



ORGANIZATIONAL CULTURE AS DETERMINANT OF KNOWLEDGE SHARING PRACTICES OF TEACHERS WORKING IN HIGHER EDUCATION SECTOR

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Abstract

The current study aims to explore the influence of organisational culture on the knowledge sharing practices of teachers working in higher education sector. The study hypothesized the impact of various aspects of organisational culture on the knowledge sharing practices of teachers working in higher education sector. The data required for the study has been conveniently collected from 250 teachers working in various higher educational institutions in the Kerala state. The study used PLS SEM for analysis and found that the organisational culture explain 35.9 % the knowledge sharing practices of the teachers working in the higher education sector of the state. Out of the factors of organisational culture, communication, trust and organizational structure influence significantly the knowledge sharing practice of teachers

Key words: Knowledge Sharing Practices, Organisational Culture, Higher Education, Partial Least Square, PLS-SEM.

1. Background of the Study

Knowledge sharing is the process by which individuals make their knowledge available to others. Davenport (1997) defined it as *voluntary* and distinguished it from reporting. While reporting involves the exchange of information based on some routines or structured formats, sharing implies a voluntary act by an individual who participates in the knowledge exchange even though there is no compulsion to do so. Knowledge sharing can occur through communications and networking with other experts, or documenting, organising and capturing knowledge for others (Cummings, 2004; Pulakos *et al.*, 2003; Sousa *et al.*, 2015). There are variances with regards to knowledge sharing behaviours, depending on the nature of the cultural dimension that is practiced within a firm (Ardichvili, Maurer, Li, Wentling, & Stuedemann, 2006). Development of favourable organisational culture may encourage knowledge sharing activity.

Academic institutions are confronted by number of challenges that can be alleviated through sound knowledge management and sharing practices. The proliferation of information has transmuted competitive success to be based on comprehensive knowledge and intellectual capital management. Higher education is of very significant in any society as it contribute to the socioeconomic development. The quality of higher education mainly depends on the quality and competence of the teachers working in the sector (Areekkuzhiyil, 2014). The teacher is considered the key element for the success of any system of education (Yin, 1996). Being a knowledge worker, knowledge sharing is an important to the teachers in higher education, which facilitate their professional development, contribute to the growth of higher education institutions, and the entire academic community. The knowledge sharing of the teachers are influenced by many factors. One important factor among them is the organisational culture of the institutions.

The present study directed towards investigating the impact of the organisational culture on the knowledge sharing practices of teachers working in higher education sector.

2. Statement of the Problem

Knowledge sharing connects individuals with the organisation by transferring knowledge that resides with individuals to the organisational level where it is converted into economic and competitive value for the organization (Hendriks, 1999). However, knowledge sharing is not an activity that takes place seamlessly within organizations (Hendriks, 1999). There is enough evidence to suggest that knowledge sharing is critical to organizations (e.g. Davenport & Prusak, 1998; Hendriks, 1999). However, the dominant idea in the literature related to knowledge sharing is that individuals do not readily share knowledge (Brown & Woodland, 1999; Davenport & Prusak, 1998); and that individuals are motivated to share what they know primarily through financial inducements (Gupta & Govindarajan, 2000; Quinn, Anderson & Finklestein.). there a number of organisational, personal and social factors that influence the knowledge sharing practices of teachers. Being different from business organisations and other corporate firms, the nature of knowledge sharing practices of teachers working in higher education sector has to be studied separately. In this study the knowledge sharing practices of teachers working in higher education sector has been studied in relation to the organisational culture.

3. Theoretical Framework

According to Hendriks (1999), knowledge sharing suggests a relationship between at least two parties—one that possesses the knowledge and the other that acquires the knowledge. Individuals in organizations have always created and shared knowledge and therefore knowledge sharing was considered to be an activity that took place automatically. Knowledge sharing is a dynamic process mediated by complex factors that exist at the organizational, group, and individual levels (Andrews & Delahaye, 2000; Davenport & Prusak, 1998).



