledge sharing practices and job satisfaction needs to empirically explore thus current paper will look in to the relationship between job satisfaction and knowledge sharing behaviour among CIS academicians.

LITERATURE REVIEW

Knowledge sharing: The view that physical assets help to maintain competitive advantage started to vanish from economic scene when Knowledge Management (KM) started to emerge. The asset, which is being considered crucial for competitive advantage, is now knowledge and businesses are looking towards it to maintain their advantage (Davenport and Prusak, 1998; Drucker, 1999). The reason for its importance and to become a source of competitive advantage is that physical assets lose their value or depreciate upon usage whereas in case of knowledge it loses its value when it is not in use (Sveiby, 2001). Thus it is a win-win situation for both parties (knowledge donator and receiver). KM helps an organization to increase innovation and performance (Nonaka and Takeuchi, 1995). It also benefits individuals and groups (Reid, 2003). However management of knowledge is not an easy task and is considered as one of the uphill tasks organizations face (Davenport and Prusak, 1998; Drucker, 1993; Hansen, 1999).

One of the key elements of KM is knowledge sharing. Knowledge sharing is the process in which an individual shares his/her knowledge with others. This knowledge is based either on the expertise and skills of that individual, which he/she has possessed over a period of time, or it can also be acquired from other published sources. The one which is based on skills or experiences is called implicit/tacit knowledge, on the other hand the one which is gained through some published document, or is documented or codified somewhere, is known as explicit knowledge (Bollinger and Smith, 2001).

Knowledge sharing involves two parties. One is called knowledge supplier and the other is knowledge demander (Ardichvill *et al*., 2003). These two parties can also be referred as "knowledge source" and "knowledge receiver" (Weggeman, 2000) or "knowledge carrier" and "knowledge requester" (Oldenkamp, 2001). This emphasizes that to make knowledge sharing, both parties should be willing to send or receive knowledge. If knowledge sender is hesitant to share knowledge then knowledge receiver will suffer and ultimately team, department and organization. Similarly, if knowledge receiver is not ready to accept new knowledge due to any reason then the above mentioned units will suffer. Thus organizations should encourage its employees more and more to share and receive new knowledge.

Job satisfaction: Literature on job satisfaction can be found as old as 75 years like the work done by Hoppock (1935). Since then, an ample amount of work has been done on job satisfaction. There are numerous reasons to that. For example, work is the only activity which takes majority of our time on daily basis (Koustelios, 2001) additionally; job satisfaction also has an impact on productivity and turnover (Baron, 1986; Maghradi, 1999) which are two focus areas for any organization. Importance of job satisfaction can be analyzed from the findings of Granny *et al*. (1992) in which they stated that more than five-thousand studies have been published on this topic. So much in depth research on this area is due to the belief of practitioners and academicians that job satisfied workers are more productive as compared to dissatisfied ones (Sarker *et al*., 2003).

Job satisfaction can be defined as "a pleasurable or positive emotional state, resulting from the appraisal of one's job experience" (Locke, 1976). Simply stating, it is the difference between what an individual is expecting from his/her job and what job is delivering.

Individual's expectations from job <= Job's supply of individual's expectation = Job Satisfaction (1)

Individual's expectations from job>Job's supply of individual's expectation = Job Dissatisfaction (2)

These expectations can be subjective. i.e., they might vary on individual basis. Numerous surveys have been developed so far to measure job satisfaction. Like the one, developed by Hackman and Oldham (1974) measures job satisfaction and contains pay, promotion, co-workers attitude and supervisory. Another survey to measure job satisfaction is Minnesota Satisfaction Questionnaire (MSQ) which was developed by Weiss *et al*. (1967) and is one of the comprehensive measurement instruments for job satisfaction. It measures an individual's satisfaction on 20 aspects. Components which have been used for measuring job satisfaction includes activity (Weiss *et al*., 1967), ability utilization (Weiss *et al*., 1967), authority (Weiss

et al., 1967), good relations with co-workers (Hackman and Oldham, 1974; Weiss *et al*., 1967; Awang *et al*., 2010), independence (Weiss *et al*., 1967), moral values (Weiss *et al*., 1967), recognition (Weiss *et al*., 1967), promotion (Awang *et al*., 2010), workload (Awang *et al*., 2010).

