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Knowledge Sharing Behaviour among Academic Staff at a Public Higher Education Institution in Malaysia

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Abstract**—**This study applied Theory of Planned Behaviour (TPB) to explain the knowledge sharing behaviour among academic staff at a Public Higher Education Institution (HEI) in Malaysia. The main objectives of this study are; to identify the components that influence knowledge sharing behaviour and to determine the levels of knowledge sharing behaviour among academic staff. A total of 200 respondents were participated in answering questionnaires. The findings of this study revealed that level of perceiving and implementing knowledge sharing behaviour among academic staff at a Public HEI in Malaysia exist but not openly or strongly practiced. The findings were discussed and recommendations for the future research were also addressed.

Keywords**—**Attitude, Knowledge Sharing Behaviour, Perceived Behavioural Control, Subjective Norm.

I. Introduction

THE concept of Knowledge Management (KM) was first introduced by [1]. Since the introduction of the concept, it has attracted much attention by the business world and considered to be crucial to the operation of modern organizations [2]. As a result, organizations especially those who are in knowledge-intensive industries have introduced knowledge management systems in order to use the knowledge resource more effectively and efficiently [1]. According to [3], there are two benefits organization gained if the members in organization shared their knowledge. Firstly, valuable knowledge can be disseminating effectively and efficiently within the organization through the process of knowledge sharing. Secondly, the ability of individual knowledge to recognize the value of knowledge, assimilate it, and apply it in the commercial end, can be increase by knowledge sharing among individuals of an organization.

However, barriers and problems for knowledge sharing in organizations are inevitable [4]. Theoretically, knowledge sharing is unnatural. People think that their knowledge is valuable and important and unwilling to share their knowledge unless there are enough incentives.

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Yet, knowledge sharing culture can be successfully embedded in organizations not only directly in business strategy but also by changing employee's attitude and behaviours to promote willing of sharing knowledge [5].

In this information mobility era, incredible amount of knowledge and information can travel fast and the computing and telecommunications technology make it possible [6]. Therefore, to sustain the competitive advantage has become increasingly more difficult for organizations [7]. Under these circumstances, organizations may differentiate themselves based on the knowledge they possess which are from their employees [8]. Reference [6] and [7] supported that the only thing to be sustainable is through knowledge advantage. Knowledge is seen as the most strategically important resource [9], [10], [11] and the most valuable thing [12] for the organizations striving for competition in knowledge economy. Therefore, the concept of knowledge in organizations has become increasingly popular and it has been recognized as a critical strategic resource for the organizations [13], [14].

An important enabler of KM is knowledge sharing [13], [15]. [16]; and many organizations state that sharing knowledge is vital to utilize core competencies and to realize sustainable competitive advantage [14]. Increased sharing of knowledge generates the benefits of increased organizational knowledge without having to increase the energy or cost [17]. According to [18], knowledge sharing is a process where individual exchange his or her knowledge and ideas through discussions to create new knowledge or ideas. The information shared among peers involved visions, aims, opinion and questions besides the work aspects that would enhance his or her job performance and at the same time increased the organizational performance.

As cited by [19], knowledge rather than capital or labour is the only meaningful resource in the knowledge society. Organizational experts may view the individual knowledge as their intellectual property which gives them a personal advantage that they can leverage for the organization [6]. To some point, every human process issues are a key success factor because everyone is important since people formed organizations to accomplish tasks. However, [4] warned that knowledge sharing is the keystone of many organizations. Some might not be capable to function as knowledge based organizations since they suffer from knowledge sharing disabilities. The transfer of knowledge is a core issue in organization [15]. Tacit knowledge especially is difficult to be

shared especially whenever an individual refused to do so. Even though knowledge sharing among individuals has been acknowledged as a positive force for the survival of an organization but the factors that encourage or discourage knowledge sharing behaviours in the organizational context are poorly understood [20]. Therefore, it is not surprising that individuals are unwilling to share their knowledge with others.

It is important to understand when people are willing to share their knowledge and how an organization can facilitate this type of behaviour from both research and practical standpoint. Individuals do not always willing to share their knowledge and they may not be willing to share as much as the organization would like them to. It supported by [19] which stated that the biggest difficulty in knowledge management was changing people's behaviour. Unwillingness to share knowledge also has become an issue in tertiary education. Education systems, including universities normally focused on delivering the explicit knowledge. In an academic institution, there are group of experts and knowledge workers; academic staff that possess tacit knowledge with experiences in their respective fields therefore it is best place for practicing knowledge management system. Regrettably, even though universities are knowledge service providers, many Malaysian universities were not utilising knowledge to the fullest to improve their performance. This is because the data, information and knowledge available in these universities are not appropriately managed when they could be efficiently shared and reused to generate new knowledge [21].