Empirical evidence suggests that knowledge is used at the individual level for both control and defense (Brown & Woodland, 1999), and that if individuals perceive that power comes from the knowledge they possess, it is more likely to lead to knowledge hoarding instead of knowledge sharing (Gupta & Govindarajan, 2000). Withholding information from those perceived to be competitors is often considered useful in attaining one's goals in a competitive environment (Pfeffer, 1980). Research further indicates that professionals zealously guard their knowledge, as they perceive that their own value to the firm is a product of the knowledge they possess (Empson, 2001; Weiss, 1999). Issues of power that mediate the relationships between individuals involved in knowledge exchanges is also thought to influence knowledge sharing behavior (Huber, 1982). However, it must be noted that many of these studies were conducted in situations involving organizational restructuring, mergers, and other highly volatile environments.

Equating knowledge with power has fuelled the notion that knowledge is not easily shared within organizations and sufficient incentives need to be provided in order to prompt individuals to share what they know with others within the organization. O'Reilly and Pondy (1980) indicated that there is a positive relationship between rewards and knowledge sharing behaviour among individuals. The relationship between knowledge sharing and incentives was further supported by case studies (Gupta & Govindarajan, 2000; Quinn et al., 1996) which found that significant changes had to be made in the incentive system to encourage individuals to share their knowledge, particularly through technology based networks in the organizations. There is also some evidence for knowledge sharing that was not motivated by any tangible rewards (e.g. Constant, Sproull, & Kiesler, 1996). Yet others who argued against the use of incentives to share knowledge claim that in the long run, unless knowledge sharing activities help employees meet their own goals, rewards will not help to sustain the system (O'Dell & Grayson, 1998).

Culture is another factor that has proved to have a significant influence on knowledge sharing behavior in organizations. Regardless of how strong an organization's commitment is to knowledge management, it has been found that the influences of the organization's culture are much stronger (O'Dell & Grayson, 1998). Due to the very complex nature and influence of culture, organizational culture is increasingly being considered a major barrier to effective knowledge sharing in organizations (DeLong & Fahey, 2000; Leonard-Barton, 1995). Empirical evidence of the relationship between culture and knowledge sharing was found among other by Leonard-Barton, 1995, and Pan and Scarborough (1999).

Other factors that have been identified as influencing knowledge sharing behaviour are sensitivity of knowledge (Weiss, 1999), friction (Szulanski, 2000; von Hippel, 1994), reciprocity (Nahapiet & Ghoshal, 1998) and trust (Andrews & Delahaye, 2000; Ghoshal and Bartlett, 1994). The importance of having shared language to facilitate knowledge sharing was identified by several authors (e.g., Blackler, et al., 1998; Nonaka and Takeuchi, 1995; Nahapiet and Ghoshal, 1998; Orr, 1990).

4. Research Questions

The purpose of this study is to analyse the impact of organisational culture on the knowledge sharing practices of teachers working in higher education sector. The primary research questions were:

1. What is the impact of organisational culture determine the knowledge sharing practices of teachers working in higher education sector?
2. What are the organisational factors that influence knowledge sharing practices of teachers working in higher education sector?

5. Hypotheses

In accordance with the research questions and based on the model developed, the following hypotheses have been formulated and tested for significance.

1. Organisational culture has a significant impact on the knowledge sharing practices of teachers working in higher education sector.
2. Communication has a significant impact on the knowledge sharing practices of teachers working in higher education sector.
3. Leadership of the institution has a significant impact on the knowledge sharing practices of teachers working in higher education sector.
4. Motivation and Reward has a significant impact on the knowledge sharing practices of teachers working in higher education sector.
5. Trust has a significant impact on the knowledge sharing practices of teachers working in higher education sector.
6. Organisational structure has a significant impact on the knowledge sharing practices of teachers working in higher education sector.



6. Review of Related Literature

The studies of Vazquez, Fournier, and Flores (2009), Bures (2003), Riege (2005), Bock, Zmud, Kim, and Lee (2005) and Ardichvili, Page, and Wentling (2003) investigate the impacts of culture on knowledge sharing practices. The authors have asserted that culture, through some of its dimensions serve as a barrier in the knowledge sharing capabilities within an organization. Some of the components of culture that have been identified as being influential towards the impeding of a knowledge sharing behaviour include commitment of head of the institutions, emotional intelligence, fear, the presence of hierarchy in the organizational structure, lack of social network, age differences, gender differences, shortage of resources, conflict of motives, uncertainty, under- estimation of lower levels, conflict avoidance and the general environment at work, among others.