Job satisfaction among academicians: Teachers are generally satisfied with their job itself and supervision however they are not satisfied with the promotion and pay aspects (Koustelios, 2001). Similarly another study by Oshagbemi (1999) concluded that UK academicians are generally satisfied with their job (teaching), physical or working conditions and supervision whereas they are not satisfied with their present pay and promotion. Saif-ud-Din *et al*. (2010) concluded in a study done on academicians from Pakistan that junior lecturers have less job satisfaction as compare to their seniors. And females have also less job satisfaction than their male colleagues. This study revealed that demography is also a factor which can cause job satisfaction/dissatisfaction among academicians.

Lacy and Sheehan (1997) conducted a study in which they compared the job satisfaction among academicians of different nations. They concluded that academicians from eight countries, which were included in the study, are generally satisfied with their jobs. Faculty members from USA were most satisfied based on their study results. Respondents from all participating countries were satisfied with their relationship with co-workers, job security, freedom to use their own ideas and job as a whole. On the other hand dissatisfaction factors include promotional opportunities and "environment ('climate' or 'atmosphere')". Another conclusion on which they reached was the difference in level of job satisfaction. They found that male academicians have more job satisfaction than their female colleagues.

Knowledge sharing among academicians: "Continuous professional development" is mandatory for teachers (Hew and Hara, 2007). This is because of the rapid change in technology and extensive research on almost every aspect of life. For this, knowledge sharing can help academicians to improve their knowledge but studies reveal that teachers are not willing to share their knowledge (Carroll *et al*., 2003). This may be due to the reason that academicians do not have to depend on each other like in corporate sector. Their jobs are independent of each other so they might not communicate due to lack of interaction (Darling-Hammond and Ball, 1998). This lack of interaction can cause several other problems which hinder knowledge sharing. For example, lack of interaction will lead to less informal communication, which will lead to lack of trust and thus creating situation that cause less knowledge sharing.

Hew and Hara (2007) conducted a study on motivators and barriers of online knowledge sharing for teachers. In this study they concluded that the following factors act as "motivators and barriers to knowledge sharing".

Motivators: Collectivism (reported by 11 teachers), reciprocity (reported by 8 teachers), personal gains (reported by 7 teachers), altruism (reported by 7 teachers), technology (reported by 4 teachers), respectful environment (reported by 7 teachers), interest of seeker (reported by 3 teachers).

Barriers: Lack of knowledge (reported by 7 teachers), lack of time (reported by 7 teachers), technology (reported by 4 teachers), negative attitude of seeker and might backfire (reported by 1 teacher).

Job satisfaction and knowledge sharing: Enough literature does not exist on the nature of relationship between knowledge sharing and job satisfaction. As stated in a study done by Almahamid *et al*. (2010) in which they examined the relationships between knowledge sharing practices, employee adaptability, employee learning behaviour and job satisfaction. Study says that the relationship between these factors is not mature yet (at "infancy" level) and therefore there is a need to theoretically and empirically explore the nature of relationship between these factors.

Despite less number of studies on knowledge sharing and job satisfaction, those studies which explored this relationship showed a positive correlation between these two factors. Like, Almahamid *et al*. (2010) concluded that a positive significant correlation exists between knowledge sharing practices, employee learning commitment, employee adaptability and job satisfaction.

Pascoe *et al*. (2002) did a study in three settings which are tactical headquarters, a single service strategic headquarters; and a joint services strategic headquarters. Their study was based on this assumption that companies invest heavily on IT to reduce the impact of knowledge loss (due to turnover) but with seldom success. They say that this is because of less understanding about those factors which might increase/decrease knowledge sharing. For this reason a factor which is of particular importance for them was "employees' motivation to come up with new and better ways of working, their willingness to voice and discuss innovative ideas and their willingness, generally, to share information and corporate knowledge with their organizational colleagues". In their study they found that job satisfaction and morale, motivates an employee to work well which in return has a positive impact on the willingness of an employees to share knowledge.

Rehman *et al*. (2010) reviewed factors affecting knowledge sharing behaviour. They also showed an indirect link between knowledge sharing behaviour and job satisfaction. Their study stated that job satisfaction impacts affective organizational commitment and latter has an impact on knowledge sharing behaviour. Based on literature, following hypotheses will be tested:

Null hypotheses:

H_{01}: Job satisfaction has statistically no significant relationship with explicit knowledge donation.
H_{02}: Job satisfaction has statistically no significant relationship with explicit knowledge collection.
H_{03}: Job satisfaction has statistically no significant relationship with implicit knowledge donation.
H_{04}: Job satisfaction has statistically no significant relationship with implicit knowledge collection.

