

## Gender Differences in Knowledge Sharing Practices Among Malaysian University Academicians

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### Abstract

Knowledge sharing is an important aspect in Malaysian universities for enhancing the informative pool and giving students with new knowledge and material. Comprehensive research on knowledge sharing among university researchers, particularly those from different genders, has received little attention. The purpose of this study was to compare academicians from two different genders; male and female, on three knowledge sharing factors: organizational, technological, and individual. This study is being done among academicians at Universiti Kebangsaan Malaysia (UKM) using a number of survey tools. According to the findings of this study, both groups of academicians' genders agree that all factors are important, particularly reciprocal benefits and knowledge self-efficacy under individual factors, but significant factors that are considered moderately important are organizational rewards under organizational factors and system quality under technical factors. While there are no major disagreements with academics' individual factors in knowledge sharing, these findings show that UKM's organization and technology in knowledge sharing have space for improvement, particularly in terms of its organizational rewards and system quality.

**Keywords:** Knowledge Sharing, Organizational Factors, Technological Factors, Individual Factors, Gender Differences, Malaysian University.

### Introduction

Academics can communicate information in a unique environment because of their active participation in the knowledge economy and the growth of Malaysian institutions. As a result, all academicians must comprehend knowledge sharing and the consequences of applying knowledge sharing in their enterprises. Academicians must recognize the importance of expanding their knowledge in order to serve as a hub for knowledge generation, exchange, and acquisition. Much has been stated about information exchange, but less about areas or

streams (of research) among faculty members at universities, particularly the distinction between male and female. Academicians in higher education should be aware of the three fundamental components that comprise the knowledge sharing process: organizational, technological, and individual factors (Lin, 2007) and how gender differences relate to these components.

Organizational factors are one of the aspects that influence how knowledge is conveyed. Knowledge sharing is regarded as one of the most essential ways for increasing the impact of knowledge in organizations (Quinn et al, 1996). Contact and communication between coworkers on an individual basis, in project teams, or across projects can transform individual knowledge into organizational knowledge, and these knowledge-sharing activities can aid in the advancement of knowledge to a higher level (Nonaka et al, 1994). Similarly, through information sharing, a corporation can translate individual expertise into organizational knowledge.

Employee encouraging knowledge sharing behaviour has frequently been challenged using self-determination theory (Ryan and Deci, 2000). Individual elements that contribute to the success of information sharing include trust, knowledge self-efficacy (Van Acker et al, 2014), and reciprocal advantages (Chennamaneni et al, 2012; Lin, 2007). According to Lai and Lee (2007), the desire to share knowledge is directly motivated by self-efficacy, job autonomy, and trust.

Since its conception, the key pillars of knowledge management have been based on information technology and technology-driven procedures (Davenport & Prusak, 1998), while organizational culture, structure, and information technology have all influenced workers' ability to exchange information (Lee, 2001). Orlikowski (1992) identified two key elements in the concept of technology. Many people have recently joined online communities to share data, collaborate on research projects, and exchange messages that provide insights on knowledge sharing (Liao et al, 2013).

### **Knowledge Sharing In A Nutshell**

In this study, knowledge is defined as a combination of experience, values, contextual information, and proficient comprehension (Davenport & Prusak, 1998), which has been highlighted by many studies and practitioners as an important and low-cost source of organizational success (Quinn et al, 1996; Albert & Bradley, 1997). Organizations may struggle to survive in the Knowledge Era unless they have a thorough plan in place for controlling and influencing the value of their intellectual assets (Abell & Oxbrow, 2001). As a result, many small and large businesses are turning to knowledge management systems to manage and utilize their entire organizational information (Davenport & Prusak, 1998). Knowledge management in this sense refers to the process of identifying, selecting, and sharing evidence and information that is critical to company operations (Gupta & Govindarajan, 2000). Companies should consider these elements since knowledge sharing occurs through interactions between people, organizations, and technology (Noor et al, 2014).

Previously, corporate entities regulated knowledge sharing research, with the ultimate goal of revenue-motivated information sharing. The challenge of information sharing, on the other hand, is equally important for a knowledge-based institution, such as a Higher Learning Institution (HLI), whose core mission is knowledge development, distribution, and relevance. Petrides and Nodine (2003). With the growing number of HLIs in Malaysia, there is a need for them to increase their expertise so that they may be identified as a repository of knowledge rather than simply supplying information to students. Unfortunately, little in-depth

examination and research into information exchange among university faculty academics has been conducted, particularly in terms of academicians' gender. This motivates the author to write this article, which seeks to better understand and comprehend the gender differences of academicians' knowledge-sharing at Malaysian universities based on three factors: organizational factors, technological factors, and individual factors. This provides the importance and significance of this study.

