

## TITLE: CONSTRUCTING TACIT KNOWLEDGE SHARING BEHAVIOUR AMONG THE NON-ACADEMIC MEMBER OF INSTITUTIONS HIGHER LEARNING

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### ABSTRACT

*The purpose of this research is to explain the critical success factors of tacit knowledge sharing behavior among the non-academic staff of higher learning institutions. This research applied cross-sectional research design where the researchers used survey questionnaires for data collection. The data analysis used 150 non-academic staff of Malaysian higher learning institutions. This research applied confirmatory factor analysis (CFA) to assess the measurement model. The result from CFA analysis shows four-factor model supported the data which proved all the fit indices suggested by the previous researchers. The four-factor model was comprised of the underlying factors: 1) Big-Five personality traits 2) Motivation, 3) Self-efficacy, and 4) Mutual trust. The implication emanating from this study is that the higher learning institutions require those factors to facilitate the tacit knowledge sharing behavior among the non-academic staff of higher learning institutions.*

**Keywords:** *Tacit Knowledge Sharing Behaviour, Non-Academic Staff, Higher Learning Institutions, Malaysia.*

### INTRODUCTION

The behavior of Tacit Knowledge sharing (KS) among the employees has numerous benefits for the organizations (Panahi et.al., 2013). In today's competitive environment, knowledge sharing capabilities among the members of the organizations are highly required for their survival, individual development and profitability of the organizations to achieve long-term sustainable competitive advantages (Jafari et al., 2007). In other words, to comply with the fast technological, environmental changes and adapt to the competition, higher learning

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institutions are also trying to attain sustainable competitive advantages through their knowledge sharing capabilities (Mehralian et al., 2013). As Jafari et al. (2008) explain knowledge as “the most vital resource of the organization strategy.” Therefore, facilitating the behavior of tacit knowledge sharing among the member of higher learning institutions has numerous benefits, including time reduction in the work process for an assigned job, reducing operating costs, improvement of customer services, and flexibility with the rapid changes in the organization. Above all, this type of facilities may also push the institutions as complete learning institutions, and increased productivity and efficiency (Akhavan et al., 2009; Akhavan et al., 2010). According to Panahi et al., (2013) tacit knowledge is the knowledge that individual staff usually acquire individually or as a group from the workplace through the process of learning by doing. Therefore, tacit knowledge is more reliant on the knowledge holder attitude, the degree of attachment to a person’s mind, and deeply grounded in an individual’s intention for action and experience.

Thus, the practice of tacit knowledge sharing behavior among the individual employee has always been of concern to numerous researchers (Panahi et al., 2016; Suppiah & Sandhu, 2011). In recent times researchers are thrusting to investigate the various personality attributes to see the staff overall behavioral traits to seek and share tacit knowledge (Raman, 2014; Ma & Chan, 2014).

To-date, while there has not been much research on the perspective of higher learning instruction’s non-academic staff behavioral factors that may influence their tacit knowledge sharing behavior by using big-Five personality traits, motivation, self-efficacy, and mutual trust where this research will extensively contribute. Researchers classify knowledge sharing in two broad aspects, namely tacit knowledge to explicit knowledge (Nonaka & Takeuchi, 1995; Haldin-Herrgard, 2000). Explicit knowledge referred to the knowledge that has been stated and written down through books, journals, manuals, guidelines, database (Godfroid, 2016; Addis, 2016). On the other hand, tacit knowledge refers to the individual’s knowledge about his/her experiences, expertise, insight observation, personal beliefs (Chuang et al., 2016; Panahi et al., 2016). Thus, making an environment for tacit knowledge sharing in the conformation of the sharing of experiences has also been a long interest to the learning organizations (Panahi et al., 2012). There is limited research in the area of this study, mostly focussed broadly on academic organizational culture as a single dimension and its influence on knowledge management practices. This research went much deeper into both the realms; by diagnosing the Big five personality factors and others factors that are constructing on tacit knowledge sharing behavior.

Therefore, it is important that studies on tacit knowledge sharing behavior among the member of higher learning institutions be vital and useful for the higher learning institutions to optimize the culture of tacit knowledge sharing behavior among the non-academic staff where this research will contribute.

