Enabling and Constraining Factors to Knowledge Sharing Among Academicians

Fadillah Ismail[1],*

[1]Department of Production and Operations Management, Faculty of Technology Management and Business, Universiti Tun Hussein Onn, Malaysia, Parit Raja, Batu Pahat, Johor, 86400 MALAYSIA

*Corresponding Author

Abstract: Knowledge sharing management is an ideal and effective strategy which has become a culture of successful organizational practice. However, most organizations including public sector fail and pay less attention in managing assets i.e. human capital skills and knowledge. Hence this study was conducted to identify the determining factors that influence the sharing of knowledge that occurs successfully among academics in higher education's institutions. This study obtained information through secondary data. Based on published data, study identifies and lists four key critical factors that lead to the survival of an organization facing challenges and risks. The effective management of knowledge has been described as a critical ingredient for organization seeking to ensure sustainable strategic competitive advantage. Therefore, creating, managing, sharing and utilizing knowledge effectively is vital for organizations to take full advantage of the value of knowledge.

Keywords: Knowledge sharing, Academicians

1.0 Introduction

Knowledge management exists, when many are beginning to realize the importance of knowledge management in an organization. Knowledge management is a new term for an organization to manage its knowledge resources whether the knowledge already exists or new knowledge within the organization. Knowledge management is defined by Ngugi and Goosen (2018) as organized and systematic activities of the organization in order to improve the capabilities of an organization. It is a process in creating, collecting, absorbing, utilizing and exploiting knowledge. Through knowledge management, it is able to improve the level of employee performance and drive productivity and innovation in the organization towards better. Gunjal (2019) have introduced four processes of knowledge management, namely knowledge discovery, knowledge capture, knowledge sharing and knowledge application.

Ngugi and Goosen (2018) define knowledge sharing as a process that involves the exchange of knowledge between individuals and groups. There are many benefits that can be gained through the process of knowledge sharing in the organization. Xuexin and Danzi (2017) states that knowledge sharing is important in a business to maintain the competitive advantage that exists between businesses. Lack of knowledge sharing will result in stunted knowledge development in the organization. Therefore, in order to maintain and develop knowledge, knowledge sharing activities should be carried out actively within the organization.

Successful knowledge sharing activities, should have a knowledge sharing activity that involves between the giver and the recipient of knowledge. Therefore, knowledge sharing will occur when the giver and receiver of knowledge are ready to carry out the activity. Knowledge sharing should involve sharing activities between implicit knowledge (tacit) or explicit knowledge (explicit) or both (Gobet, 2018). Therefore, various industries in the world have adopted knowledge sharing to encourage economic growth for the industry. The sharing of knowledge includes efforts that have been implemented and reviewed as well as lessons learned.

Since universities and their educational and research programmes are a source of inspiration for the introduction of information and ideas, this study is carried out because it is necessary to explore a new topic (Jarrah & Alkazelah, 2020). As a crucial approach to their future programmes, universities are embracing adaptation, transformation and innovation. This research contributes to the improvement of education management and the triggering management of expertise at the university.

2.0 Universities and Knowledge Sharing

In the employment and education environment, there are significant differences in the work skills required. First, work whose major components require high intellectual mastery such as mathematical, verbal and skill mastery analytical more geared towards students with spatial and kinesthetic tendencies (Judi *et al.*, 2018). Second, work that requires individuals to do it practically using hands rather than using intellectual knowledge.

Higher educational institutions play a crucial role in the management and advancement of expertise as information-based organisations. For higher education institutions the implicit and explicit goal is to deliver high-quality knowledge that used to grow and improve society. Additionally, the development and dissemination of knowledge was seen as key competencies for higher educational institutions. In addition, the sharing of knowledge is a natural and common activity among academic staff in their daily work process, enhancing student and academic learning leading to university innovation (Usman, 2015; Sriratanaviriyakul & El-Den, 2017; AlKurdi *et al.*, 2018).

Academic staff is the main resource for higher education institutions, and they play a significant role in achieving university goals. More importantly, the academic staff's implicit expertise and professional experience are the key resources used to attain higher quality professional. Moreover, study and publication by academic staff is necessary to create an excellent reputation for the academic staff and university. This reputation and high-quality learning help universities recruit new students, raise funding for research and consultancy contracts (Foote & Halawi, 2018; Gunasekera & Chong, 2018). However, this success required a higher level of academic staff commitment towards university goals.

In general, teaching, researching and publication are the major criteria used to evaluate the academic staff performance (Ghadirian *et al.*, 2014). Furthermore, Masron *et al.* (2012) Stated that monitoring and consultation contribute to the performance evaluation of academic staff. Thus, teaching, research, editing, supervising, and advising are benchmarks for success of academic staff at universities. These metrics are calculated on the basis of a set of targets relevant to the university vision such as the number

of graduate students, university funding and the number of academic staff publications (Rowley, 2000). Furthermore, the commitment of academic staff to university and community is another important, intangible performance indicator (Masron *et al.*, 2012). However, to achieve both tangible and intangible performance, academic staff must work together, exchange and share their knowledge with each other. Therefore, numerous researchers suggest different methods and practices that can increase the level of knowledge sharing activity among academic staff such as knowledge management system and collaborative knowledge sharing (Usman, 2015; Sriratanaviriyakul & El-Den, 2017; AlKurdi *et al.*, 2018). According to Nassuora (2011, p.31), knowledge management is "a set of management activities aimed at designing and influencing processes of knowledge creation and integration including processes of sharing knowledge, which emerged as one of the most influential new organizational practices." Tian *et al.* (2009, p.76) defined knowledge management system in university context "as any systematic activity related to support and enhance the scientific knowledge creation, which can achieve the university goals." Therefore, knowledge management system in universities is important to practice since it is concerned with the process of transforming academic staff knowledge and intellectual assets into something of enduring value. Furthermore, it allows the academic staff to acquire the required knowledge when needed to take the right action.