### **Objective of Study:**

Consequently, this study is aimed:

- a. to identify the comparison of perceptions of male academicians and female academicians on organizational factors on knowledge sharing in HLIs.
- b. to identify the comparison of perceptions of male academicians and female academicians on technological factors on knowledge sharing in HLIs.
- c. to identify the comparison of perceptions of male academicians and female academicians on individual factors on knowledge sharing in HLIs.

### **Literature Review**

Knowledge sharing is a cornerstone of knowledge management. Knowledge sharing is defined by the International Labour Organization (ILO) as "a process that begins with capturing and organizing knowledge and experience gained from others, then proceeds to make that knowledge accessible to a broader audience, thus building new ties across interest groups." Knowledge sharing also covers the transmission or dissemination of knowledge among individuals or organizations as the foundation for knowledge operation in order to deliver a competitive advantage to the industry (Noor et al, 2014). According to Lee (2001), knowledge sharing is the "transmission or dissemination of information from one individual, group, or organization to another", while Van den Hooff and de Ridder (2004) elaborate on this issue, arguing that knowledge sharing is a process in which individuals exchange knowledge and collaborate to produce new knowledge.

Knowledge sharing increases the prospect of capitalizing on an organization's capacity to satisfy such demands through the development of ideas and capabilities that create a competitive advantage (Razmerita et al, 2016). Information sharing in an organization is the act of capturing, organizing, reusing, and transferring experience-based information within the organization and making that knowledge available to others within the firm. (Lin, 2007). Knowledge sharing, according to a number of studies, is critical since it allows firms to improve their innovation performance while also minimizing duplicate learning efforts (Wasako & Faraj, 2005).

The skills, knowledge, specialized language, and practice norms acquired through interaction with others engaged in the same exercises over time improve one's intellectual capital, which can be developed through first-hand experience or through stories told over time (Wasako & Faraj, 2005). Working experience is information or competence gained via real performance, observation, and sensation of a task that requires physical or mental resolution. The process of knowing, according to Polanyi (1958), includes some level of comprehension. Continuous routines are associated to knowledge sharing and competition (Cabrera & Cabrera, 2005). Knowledge accumulated by social groups within and across divisions, internally via processes, and even externally via establishments is critical for the evolution of knowledge exchange (Michailova & Minbaeva, 2012). Knowledge sharing can also refer to the process of sharing information among individuals whose understandings, experiences, and knowledge are

relevant to the current job (King, 2007), as knowledge sharing aims to improve and facilitate the exchange of tacit knowledge among company members (Trivellas et al, 2015). People who have a deeper understanding and experience with their skill are more likely to share it. However, they must have reasons or motives to use knowledge sharing in the workplace.

Knowledge sharing, on the other hand, is a difficult process since people typically keep information in groups or organizations (collective forms) that are dispersed within the company and occasionally beyond geographical boundaries (Argote & Ingram, 2000). Knowledge management is the process of preserving, identifying, and applying knowledge inside an organization. Improving information development and sharing is the most difficult problem in knowledge management since it is always the deciding factor between success and failure (Wasako & Faraj, 2005).

Furthermore, knowledge is recognized as sticky and causally ambiguous since it is entrenched in a complex network of formal and informal interactions, making effective knowledge sharing difficult for companies. Because knowledge is owned by people and requires a personal relationship to get, it is considered socially complicated (Sanchez et al, 2013; Szulanski, 2000).

The ability to handle knowledge effectively is increasingly recognized as being dependent on the relationships that exist between employees within the organization (Quinn et L, 1996). Organizational, human, and technological factors all have an impact on employee knowledge sharing programs, according to research (Chou et al, 2014).

Organizational knowledge is comprised of tacit and explicit knowledge, both of which are required for interaction and the development of new knowledge (Nonaka et al, 2000). Given that others can easily replicate explicit information without tacit understanding, it loses value quickly and must be shared with others to generate fresh ideas and learning. If tacit information is not recorded and distributed around the organisation, it may be lost when the person who possesses it leaves. Rather of emerging from either tacit or explicit knowledge on its own, new knowledge or knowledge innovation emerges from collaborations between tacit and explicit information (Nonaka et al, 2000). Therefore, efficiently managing and communicating both types of knowledge is critical, as they provide major benefits to businesses (Cabrera & Cabrera, 2005). This approach offers a fresh perspective on the significance of various types of information to various persons, groups, and organisational entities.