The scope of this current research was the non-academic staff of higher learning institutions in Malaysia. In order to be competent and competitive among the higher learning institutions locally and globally, the role of non-academic staff of the higher learning institutions (both executive and non-executive) are significant which require them to practice a substantial amount of tacit knowledge sharing behaviour among themselves in order to solve work-related problem (Sandhu et al., 2011; Choy Chong et al., 2011). As, the administrative and supporting staff of these higher learning institutions require to share their knowledge and skills with their peers, as it is essential that tacit knowledge be exchangeable within the work environment. Consequently, firms are increasingly enhancing their resources to search for the ways to transfer tacit knowledge among their employees and prevent the loss of institutional knowledge (Joia & Lemos, 2010; Murray and Peyrefitte, 2007).

Therefore, the aim of this research was to use a confirmatory factor analysis (CFA) and various indicators of fit to examine how closely four-factor model represented the sample information. Established on a sample of non-academic staff of Malaysian higher learning institutions this research tested whether the reported four-factor structure properly fit regarding interpretable factor structures and data fit, more appropriately suit the sample information. The following section will highlight the relevant literature to explain the personality, motivation, self-efficacy, mutual trust and tacit knowledge sharing behavior.

Although factors such as personality, motivation, and self-efficacy are effective in tacit knowledge sharing behavior, it is hard to apply them in large higher learning institutions with a huge number of non-academic employees with different cultures. So far, in various research studies, motivational components and their role in knowledge sharing behaviour have been noted, but no efforts can be found to have been looking at others components which are also play to explain the conduct of tacit knowledge sharing behaviour from the perspective of higher learning institutions. The rest of the paper is organized accordingly. The next section develops with the critical literature review, followed by research methodology, research results, and discussion on the research findings, conclusions, and limitations of the study.

## **LITERATURE REVIEW**

Researchers have already confirmed that the behavior of knowledge sharing involves a set of mutual trust behaviors that assist the organizational member in the exchange of acquired knowledge with other staff. The substantial amount of research findings explored that individual may share their precious tacit knowledge when there is a mutual trust between them (Yang & Farn, 2009; Holste & Fields, 2010). As Wu et. al. (2006) confirmed that trust is a significant and positive relationship with knowledge sharing behavior in virtual teams. Also, previous researchers also confirmed that trust allows the organizational member to initiate and continue sharing their knowledge through the online social network (Askay & Spivack, 2010; Chen, & Hung, 2010). Cabrera et al. (2006) found that individual personality

traits influence to share knowledge. Therefore, past research explored that there are five personality dimensions of personality (Matzler & Müller, 2011; Matzler et al., 2011): neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Extraversion characteristics include the quality of sociability, self-confident, dynamic, courageous, energetic, risk-taking, expressive (Costa and McCrae, 1992; Barrick et al., 2002). Therefore, employees with in high on extraversion characteristics in their behavior are in high tendency to share their knowledge with others (Gupta, 2008). Agreeableness character is more focus on the perspectives of human-centric behavior. The employees who are high in agreeableness tend to be more supportive towards their colleagues, understanding and kind-hearted to others (Dzandu et al., 2014).

The employees who are with conscientiousness characteristics in their personality are performing better at their work related assignment and sharing their valuable knowledge with others (Matzler et al., 2011; Raducanu, 2012). Neuroticism represents the negative personality traits that determine the individual's anxious, which may negatively influence the employees to share their knowledge with each other (Gupta, 2008). Therefore, emotional stability is essential to overcome from the neurotic (Raducanu, 2012). Above all, previous research work also revealed that the culture of knowledge sharing might highly influence by the openness oriented personality traits (McCrae and John, 1992; Costa and McCrae, 1992).

Employee motivation is one of the primary concerns for the manager. Individual intention to knowledge sharing behavior combines with personal and social phenomena. The individual category refers to the extrinsic and intrinsic motivational factors (Wang et al., 2014). On the other hand, the social category consists of successful social interactions between the employees (Majchrzak et al., 2013). Osterloh and Frey (2000) argued that extrinsic and intrinsic motivational tools be both plays a significant role in sharing of explicit and tacit knowledge in an organization. Ahearne et al., (2005) explains the Self-efficacy is a belief toward an individual ability to organize and executing an action to achieve the objective. Therefore the substantial amount of research also argued that staff self-efficacy can push their intention to share knowledge, as an employee is more willing to share knowledge once he or she believes that his or her contribution may be valuable to the others (Ardichvili et al., 2003; Lin, 2007).

