The Role of Organizational Culture and Information Communications Technology with knowledge sharing among academic staff

Wala Jawdat Ali, Alaa S. Jameel, Mohammed A. Kareem

1 Koya University – Erbil, Kurdistan Region, Iraq
2 Department of Public Administration, Cihan University-Erbil, Erbil, Kurdistan Region, Iraq

Abstract

Knowledge Sharing (KS) has attracted the attention among the researchers, meanwhile considers essential element for organization’s as well as the universities. limited studies has been conducted in developing countries in general and particularly in Iraq. The purpose of this study is to examine the impact of Organizational Culture and information communication technology (ICT) on KS among academic staff. The study is conducted in Iraq at Cihan University-Erbil. Data were collected by questionnaire from 83. However, Data were analysed by SPSS using descriptive statistics, and regression. Results showed that ICT has a positive and significant impact on KS among academic staff, while organizational culture (OC) showed non-significant impact on KS among academic staff. The study recommended the university should improve KS among staff by enhancing the ICT tools.

Keywords: Knowledge sharing, organizational culture, ICT, Academic staff.

1. Introduction

Knowledge sharing (KS) has been attracted the attention among the scholars and researchers due to the importance of this element in the organizations among all the sectors. (Asrar-ul-Haq & Anwar, 2016) described the Knowledge as the lifeblood of the organization and considered an essential component for organizations to survive in a competitive era. Therefore, indicated that the importance of Knowledge no less critical with other vital assets in the organization. Knowledge gain varies benefits such as learning and development However, its provide a great resource to individuals and organizations (Al-Busaidi, Olffman, Ryan, & Leroy, 2010). Knowledge Sharing (KS) is an essential factor which effect to learning and create a positive attitude among staff (Jer Yuen & Shaheen Majid, 2007).

Moreover, KS enable the organization to avoid the mistakes and reduces the cost of production and services that will lead to organization successful (Muhammad Jawad Iqbal et al., 2011). Universities should promote positive attitudes to the academics staff and encourage them to share the knowledge and don’t let them feel fear of losing Knowledge and make strong predictors of behaviour (Al-Kurdi, El-Haddad, & Eldabi, 2018). universities duties are to create, develop and spread the Knowledge among academics staff as well the society (Annansingh, Howell, Liu, & Baptista Nunes, 2018). However, in higher education often consider KS as essential criteria when evaluating the students or rewarding individuals (Li, Shang, Liu, & Xi, 2014). To enhance the Knowledge sharing among academic staff the universities should provide a suitable environment which plays a vital role in KS (Sohail & Daud, 2009).

Higher education sector suffering from limited contributions and understanding knowledge sharing if compared with other sectors (Al-Kurdi et al., 2018). Knowledge in Arabic countries facing many challenges in the context of promoting (Al-Busaidi et al., 2010). (Muhammad Jawad Iqbal et al., 2011) suggest research related to KS can be conducted in developing countries. According (Asrar-ul-Haq & Anwar, 2016; Fullwood, Rowley, & Delbridge, 2013), most of the previous studies conducted in developed countries and limited studies in KS conducted in the higher education field. previous literature reported there is a lack of study in developing countries about KS, particularly in Higher education filed and most of the previous studies conducted in developed countries. our study contribution is to fill this gap in the context of Iraqi Higher Education.

The main objective of this study is to examine the impact of Organizational culture and ICT on knowledge sharing among academic staff at Cihan University-Erbil, Iraq.