Management support is an important organizational component that may improve information exchange. According to Cabrera and Cabrera (2005), management support is linked to personnel, job design, performance assessment, pay systems, and drill. Furthermore, it was discovered that knowledge sharing was positively associated to characteristics such as participative decision-making and top-management confidence (Park et al, 2004).

Another critical organizational feature that may facilitate knowledge interchange is organizational reward. According to Roca and Gagne (2008), need satisfaction is positively related to knowledge sharing, and rewards based on joint performance, such as team-based rewards and organizational-wide incentives (gain sharing, profit sharing, and employee stock options), are also likely to be effective in creating a sense of collaboration, ownership, and assurance among employees.

The beliefs, practises, and structures that impact or hinder an organization's ability to develop and exchange knowledge are referred to as organizational culture (Bartol & Srivastava, 2002). There is a different culture for each organisation that articulates the organization's identity

on two scales: seen / visible and unseen / invisible (Bibi & Ali, 2017). An organization's visible (seen) culture evolves through time and comprises of the company's values, mission, and philosophy. The invisible (unseen) component, on the other hand, is primarily concerned with the principles and norms that influence employees' behaviour and routines (Razmerita et al, 2016). While organizational culture was found to be clearly associated with knowledge sharing behaviour in organisations as measured by sharing norms, it was also discovered that there is a positive relationship between sharing opportunities, which include organisational culture that promotes knowledge use and sharing (Chou et al, 2014). Bock and Kim (2002) establish that knowledge sharing attitudes and actions are positively related to expectations to improve working relationships and have a significant influence on organisational success, and Park et al (2004) discovered that knowledge sharing is encouraged and inspired by cultures that value collaboration, employee support, and autonomy.

Individual traits with individual aspects that contribute to information sharing include trust, knowledge self-efficacy, and reciprocal rewards. Lin (2007) discovered that self-efficacy, job autonomy, and trust all had a direct impact on the proclivity to impart information and exchange knowledge.

Trust can refer to a multitude of events in a social setting, the most important of which is when one party is willing to rely on the actions of another party to establish and evaluate expectations. The most important component of any affiliation inside an organisation is trust, which is also defined as the act of making oneself available to others based on a favourable assessment of the outcomes of one's efforts (Noor et al, 2014). The amount of trust between two parties shows the degree to which one party believes the other is trustworthy, fair, or sympathetic. This improves internal information interchange and can encourage knowledge sharing (Hau et al, 2013)

Employees' willingness to share knowledge is influenced by self-efficacy, which is the level of trust in one's own ability to complete tasks and achieve goals (Lin, 2007). While the term "reciprocal" frequently refers to a relationship in which one party's activities are met or ignored by the actions of another party. People will always reciprocate favours offered to them, according to the social psychology principle of reciprocity (Cialdini et al, 2006). It entails returning (reciprocating) the same behaviour acquired from the second person previously.

Another key feature of an organisation that might facilitate effective information exchange is system infrastructure. The scope and function of technology are the two pillars of the notion, according to Orlikowski (1992). In terms of scope, there are two types of investigations (Ismail & Yusof, 2010). One study looks at technology as "hardware," while the other looks at technology through the lens of "social technology." Early study considers technology to have a purpose, whereas later research focuses on technology as a product that includes human interaction. According to a recent study, technology is a soft deciding factor that has always been an important component in organisational theory. It is regarded as an external component that has an impact but is managed by individuals and organisations (Orlikowski, 1992; Ismail & Yusof, 2010). While System Quality entails the use of information systems for enjoyment (such as online games and social groups), practical applications (such as e-learning, e-commerce, and knowledge management systems) are also included. Many individuals utilized virtual groups until recently to share information, cooperate on research, and communicate messages that encouraged knowledge sharing. (Van Acker, 2014).

Researchers have identified motivation as a function of reciprocity issues, connections with receivers, and remunerations, as well as dispositions to share knowledge, workplace culture, inspiration to share, and opportunities to share, as factors that contribute to knowledge

sharing success (Ipe, 2003), whereas other scientists believe that both monetary and non-monetary benefits are equally important in fostering knowledge sharing (McDermott & O'Dell, 2001).