METHODOLOGY

Instrument selection and designing: Questionnaire method was opted to collect data. Minnesota Satisfaction Questionnaire (MSQ) long-form (Weiss *et al*. (1967) was adapted to measure different aspects of job satisfaction while knowledge sharing (knowledge collection and donation) was measured by adopting the items from Reychav and Weisberg (2009). Items for job satisfaction were measured on 5 likert scale where 1 corresponds to very dissatisfied and 5 to very satisfied. Similarly, knowledge sharing items were also measured on 5 likert scale. 1-strongly disagree to 5-strongly agree. MSQ is a multi dimensional instrument and it was used because multiple-item instrument is more reliable as compare to single-item measure. Managers would like to use multiple-item measure as it helps to mention the strengths and weaknesses as well which single-item instrument do not (Oshagbemi, 1999). Job satisfaction was measured through the following items:

Ability utilization, achievement, activity, advancement, authority, company policies as used because and practices, compensation, co-workers, creativity, independence, moral values, recognition, responsibility, security, social service, social status, supervision-human relation, variety and working conditions. Knowledge sharing was categorized into explicit knowledge donation, explicit knowledge collection, implicit knowledge donation and implicit knowledge collection.

Instrument modifications: Before sending the questionnaire to the actual respondents, researcher requested few personnel (academicians) to go through the items and suggest changes, if any, according to Malaysian culture. These suggestions were based on difficulty level of language or wording used in the actual questionnaire. Due to this, ten items were removed from MSQ as they were reported to be repeating by the understanding of feedback providers. One factor Supervision-Technical from MSQ was not included in the questionnaire because in academics there is no need for this dimension of job satisfaction. As faculty members do not need technical training like the corporate people need from their boss.

Instrument distribution and respondents: Questionnaire was distributed manually and a copy was available online as well. Respondents could access that online version through the link provided by researcher. Online version was available for three weeks. Questionnaire was personally delivered and collected from the CIS faculty members of Universiti Teknologi PETRONAS (UTP). Besides, UTP, link of online version of questionnaire was emailed to CIS faculty members of Universiti Teknnology Mara (UiTM), Universiti Malaya (UM) and Multimedia Univesiti (MMU). Multiple regression analysis was used to find the correlation among job satisfaction and other variables. Internal reliability was tested through Cronbach Alpha test. And the cut-off level considered acceptable was 0.70 (Cortina, 1993).

Table 1: Demographic information of respondents

		Frequency	%
Gender	Male	44	49.4
	Female	45	50.6
	Total	89	100
Job Type		Frequency	%
	Contract	24	27
	Permanent	65	73
		89	100
Experience		Frequency	%
(in years)	Less than 2	9	10.1
	2-5	17	19.1
	6-9	18	20.2
	More than 10	45	50.6
	Total	89	100
Designation		Frequency	%
	Lecturer	41	46.1
	Senior Lecturer	33	37.1
	Associate Professor	10	11.2
	Professor	5	5.6
	Others	-	-
	Total	89	100

RESULTS AND ANALYSIS

Descriptive statistics: Almost equal number of participants (male and female) participated in the survey. Female accounts for 50.6% of the total number of respondents while male represents 49.4 % (N = 45 for female and 44 for male). Twenty-seven percent respondents were doing their job on contract basis whereas 73% were permanent employees of their respective institutes (N = 24 for contract and 65 for permanent). Majority of the respondents were experienced as they had more than 10 years of experience (50.6%) while few respondents (10.1%) had less than two years of experience. Lecturers contribute to 46.1% of the total sample, senior lecturers 37.1%, associate professors 11.2% and professors 5.6%. Table 1 provides a summarized detail about the information of respondents.