2. Literature review

2.1 Knowledge Sharing

Knowledge sharing consider one of the most vital elements inside the organization (Asrar-ul-Haq & Anwar, 2016). (Wu & Zhu, 2012) defined the KS the degree of knowledge shares with other workers in the
organization. KS link the teams with each other’s to find the solutions to the problems and improve the team member’s Knowledge (Wickramasinghe & Widyaratne, 2012). KS is playing a crucial role for competitive advantage in the organization, however, the KS in any organization could improve and enhance the performance when the organization has a right environment will lead to generating new Knowledge (Oyemomi, Liu, Neaga, Chen, & Nakpodia, 2019). Organization s to meet the objectives’ and goals should encourage KS among employees to reach this purpose (Akosile & Olatokun, 2019). KS has a significant effect for both employees and organization s; moreover, KS will improve the performance and career for employees and help the organization to achieve success (Skaik & Othman, 2014). Knowledge sharing enables the organization s to gain several advantages such as reduce the turnover among the employees, growing productivity, improve the human capital and competitive advantage (Razak, Asnawi, Pangil, Yunus, & Zin, 2016). According to (Ibrahim & Heng, 2015) there are various problems which cause the organization failure, Knowledge sharing considered one of these problems if did not successfully implement, to be success organization should depend on good knowledge sharing that will lead to improve and develop organization performance. KS became one of the organization assets and important to know how to enhance KS due to be essential for individuals with the organization (Lefika & Mearns, 2015). Through KS, managers can keep their peers learning and integrate for practical application (Ngah & Ibrahim, 2010). (Tong, Tak, & Wong, 2015) consider KS under knowledge management and to ensure maximisation of recourse in organization s should human resource professionals strategised and provide learning program of KS, however, to ensure individuals participatory in Knowledge sharing activities the leader should encourage them to get involved with peers to share their knowledge. KS could be divided into implicit Knowledge which refers to existing Knowledge which easy to share with others and explicit Knowledge apply to have high value and more complicated methods (Zhang, Zhang, Sun, Lytras, & De, 2017). (Riege, 2005) mention there are several challenges and barriers may face the KS with others such as lack of time and social network, low awareness, poor written communication, age, gender, and education level differences and lack of trust in individuals. In education, filed universities should stimulate and sensitisation the academic staff how it’s essential to share their Knowledge among each other’s to achieve the university goals especially can increase the number of publications which will get benefit to both university and academics staff, KS lead to help staff to gather and arrange their ideas to solve the problems in community and university, in developing countries the universities should create sensitisation and culture of knowledge sharing among academics staff more KS activities such as seminar, workshop, etc.; however, universities can provide awards to encourage staff to share their knowledge.

### 2.2 Knowledge sharing and Higher Education institutions (HEI)

HEI create, disseminate and exchange Knowledge among individuals. Moreover, KS leads to enhance the services and outcomes in academics field by enabling the academics staff to develop and share what they know inside the institute. (Annansingh et al., 2018). Knowledge sharing is the most crucial factor in enhancing communication among academic staff (Ghabban, Selamat, & Ibrahim, 2018). According (Sohail & Daud, 2009) and (Jameel & Ali, 2018) KS can improve and develop if universities motivate and stimulate teaching staff to share Knowledge by providing to staff seminars, discussion, and other academics activates. However if teaching staff at universities find an excellent infrastructure, easy access to databases and suitable system could improve and encourage their Knowledge sharing. Universities like any other organizations gain competitive advantage should be able to create, spread, and share the Knowledge to survive in marketplace and don’t allow to lose the Knowledge across other organization’s boundaries (Annansingh et al., 2018). All Organization s including higher education to be a success in the field should adopt KS which consider an essential factor in the workplace, where the employees and academics staff share their knowledge and vision among each other’s (Fullwood et al., 2013; Jolaee, Nor, Khani, & Yusoff, 2014).