### **Methodology**

This study applies a descriptive examination of university professors' perceptions of different streams, namely pure scientific and social science streams. This method, according to Wiersma (1995), is appropriate for analysing or calculating a program's outlook, awareness, and accomplishment. The descriptive form is also used in connection with the study's need to comprehend in its actual context (Konting, 1990). As a result, a survey instrument based on the specified literatures is created for this study. A questionnaire, according to Tuckman (1999), is a useful instrument for gathering information from selected respondents. The questions are all of the positive variety, and responders were asked to rate them on a Likert scale.

This research is being carried out through a series of surveys among research academicians at Universiti Kebangsaan Malaysia (UKM). Academicians are chosen from a pool of candidates from 5 different faculties at UKM, with a total number of 38 academicians; 14 males and 24 females respectively. Thus, The Sample Size Determination Table by Krejcie and Morgan (1970) is recommended for controlling the number of respondents. The sample size for this study is 38, as determined by Krejcie and Morgan (1970)'s Sample Size Determination.

The questionnaire's validity is assessed by an expert. The phrase "reliability" refers to an instrument's steadiness and consistency when measuring a specific concept. The Cronbach Alpha is a standard metric for determining the consistency of a concept. The Cronbach Alpha significant value ranges between 0.0 and 1.0. According to (Konting, 1990), a Cronbach Alpha value greater than 0.60 is frequently used as a dependability index in actual research. Thus, in this study, the Cronbach Alpha value greater than 0.60 was chosen as the reliability value for each section of the questionnaire being administered. The researcher then conducted an initial investigation to determine the reliability value of the questionnaire.

The pilot study's goal was to identify the questionnaire's strengths and weaknesses. As a result, ten academics were chosen to respond to the questionnaire before it was distributed. The findings show that all ten academicians have a thorough comprehension of the questions. The Cronbach Alpha value for all of the question items was found to be more than 0.6 using the Statistical Package for the Social Science (SPSS) programme version 21. Therefore, the questionnaire developed for this study is considered suitable for use.

### **Results And Discussions**

#### **Findings and Discussions on the Respondents**

The backgrounds of the respondents are as stated in Table 1. The number of male academicians consists of 36.9 percent and female academicians produce a number of 63.1 percent. Majority of the respondents are Senior Lecturers (44.7 %) with 65% of them have been working with UKM for over 11 years. 73.7 percent of the respondents possess PhD with specific expertise and knowledge in their relevant fields, with 57.9 percent of them engaging in research between 1 to 10 years.

From the demographic data obtained, UKM academicians are generally divided into two streams; pure sciences as well as social sciences. For the position reflected to their post, they are Professor, Associate Professor, Senior Lecturer and Lecturer. From the data, Senior

Lecturers and Associate Professors are the majority with 12 to 20 years of experience of work along with 6 to 10 years experiences in conducting research. All the above indicators express to us that these academicians are vigorous in managing research, which make really vital for them to share knowledge and increase networking in their proficiency to boost their research accomplishments, publication as well as lecturing across both genders; male and female.

**Table 1.**

## Backgrounds of the Respondents

Total n = 38	Numbers	Percentages
<b>Academicians' faculty</b>		
Faculty of Science and Technology	2	5.3
Faculty of Technology and Information Science	12	31.6
Faculty of Economics and Management	5	13.2
Faculty of Social Science and Humanities	14	36.8
Faculty of Islamic Contemporary Studies	5	13.2
<b>Academicians' Position</b>		
Professor	3	7.9
Associate Professor	9	23.7
Senior Lecturer	17	44.7
Lecturer	9	23.7
<b>Academicians' gender</b>		
Male	14	36.9
Female	24	63.7
<b>Academicians' years of working experience</b>		
1-5	8	21.1
6-10	5	13.2
11-20	18	47.4
21 & above	7	18.4
<b>Academicians' Highest Education Qualification</b>		
Doctoral Degree	28	73.7
Master's Degree	7	18.4
Bachelor Degree	3	7.9
<b>Academicians' years of Research Involvement</b>		
1 year & below	2	5.3
2 - 5 years	7	18.4
6 - 10 years	13	34.2
11 - 15 years	8	21.1
16 - 20 years	4	10.5
21 - 25 years	2	5.3
26 years & above	2	5.3