According to Rowley (2000), knowledge management systems at universities are graded based on the goals they aim to accomplish such as building repositories of information, increasing access to knowledge and enhancing the knowledge climate. These initiatives were seen as examples of knowledge management systems that can provide the necessary information to improve the availability of knowledge sharing at universities at any time. Some researchers argue, however, that universities already have a substantial information management framework that operates at each institution, such as electronic teaching material services, academic affairs department and the internal network; which provide the required knowledge for academic staff at any time (Rowley, 2000; Judi *et al.*, 2018).

In addition, Rao, Suresh & Hegde (2018) reported that universities should also create an environment that can enhance and support both the soft and hard aspects of knowledge management systems among academic staff to increase the scientific knowledge creation based on the analytical descriptive approach. The soft environment aspect related to developing the personalization strategies such as seminars with outside researchers, topic meetings or discussion and brainstorming meetings. Meanwhile, the hard aspect related to developing an effective information technology strategy such as physical layout and technological information platforms that support and enhance the academic staff interaction for knowledge sharing. Moreover, Al-oqaily *et al.* (2014) reported that different factors affect successful implementation of knowledge management systems in the university such as organizational culture, effective and systematic processes, knowledge measures, knowledge organization and knowledge systems infrastructure. Therefore, universities may require some changes in their culture and structure to have an effective knowledge management system.

Another method applied in universities to enhance knowledge sharing activity among academic staff is the collaborative knowledge system. Collaboration is a process of bringing people, knowledge, experience and skills of multiple team members together to contribute to organizational development. Collaborative knowledge sharing systems have the ability to link individual knowledge and the learning process to explore the strengths, weaknesses, opportunities and threats in university to enhance the overall university knowledge learning leading to innovation (Ivanova, Vinogradova & Zadadaev, 2019).

A different method of collaborative knowledge sharing reported enhancing knowledge sharing behaviour among academic staff such as faculty development programs, new ideas programs, face-to-face discussions programs, special interest group research, group team working, seminars and conference. These activities allow the academic staff meet face to face and share their new knowledge and ideas and at the same time, they can acquire new knowledge and experience (Amin *et al.*, 2011b;

Kumaraswamy & Chitale, 2012). However, establishing collaborative knowledge sharing culture in the higher educational institution required alignment between human resource practices and university processes to overcome the factors that can affect knowledge sharing activity among academic staff. In addition, university management should provide the effective tools, encouragement and reward to motivate the academic staff to be more involved in knowledge management system and collaborative knowledge sharing (Cheng *et al.*, 2009; Muhammad *et al.*, 2011). Therefore, effective support from top management is fundamental to encourage academic staff to exchange, transfer and share their knowledge with each other. However, the main challenge to achieving successful knowledge management practice among academic staff in any universities is not based on changing university culture, structure or the environment; the main concern is how to convert the academic staff tacit knowledge into explicit knowledge to be widely available and easily used by faculty members.

Therefore, understanding the factors that affect knowledge sharing activity among academic staff is important for management to find the effective ways to eliminate the effect of these factors and provide the best practice that can increase the level of knowledge sharing among the academic staff. Therefore, the next section will highlight some of the factors that have been reported influencing knowledge sharing among academic staff in universities.

3.0 Factors Effecting Knowledge Sharing in Universities

Universities are a place where knowledge is shared freely between academic staff and it is the ideal place for knowledge creation, sharing and dissemination (Cronin, 2000; Judi, 2018). In addition, previous studies have revealed that there is a widespread recognition among academic staff of the importance of knowledge sharing for their success and university performance (e.g. Fullwood *et al.*, 2013; Gunasekera, 2018; Gunjal, 2019). However, most of the academic staff is still unwilling to share their knowledge and experiences (Iqbal *et al.*, 2011; Amin *et al.*, 2011b; Goh & Sandhu, 2013a; Xuexin & Danzi, 2017). In addition, a number of researchers have reported that there is a lack of awareness regarding the factors that affecting knowledge sharing among academic staff (Akhbar & Musa, 2012; Lauring & Selmer, 2012; Supar, 2012; Fullwood *et al.*, 2013, Rao, Suresh & Hegde, 2018). Therefore, current research is still concerned with the factors that influence knowledge sharing among academics (Jain *et al.*, 2007; Cheng *et al.*, 2009; Teh *et al.*, 2011; Jahani *et al.*, 2011; Zawawi *et al.*, 2011; Amin *et al.*, 2011a; Shaari *et al.*, 2014; Ramayah *et al.*, 2013; Jolaee *et al.*, 2014; Seyoum, 2016; Usman, 2015; Sriratanaviriyakul & El-Den, 2017; AlKurdi *et al.*, 2018; Foote & Halawi, 2018; Gunasekera & Chong, 2018).