It has also been noted that a major problem in knowledge sharing is that there are some employees who are confined in a culture that is characterized by unwillingness to transfer knowledge to other people, hence, making it impossible as well for the organization to be embedded with a knowledge sharing culture. In addition, another significant insight revealed is that extrinsic rewards, as part of an organizational culture, do not necessarily translate into influencing the employees to share knowledge. There are different studies on culture which were explored on the basis of categorizing them as visible and invisible culture and finding their relationship with knowledge sharing in an organizational setting (McDermott and O'Dell, 2001; Al-Alawi, Al-Marzooqi, and Mohammed, 2007). Visible culture includes the philosophy, mission, and espoused values that guide the daily operations of an organization. On the other hand, the invisible culture basically deals with the perceptions of people who are working in an organization, and such kind of culture reflects the unspoken core values that guide their functioning (McDermott & O'Dell, 2001). Both the visible and invisible culture has been asserted as being influential in knowledge sharing was identified as having critical effects on culture as well.

Communication, information systems, rewards, organization structure, and trust were also noted. Therefore, an improvement or favorable performance of the organization with regards to the earlier mentioned dimension will also correspond into the development of a better knowledge sharing behaviour within the work environment.

There are different cultural components that can have an effect on knowledge sharing behaviour (Sharrat and Usoro, 2003; Park, Ribiere and Schulte, 2004). Support, especially when coming from the top management, is an enabler of motivation to share knowledge with other people within the workplace (Wang & Noe, 2010). The characteristics of organizational culture that has been pointed out as being influential in the establishment of a knowledge sharing behaviour within an organization include being open to change and being innovative. Areekkuzhiyil, (2016). In addition, it has also been noted that having a shared vision among the members of the workforce is an essential determinant of culture that will have an influence on knowledge sharing (Ladd & Ward, 2002). Jo (2011), explored the context of the relationship between knowledge sharing and organizational culture, and found a significant association.

The antecedents of a knowledge sharing culture were also explored in different literatures in the past, such as in the work of Lin (2007); Mueller (2012); Bock, Zmud, Kim, and Lee, 2005, and Kharabshesh (2008). Support coming from top management, knowledge self-efficacy, positive interaction, market orientation, intrinsic motivation, trust between the members of the workforce and management, and finding enjoyment from being able to help others are all influential in knowledge sharing. Trust has also been noted as a necessary ingredient in active knowledge sharing and creation (Argote *et al.*, 2003; Lee and Choi, 2003; Levin *et al.*, 2002; Szulanski *et al.*, 2004).

Researchers have shown that knowledge sharing may be facilitated by having a less centralized organizational structure (Kim and Lee, 2006), creating a work environment that encourages interaction among employees such as through the use of open workspaces (Jones, 2005) and the use of fluid job descriptions and job rotation (Kubo *et al.*, 2001). Knowledge sharing occurs in a dynamic context where other organizational factors and elements interactively influence one another.

Access to relevant information technology and higher levels of technology use would be expected to contribute to a higher level of knowledge activity within the organization. Markus (2001) also notes that knowledge reuse depends, in part, on the availability of information technology and repositories of knowledge. Although generally taken for granted that information systems play a role as a vital part of the infrastructure that enables organizations to cultivate knowledge activities (Kankanhalli *et al.*, 2005; Massey *et al.*, 2002).

7. Research Model

Through the model the investigator investigate trust, leadership, communication, reward system, and organization structure as being the components of organizational culture that are presumed to have a significant impact on the knowledge sharing behavior. Each of these factors has been investigated individually to determine how they affect knowledge sharing, and to what extent are they seen as significant by the teachers working in higher education sector of the state. Figure 1 shows the research model that has been used in the investigation.