**Findings and Results on the three factors:**

1. **Organizational Factors** (Top Management Support, Organizational Rewards and Organizational Culture)

**Table 2.**

Organizational Factors

**Table 2(a).** Top Management Support

	Low	Moderate	High
Academics' gender			
Male	0 (0.0)	3 (21.5)	11 (78.5)
Female	0 (0.0)	6 (25.0)	18 (75.0)

**Table 2(b).**

Organizational Rewards

	Low	Moderate	High
Academics' gender			
Male	4 (28.6)	7 (50.0)	3 (21.4)
Female	5 (20.8)	13 (54.2)	6 (25.0)

**Table 2(c).**

Organizational Culture

	Low	Moderate	High
Academics' gender			
Male	1 (7.1)	3 (21.5)	10 (71.4)
Female	1 (4.2)	6 (25.0)	17 (70.8)

Table 2(a), (b) and (c) above portray the organizational factor in knowledge sharing applications among academicians of gender differences in HLI. From the data, both male (78.5%) and female (75.0%) academicians approved that top management support has a high impact on knowledge sharing between academicians. However, male (28.6%) and female (20.8%) academicians barely believe that organizational rewards are not a key factor in knowledge sharing in HLIs, but organizational culture in HLI is greatly reflected as a motivating factor of knowledge sharing reflected by both male (71.4%) and female (70.8%) academicians. These findings in general show that both male and female academicians believe that top management support and organizational culture are important elements in knowledge sharing, but not in organizational rewards. This is a sign that, whether male or female academicians, senior management in the HLI is reassuring in knowledge sharing among academicians, delivers most of the essential capacities, and is pleased with sharing implementations (Mat et al., 2016b). It is also comparable to organisational culture, which displays senior management's support for academics participating in colloquiums, seminars, and emphasising the importance of information exchange among academicians (Mat et al, 2021). It is also an indication that top management at UKM is very much inspiring and accompanying in knowledge sharing among academics of both genders, supplies the majority of the necessary capacities, and is satisfied with the sharing exercises (Mat et al, 2016). However, a lack of belief in organizational rewards as an important factor in knowledge sharing among academicians demonstrates that academicians of both genders are not satisfied with material remunerations such as job promotions and budgetary surpluses, but are satisfied with non-material rewards such as acknowledgements and positive standings.

## 2. Technological Factor (System Infrastructure and System Quality)

**Table 3: Technological Factor**

**Table 3(a):**

### System Infrastructure

	Low	Moderate	High
Academicians' gender			
Male	0 (0.0)	5 (35.7)	9 (64.3)
Female	3 (12.5)	4 (16.7)	17 (70.8)

**Table 3(b):**

### System Quality

	Low	Moderate	High
Academicians' gender			
Male	2 (14.3)	7 (50.0)	5 (35.7)
Female	1 (4.2)	10 (41.7)	13 (54.2)

Table 3(a) and 3(b) above illustrates the technological factor in knowledge sharing practices among male and female academicians in HLIs. From the data, 64.3% male and 70.8% female academicians are highly assumed that system infrastructure is a central factor in knowledge sharing. However, only half of male academicians (50.0%) and 41.7% of female academicians relatively considered that system quality is a main factor in knowledge sharing.

These findings show that the system infrastructure for knowledge sharing among male and female academics in Malaysian HLI is marginally high where sympathetic systems are available, such as an online system that aids academicians in learning and teaching between each other. In general, appropriate belief in system quality, which both male and female academics see as a crucial component in knowledge sharing, demonstrates that it may still be improved in terms of its application, accuracy, modernity, dependability, and ease of access. The applications built in the system infrastructure play a significant role in ensuring the success of the knowledge sharing process (Mat et al, 2017, Mat et al, 2021, Mat & Alias, 2022, Mat & Alias, 2022b).