#### 2.3 Organizational culture

Organizational culture is an essential factor in ensuring smooth Knowledge sharing among individuals. A set of values and beliefs could affect individuals’ behavior in sharing their knowledge. (Chang, Liao, & Wu, 2017; Gupta, 2008). To enhance the research collaboration at universities should promote KS culture among academics that consider a way to improve the quality of teaching (Fullwood & Rowley, 2017). Culture could lead to success or failure of Knowledge in organization s (Cavaliere & Lombardi, 2015; Durmusoglu, Jacobs, Nayir, Kilili, & Wang, 2014; Ma, Huang, Wu, Dong, & Qi, 2014). According to (Bousari & Hassanzadeh, 2012; Noor, Hashim, & Ali, 2014) organizational culture considers the main factors that lead to the success of KS. Institutions likely get succeed at KS when encourages the learning, trust and communications among peers (Akosile & Olatokun, 2019), (Staad, 2015) indicated that organizational culture is the conspicuously lead to enhancing KS. (Bousari & Hassanzadeh, 2012) mentioned culture as a critical success of KS and organizations should pay more attention and establish policy, rules and regulations for KS. National culture could play an essential role in KS among the employees. (Zhang, Ordóñez, Pablos, & Xu, 2014) mention the national culture may influence knowledge sharing behavior among individuals. Organizational culture refers to the values and system may encourage and enhance the knowledge sharing or impede it within the organization. According to (Ismail Al- Alawi, Yousef Al- Marzooshi, and Fraidoon Mohammed 2007; McDermott and O’Dell 2001) each organization has visible and invisible culture, the visible which related to value, philosophy and mission of the organization, the intangible culture related to employees behavior and actions. Organizational culture plays a role vital to
organization s will highly increase the productivity, performance, and achieves the goals and objectives if deployed knowledge sharing culture among staff. As well in the context of educations, universities should create and enhance a knowledge sharing among academic staff to increase their productivity which can be related in publication and improve the teaching. There is a contrasting finding in previous studies, and some studies reported OC has a significant effect on KS (Chang et al., 2017; Durmusoglu et al., 2014; Tong et al., 2015), on the other hand, OC has non-significant effect on KS (Akosile & Olatokun, 2019), To solve this contrasting in the context of Iraq at private university Cihan -Erbil.

**H1 organizational culture has a positive and significant influence on knowledge sharing.**

### 2.4 Information communication technology (ICT)

ICT improve the Knowledge sharing by access databases to get the information and providing effective communication to exchange the information and Knowledge among peers. The issues may face the ICT implementation the suitable technology tools which should be fit between the individuals and organization; however, cant generalise the technology tools to all the organization may technology implement successfully and be useful in some organization s but fail in others (Farooq, 2018; Jameel & Ahmad, 2018). In other hand ICT may facing potential issue as some staff member are not recognise or familiar with the system which implemented in the organization. Meanwhile, ICT can provide functional benefit to organization or institution by easily stored the data, information and exchange it among others (Hansen, Nohria, & Tierney, 1999; Jameel, 2018). According to (Sohail & Daud, 2009) technology is essential driver of Knowledge sharing. ICT can reduce the barriers between knowledge individuals and by adoption ICT can enhance and improve access to information that will lead to successfully implement (Ahmad & Jameel, 2018; Jameel, Karem, & Mahmod, 2017; Jameel & Ahmad, 2018). With highly adopt of technology tools nowadays can promote the KS and transfer among different cultures and organization s (Asrar-ul-Haq & Anwar, 2016). According to (Akhavan, Rahimi, & Mehralian, 2013) to adopt technology for supporting KS it will cost the organization and should provide the necessary environment to create the acceptance by the staff. Nowadays technology became used widely and developing rapidly, by the modern technology easy to access and communicate with others to share the knowledge and ideas among the academic staff however universities should pay more attention to Technology side provide a good ICT infrastructure and provide the academics staff training, workshop, seminars, etc. to educate them about KS by ICT tools. Moreover, ICT can increase the Knowledge transfer and enable the individuals to access to databases and to share their Knowledge among peers.

Technology had a strong positive relationship towards knowledge sharing (Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012). Same finding with (Eze, Goh, Goh, & Tan, 2013) and (Jameel, & Mohsfeghyan, 2017) found knowledge technology had a significant impact on KS and considered technology most important factor determine of KS attitude among individuals. On another hand, the finding from the study of (Akosile & Olatokun, 2019) showed the availability of IT infrastructure didn’t affect to KS among academics staff and suggested to encourage KS in institutions it’s essential to create an environment which is people-oriented, rather than technology-oriented. (Rad et al., 2011) found the ICT didn’t exert influence on KS. The same result with (Cheng, Ho, & Lau, 2009) did not find IT application influence on KS.