Reliability and item analysis: Cronbach Alpha was used to measure the internal consistency of the items as it provides good estimate of reliability (Nunally and Bernstein, 1994). Results showed that data is highly reliable as value for Cronbach alpha is 0.873. Item analysis was also conducted. On the basis of item analysis, three factors namely, authority, variety and working condition were removed from further analysis

Table 2: Item analysis

	Cronbach Alpha if item deleted				Cronbach Alpha if item deleted		
1	Ability Utilization			12	Recognition		
	Item 7	0.653	0.773		Item 17	0.863	0.877
	Item 25	0.67			Item 35	0.821	
	Item 43	0.767			Item 54	0.823	
2	Achievement				Item 70	0.874	
	Item 18	0.661	0.731		Item 88	0.864	
	Item 36	0.673		13	Responsibility		
	Item 55	0.624			Item 34	0.697	0.75
	Item 89	0.714			Item 53	0.732	
3	Activity				Item 69	0.699	
	Item 19	0.632	0.711		Item 87	0.63	
	Item 37	0.647		14	Security		
	Item 56	0.669			Item 11	0.9	0.905
	Item 72	0.681			Item 29	0.845	
	Item 90	0.686			Item 47	0.828	
4	Advancement			15	Social Service		
	Item 14	0.642	0.714		Item 38	0.669	0.741
	Item 50	0.575			Item 57	0.611	
	Item 66	0.608			Item 73	0.686	
	Item 85	0.701		16	Social Status		
5	Authority				Item 26	0.824	0.833
	Item 6	0.504	0.638		Item 62	0.71	
	Item 24	0.538			Item 80	0.766	
	Item 42	0.603		17	Supervision - Human Relations		
	Item 78	0.617			Item 10	0.898	0.913
6	Company Policies and Practices				Item 28	0.885	
	Item 9	0.895	0.907		Item 32	0.883	
	Item 27	0.877			Item 46	0.899	
	item 45	0.896			Item 51	0.902	
	Item 63	0.875		18	Variety		
	Item 81	0.888			Item 5	0.523	0.635
7	Compensation				Item 23	0.453	
	Item 12	0.8	0.823		Item 41	0.647	
	Item 48	0.732			Item 77	0.612	
	item 84	0.818		19	Working Conditions		
	Item 30	0.746			Item 13	0.629	0.583
8	Co-workers				Item 31	0.327	
	Item 15	0.74	0.749		Item 49	0.385	
	item 33	0.634			Item 61	0.628	
	Item 52	0.676		20	Explicit KD and KC		
	Item 68	0.702			Item 1	0.709	0.781
	Item 86	0.744			Item 3	0.73	
9	Creativity				Item 5	0.751	
	Item 2	0.656	0.765		Item 7	0.721	
	Item 20	0.67		21	Implicit KD		
	Item 39	0.722			Item 9	0.711	0.812
10	Independence				Item 13	0.737	
	Item 4	0.607	0.719		Item 17	0.78	
	Item 22	0.684		22	Implicit KC		
	Item 60	0.577			Item 11	0.634	0.748
	Item 76	0.634			Item 15	0.643	
11	Moral Values				Item 19	0.717	
	Item 21	0.641	0.706				
	Item 40	0.618					
	Item 59	0.651					
	Item 75	0.659					

Items which increased the Cronbach alpha value were removed. Those factors whose value was less than 0.70 were also not included in the results

as they do not met the criteria to qualify item analysis. Table 2 shows the Cronbach value if item deleted plus the Cronbach alpha value for each factor. Alpha values for factors ranged from 0.706 to 0.913. Hence all the factors included in the analysis had good reliability.

Mean and standard deviation of job satisfaction dimensions among CIS faculty members: CIS faculty members are satisfied mostly with the independence they get from their job and the moral values. Mean values for these two factors are 4.08 and 4.01 respectively. Mean values for creativity (3.97), social service (3.94), achievement (3.88), security (3.84), co-workers (3.82), activity (3.80) and recognition (3.73) are also high as compare to other dimensions of job satisfaction. Table 3 summarizes the mean value of every factor and the standard deviation.

Hypotheses testing: Multiple model regression method (Hair Jr *et al*., 1998) was used to analyze the

Table 3: Job satisfaction level based on different dimensions

	Ability utilization		Independence
Mean	3.76	Mean	4.08
S.D.	0.477	S.D.	0.527
	Achievement		Moral values
Mean	3.88	Mean	4.01
S.D.	0.518	S.D.	0.488
	Activity		Recognition
Mean	3.80	Mean	3.73
S.D.	0.504	S.D.	0.471
	Advancement		Responsibility
Mean	3.48	Mean	3.53
S.D.	0.608	S.D.	0.586
	Company policies and practices		Security
Mean	3.26	Mean	3.84
S.D.	0.791	S.D.	0.498
	Compensation		Social Service
Mean	3.72	Mean	3.94
S.D.	0.564	S.D.	0.436
	Co-workers		Social Status
Mean	3.82	Mean	3.69
S.D.	0.415	S.D.	0.632
	Creativity		Supervision
Mean	3.97	Mean	3.53
S.D.	0.487	S.D.	0.524