## 3. Individual Factors (Trust, Knowledge Self-Efficacy and Reciprocal Benefits)

**Table 4: Individual Factors**

**Table 4(a):**

### Trust

	Low	Moderate	High
Academicians' gender			
Male	0 (0.0)	2 (14.3)	12 (85.7)
Female	0 (0.0)	11 (45.8)	13 (54.2)

**Table 4(b):****Knowledge Self-Efficacy**

	Low	Moderate	High
Academicians' gender			
Male	0 (0.0)	3 (21.4)	11 (78.6)
Female	0 (0.0)	5 (20.8)	19 (79.2)

**Table 4(c):****Reciprocal Benefits**

	Low	Moderate	High
Academicians' gender			
Male	0 (0.0)	3 (21.4)	11 (78.6)
Female	0 (0.0)	6 (25.0)	18 (75.0)

The individual factor in knowledge sharing functions among male and female academics in HLI is depicted in Tables 4(a), (b), and (c). The majority of male academicians (85.7%) believe that trust is important in knowledge sharing, whereas only half of female academicians (54.2%) agree. Knowledge self-efficacy is also a major aspect in knowledge sharing, according to 78.6% of male academicians and 79.2% of female academics. In terms of the reciprocal benefits, 78.6% of male academicians and 75.0% of female academicians believe it is an encouraging aspect in knowledge sharing.

The findings show that knowledge sharing accomplishments among academicians, regardless of gender, in Malaysian HLI are highly related to the individual aspects of "Trust", "Knowledge Self-Efficacy", and "Reciprocal Benefit". To enhance knowledge sharing practise, every academician must possess and uphold the three qualities of "Trust", "Knowledge Self-Efficacy", and "Reciprocal Benefit" (Mat et al, 2016b, Mat et al, 2021, Mat & Alias, 2022, Mat & Alias, 2022b).

**Conclusions**

This study demonstrates that knowledge sharing exercises among academicians of gender differences in a Malaysian HLI, from the "Top Management Support" and "Organizational Culture" aspects are at a tolerable level based on the data collected. On the other hand, the knowledge sharing exercises among academicians of different genders in Malaysian HLI, from the "Organization Rewards" aspect is detected to be still lacking. This could be viewed favourably if management invests in adequate and proper monetary remunerations for academicians who excel at knowledge sharing. Individual characteristics such as "Trust", "Knowledge Self-Efficacy", and "Reciprocal Benefit" are thought to be closely related with knowledge sharing practises for both male and female academics. Academicians of both genders agreed that the "System Infrastructure" provided by technological factors is sufficient, but that improvements in "System Quality" should be made and improved in order to expand knowledge sharing among academicians at Malaysian HLI.

Thus, this study contributes to a deeper theoretical understanding of how various factors influencing knowledge sharing, particularly the individual, technological, and organizational factors, interact with academicians of different genders. In short, this study proven to be

significant for the body of knowledge in the field of knowledge management, particularly knowledge sharing. It also provide beneficial relevance towards practical usage of knowledge sharing across gender. In terms of accidental influence, when joining these two groups of academicians; male and female, the results demonstrate that their agreement appears to bind each factor regardless of gender. This conveys the function that the factors purported to moderate in knowledge sharing applications; such as system quality and organisational benefits, steadily spread throughout both groups of gender academics.

As a result, in order for knowledge sharing functions to perform properly, the institution must improve system quality, organisational rewards, and support other variables at their existing level. Thus, the key outcomes and significant contributions of this study include a deeper understanding of how different genders of academics (male and female) link to and compare different variables of knowledge sharing. Overall, this paper will provide significant inspiration for appreciating the gender relations on knowledge sharing established on the three factors discussed above (organizational factor, technological factor, and individual factor) and how universities may utilise it for future improvements.

### References

- Abell, N. Oxbrow. S. (2001) *Competing with knowledge: the information professional in the knowledge management age*. London: Library Association Publishing.
- Albert, S., Bradley, K (1997) *Managing knowledge: Experts, agencies and organizations*. Cambridge University Press.
- Argote, L., Ingram, P. (2000) Knowledge transfer: A basis for competitive advantage in firms, *Organizational Behavior and Human Decision Processes*, Vol. 82, No. 1, pp. 150–169.
- Bartol, K. M., Srivastava, A. (2002) Encouraging knowledge sharing: The role of organizational reward systems, *Journal of Leadership & Organizational Studies*, Vol. 9, No. 1, pp. 64–76.
- Bibi, S., Ali, A. (2017) Knowledge sharing behavior of academics in higher education, *Journal of Applied Research in Higher Education*, Vol. 9, No. 4, pp. 550-564.
- Bock, G. W., Kim, Y. G. (2002) Breaking the Myths of Rewards: An Exploratory Study of Attitudes about Knowledge Sharing, *Information Resources about Management Journal*, Vol. 15, No. 22, pp. 14-21.
- Cabrera, E. F. (2005) A. Cabrera. Fostering knowledge sharing through people management practices, *The International Journal of Human Resource Management*, Vol. 16, No. 5, pp. 720–735.
- Chennamaneni, A., Teng, J. T., Raja, M. (2012) A unified model of knowledge sharing behaviors theoretical development and empirical test, *Behavior and Information Technology*. Vol 31, No. 11, pp 23-31.
- Chou, H. W., Lin, Y. H., Lu, H. H., Chang, S.B. (2014) Knowledge sharing and ERP system usage in post-implementation stage, *Computers in Human Behavior*, Vol. 33, pp. 16-22.
- Cialdini, R. B., Demaine, L. J., Sagarin, B. J., Barrett, D. W., Rhoads, K., Winter, P. L. (2006) Managing social norms for persuasive impact. *Social Influence*, Vol. 1, No. 1, pp. 3–15.
- Davenport, T.H., Prusak, L. (1998) *Working knowledge: how organizations manage what they know*. Harvard Business Press.
- Gupta, A. K., Govindarajan, V. (2000) Knowledge flows within multinational corporations. *Strategic Management Journal*, Vol. 21, No 4, pp. 473–496.
- Hau, Y. S., Kim, B., Lee, H., Kim, Y. G. (2013) The effects of individual motivations and social