The results from previous studies showed ICT has a significant and positive impact to KS in some studies, and other studies showed different result that ICT does not influence to KS, to solve this contradiction proposed to test this factor among academic staff at Cihan University Erbil, Iraq. However ICT can help the academics staff to access large amounts of data and information and removing the barriers among the staff especially in developing countries. Meanwhile, ICT can enhance the KS levels at universities and spread the Knowledge and information between the departments at universities to get better understand, ICT lead to spread Knowledge and build capacity at universities.

**H2 Information Communication Technology has a significant and positive influence on knowledge sharing.**

### 3. Methodology

The study used a survey design quantitative approach covering academics staff at Cihan University Erbil, Iraq from various colleges. The population of the study consisted of Professors, Assistant Prof, lecturer and Assistant Lecturers in the university

Data were collected by a questionnaire which structured based on the variables of this study to measure it. The questionnaire was consisting of two parts. Part A demographic information of the academic staff. Part B consisted of Three sections and items were adapted from previous studies, as follows:

- **Section 1: Knowledge Sharing 5 Items adapted from** (Durmusoglu et al., 2014; Fullwood et al., 2013).
- **Section 2: measure organizational culture 4 Items adapted from** (Akosile & Olatokun, 2019; Tan & Md. Noor, 2013).
- **Section 3: ICT measures the availability of IT infrastructure by four items adapted from** (Akosile & Olatokun, 2019).

Five-point Likert scale closed-ended has been used in the questionnaire, as 1 = strongly agree and 5 = strongly disagree. The questionnaire was distributed by self-administered in various colleges at Cihan university Erbil. Out of 100 questionnaires distributed only 87 were returned and 83 valid, which mean 87 % return rate. The data were coded and analysed by statistical package for the social sciences (SPSS) version 23.

### 4. Results

#### 4.1 demographic Descriptive.

In this section, the results will be starting with demographic characteristics, as represented in Table 1. The majority of the respondents Male with 63%, while 37 % are Female. The largest response for this survey was with age group of 40 to 49 (34 %) and close to this result was with the group of 30 to 39 (29 %) while the young group below 30 years are 4 % and above 60 years 16 %. As expected in Qualifications, most (66%) of the respondents with Master degree while (34%) hold PhDs.
A large proportion (63%) of the respondents Assistant Lecturer while (14%) with Lecturer position, (23%) Assistant Professor and no participant belong to Professor.

Distribution of socio-demographic data of the respondents

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>52</td>
<td>63%</td>
</tr>
<tr>
<td>Female</td>
<td>31</td>
<td>37%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 30</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>30 - 39</td>
<td>24</td>
<td>29%</td>
</tr>
<tr>
<td>40 – 49</td>
<td>28</td>
<td>34%</td>
</tr>
<tr>
<td>50- 59</td>
<td>14</td>
<td>17%</td>
</tr>
<tr>
<td>60 and above</td>
<td>13</td>
<td>16%</td>
</tr>
<tr>
<td>Position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistant Lecturer</td>
<td>52</td>
<td>63%</td>
</tr>
<tr>
<td>Lecturer</td>
<td>12</td>
<td>14%</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>19</td>
<td>23%</td>
</tr>
<tr>
<td>Professor</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Qualifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master</td>
<td>55</td>
<td>66%</td>
</tr>
<tr>
<td>PhD</td>
<td>28</td>
<td>34%</td>
</tr>
</tbody>
</table>

4.3 Reliability and Validity

The purpose form Cronbach’s alpha to evaluate the internal consistency and to determine how the items are associated as a group. (Tang, Cui, & Babenko, 2014). Cronbach’s alpha less than .60 considered poor, .70 to .80 will be acceptable and over .80 good (Sekaran & Bougie, 2010). The results are shown in Table 2 there is a good consistency of all constructs, the reliability scores over .80, which consider good level. Meanwhile, all variables valid and perfect factor loading values. according to (Hair,Tatham,&Black 2010) the minimum limit of factor loading value 0.5, all estimated loadings were greater than 0.7 and significant see Table 2