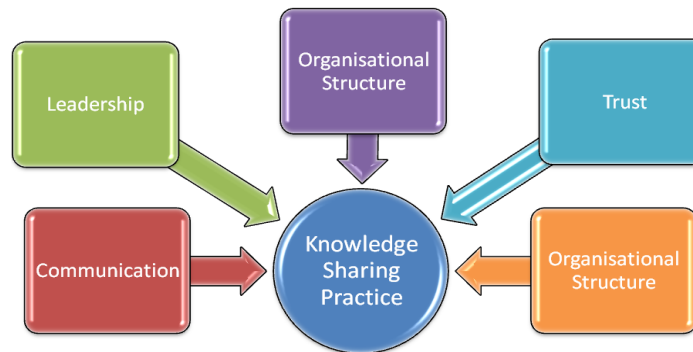


Figure 1: Research Model

8. Development and Administration of the Tool

On the basis of review of literature, a list of statements regarding the different aspects of organisational culture which potentially influence the knowledge sharing practices of teachers working in higher education sector has been prepared. The responses of the respondents (concerning the importance of these variables in determining the organizational stress) to these variables were anchored on a five point Likert type scale. The scale was pretested for validity and clarity on respondents conveniently selected from the relevant population. Following pretesting, the scale has been administered to the teachers working in different institutions of higher education in the state of Kerala.

9. Methodology

The epistemology on which the present study has been based is positivism. The assumption is that the variables under the study can be objectively measured and analysed to arrive at the finding. Hence the investigator followed quantitative methodology based on the principles of empiricism. The data required for the study has been collected from 250 teachers conveniently drawn from the various higher education institutions in the state of Kerala. Casual modeling technique namely, Partial Least Squares (PLS) has been used for the purpose of analysis.

10. Measurement Model

PLS examine the relationship among the constructs that cannot be directly measured and the model is composed of two parts that will be tested separately: (i) the measurement model and (ii) the structural model. The analysis of the measurement model is required to ensure the reliability and validity before drawing any conclusion. To analyse the measurement model individual item reliability, internal consistence and discriminate validity are tested. The details of the results of the PLS has been presented in table 1.

Table 1: Result Summary for Reflective Outer Model

Latent Variable	Indicators	Loadings	Loading (indicator reliability)	Composite Reliability	AVE
Knowledge Sharing	KS 1	0.893	0.797	0.888	0.799
	KS 2	0.859	0.738		
Communication	C 1	0.887	0.787	0.865	0.762
	C 2	0.859	0.738		
Leadership	L 1	0.784	0.615	0.873	0.697
	L 2	0.809	0.654		
	L 3	0.907	0.823		
Motivation and Rewards	MR 1	0.883	0.780	0.885	0.659
	MR 2	0.829	0.687		
	MR 3	0.801	0.642		
	MR 4	0.728	0.575		
Trust	T 1	0.795	0.632	0.855	0.664
	T 2	0.903	0.815		
	T 3	0.938	0.880		
Organisatioanl Structure	OS 1	0.782	0.612	0.912	0.776
	OS 2	0.773	0.598		
	OS 3	0.885	0.783		



10.1. Individual Item Reliability

Individual item reliability has been tested by examining the individual loadings of the measures to see the links between measures and factors. Table 1 summarizes the loadings. Items with loadings of 0.7 or more imply that there is much more shared variance than error variance between the construct and its measure (Hulland, 1999) and 17 measures fill the criteria. A loading of less than 0.5 means that more variance is due to error and those items should be dropped (Hulland, 1999). Thus three measures that were below 0.5 were dropped.

10.2. Internal Consistency (Reliability)

Internal consistency, seeks to assure that there is correlation among the measures, meaning that measures for the same construct produce similar results. Internal consistency was assessed by examining composite reliability values. Acceptable composite reliability level is 0.7 (Hulland, 1999), and as shown in table 1, all factors are above that acceptable level.

10.3. Convergent Validity

To check the convergent validity, each latent variable's Average Variance Extracted (AVE) has been evaluated. From the table 1 it was found that all the values of AVE are greater than the acceptable threshold of 0.5. Hence the convergent validity has been confirmed.

10.4. Discriminate Validity

Fornell and Larcker (1981) suggest that the square root of AVE in each latent variable can be used to establish discriminate validity, if this value is larger than other correlation values among the latent variables. To do this, a table is created in which the square root of AVE is presented in bold on the diagonal of the table. The correlations between the latent variables are taken from the "Latent Variable Correlation" section of the report of the PLS output and are placed in the lower left triangle of the table (see table 2). The result indicates that discriminate validity is well established.