- capital on employees' tacit and explicit knowledge sharing intentions. *International Journal of Information Management*, Vol. 33, No. 2, pp. 356-366.
- International Labour Organisation (2006) *Knowledge Sharing: Gender equality in the world of work*
- Ipe, M. (2003) Knowledge sharing in organizations: a conceptual framework, *Human Resource Development Review*, Vol. 2, No. 4, pp. 337-59.
- Ismail, M. B., Yusof, Z. M. (2010) The impact of individual factors on knowledge sharing quality, *Journal of Organizational Knowledge Management*, Vol. 13, pp. 1-12.
- King, W. (2007) A research agenda for the relationships between culture and knowledge management, *Knowledge and Process Management*, Vol. 14, No. 3, pp. 226-236.
- Konting, M. M. (1990) *Kaedah Penyelidikan Pendidikan*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Krejcie, R. V., Morgan, D. W. (1970) Determining sample size for research activities, *Educational and Psychology Measurement*, Vol. 30, No 3.
- Lai, M.F., Lee, G. G. (2007) Relationship of organizational culture towards knowledge activities, *Business Process Management Journal*, Vol. 13, No. 2, pp. 306-322.
- Lee, N. J. (2001) The impact of knowledge sharing, organizational capability and partnership quality on IS outsourcing success. *Information and Management*, Vol 38, No 5, pp. 323-335.
- Liao., C., Hsu, C P. L. (2013) Exploring knowledge sharing in virtual communities. *Online Information Review*.
- Lin, H. F. (2007) Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions, *Journal of Information Science*, Vol. 33, No. 2, pp. 135-149.
- Mat, N., Alias, J. (2022) Academicians' Years of Research Involvement on Sharing of Knowledge in Malaysian University, *International Journal of Academic Research in Business and Social Sciences*, Vol. 12, No. 6, pp. 1277-1292.
- Mat, N., & Alias, J. (2022b). Knowledge Sharing in Malaysian University between Pure Science and Social Science Academicians. *International Journal of Academic Research in Business and Social Sciences*, Vol. 12, No. 8, pp212-226.
- Mat, N., Alias, J., Abdullah, N. A., Muslim, N. (2021) Academicians' Term of Experience on Sharing of Knowledge in Malaysian University, *International Journal of Academic Research in Business and Social Sciences*, Vol. 11, No. 8, pp. 829-844.
- Mat, N., Alias, J., Abdullah, N. A., Yazid, Z., Muslim, N. (2019) Knowledge Sharing Factors: Perception between Junior and Senior Academicians in Malaysian University, *International Journal of Scientific and Technology Research*, Vol. 8, No. 12, pp. 1255-1263.
- Mat, N., Alias, J., Muslim, N. (2016) The impacts of organizational factors on knowledge sharing in higher learning institutions (HLIs): Case at Universiti Kebangsaan Malaysia (UKM), *Mediterranean Journal of Social Sciences*, Vol. 7, No. 6, pp. 181-187.
- Mat, N., Alias, J., Muslim, N. (2016b). Individual factors on knowledge sharing among academicians at Universiti Kebangsaan Malaysia (UKM), *Social Sciences (Pakistan)*, Vol. 11, No. 19, pp. 4771-4775.
- Mat, N., Alias, J., Muslim, N. (2017) Perceptions of Universiti Kebangsaan Malaysia (UKM) Academicians on the Impacts of Technological Factors on Knowledge Sharing, *International Business Management*, Vol. 100, No. 1, pp. 183-188.
- McDermott, R., O'Dell, C. (2001) Overcoming Culture Barriers to Sharing Knowledge, *Journal of Knowledge Management*, Vol 5, No. 1, 76-85.