3.1 Internet

Technology is one of the factors which allow knowledge management to be implemented. Technology 's function is to encourage communication to collaborate, acquire information or knowledge and not merely store information alone (Razzaque & Hamdan, 2020). Technology facilitates the management of knowledge by opening up space for communication. Sharing information is not about IT but how each person can exchange ideas and behaviour. Without the technical infrastructure, knowledge sharing cannot happen in organizations (Vrontis et al., 2020).

Technology development enables information sharing across platforms (Vrontis *et al.*, 2020). Organizations can create technologies which can promote the sharing of knowledge. Explicit information can be encoded and processed by other workers for possible use of business intranets or other contact media (Koranteng & Wiafe, 2019). The use of intranets, the internet and extranets has

been shown to be effective in exchanging knowledge with employees so that they can behave better (Ahmed *et al.*, 2019).

The Intranet has encouraged us to create our own website to facilitate the sharing of knowledge. Intranets are a component of the knowledge-sharing approach. Proper sharing is a constructive tool, ready to receive criticism, ready to participate in discussion and able to share views (Razzaque & Hamdan, 2020). A knowledge sharing approach based on intranet is based on document preparation, visual construction, and web-based interfaces that form the basis of file structure. To facilitate the search, essential files that group members will need will be put on a network (Vrontis *et al.*, 2020).

Nowadays, the intranet is a knowledge store and supplying users with resources is getting easier with this technology. Intranet technology has given the academic staff legal authority to exchange relevant information and expertise. The intranet-based transfer of information involves a concerted effort because of the sophistication of the technology itself (Koranteng & Wiafe, 2019).

Nevertheless, there are past studies that claim that technology is only second in the knowledge management phase after the human factor. In reality, academic workers at higher educational institutions receive knowledge from other sources rather than from information technology systems. Studies show that two-thirds of academic staff 's overall information is acquired by conversations and documents that often come from outside the universities (Razzaque & Hamdan, 2020).

3.2 Individual Characteristics

According to Taylor (2006), successful knowledge sharing is concerned more with the behaviour of the source and the recipient of knowledge exchange and the Theory of Reasoned Action (TRA) is the most useful to explain the individual behaviours of knowledge sharing. Therefore, the vast majority of previous studies on knowledge sharing among academic staff have looked to determine the factors that influence academic staff attitude and intention towards knowledge sharing behaviour (e.g. Seonghee & Boryung, 2008; Iqbal *et al.*, 2011; Goh & Sandhu, 2013b; Fullwood *et al.*, 2013; Ramayah *et al.*, 2013; Gunasekera, 2018; Gunjal, 2019).

In general, these studies have found a number of factors that affect successful knowledge sharing among academic staff. Some of these factors are related to individual characteristics such as self-efficacy, sense of affiliation, reciprocal relationships, trust, perception, individual attitude and personal expectation. In addition, various organizational factors found to affect knowledge sharing include recognition and reward systems, management support system, organizational culture, teamwork spirit, formal and informal activities, working conditions and academic leadership style. Furthermore, many technology factors have been reported affecting knowledge sharing among academic staff such as IT application, IT systems and processes, lack of information and communication technology, openness in communication, IT for knowledge sharing and distributed knowledge sharing model.

Within the sense of individual characteristics, several researchers have found that lack of trust amongst academic staff is the key factors for effective sharing of knowledge (Jain *et al.*, 2007; Gururajan & Fink, 2010; Iqbal *et al.*, 2011; Goh & Sandhu, 2013a; Jolaee et al., 2014; Kim , Lee & Oh, 2020). In general, the result found that lack of trust among academics is one of many factors affecting the sharing of knowledge (Hao, Shi & Yang, 2019). Meanwhile, Gururajan and Fink (2010) argued that for knowledge sharing, effective knowledge sharing among academic staff at Australian universities is dependent on both the sender and receiver. Their study showed that trust and motivation are related to the sender side while the recipient side is related to the absorptive ability and information regeneration.

More specifically, the factors relating to the sender side (trust and motivation) are the most important factors for the effective exchange of information.

In addition, Seonghee & Boryung (2008) study the influence of dimensional relational factors (perception, trust, collaboration and openness in communication) and dimensional structural factors (reward systems and communication) on academic staff attitude for knowledge sharing at one private research university in South Korea. One surprising factor that was found to be insignificantly associated with academic staff attitude for knowledge sharing is trust. In addition, Goh and Sandhu (2013a) found that emotional factors (commitment, trust) have a positive influence on academic staff intention for knowledge sharing in 30 universities in Malaysia. Furthermore, Iqbal *et al.* (2011) argue that the combinations of two theories (Social Capital Theory and Theory Reasoned Action) are the best way to determine the academic staff intention towards university innovation. Iqbal *et al.* (2011) study revealed that trust, subjective norms and attitude are positivity related to enhancing the academic staff intention towards university innovation and the strength of knowledge sharing environment can affect the innovative capabilities of the university. Additionally, Goh and Sandhu (2014b) go a step further and examine the interpersonal trust (affect-based trust and cognition-based) on knowledge sharing behaviour (knowledge donating and knowledge collection) among the academic staff in Malaysian universities. The result revealed that trust has a significant relationship with knowledge collecting and insignificant relationship with knowledge donating. In conclusion, trust is an important factor that can influence academic staff for knowledge sharing behaviour.