A survey by the Centre for Academic Development (CADe), found that the level of knowledge management practices in Malaysian universities was merely moderate. Even though most Malaysian universities have invested heavily in Information and Communication Technologies (ICT), the new technologies have not enabled the free flow and sharing of knowledge among members of the respective organizations, including the academic staff and students [22]. Nevertheless, very little empirical research investigate the knowledge sharing behaviour of academic staff at higher education can be found [23], [24], especially in Malaysia [25], [26]. Other studies were conducted in service industry [2], [24], [27], food industry [28] and marketing industry [29].

The purpose of this study is to examine the knowledge sharing behaviour among academic staff of public HEI in Malaysia. Therefore, the objectives of the research are: 1) to identify the components that influence knowledge sharing behaviour; and, 2) to determine the levels of knowledge sharing behaviour among academic staff. Based on the facts and issues from the problem statement, this study has developed two research questions: 1) what are the components that influence knowledge sharing behaviour? and 2) what are the levels of knowledge sharing behaviour among academic staff?

II. Literature Review

According to [30], knowledgeable individuals in organizations must move to the level of groups and the organization as a whole so that it can be used to achieve the organizational goals. There is a growing awareness that knowledge sharing is vital to knowledge creation, organizational learning, and performance achievement [31]. Knowledge sharing is considered a natural function of the workplaces as individuals in organizations always created and shared knowledge. However, organizations must know what factors that promotes employees to share knowledge among each other. Although there is much on paper about why managing knowledge is important to organizations, there is very much less on the how, which is the process that are used to identify, capture, share and use knowledge within organizations [13].

There are four variables in this study, which was adopted from the Theory of Planned Behaviour developed by [32]. Knowledge sharing behaviour (KSB) as a dependent variable, attitude (ATT), subjective norm (SN) and perceived behavioural control (PBC) as independent variables were used for this study. Knowledge sharing behaviour (KSB) is defined as the degree to which an employee actually shares knowledge with other organizational members [23], [32]. According to [13], the importance of KSB is it provides a link between the individual or employees and the organization by moving knowledge, and will then be converted into competitive value for the organization. Previously, in the studies to measure KSB researchers used variables such as frequency, quantity, and time spend on knowledge sharing etc.

In research conducted by [33], a model of knowledge management and knowledge sharing for their study was developed inspired by the work of [11]; they aimed to understand the social and organizational factors that influence knowledge sharing. The study is conducted via online survey that was developed and subsequently administered in a tertiary educational institution (academic staff, administrators and students) in Singapore. The result show that reward and recognition, open-mindedness and cost concerns of knowledge hoarding to be the strongest predictors of knowledge sharing rather than pro-social motives or organizational concern. On the whole, the findings provide evidence for the importance of a conducive organizational climate and state-of-the art performance management systems in high performing knowledge organizations. Reference [20] examined factors believed to influence individuals' knowledge sharing intentions and drew upon the Theory of Reasoned Action (TRA) [34] for the study's theoretical framework. They have conducted a field survey of 154 managers from 27 Korean organizations, they found that attitudes toward and subjective norms with regard to knowledge sharing as well as organizational climate affect individuals' intentions to share knowledge. Additionally, they also find that anticipated reciprocal relationships affect individuals' attitudes toward knowledge sharing while both sense of self-worth and organizational climate affect subjective norms. However, contrary to common belief, they find that anticipated extrinsic rewards exert a negative effect on individuals' knowledge sharing attitudes.

A research on knowledge sharing behaviour of bank employees in Greece which is based on the Theory of Planned

Behaviour (TPB) was conducted by [2]. The research findings indicated that an individual's attitude toward knowledge sharing is the primary factor influencing intention to share knowledge, meaning that whether a person actually shares knowledge with others primarily depends on his or her personal, favourable or unfavourable, appraisal or evaluation of the behaviour in question. Second, intention to share knowledge was found to be influenced by subjective a norm, that is by the perceived social pressure to perform or not knowledge sharing. Finally, the direct effect of PBC on intention and on behaviour, respectively, as well as the effect of intention on knowledge-sharing behaviour, although positive they are basically regarded as inconclusive.