- Michailova, S., Minbaeva, D. B. (2012) Organizational values and knowledge sharing in multinational corporations: The Danisco case, *International Business Review*, Vol. 21, No. 1, pp. 59–70.
- Nonaka, I., Byosiere, P., Borucki, B., Konno, N. (1994) Organizational knowledge creation theory: A first comprehensive test, *International Business Review*. Vol. 3, No. 4, pp. 337-351.
- Nonaka, I., Toyama, R., Konno, N. (2000) SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation. *Long Range Planning*.
- Noor, A. D., Hashim, H. S., Ali, N. (2014) Factors Influencing Knowledge Sharing Organizations: A Literature Review, *International Journal of Science and Research*, Vol. 3, No. 9, pp. 1314-1317.
- Orlikowski, W. J. (1992) The Duality of Technology: Rethinking the Concept of Technology in Organizations. *Organization Science*.
- Park, H., Ribeire, V., Schulte, W. D. (2004) Critical Attributes of Organizational Culture that Promote Knowledge Management Technology Implementation Success, *Journal of Knowledge Management*, Vol. 8, No. 3, pp. 106-117.
- Petrides, L., Nodine, T (2003) *KM in Education: Defining the Landscape*, Institute for the Study of Knowledge Management in Education, Half Moon Bay, CA.
- Polanyi. M (1958) *Personal Knowledge: Towards a Post-Critical Philosophy*. University of Chicago Press, Chicago.
- Quinn, J. B., Anderson, P., Finkelstein, S. (1996) Managing professional intellect: making the most of the best. *Harvard Business Review*.
- Razmerita, K., Kirchner, K., Nielsen, P (2016). What factors influence knowledge sharing in organizations? A social dilemma perspective of social media communication, *Journal of knowledge Management*, Vol. 20, No. 6, pp. 1225-1246.
- Roca, J. C., Gagne, M. (2008) Understanding E-Learning Continuance Intention in the Workplace: A Self-Determination Theory Perspective, *Computers in Human Behavior*, Vol. 24, No. 4, pp. 1596-1604.
- Ryan, R.M., Deci, E.L. (2000) Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, Vol 25, No 1, pp. 54-67.
- Sánchez, J. H., Sánchez, Y.H., Collado-Ruiz, D., Cebrián-Tarrasón, D. (2013) Knowledge Creating and Sharing Corporate Culture Framework, *Procedia - Social and Behavioral Sciences*, pp 25-33.
- Szulanski, G. (2000) The process of knowledge transfer: A diachronic analysis of stickiness, *Organizational Behavior and Human Decision Processes*, Vol. 82, No. 1, pp. 9–27, 2000.
- Trivellas, P., Akrivouli, Z., Tsifora, E., Tsoutsas P. (2015) The Impact of Knowledge Sharing Culture on Job Satisfaction in Accounting Firms. The Mediating Effect of General Competencies, *Procedia Economics and Finance*, Vol. 19, pp. 238-247.
- Tuckman, B. W. (1999) *Conducting Educational Research*. Fort Worth: Harcourt Brace College Publishers.
- Van Acker, F., Vermeulen, M., Kreijns, K., Lutgerink, J., Van Buuren., H. (2014) The role of knowledge sharing self-efficacy in sharing Open Educational Resources. *Computers in Human Behavior*. Vol. 39, pp. 136-144.
- Van Den Hooff, B., De Ridder, J. A. (2004) Knowledge sharing in context: the influence of organizational commitment, communication climate and CMC use on knowledge sharing, *Journal of Knowledge Management*, Vol. 8, No. 6, pp. 117–130.
- Wasako, M., Faraj, S. (2005) Why Should I Share? Examining Social Capital and Knowledge

Contribution in Electronic Newtworks Practice, MIS Quarterly, Vol. 29, No. 1, pp. 35-57.

Wiersma, W. (1995) Research Methods in Education: An Introduction, Allyn and Bacon, Boston, MA.