Moreover, self-efficacy was also found as a factor that can influence knowledge sharing among academic staff for a different perspective (Iqbal *et al.*, 2011; Shaari *et al.*, 2014; Jolaee *et al.*, 2014; Sajeva, 2014; Kim, Lee & Oh, 2020). For example, Shaari *et al.* (2014) study the influence of self-efficacy as a determining factor for knowledge sharing among academic staff in 20 public universities in Malaysia. The result revealed that self-efficacy has a significant positive relationship with knowledge sharing among academic staff. Additionally, Haddad and AbuTaleb (2016) study the impact of self-efficacy on the performance of faculty members in business schools at different Jordanian public and private universities. The result shows that academic staff self-efficacy has a positive influence on their academic performance (analytic way of teaching, synthetic way of teaching, dynamism and enthusiasm and interactions with students).

Moreover, Iqbal *et al.* (2011) study the influence of self-efficacy on academic staff attitude towards knowledge sharing intention leading to university innovation in Malaysian universities. The result revealed that self-efficacy has a significant positive relationship with knowledge sharing attitude towards university innovation. In addition, self-efficacy was also reported to have a positive effect on knowledge sharing attitude towards knowledge sharing intention among academic staff of three social science faculties at one university in Malaysia (Jolaee *et al.*, 2014). In conclusion, self-efficacy is an important individual factor that can influence academic staff for knowledge sharing.

Goh and Sandhu (2013b) examine the influence of some dimensions of social capital (sense of affiliation, reciprocal relationships and peer influence) toward knowledge sharing intention among academic staff from 10 public universities in Malaysia. The result found that academic staff with a high sense of affiliation and reciprocal relationships is more willing to conform to social pressure in sharing their knowledge. Moreover, Gururajan and Fink (2010), Lauring and Selmer (2012) study the influence of diversity (cultural background and linguistic issue) on knowledge sharing among academic staff in Australian and Danish universities, respectively. These two studies revealed that different cultural backgrounds and different linguistic among academic staff can create a knowledge sharing blocks among academic staff. More specific, Fullwood *et al.* (2019) study found that there is a culture of trust in most departments and academics are willing to share knowledge with their colleagues. However, they do agree that the matrix structure, which is characteristic of academic departments, has resulted in

undefined roles and obligations that could impede the creation of systems to facilitate collaboration and sharing.

3.3 Organizational Factors

From another point of view, Rohman *et al.* (2020) stated that knowledge sharing behavior is a people-process and university management must understand how individuals react regarding internal or external factors that can provide a decision for the academic staff to participate in knowledge sharing activity. Therefore, a number of researchers have investigated the influence of organizational factors on knowledge sharing behavior among academic staff (e.g. Jain *et al.*, 2007; Cheng *et al.*, 2009; Sohail & Daud, 2009; Akhbar & Musa, 2011; Jahani et al., 2011; Siddique *et al.*, 2011; Supar, 2012; Fullwood *et al.*, 2013; Shanti *et al.*, 2016; Le & Lei, 2019; Javaid, Soroya & Mahmood, 2020). The studies revealed that supporting university culture is a critical player to enhance the operation of knowledge sharing among academic staff. Furthermore, numerous organizational factors have been documented to affect the sharing of knowledge among academic staff such as reward system, lack of time for sharing, lack of both formal and informal interaction, inadequate working conditions, location and space quality, leadership style, teamwork and recognition system.

Among the factors related to organizational, lack of effective reward system for knowledge sharing was reported as the strongest factor that can influence the level of knowledge sharing among academic staff (e.g. Jain *et al.*, 2007; Jahani *et al.*, 2011; Jolaee *et al.*, 2014; Tan & Ramayah, 2014; Le & Lei, 2019; Javaid, Soroya & Mahmood, 2020). Javaid, Soroya & Mahmood (2020) suggest that appreciation and recognition are the effective non-monetary rewards that can promote knowledge sharing among academic staff in the Malaysian context. Meanwhile, Le & Lei (2019) found that honor and reputation are the effective intrinsic rewards for sharing knowledge among academic staff at universities in Iran. In addition, Tan and Ramayah (2014) found that organizational rewards as extrinsic rewards were found to have a positive impact on the attitude of academic staff towards intention to share knowledge among academic staff at five universities in Malaysia. However, it is likely that this finding is because only one university in Malaysia employed this research. Nevertheless, most of the studies in the area of information sharing between academic staff concentrated only on intrinsic or extrinsic rewards and none of these studies looks to determine the effect of both intrinsic and extrinsic reward to highlight the effective reward system for knowledge sharing among academic staff.

A study by Cheng et al. (2009) that explores the impact of organizational, person and technological barriers on the behavior of knowledge sharing among academic staff at one Malaysian university. More specifically, their study explores the impact of incentive system, management structure, organizational culture, individual attitudes, personal expectations and application of information on the conduct of knowledge sharing among academic staff. The result revealed that personal expectation and incentive system were the two main factors that influenced conduct of knowledge sharing among academic staff.