Table 2: Fornell-Larcker Criterion Analysis for Checking Discriminate Validity

	Knowledge Sharing	Communication	Leadership	Motivation and Rewards	Trust	Organisational Structure
Knowledge	0.894					
Communication	0.576	0.873				
Leadership	0.107	0.279	0.835			
Motivation and	0.544	0.544	0.421	0.812		
Trust	0.362	0.362	0.815	0.521	0.815	
Organisational	0.763	0.763	0.386	0.618	0.561	0.881

11. Structural Model

The structural model specifies the relations between constructs (Cool et al, 1989) allowing to test the hypotheses of the study. Analysis of relationships between constructs and their explained variance is done by assessing path coefficients and R² values. The figure 2 gives the PLS SEM result for the reflective model.

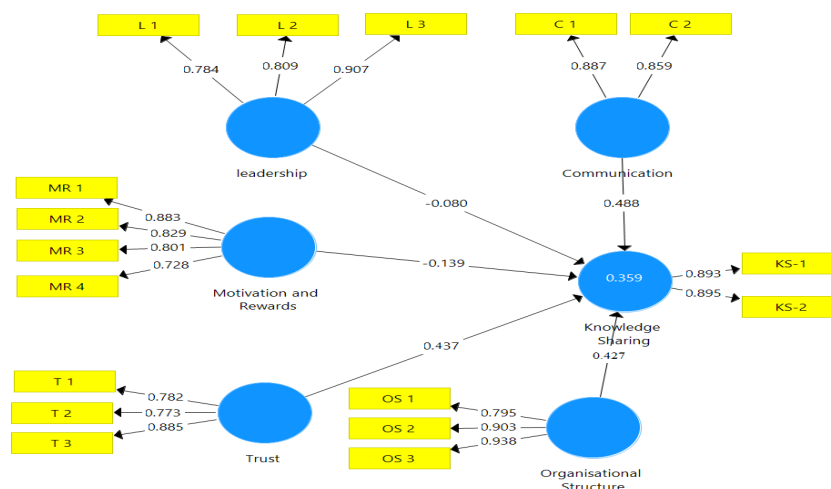


Figure 2: Impact of Organisational Culture on Knowledge Sharing Practice



The coefficient of determination tells to what extent a variable is explained by the model. Table 3 and 4 shows the overview of coefficient of determination of variables in the model.

Table 3: Quality Criteria for the Model

Variable	R Square	t value	P Value
Knowledge Sharing	0.359	3.236 **	0.001

** Significant at 0.01 level

The table 3 shows that the organisational culture explains 35.9 % of the knowledge sharing practise of the teachers working in the higher education sector. This impact is significant at 0.01 level. (t = 3.236, p =0.001, significant at 0.01 level). Hence the hypothesis that Organisational structure has a significant impact on the knowledge sharing practices of teachers working in higher education sector has been accepted.

11. Testing of Hypotheses using Bootstrapping

The bootstrapping analysis is used to determine the confidence intervals of the path coefficients and statistical inference. It helps to perform statistical testing of hypotheses that is to accept or reject the hypotheses. The researcher has adopted 5000 bootstrap samples. Table 4 shows the path model (hypothesis) with its respective t-values for each and every path.

Table 4: Path Coefficients and t Statistics

Path/Hypothesis	Path Coefficient	t-value	P value
Communication → Knowledge Sharing	0.488	3.148**	0.002
Leadership → Knowledge Sharing	-0.080	0.915	0.360
Motivation and Rewards → Knowledge Sharing	-0.139	0.966	0.334
Trust → Knowledge Sharing	0.437	3.808**	0.001
Organisational Structure → Knowledge Sharing	0.427	2.512**	0.003

** Significant at 0.01 level

12. Findings

The study reveals that the organizational culture is a strong determinant of knowledge sharing practices of teachers working in higher education sector (35.9 %). Analysis of the path coefficients (table 4) reveals that among the various aspects of organizational culture, communication, trust, and organisational structure significantly influence the knowledge sharing practices of teachers working in higher education sector.

13. Conclusion

In this study, the investigator has analysed the organizational culture and different aspects of organizational culture as determinant of knowledge sharing practices of teachers working in higher education sector. The study reveals that organisational culture is a significant element which determine the knowledge sharing practices of teachers working in higher education sector. It is also identified that the out of the various aspects of organizational culture, communication, trust, and organisational structure significantly influence the knowledge sharing practices of teachers working in higher education sector. The findings of the study indicate the significance of having a conducive organizational culture in higher educational institution enriched by mutual trust, free and open communication and barrier free organizational structure to facilitate knowledge sharing practices of teachers.

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