hypotheses. Every dimension of job satisfaction (adapted 19 factors from MSQ, 3 were removed during item analysis) taken from MSQ was treated as independent variable. Dependent variables were explicit knowledge donation, explicit knowledge collection, implicit knowledge donation and implicit knowledge collection. Sixteen factors of MSQ job satisfaction (independent variable) were first tested with explicit knowledge donation (dependent variable) and then with explicit knowledge collection (dependent), implicit knowledge donation (dependent) and implicit knowledge collection (dependent) separately.

Job satisfaction and explicit knowledge donation: Table 4 shows the model fitness between independent variables and explicit knowledge donation as dependent factor. Model is reliable as $F_{(89, 16)} = 3.358$ and $p<0.05$. Correlation value 'R' is 0.654 whereas R-square is 0.427. This shows that 42.7% of variation in explicit knowledge donation can be explained by independent factors. But out of these 16 factors of job satisfaction, only five factors, namely achievement, company policies and practices, recognition activity and responsibility, have significant correlation with explicit knowledge donation as $p<0.05$ for these factors. This also suggests that H_{01} is rejected. Appendix A gives detailed information about the significance level of every independent factor on dependent.

Job satisfaction and explicit knowledge collection: Table 5 is about the multiple regressions between 16 job satisfaction dimensions and explicit knowledge collection. R-square value is 0.522 which shows that 52.2% variance in the dependent variable (in this case explicit knowledge collection) is explained by independent variables. Correlation value 'R' is also high (R = 0.723). Thus model is suitable to use as $F_{(89, 16)} = 4.917$ and $p = 0.000<0.05$. Based on p-value our hypothesis H_{02} is rejected. On the other hand, only two factors of job satisfaction have significant correlation with explicit knowledge collection as their p-values are less than 0.05. Factors which have significant correlation are company policies and practices and co-workers. Appendix B shows the correlation of every factor on dependent variable.

Job satisfaction and implicit knowledge donation: Table 6 summarizes the results of correlation between job satisfaction dimensions and implicit knowledge donation. Model shows that 42.7% variation in the dependent variable (implicit knowledge donation) can be predicted by independent variables. Correlation is also high at 'R' = 0.654. Thus model seems to be good at $F_{(89, 16)} = 3.358$ and $p<0.05$ and rejecting hypothesis H_{03}. Five factors have significant correlation with

Table 4: Correlation between job satisfaction and explicit knowledge donation

R-value	R^2-Value	F-value	Sig	Achievement (Sig)	Company Policies (Sig)	Recognition (Sig)	Responsibility (Sig)
0.654	0.427	3.358	0.000	0.005	0.045	0.009	0.041

Table 5: Correlation between job satisfaction and explicit knowledge collection

R-value	R^2-value	F-value	Sig	Company Policies (Sig)	Co-workers (Sig)
0.723	0.522	4.917	0.000	0.001	0.010

Table 6: Correlation between job satisfaction and implicit knowledge donation

R-value	R^2-value	F-value	Sig	Achievement (Sig)	Activity (Sig)	Company policies (Sig)	Recognition (Sig)	Responsibility (Sig)
0.654	0.427	3.358	0.000	0.005	0.024	0.045	0.009	0.041

Table 7: Correlation between job satisfaction and implicit knowledge collection

R-value	R^2 -value	F-value	Sig	Responsibility (Sig)
0.856	0.733	12.385	0.000	0.006

implicit knowledge donation. Those factors are achievement, activity, company policies and practices, recognition and responsibility. p-value for all these factors is less than 0.05 thus making them statistically significant factors. Appendix C summarizes the correlation between all 16 factors (as independent) and implicit knowledge donation (as dependent).

Job satisfaction and implicit knowledge collection: Table 7 shows that the correlation value between implicit knowledge collection and job satisfaction dimensions is 0.856 which is quite high. 73.3% variation in the dependent variable is explained by independent factors. Thus model is significant at $F(89, 16) = 12.385$, $p<0.05$ and hence H_{04} is rejected. Besides the fitness of model, only one factor has significant correlation. That factor is responsibility and its p-value is 0.005 which is less than 0.05. For detail results of this model, please see Appendix D.