3.4 Motivation

In addition, Choi *et al.* (2020) examine the effect of academic staff motivation, management support, information technology literacy and teamwork spirit on knowledge sharing behavior among academic staff at one public university in Malaysia. The study revealed that teamwork and management policy are the two main factors affecting knowledge sharing behavior. Furthermore, a study by Jahani *et al.* (2011), look to examine the influence of leadership style and intrinsic reward on knowledge sharing behaviour among academic staff in Iranian universities. The study revealed that the leadership

style and intrinsic reward have a positive influence on the level of knowledge sharing behaviour among academic staff.

Furthermore, Bhatti *et al.* (2020) study the effect of extrinsic motivators, social-psychological factors, organizational climate, leadership style, technology platform and university structure on academic staff attitude towards knowledge sharing intention in the universities. In general, the study revealed that all factors have an effect on academic staff knowledge sharing attitude towards knowledge sharing intention.

In the context of Jordanian universities, Alhammad *et al.* (2009) are researching the impact of organisational and individual factors affecting the implementation of effective sharing of knowledge on both academic and administrative personnel. The study showed that there are lower shared relationships between academic workers, cooperation, attitudes and desire to share information than the administrative staff. Moreover, this study reported that there is still a lack of longitudinal studies which decide the factors that influence the sharing of knowledge among academic staff in Jordanian universities. In addition, an Al-Omari *et al.* (2013) study examines the extent of attitudes, aspirations and involvement of academic workers for information management at four universities in Jordan. The study found academic workers in the information management system have a reasonable degree of attitudes and practises. Consequently, they suggested appreciation and incentives as the best way to improve the attitude of academic workers and involvement in the knowledge management system.

In addition, a study by Ramayah *et al.* (2013) is attempting to uncover the factors that affect the conduct of knowledge sharing among academic staff at ten Malaysian public universities. The study found that extrinsic motivation, mutual relationships, sense of self-worth and subjective norm are vital determinants for the attitude of the academic staff towards action in sharing knowledge. This research, however, suggests certain methods that improve the sharing of knowledge among academic staff, such as rewarding academic staff for publishing and fostering an open atmosphere that welcomes new ideas. In addition, a study by Rahab and Wahyuni (2013) seeks to determine the individual factors influencing the intention to share knowledge among academic staff at both the Indonesian public and private universities. The study result shows that the individual factors that influence academic staff attitudes towards information sharing are mutual benefits, satisfaction in supporting others, credibility enhancement and channel richness. Furthermore, the study found that both intrinsic and extrinsic factors are potential predictors for the intention to share information amongst academic personnel.

Despite numerous theories and models used by researchers to evaluate the factors influencing the sharing of knowledge among academic staff, most previous researchers recommended a different approach for encouraging academic staff to increase the level of knowledge sharing. For example, effective encouragement from senior to junior staff was suggested as a means of changing the difference of attitude among academic staff. In addition, Tuan (2019) proposed a way to increase academic staff behaviour towards knowledge sharing by encouraging the academic staff to be formed in groups based on their knowledge interest. In addition, effective training and workshops were suggested to serve a base for academic staff to engage more effectively in knowledge sharing activity. Furthermore, a number of researchers suggest that monetary reward system is the best method to motivate academic staff towards knowledge sharing (e.g. Sohail & Daud, 2009; Cheng *et al.*, 2009; Amin *et al.*, 2011; Siddique *et al.*, 2011; Chen *et al.*, 2018; Tuan, 2019; Nguyen, 2020).

3.5 Culture

Furthermore, the study found that universities have an embedded culture of knowledge sharing. However, this culture is individualistic in nature, self-serving and instrumental for the academic staff

to achieve their own goals. Consequently, this means that top management in universities still faces big challenges for promoting effective knowledge sharing activity among their academic staff.

Previous studies have reported many factors that can affect knowledge sharing behaviour among academic staff, more precisely, these studies examine the effect of different factors on academic staff attitude of knowledge sharing. The result of these studies reported that academic staff have a positive knowledge-sharing attitude (Jain *et al.*, 2007; Alhammad *et al.*, 2009; Fullwood *et al.*, 2013; Fullwood, Rowley, & McLean, 2019) and their intention for knowledge sharing is good but needs to be improved in order to have effective behaviour of knowledge sharing (Fullwood *et al.*, 2013, Ahmad *et al.*, 2020). Furthermore, Iqbal *et al.* (2011) suggest that university can enhance the academic staff intention to share knowledge through developing the working environment factors.

Universities that adopt a culture of collaboration and partnership will more easily encourage knowledge sharing compared to universities whose staffs prefer knowledge storage and compete with each other (Singh *et al.*, 2019). Cooperation and cross-functional problem solving are encouraged in the company. When company norms and practices encourage joint ventures between operating units and functions, interactions will tend toward the construction and sharing of all types of knowledge (Fullwood, Rowley, & McLean, 2019).

4.0 Conclusion

The results of this study are expected to help organizations in Malaysia in particular in the education sector in identifying elements in the organizational environment which contributes to the knowledge sharing activities that directly can assist in sustaining organizational development. At the same time, the results of this study hope to be able to give a rough explanation and disclosure of partnership activities knowledge in addition to helping the organization improve its improvement efforts strategies in encouraging the participation of members of the organization in participating in partnerships knowledge in the organization.