## **METHODOLOGY**

This research employed a cross-sectional survey procedure. The population of this research consisted of the non-academic staff of higher learning institutions in Malaysia. The researchers gathered information from both four public and five private higher learning institutions from Klang Valley area in Malaysia. The unit of analysis chosen to collect data was the non-academic staff of higher learning institutions only, as this unit play a vital role in the efficient operation of the higher learning institutions. The researchers applied campus

intercept procedure to operationalise the survey instrument. A total of nine higher learning institutions were selected for data collection drawn broadly from both the public and private sectors, each with a minimum of 20 non-academic staff were chosen to participate in this study. The survey applied a sample size of 200; however, 150 out of the 200 survey questionnaires were passed away and obtained fully and correctly filled and therefore were used in the further analysis. As this research applied confirmatory factor analysis, the sample size of this investigation seems appropriate, suggested by Hair et.al., (1998). The researchers applied the self-administered technique to deal out the questionnaire to the target respondents. The respondents consisted of 80 (53.3 percent) females and 70 (46.6 percent) males. The results also indicated that 35 per cent of the respondents were between the ages of 30-39 years; 60 percent were between ages of 20-29 years; while those between the ages of 40-49 years constituted 10 per cent. As expected, only a few (5 percent) of the respondents were within the 50- to 59-year age bracket.

Furthermore, about 60 per cent of the respondents were the managerial position, while 40% of the respondents were the non-managerial position. Thus, the majority of the respondents had considerable work experience with more than ten years (70%).

The survey was conducted through a structured and standardized close ended questionnaire and data were collected by using a five-point Likert scale. The first part of the instrument consisted of the items to measure the staff individual's personality by using Big-Five personality framework (Teh et al., 2011; Matzler et al., 2008; 2011). As a result, 15 items were adapted from Goldberg (1992) research to measure personality constructs (Extraversion- E-3 items; Conscientiousness- C-3 items; Agreeableness- A-3 items; Emotional Stability- ES-3 items; Openness – O-3 items). The construct trust was measured through six (6) items adapting from Cook and Wall's (1980) scale. The research measured self-efficacy with four items adapted from Chen et. al., (2001) research. Meanwhile, this research adapted five items from Akhavan et.al.,(2013) research to measure motivation construct. All the variables were measured by five-point Likert scale where 1 – strongly disagree, 2 – disagree, 3 – neither agree nor disagree, 4 – agree and 5 – strongly agree. The researchers applied MLE, a CFA approach to defining the construct.

## **DATA ANALYSIS**

This research tested reliability estimates to assess the internal consistency of the scales mentioned above. The Cronbach's alpha values of the questionnaire are shown in Table I.

**Table I. Cronbach's alpha coefficients for the measurement of the questionnaire**

Construct Name	Number of Items	Cronbach's Alpha
<b>Personality</b>		
<b>Extraversion (E)</b>	Three (3)	0.83
I want to see myself and my colleagues with a lot of enthusiasm of using online social network (E1)		
I see myself and others have the quality of self-confident in their personality (E2)		
I like my colleagues who is talkative and well behave (E3)		
<b>Conscientiousness (C)</b>	Three (3)	0.79
I want to see myself and others who are reliable (C1)		
I want to see myself and others who does things efficiently (C2)		
I want to see myself someone as well plan and follows through with others (C3)		
<b>Agreeableness (A)</b>	Three (3)	0.81
I want to see my colleagues must be helpful and unselfish (A)		
I want to expect my superior and me are forgiving nature in their personality (A)		
I want see myself as someone who likes to cooperate with others in sharing their experience (A)		
<b>Emotional Stability (ES)</b>	Three (3)	0.81
I like to be relaxed and try to handles stress with rationally (ES1)		
I want to see myself and my colleagues as emotionally stable and not easily upset (ES2)		
I like my colleagues to be remains calm in a tense situations (ES3)		
<b>Openness (O)</b>	Six (6)	0.79
I want to see myself as someone who encourages and practices with new ideas (O)		
I want see myself as someone who is resourceful, a thinker (O)		
I like to be with the colleagues in my institution who values artistic, aesthetic experiences (O)		
<b>Trust (Tr)</b>	Five (5)	0.79
I like to work in an environment where the environment is trustworthy (Tr1)		
I like that my colleagues are concerned with my best interests (Tr2)		
	Four (4)	