DISCUSSION

CIS academicians from Malaysian universities scored higher on independence and moral values. Academicians normally have to work alone as compare to industrial employees whose work or output becomes the input for other employees. Thus their output or work depends on the performance of others. Whereas in case of academicians, they have to work alone and their performance is solely based on their own work. Another factor which scored high was moral values. In this study, moral values was referred to ethics or beliefs (Weiss *et al*., 1967) and the reason might be that as the respondents are from CIS department which means they are teaching technical subjects and technology has nothing to do with beliefs. Some other factors which scored high for job satisfaction includes social service, achievement, security and co-workers. These findings are consistent with the studies previously done in the field of academics. For example, Eyupoglu and Saner (2009) study results showed that teachers are motivated more through intrinsic factors rather than extrinsic. As moral values, social service, social status is intrinsic in nature so results of this study also strengthen the previous literature. Interestingly, compensation was not included as a major satisfactory factor by respondents. In a study done by Oshagbemi (1999), pay was also not an important factor contributing towards job satisfaction. Thus it can be concluded that those factors which are intrinsic in nature, play more contributing role for the satisfaction of academicians rather than extrinsic factors.

People may prefer to collect and share explicit knowledge if it helps them to grow more in their organizations and due to sharing, they might get recognition. Besides, if company adopts a policy in which everybody has to share then knowledge sharing will increase in the organization and thus knowledge received will also increase. At the same time, if company policies are made in such a way that employees feel knowledge sharing to be their responsibility instead of an enforced object or policy, this will also help to improve the level of knowledge sharing in the organization. These results are consistent with the results of prior research in which it was concluded that intrinsic and extrinsic motivation helps to enhance knowledge contribution (Horie and Ikawa, 2007). In current study recognition, company policies and practices and achievement can be categorized into intrinsic and extrinsic motivating factors and they have an impact on explicit knowledge donation and collection as mentioned in the results.

Relationship with colleagues is an important factor for implicit knowledge collection and donation behaviour. Good working relationship with co-workers increases the level of communication and trust which ultimately enhances the mutual understanding. And if employees have good level of understanding then there are more possibilities of knowledge sharing. Employees may also collect or donate the knowledge they have, to get recognition in the organization or to grow if advancement criteria takes knowledge sharing behaviour into consideration. Therefore advancement and recognition process in the organization do impact implicit knowledge donation and collection.

CONCLUSION

This study focused on the job satisfaction dimensions mentioned in MSQ and the knowledge sharing behaviour (both explicit and implicit, collection and donation) of Malaysian academicians from the departments of CIS. Results showed that, company policies and practices, recognition and responsibility had strong correlation with explicit knowledge donation. Company policies and practices and co-workers contributed more towards explicit knowledge collection. Whereas achievement, activity, company policies and practices, recognition and responsibility impacts implicit knowledge donation and responsibility has a correlation with implicit knowledge collection.

This study also has some limitations like less number of respondents and thus results should be carefully generalized. However it will be interesting to see in future studies that whether the factors, which, Malaysian academicians consider important for their job satisfaction and knowledge sharing, are also important for academicians from other nationalities or not. This requires in-depth analysis across various countries in future.

Appendix A: Job satisfaction factors and explicit knowledge donation

Coefficients[a]

Mode		Unstandardized coefficients B	S.E.	Standardized coefficients β	t	Sig.
1	(Constant)	0.379	0.953		0.398	0.692
	Ability_utilization	-0.315	0.170	-0.250	-1.852	0.068
	Achievement	0.493	0.171	0.425	2.887	0.005
	Activity	0.380	0.165	0.318	2.301	0.024
	Advancement	0.028	0.125	0.028	0.225	0.823
	Company_Policies	0.179	0.088	0.236	2.037	0.045
	Compensation	0.160	0.125	0.150	1.281	0.204
	Co-workers	-0.125	0.163	-0.086	-0.765	0.447
	Creativity	0.129	0.168	0.105	0.766	0.446
	Independence	0.042	0.132	0.037	0.319	0.750
	Moral_values	0.168	0.136	0.136	1.238	0.220
	Recognition	0.384	0.143	0.301	2.682	0.009
	Responsibility	-0.301	0.145	-0.293	-2.076	0.041
	Security	-0.240	0.151	-0.199	-1.592	0.116
	Social_service	-0.122	0.155	-0.089	-0.786	0.434
	Social_status	-0.011	0.096	-0.011	-0.112	0.911
	Supervision	0.093	0.144	0.081	0.648	0.519

a. Dependent Variable: Explicit_Knowledge_Donation

Appendix B: Job satisfaction factors and explicit knowledge collection

Coefficients[a]