Based on the results of the study obtained, the researcher hopes that this study can be in proceed by examining a few more dimensions in the organizational environment that can contributes to the sharing of knowledge among members of such organizations the use of information technology, organizational structure, reward system obtained from knowledge sharing activities and so on.

Indeed, this study aims to examine the commitment of academic staff in institutions of higher learning in the implementation of knowledge sharing. Researchers hope that the results of the study findings that have been obtained as well as the discussions made can utilized and used as a guide. In addition, the researchers also hope that this study can help the relevant parties in the field of skills in providing an overview of the implementation of knowledge sharing that takes place in institutions of higher learning so that further efforts can implemented and at the same time further improve the quality of knowledge in universities in Malaysia.

References

Ahmad, M. F., Zamri, S. F., Abdullah, A. S., Abdul Rahman, N. A., Mohd Nawi, M. N., & Andleeb, N. (2020). Linkage between knowledge sharing, organizational culture, employee creativity in manufacturing organizations. *International Journal of Supply Chain Management (IJSCM),* 9(3), 252-259.

Ahmed, Y. A., Ahmad, M. N., Ahmad, N., & Zakaria, N. H. (2019). Social media for knowledge-sharing: A systematic literature review. *Telematics and informatics,* 37, 72-112.

Akhbar, A. R. N., & Musa, M. F. (2012). Enhancing Human Interaction of Knowledge Sharing in Higher Learning Workplace Environment. *Procedia- Social and Behavioral Sciences, 35(2012),* 137-145.

Alhammad, F., Al Faori, S., & Abu Husan, L. S. (2009). Knowledge Sharing in the Jordanian Universities. *Journal of Knowledge Management Practice*, 10(3), 1-9.

Al-Kurdi, O., El-Haddadeh, R., & Eldabi, T. (2018). Knowledge sharing in higher education institutions: a systematic review. *J of Ent Inf Management,* 31(2), 226-246.

Al-Omari, A. A., Abu Tineh, A. M., & Khasawneh, S. A. (2013). Faculty members' attitudes, expectations and practices of Knowledge Management at higher education institutions in Jordan. *International Journal of Management in Education*, 7(1-2), 199-211.

Al-oqaily, A. T., Hassan, Z. B., Rashid, A. M., & Al-sulami, Z. A. (2014). Success Factors of Knowledge Management in Universities (A Case Study: Jordanian Private Universities). *Middle-East Journal of Scientific Research*, 22(7), 994-1002.

Amin, A., Hassan, M. F., Ariffin, M. B. M., & Rehman, M. (2011b). Knowledge sharing: two-dimensional motivation perspective and the role of demographic variables. *Journal of Information & Knowledge Management,* 10(02), 135-149.

Amin, S. H. M., Zawawi, A. A., & Timan, H. (2011, a). To share or not to share knowledge: Observing the factors. A paper published In *Humanities, Science and Engineering (CHUSER), 2011 IEEE Colloquium on Penang* (pp. 860-864). IEEE.

Bhatti, S. H., Zakariya, R., Vrontis, D., Santoro, G., & Christofi, M. (2020). High-performance work systems, innovation and knowledge sharing. *Employee Relations: The International Journal.*

Chen, H., Nunes, M. B., Ragsdell, G., & An, X. (2018). Extrinsic and intrinsic motivation for experience grounded tacit knowledge sharing in Chinese software organisations. *Journal of Knowledge Management.*

Cheng, M. Y., Ho, J. S. Y., & Lau, P. M. (2009). Knowledge sharing in academic institutions: a study of Multimedia University Malaysia. *Electronic Journal of Knowledge Management,* 7(3), 313-324.

Choi, G., Nam, C., Kim, S., Jung, H. J., & Lee, C. H. (2020). Where does knowledge-sharing motivation come from? The case of third-party developer in mobile platforms. *Journal of Knowledge Management.*

Foote, A., & Halawi, L. A. (2018). Knowledge management models within information technology projects. *Journal of Computer Information Systems*, 58(1), 89-97.

Fullwood, R., Rowley, J., & Delbridge, R. (2013). Knowledge sharing amongst academics in UK universities. *Journal of Knowledge Management,* 17 (1), 123-136.

Fullwood, R., Rowley, J., & McLean, J. (2019). Exploring the factors that influence knowledge sharing between academics. *Journal of Further and Higher Education*, 43(8), 1051-1063.

Ghadirian, H., Ayub, A. F. M., Silong, A. D., Bakar, K. B. A., & Zadeh, A. M. H. (2014). Knowledge sharing behaviour among students in learning environments: A review of literature. *Asian Social Science*, 10(4), 38-45.

Gobet, F. (2018). Three views on expertise: Philosophical implications for rationality, knowledge, intuition and education. *Education and Expertise*, 58-74.

Goh, S. K., & Sandhu, M. S. (2013a). Knowledge sharing among Malaysian academics: Influence of affective commitment and trust. *The Electronic Journal of Knowledge anagement,* 11(1), 38-48.

Goh, S. K., & Sandhu, M. S. (2014). The influence of trust on knowledge donating and collecting: An examination of Malaysian Universities. *International Education Studies,* 7(2), 125-136.