However, besides drawing out the research model on the basis of these theories, researcher also examined the impact of culture on knowledge sharing behaviour. In a research that was conducted in Russia, China and Brazil by [35], the authors assumed that factors such as degree of collectivism, competitiveness, the importance of saving face, in-group orientation, and attention paid to power and hierarchy, and culture specific preferences for communication modes, would explain differences in knowledge seeking and sharing patterns. The results showed that these factors had different levels of importance among employees in the three participating countries. The issue of saving face was less important than expected in China. Modesty requirements as well as a high degree of competitiveness among employees were found to be serious barriers to information sharing in China, but not in Russia and Brazil. Perceived differences in power and hierarchy seemed to be less critical in all three countries than initially assumed.

The present study seeks to apply the Theory of Planned Behaviour (TPB) to investigate knowledge sharing behaviour within an academic profession. The Theory of Planned Behaviour (TPB) [32] is a psychological model that examines the behaviour of individuals and states that the best predictor of a person's behaviour in any given situation is their intention to perform the behaviour. The theory suggests that a person's behavioural intention is based upon three conceptually independent: attitude toward the behaviour, subjective norm, and perceived behavioural control [2], [32].

Attitude (ATT) defined by [32] is the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question. On the other hand, [36] defined that attitude as whole positive or negative evaluations of behaviour. A behavioural belief refers to an individual's idea that the behaviour will lead to a certain outcome or consequences [37], [38]. The more positive perceived consequences of behaviour, the more favourable the attitude towards performing the behaviour. Hence, if a person holds a negative attitude about behaviour, he or she will be less likely to take part in the behaviour compared to one who has a positive attitude about the behaviour.

Subjective norm (SN) is defined as a perception of general social pressure from important of others to perform or not to perform a given behavior [36]. In addition, subjective norm are defined as having similar origins in a combination of people's perceptions that others think they should or should not perform the behaviour and their motivation to conform to other's desires [37], [39]. Subjective norm is derived from normative beliefs and [37] explained that the subjective norm is a summary of the person's beliefs of other people such as co-workers, managers, etc. that concerning how the individual should act in the situation (normative beliefs) and how enthused the individual is to comply with those individuals (motivation to comply). According to [36], normative beliefs are an individual's perception about the particular behaviour, which is influenced by the judgment of significant others. The theory predicts that an individual will feel normative pressure to act upon behaviour if they believe that significant others have the thinking of that individual should engage in the behaviour and if the individual is motivated to comply with those parties [37].

Perceived Behavioural Control (PBC) is determined by the total set of available control beliefs. PBC is a function of the resources and opportunities an individual have (control beliefs) and the assisting effect of those factors (perceived facilitation) [37]. Additionally, according to [32] human behaviour also is funnel by beliefs about factors that can either aid or deter performance of the behaviour and the perceived power of these factors (control beliefs). Control beliefs are beliefs about the perceived presence or absence of factors that may help or impede the performance of behaviour in interest [14]. PBC factors are dispositional factors that refer to the employee's beliefs about the perceived of vital resources and opportunities that may aid knowledge sharing [14]. The internal factors such as individual differences, information, skills, abilities, and emotion, and external factors such as time involve, cooperation with others, and financial limitations [32]. As cited by [37], these control beliefs and perceptions of facilitation may be based on past experience or opportunities. The theory predicts that the greater the employee's belief that they possesses resources and opportunities, the fewer impediments they anticipates and as such has greater perceived control over the behaviour.

III. Methodology

This study was conducted by structured questionnaire survey to gather the data. This study also adopted a cross-sectional research design for data collection purpose. Stratified random sampling method was done to collect the data from samples, which represent all the populations' characteristics. The collection of data was conducted within three weeks, and the unit of analysis in this study was individual unit. In this study, the academic staff in the university formed the unit of analysis. A sum of 400 questionnaires was randomly distributed to four faculties in the university. From the total questionnaires distributed, 187 questionnaires were returned. The 13 questionnaires were collected through personal visits in order to get a total of 200 questionnaires giving the survey a response rate of 50 percent. This study used questionnaires from the previous research [20], [24], [40] and makes an alteration to adapt with research objectives. Variables constructed from multiple questionnaire items were first

selected based on the theoretical meaning.