Table 2 of Reliability and validity

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
<th>Factor loading</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC</td>
<td>OC1</td>
<td>.882</td>
<td>.802</td>
</tr>
<tr>
<td></td>
<td>OC2</td>
<td>.888</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OC3</td>
<td>.765</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OC4</td>
<td>.772</td>
<td></td>
</tr>
<tr>
<td>ICT</td>
<td>ICT1</td>
<td>.977</td>
<td>.903</td>
</tr>
<tr>
<td></td>
<td>ICT2</td>
<td>.994</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ICT3</td>
<td>.994</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ICT4</td>
<td>.994</td>
<td></td>
</tr>
<tr>
<td>KS</td>
<td>KS1</td>
<td>.896</td>
<td>.855</td>
</tr>
</tbody>
</table>

4.3 Regression

Regression analysis was conducted to test the Hypothesis H1 and H2. The regression involves independent variables (IV), i.e. OC and ICT, and one dependent variable (DV), i.e. Knowledge sharing. The coefficient shown R² is .489. This result indicates that (OC and ICT) explain 48.9 per cent of the variance in KS. The finding of the study, as summarised in Table 4, show OC to have a non-significant influence on KS (p = 0.887, >0.5). This means, there is no support for Hypothesis 1. Hence, ICT is found as a strong predictor of KS (p = .000, <0.5).

Table 4 Multiple Regression Analysis Result

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Standardised Coefficients β</th>
<th>Sig.</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC → KS</td>
<td>.012</td>
<td>.887</td>
<td>&gt; 0.05</td>
</tr>
<tr>
<td>ICT → KS</td>
<td>.325</td>
<td>.000</td>
<td>&lt; 0.05</td>
</tr>
</tbody>
</table>

R = .699, R² = .489, Std. Error of the Estimate .387.

5. Discussion

Finding from this study provide a better understanding of the factors that affect KS among academic staff at Cihan university in Iraq. The main result of this study summarised and discussed below.

H1 organizational culture has a positive and significant influence on Knowledge sharing.

First Hypotheses it’s in contrast to most of the previous studies which have reported that Organizational culture has a positive effect on KS, we did not find this effect among academic staff at university. This finding is strengthened by (Akosile & Olatokun, 2019) found in the study which conducted among academic staff at Bowen University, Nigeria organizational culture has a non-significant effect on KS, same finding with (Cheng et al., 2009) which found in the study conducted among academic institutions at Multimedia University Malaysia. This may be demonstrated that both of the studies were conducted among academic staff in private universities.

H2 Information Communication Technology has a significant relationship with Knowledge sharing.

ICT has a positive and significant relationship among academic staff at Cihan University Erbil, most of the academic staff believe the ICT can be a useful platform to share their Knowledge among academics staff as well enable to access databases. Same findings from previous studied which reported ICT has a positive and significant effect on KS (Eze et al., 2013; Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012). on the other hand, ICT
found a non-significant effect on KS (Akosile & Olatokun, 2019; Cheng et al., 2009; Rad et al., 2011). Universities, especially in developing countries such as Iraq, it’s required to developing and enhancing ICT system to increase the benefit from ICT will lead to an increase in the number of publications and enhancing universities ranking.

6. Conclusion
The study conducted at Cihan university Erbil which provided an empirical study on KS of among academic staff, the study has reported non-significant regression in the university among OC and KS. However, ICT necessary according to academic staff to ensure smooth communication and transfer their Knowledge with peers. KS practices should be encouraged as a culture at university such as provide to members’ workshops, seminars, etc., however, create an environment led to share the knowledge among academic staff at university.

References


Tohidinia, Z., & Mosakhani, M. (2010). Knowledge sharing behavior and