Gunasekera, V. S., & Chong, S. C. (2018). Knowledge management critical success factors and project management performance outcomes in major construction organisations in Sri Lanka: A case study. *VINE Journal of Information and Knowledge Management Systems,* 48(4), 537-558.

Gunjal, B. (2019). Knowledge management: Why do we need it for corporates. *Malaysian Journal of Library & Information Science.*

Gururajan, V. & Fink, D. (2010). Attitudes toward knowledge transfer in an environment to perform. *Journal of Knowledge Management*, 14(6), 828-840.

Haddad, S. I., & Taleb, R. A. (2016). The impact of self-efficacy on performance (An empirical study on business faculty members in Jordanian universities). *Computers in Human Behavior*, 55, 877-887.

Hao, Q., Shi, Y., & Yang, W. (2019). How leader-member exchange affects knowledge sharing behavior: understanding the effects of commitment and employee characteristics. *Frontiers in Psychology*, 10.

Iqbal, M. J., Rasli, A., Heng, L. H., Ali, M. B. B., Hassan, I., & Jolaee, A. (2011). Academic staff knowledge sharing intentions and university innovation capability. *African Journal of Business Management*, 5(27), 11051-11059

Ivanova, E. V., Vinogradova, I. A., & Zadadaev, S. A. (2019). The study of school educational environment in the context of ensuring equal access to quality education. *The Education and science journal,* 21(7), 69-89.

Jahani, S., Effendi, A. & T-Ramayah (2013). Reward System and Knowledge Sharing Behavior among Iranian Academics: Preliminary Survey Findings. *International Journal of Business and Innovation,* 1, 37-51

Jahani, S., Ramayah, T., & Effendi, A. A. (2011). Is reward system and leadership important in knowledge sharing among academics? *America Journal of Economics and Business Administration.* 3(1), 87-94.

Jain, K. K., Sandhu, M. S., & Sidhu, G. K. (2007). Knowledge sharing among academic staff: A case study of business schools in Klang Valley, Malaysia. Malaysia." JASA, 2, 23-29.

Jarrah, H. Y., & Alkhazaleh, M. S. (2020). Knowledge Sharing Behavior in the Curricula of United Arab Emirates Universities and Educational Organizations. *International Journal of Instruction,* 13(3), 1-16. https://doi.org/10.29333/iji.2020.1331a

Javaid, J., Soroya, S., & Mahmood, K. (2020). Impact of personal and organizational factors on knowledge sharing attitude of university teachers in Pakistan. The Electronic Library.

Jolaee, A., Md Nor, K., Khani, N., & Md Yusoff, R. (2014). Factors affecting knowledge sharing intention among academic staff. *International Journal of Educational Management*, 28(4), 413-431.

Judi, H.M., Hashim, H., & Wook, T.S. (2018). Knowledge Sharing Driving Factors in Technical Vocational Education and Training Institute Using Content Analysis. *Asia-Pacific Journal of Information Technology and Multimedia,* 7, 11-28.

Junos, N. M., & Najid, N. S. A. N. (2011). The Study of Barrier Factors in Knowledge Sharing: A Case Study in Public University. *Management Science and Engineering*, 5(1), 59-70.

Kidwell, J. J., Vander Linde, K., & Johnson, S. L. (2000). Applying Corporate Knowledge Management Practices in Higher Education. *Educause Quarterly*. 4(2000), 28-33.

Kim, H., Lee, J., & Oh, S. E. (2020). Individual characteristics influencing the sharing of knowledge on social networking services: online identity, self-efficacy, and knowledge sharing intentions. *Behaviour & Information Technology*, 39(4), 379-390.

Kim, S., & Lee, H. (2006). The impact of organizational context and information technology on employee knowledge-sharing capabilities. *Public Administration Review*, 66(3), 370-385.

Koranteng, F. N., & Wiafe, I. (2019). Factors that promote knowledge sharing on academic social networking sites: An empirical study. *Education and Information Technologies*, 24(2), 1211-1236.

Kumaraswamy, K. S. N., & Chitale, C. M. (2012). Collaborative knowledge sharing strategy to enhance organizational learning. *Journal of Management Development*, 31(3), 308-322.

Lauring, J., & Selmer, J. (2012). Knowledge sharing in diverse organizations. *Human Resource Management Journal,* 22(1), 89-105.

Le, P. B., & Lei, H. (2019). Determinants of innovation capability: the roles of transformational leadership, knowledge sharing and perceived organizational support. *Journal of knowledge management.*

Masron, T. A., Ahmad, Z., & Rahim, N. B. (2012). Key Performance Indicators vs. Key Intangible Performance among Academic Staff: A case study of a public university in Malaysia. *Procedia-Social and Behavioral Sciences*, 56, 494-503.

Muhammad, N., Rahman, B. A., Rahman, W. Z. A., Asma'Rashidah Idris, S. M. S., & Jusoff, K. (2011). Knowledge management practices (KMP) and academic performance in Universiti Teknologi Mara (UITM) Terengganu, Malaysia. *World Applied Sciences Journal*, 12(12), 21- 26.

Nassuora, A. B. (2011). Knowledge Sharing in Institutions of Higher Learning. *Management,* 1(3), 29-36.

Ngugi, J., & Goosen, L. (2018). Modelling course-design characteristics, self-regulated learning and the mediating effect of knowledge-sharing behavior as drivers of individual innovative behavior. *EURASIA J of Math, Sci and Tec Edu*, 14(8), 1575.