The questionnaire of this study comprised two main sections and took approximately 10 to 15 minutes to be completed. The majority of instruments were adopted from [20]. The first section called as knowledge sharing behaviour and sought to measure the knowledge sharing behaviour in the context of academic staff. This section was further divided into four subsections: knowledge sharing behaviour (KSB), attitude (ATT), subjective norms (SN) and perceived behavioural control (PBC). The second section of the questionnaire consists of the demographical background of the respondents. It includes designation, area of specialization, academic appointment, gender, age, and working experiences. The questionnaires have 21 questions represented four (4) variables using 5-point Likert scale. This scale applied for all the questions in Section A. KSB was measured by using (5) items ranging from (1) very infrequently to (5) very frequently. ATT, SN and PBC were measured using 14 items questionnaire. The respondents were asked to measure the respondent's attitude, subjective norm and perceived behavioural control towards knowledge sharing behaviour ranging from (1) strongly disagree to (5) strongly agree.

IV. Results

From a total of 200 respondents, majority of participants came from female respondents with 126 persons (63.0 %) compared to male with only 74 persons (37.0%).

According to age range, a total of 30 (30.0%) of the respondents belong to the age group of 46-50 years. The lowest percentage came from age range of 55 years old and above with only 6 persons (3.0%). Majority of the respondents with 98.5% or 197 of them are full time workers and only 3 (1.5%) of them are contract workers. In terms of respondents' designation, out of 200 respondents, 83 persons (41.5%) were lecturers, 57 (28.5%) of the respondents were associate professor, 46 persons (23.0%) were senior lecturer and 14 persons (7.0%) were professors. It shows that majority of the respondents are lecturers. Besides, 25 out of 200 respondents (12.5%) had experienced the working life less than 5 years, 56 persons (28.0%) had worked between 5 to 10 years, 14 persons (7.0%) had working experience between 11 to 15 years, 25 persons (12.5%) with 16 to 20 years of working experiences and 80 persons (40.0%) had working experienced more than 20 years. This shows that majority of the respondents had experienced the working life more than 20 years.

A principal component factor analysis test was conducted for 21 items from four (4) variables. Results of factor analysis indicated that the knowledge sharing behaviour (KSB) measure was found to be consisted of seven items. The factor loadings of seven items range from .57 to .86. For attitude (ATT), there were five items ranging from .49 to .95. However, subjective norm with five items resulted into 2 dimensions. Therefore, factor SN was subsequently renamed as normative norm (NN) and comply norm (CN) for further analysis. Factor loadings of perceived behavioural control (PBC) with four items range from .81 to .87. Consequently, findings of this study highlighted two (2) components derived from subjective norm. Therefore discussion on levels of knowledge sharing behaviour among academic staff will be using five (5) variables instead of four (4) variables. Mean and standard deviations were calculated for the study.

From the results in Table 1, most of the respondents frequently shared work-related knowledge among their colleagues with mean scores of 3.78. Besides, attitude is a way of thinking and acting towards knowledge sharing and the respondents rated with mean score of 4.15. This shows most of the respondents 'agreed' that the knowledge sharing with other organizational member was good, not harmful, enjoyable, and valuable. Next, comply norm and normative norm which derived from subjective norm is a person's belief of other people. Comply norm consists of trying to follow superiors' policy and intention; accept and carry out superiors' decision even though it is different; and respect and put in practice the colleagues' decision. This entails that most of the respondents 'agreed' with mean score of 3.75. Likewise, the elements included in normative norm have mean score of 3.87. Moreover, perceived behavioural control is a perception of the ability to perform a given behaviour and this variable had the highest mean score with 4.36. Hence, most of the respondents 'agreed' with some of the elements such as to share knowledge are possible always and it is mostly up to the respondents whether to share knowledge or not. Based on this result, it can be concluded that perceived behavioural control was the major determinant to knowledge sharing behaviour among academic staff since it represents the highest mean and lowest standard deviation.

The result of the reliability test falls between 0.60 and 0.91. The value of Cronbach's Alpha for dependent variable which is knowledge sharing behaviour is 0.85. Furthermore, Cronbach's Alpha for the four independent variables, which are attitude with 0.88, comply norm with 0.60, normative norm 0.88 and perceived behavioural control with 0.91. Thus, the internal consistency and reliability of the measures used in this study are acceptable and can be considered good. However, the value for comply norm with 0.60 is considered as weak but still acceptable for this exploratory study.