		Unstandardized coefficients B	S.E.	Standardized coefficients β	t	Sig.
1	(Constant)	1.022	0.634		1.613	0.111
	Ability_utilization	0.173	0.113	0.188	1.524	0.132
	Achievement	-0.100	0.114	-0.119	-0.882	0.380
	Activity	-0.090	0.110	-0.103	-0.818	0.416
	Advancement	0.026	0.083	0.036	0.313	0.755
	Company_Policies	0.195	0.059	0.353	3.333	0.001
	Compensation	0.160	0.083	0.205	1.926	0.058
	Co-workers	0.289	0.109	0.273	2.659	0.010
	Creativity	0.201	0.112	0.224	1.793	0.077
	Independence	-0.084	0.088	-0.101	-0.953	0.344
	Moral_values	0.053	0.090	0.059	0.587	0.559
	Recognition	-0.112	0.095	-0.120	-1.172	0.245
	Responsibility	0.142	0.097	0.190	1.473	0.145
	Security	-0.069	0.100	-0.078	-0.683	0.497
	Social_service	0.074	0.103	0.073	0.711	0.479
	Social_status	0.069	0.064	0.100	1.086	0.281
	Supervision	-0.145	0.096	-0.174	-1.518	0.133

a. Dependent Variable: Explicit_Knowledge_Collection

Appendix C: Job satisfaction factors and implicit knowledge donation

Coefficients[a]

		Unstandardized coefficients B	S.E.	Standardized coefficients β	t	Sig.
1	(Constant)	0.379	0.953		0.398	0.692
	Ability_utilization	-0.315	0.170	-0.250	-1.852	0.068
	Achievement	0.493	0.171	0.425	2.887	0.005
	Activity	0.380	0.165	0.318	2.301	0.024
	Advancement	0.028	0.125	0.028	0.225	0.823
	Company_Policies	0.179	0.088	0.236	2.037	0.045
	Compensation	0.160	0.125	0.150	1.281	0.204
	Co-workers	-0.125	0.163	-0.086	-0.765	0.447
	Creativity	0.129	0.168	0.105	0.766	0.446
	Independence	0.042	0.132	0.037	0.319	0.750
	Moral_values	0.168	0.136	0.136	1.238	0.220
	Recognition	0.384	0.143	0.301	2.682	0.009
	Responsibility	-0.301	0.145	-0.293	-2.076	0.041
	Security	-0.240	0.151	-0.199	-1.592	0.116
	Social_service	-0.122	0.155	-0.089	-0.786	0.434
	Social_status	-0.011	0.096	-0.011	-0.112	0.911
	Supervision	0.093	0.144	0.081	0.648	0.519

a. Dependent Variable: Implicit_Knowledge_Donation

Appendix D: Job satisfaction factors and implicit knowledge collection

Coefficients[a]						
		Unstandardized Coefficients		Standardized coefficients		
		B	S.E.	β	t	Sig.
1	(Constant)	-0.269	0.542		-0.495	0.622
	Ability_utilization	0.174	0.097	0.165	1.790	0.078
	Achievement	0.072	0.097	0.074	0.742	0.460
	Activity	0.017	0.094	0.017	0.182	0.856
	Advancement	0.114	0.071	0.138	1.605	0.113
	Company_Policies	0.076	0.050	0.119	1.506	0.136
	Compensation	0.141	0.071	0.159	1.992	0.050
	Coworkers	0.088	0.093	0.073	0.950	0.345
	Creativity	-0.026	0.096	-0.025	-0.272	0.786
	Independence	0.108	0.075	0.114	1.438	0.155
	Moral_values	0.034	0.077	0.033	0.441	0.660
	Recognition	0.117	0.082	0.110	1.436	0.155
	Responsibility	0.235	0.083	0.274	2.845	0.006
	Security	0.093	0.086	0.092	1.080	0.284
	Social_service	-0.002	0.089	-0.002	-0.027	0.978
	Social_status	0.006	0.054	0.008	0.112	0.911
	Supervision	0.051	0.082	0.054	0.627	0.532

a. Dependent Variable: Implicit_Knowledge_Collection

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