<p>I believe the information which I obtain from my co-workers is valid (Tr3)                  I believe that my co-workers are resourceful in sharing information through online network (Tr4)                  I believe that the information I obtained from my co-workers from online social network is useful to me (Tr5)                  I believe that that the information I obtained from my colleagues is reliable (Tr6)</p>		0.79
<p><b>Motivation (M)</b>                  Friendly and intimate relationship with my colleagues influences me to share my knowledge (M2)                  Self-management and controlling my own activities play as an incentive to motivates to share my knowledge (M3)                  Organizational IT infrastructure and using intensity motivates me to share my knowledge (M4)                  My organization gives me an incentive (Financial/nonfinancial) once I share my knowledge with my colleagues (M5)                  Getting right salary and incentive gives memotivation to share my knowledge (M6)</p> <p><b>Self-Efficacy (Se)</b>                  I will be able to achieve most of the goals for my institution that I have set for myself (Se1)                  In a situation of facing difficult tasks, I am certain that I will accomplish my objective (Se2)                  I am confident that I can perform effectively on many different job-related assignment (Se3)                  Even when things are tough and challenging, I can perform quite well (Se4)</p>		0.85

The statistical outcome shows that the value of Cronbach  $\alpha$  under each construct was greater than 0.75, which indicates a meritorious reliability of the survey instrument. In summation, the result from item-to-total correlations of each construct was above 0.50. This shows that the criterion validity of each scale in this research is considered as satisfactory. The assessment of measurement model was used unidimensionality, validity, construct reliability (CR) and average variance extracted (AVE). In summation, this research used a series of the goodness-of-fit index to assess the fitness of the model. In this study, this research applied absolute fit, incremental fit, and parsimonious fit. The overall results of CFA are depicted in Table II and III.

**Table II. The Confirmatory Factor Analysis (CFA) report summary for all constructs (Factor Loadings, Construct Reliability-CR; Average Variance Extracted-AVE)**

Construct Name	Factor Loading	CR (Above 0.6)	AVE (Above 0.5)
<b>Personality</b>			
<b>Extraversion (E)</b>			
I want to see myself and my colleagues with a lot of enthusiasm of using online social network (E1)	0.61	0.69	0.54
I see myself and others have the quality of self-confident in their personality (E2)	0.80		
I like my colleagues who is talkative and well behave (E3)	0.79	0.83	0.62
<b>Conscientiousness (C)</b>	0.77		
I want to see myself and others who are reliable (C1)	0.79		
I want to see myself and others who does things efficiently (C2)	0.82		
I want to see myself someone as well plan and follows through with others (C3)		0.79	0.56
<b>Agreeableness (A)</b>	0.78		
I want to see my colleagues must be helpful and unselfish (A)	0.75		
I want to expect my superior and me are forgiving nature in their personality (A)	0.72	0.78	0.54
I want see myself as someone who likes to cooperate with others in sharing their experience (A)	0.71		
<b>Emotional Stability (ES)</b>			
I like to be relaxed and try to handles stress with rationally (ES1)	0.68		
I want to see myself and my colleagues as emotionally stable and not easily upset (ES2)	0.82		
I like my colleagues to be remains calm in a tense situations (ES3)		0.77	0.53
<b>Openness (O)</b>	0.68		
I want to see myself as someone who encourages and practices with new ideas (O)	0.69		
I want see myself as someone who is resourceful, a thinker (O)	0.81		
I like to be with the colleagues in my institution who values artistic, aesthetic experiences (O)			
<b>Trust (Tr)</b>	0.61	0.85	0.50
I like to work in an environment where the environment is trustworthy (Tr1)	0.79		
I like that my colleagues are concerned with my best interests (Tr2)	0.69		
I believe the information which I obtain from my			