TABLE I
Mean, Standard Deviation and Reliability

Variables	Mean	Standard Deviation	Reliability
Knowledge Sharing Behaviour	3.78	0.64	0.85
Attitude	4.15	0.67	0.88
Comply Norm	3.75	0.60	0.60
Normative Norm	3.87	0.73	0.88
Perceived Behavioural Control	4.36	0.57	0.91

V. Discussion and Conclusion

This study identified the components that influence knowledge sharing behaviour among academic staff. Three basic steps were carried out to conduct factor analysis: computing the correlation matrix of all variables, extracting

the factors, and rotating the factors to create a more understandable factor structure for interpretation. Formerly, three (3) independent variables; attitude, subjective norm and perceived behavioural control were predicted to influence knowledge sharing behaviour based on the model in theory of planned behaviour (TPB). However, two factors of subjective norm have been extracted from factor analysis and this factor labelled as comply norm and normative norm based on common criteria of each item. As a result, the components that influence knowledge sharing behaviour turn out to be four (4) variables which are attitude, comply norm, normative norm and perceived behavioural control. Thus, these variables were used as factors that influence knowledge sharing behaviour among academic staff. This results supported by [37] defined subjective norm is a function of the person's beliefs about whether significant others think he or she should perform behaviour (normative beliefs [NB]), weighted by the person's motivation to comply with these others (motivation to comply, [MC]).

Based on the second research objectives, the purpose of study is to determine the levels of knowledge sharing behaviour among academic staff. After conduct an analysis in previous chapter, the results revealed that level of perceiving and implementing knowledge sharing behaviour among academic staff in the university exist but not openly or strongly practiced. According to mean statistics, the mean scores of all variables were considered high (3.75 to 4.36). There was no low level of mean scores. The high mean scores implicate that respondents agreed that all variables influenced the knowledge sharing behaviour. Perceived behavioural control have more influence towards knowledge sharing behaviour compared to other independent variables. Even though the rest of variables were moderately high, their mean scores of above average imply that these variables are important because they may influence knowledge sharing behaviour and organizational effectiveness to certain degree. Besides, the internal consistency and reliability of the measure used in this study is acceptable with one another using twenty one (21) items tested. Thus, the instruments or items were reliable to measure research's variables (knowledge sharing behaviour, attitude, subjective norm, and perceived behavioural control).

The main contribution of this study firstly to identify the components that influence knowledge sharing behaviour and the result have shown the applicability of the independent variables which are attitude, comply norm, normative norm and perceived behavioural control in explaining knowledge sharing behaviour among academic staff. Secondly, the purpose of this study is to determine the level of knowledge sharing behaviour among academic staff and it was found that perceived behavioural control of academic staff was the major determinants on their behavioural to share knowledge.

However, Knowledge Management (KM) has been gaining since organizational realize the importance of knowledge as an intellectual asset and key source of competitive advantage [21]. Therefore, Malaysian Ministry of Higher Education (MOHE) has identified KM as one of the prerequisites to turn Malaysia into a centre of excellence for higher education by encouraging the growth of knowledge and individuals who are competent and innovated with high moral values in order to meet national and international needs [21]. It can be done by sharing of knowledge between individuals and departments in the organization which is considered a crucial process. However, the establishment of successful knowledge sharing is very hard to accomplish. Many barriers have been outlined in successful implementation and emphasizing knowledge sharing behaviour at organizational and individual level. The barriers, as stated in various studies such as culture, lack of communication skills, lack of time, lack of trust and so on [4], [13], [41].

Several limitations exist in the present study that restrains review. The vast constraints for this study were specifying the selected category of the respondents. The sample of this study was derived from academic staff of a single public higher education. Thus, the study may be limited to the extent to which respondents behaviours can be generalized to the general work force or to students. Additionally, the study was grounded in well developed theory and practice as such, has the theoretical support for the direction of the relationship without taking into consideration on the other factors.

Considering the limitations of the study, it is necessary to suggest several ideas for future researchers. First, since this research only focused on four faculties in the university, findings for the future research should be confirmed through a larger sample in order to increase generalizability and confirm the research findings. Involving all faculties or would be appropriate for identify the knowledge sharing behaviour in learning institutions. In order to verify and generalize the research results, the research should be expanded geographically within the same level of education institutions.

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