Nguyen, T. M. (2020). Four-dimensional model: a literature review in online organisational knowledge sharing. *VINE Journal of Information and Knowledge Management Systems.*

Rahab, P., & Wahyuni (2013). Predicting Knowledge Sharing Intention Based on Theory of Reasoned Action Framework: An Empirical Study on Higher Education Institution. *American International Journal of Contemporary Research* 3(1), 138-147

Ramayah, T., Yeap, J. A., & Ignatius, J. (2013). An empirical inquiry on knowledge sharing among academicians in higher learning institutions. *Minerva,* 51(2), 131-154.

Rao, H. S., Suresh, A., & Hegde, V. (2018). academic dashboard—descriptive analytical approach to analyze student admission using education data mining. *In Information and communication technology for sustainable development* (pp. 423-432). Springer, Singapore.

Razzaque, A., & Hamdan, A. (2020). Social networking with Internet of Things aid Bahraini medical professionals' decisions through their knowledge sharing. In Toward Social Internet of Things (SIoT): Enabling Technologies, *Architectures and Applications* (pp. 173-182). Springer, Cham.

Rohman, A., Eliyana, A., Purwana, D., & Hamidah, H. (2020). Individual and organizational factors' effect on knowledge sharing behavior. *Entrepreneurship and Sustainability Issues,* 8(1), 38-48.

Rowley, J. (2000). Is higher education ready for knowledge management?

Sajeva, S. (2014). Encouraging Knowledge Sharing among Employees: How Reward Matters. *Procedia-Social and Behavioral Sciences*, 156, 130-134.

Seonghee, K., & Boryung, J. (2008). An analysis of faculty perceptions: Attitudes toward knowledge sharing and collaboration in an academic institution. *Library & Information Science Research,* 30(4), 282-290.

Seyoum, Y. (2016). Analysis of faculty member's attitude towards academic development endeavors in some selected Ethiopian universities. *International Journal of Instruction*, 9(1), 49-64.

Shaari, R., Rahman, S. A. A., & Rajab, A. (2014). Self-Efficacy as a Determined Factor for Knowledge Sharing Awareness. *International Journal of Trade, Economics and Finance*, 5(1), 39-42.

Shanti, T. I., Janssens, J. M. A. M., & Setiadi, B. (2016). University support, motivation to learn, emotional adjustment, and academic performance. *Asian Journal of Basic and Applied Sciences,* 3(1), 1-14.

Siddique, A., Aslam, H. D., Khan, M., & Fatima, U. (2011). The impact of academic leadership on faculty's motivation, and organizational effectiveness in higher education system. *International Journal of Business and Social Science*, 2(8), 184-191.

Singh, S. K., Gupta, S., Busso, D., & Kamboj, S. (2019). Top management knowledge value, knowledge sharing practices, open innovation and organizational performance. *Journal of Business Research.*

Sohail, M. S., & Daud, S. (2009). Knowledge sharing in higher education institutions: Perspectives from Malaysia. *Vine,* 39(2), 125-142.

Sriratanaviriyakul, N. & El-Den, J. (2017). Motivational factors for knowledge sharing using pedagogical discussion cases: Students, educators, and environmental factors. *Procedia Computer Science,* 124, 287-299.

Supar, N. (2012). Technological factors affecting knowledge sharing among academic staff in selected Malaysian higher educational institutions and the effect on performance. *Journal of Education and Vocational Research*, 3(7), 234-241.

Tan, C. N. L., & Ramayah, T. (2014). The role of motivators in improving knowledge sharing among academics. *Information Research: An International Electronic Journal*, 19(1), 1-19.

Taylor, J. (2006). "Big is Beautiful." Organisational Change in Universities in the United Kingdom: New Models of Institutional Management and the Changing Role of Academic Staff. *Higher Education in Europe*, 31 (3), 251-273.

The, P.-L., Chong C.-W., Yong C.-C., & Yew, S.-Y. (2011). Do the big five personality factors affect knowledge sharing behaviour? A study of Malaysian universities. *Malaysian Journal of Library and Information Science*. 16(1), 47-62.

Tian, J., Nakamori, Y., & Wierzbicki, A. P. (2009). Knowledge management and knowledge creation in academia: a study based on surveys in a Japanese research university. *Journal of Knowledge Management*, 13(2), 76-92.

Tuan, L. T. (2019). HR flexibility and job crafting in public organizations: The roles of knowledge sharing and public service motivation. *Group & Organization Management*, 44(3), 549-577.

Usman, S. H. (2015). A survey on students' preference in knowledge sharing tools to support learning in higher education. *J of Advanced Management Sci,* 3(4), 350-353.

Vrontis, D., Christofi, M., Battisti, E., & Graziano, E. A. (2020). Intellectual capital, knowledge sharing and equity crowdfunding. *Journal of Intellectual Capital.*

Xuexin, H. E., & Danzi, Y. A. N. G. (2017). The Indian basic education curriculum reform in the new century and its enlightenment. *Journal of Teacher Education*, 5, 16.

Zawawi, A. A., Zakaria, Z., Kamarunzaman, N. Z., Noordin, N., Sawal, M. Z. H. M.,