co-workers is valid (Tr3)	0.74		
I believe that my co-workers are resourceful in sharing information through online network (Tr4)	0.72		
I believe that the information I obtained from my co-workers from online social network is useful to me (Tr5)	0.69		
I believe that that the information I obtained from my colleagues is reliable (Tr6)			
<b>Motivation (M)</b>	0.75	0.84	0.53
Friendly and intimate relationship with my colleagues influences me to share my knowledge (M2)	0.74		
Self management and controlling my own activities play as an incentive to motivates to share my knowledge (M3)	0.69		
Organizational IT infrastructure and using intensity motivates me to share my knowledge (M4)	0.68		
My organization gives me an incentive (Financial/non-financial) once I share my knowledge with my colleagues (M5)	0.78		
Getting right salary and incentive gives me motivation to share my knowledge (M6)			
<b>Self-Efficacy (Se)</b>		0.80	0.51
I will be able to achieve most of the goals for my institution that I have set for myself (Se1)	0.69		
In a situation of facing difficult tasks, I am certain that I will accomplish my objective (Se2)	0.72		
I am confident that I can perform effectively on many different job related assignment (Se3)	0.76		
Even when things are tough and challenging, I can perform quite well (Se4)	0.69		

**Table III: Fit of the overall Model**

Absolute Fit	Chi-square with 78.69 degrees of freedom = 48 (p= 0:01) Goodness of fit index GFI= 0.92 Root mean square error of approximation RMSEA= 0.048
Incremental Fit	Normed fit index NFI= 0.92 Non-normed fit index NNFI= 0.93 Comparative fit index CFI= 0.93 Incremental fit index IFI= 0.92
Parsimonious Fit	Parsimony normed fit index PNFI = 0.62 Parsimony goodness of fit index PGFI = 0.52 Normed chi-square 78.69/48=1.64

The result from Table III represents that all the measurement points are achieved their respective unidimensionality with acceptable values of factor loadings for the respective latent construct. Also, the result of AVE under each construct is greater than 0.5 which reflect the convergent validity of the measurement items. Furthermore, the absolute fit measures (See Table IV) indicate that the measurement model meets the recommended levels of fit to the sample data. The Chi-square statistic divided by the degrees of freedom also indicates a reasonable fit at 1.64. Thus, the result of confirmatory factor analysis concluded that the proposed measurement model maintains good construct validity.

## **CONCLUSION**

As the non-academic employees of Malaysian higher learning institutions are coming from different ethnic setting. Therefore, the directors of the respective department need to understand which criteria of personality as well as other factors may push on the tacit knowledge sharing behavior among the staff. With this point of view, this research produced factors for tacit knowledge sharing behavior embedded with Big-Five- Personality theory and other antecedents of tacit knowledge sharing behavior. Thus, the constructs will assist the authorities as well as the ministry of higher learning institutions to understand the critical success factor of tacit knowledge sharing behavior. The result from this research also proved that extraversion (E), agreeableness (A), Emotional Stability (ES), openness (O), conscientiousness (C), motivation (M), self-efficacy (SE), mutual trust (MT) are playing the major role in explaining Tacit Knowledge Sharing Behaviour (TKSB) among the non-academic staff of higher learning institutions. This study shows that the Big-Five personality traits factors, motivation, self-efficacy, and mutual trust have a significant role in facilitating tacit knowledge sharing culture among the non-academic staff of higher learning institutions.

## **Discussion and Implication:**

From the empirical findings, the researchers indicated that non-academic staff of higher learning institutions does not perform their tacit knowledge sharing behavior by simply improving their personality factors rather institutions also take to focus on mutual trust, self-efficacy and motivational elements as well. On the theoretical perspective, this research provides an empirical test that shows the Big-Five-Personality factors, motivation, self-efficacy and mutual trust are the crucial success factors on tacit knowledge sharing behavior. Top management of higher learning institutions should be aware of the advantages of tacit knowledge sharing practices in their respective department. Thus facilities should be made available when the employee's interactions will be high. Last but not least, the current study contributes by representing, through established empirical methodologies, how personality, motivation, self-efficacy and mutual trust at higher learning institutions influence the knowledge sharing behavior of the non-academic staff.

### Limitation and Further Study:

This research only considered the personality, motivation, self-efficacy and mutual trust in constructing to the tacit knowledge sharing behavior. It would have been more interesting to empirically test their relationship by building a theoretical framework by these proposed factors. On the other hand, the proposed factors also may test from a different industry perspective. However, the researchers also propose to collect a lot of samples which may enhance the generalizability of the research findings.

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## **BIOGRAPHICAL NOTES:**

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