Knowledge Management in Service Encounters: Impact on Customers’ Satisfaction Evaluations

Priyanko Guchait
Doctoral Student and Research Assistant
School of Hospitality Management
The Pennsylvania State University
Mateer Building, State College, PA-16802
United States
Tel: (573) 289-5830
Email- pug117@psu.edu

Karthik Namasivayam, Ph. D.
Associate Professor
School of Hospitality Management
The Pennsylvania State University
Mateer Building, State College, PA-16802
United States
Tel: (814) 863-9774
Email- kun1@psu.edu

and

Pui-Wa Lei, Ph. D.
Associate Professor
Educational Psychology
The Pennsylvania State University
CEDAR Building, State College, PA-16802
United States
Tel: (814) 865-4368
Email- Puiwa@psu.edu

July 2010

1 Corresponding author. email: pug117@psu.edu
Knowledge Management in Service Encounters: Impact on Customers’ Satisfaction Evaluations

Abstract

Purpose – This paper integrates the knowledge management and marketing literatures to examine the relationships between knowledge management (KM) practices during a service exchange and customers’ satisfaction and behavioral intentions.

Design/methodology/approach - Data were collected in an experimental setting using video scenarios; hypotheses were tested using MANOVA and ANCOVA.

Findings - Results show that tacit rather than explicit KM practices used by service providers have a greater influence on customer satisfaction and behavioral intentions. The mediating effects of perceived control and fairness on the relationship between KM practices and customer satisfaction are also found.

Research implications/limitations – This paper extends research in the area of knowledge management, customer relationship management, services management, and suggests future theoretical and methodological research directions. Although sample is representative of the population, no claims are made to generalize the findings of the study to broader population.

Practical implications - Managers need to understand the value of knowledge management in service encounters and specifically focus on the tacit knowledge that front-line workers possess. Managers need to install organizational systems that encourage front-line workers to develop and use tacit knowledge in service encounters.

Originality/value - The impact of knowledge management practices on consumer evaluations of service has received less research attention. No prior studies have investigated the influence of KM practices in a service encounter context. This paper focuses on the influence of two fundamental knowledge management components, namely tacit and explicit knowledge, on consumer reactions.

Keywords: Knowledge management, Customer satisfaction, Perceived fairness, Perceived control, Service relationships, Relationships marketing

Paper type – Research Paper
Knowledge Management in Service Encounters: Impact on Customers’ Satisfaction Evaluations

1. Introduction

The concept of Knowledge Management (KM) has attracted the attention of researchers over the last decade since it is considered an important tool to achieve innovation and sustainable competitive advantages (Cooper, 2006; Marques and Simon, 2006). Nonaka (1998) noted that in highly uncertain economies the only sure source of lasting competitive advantage is knowledge. Several studies found that firms that adopt knowledge management practices perform better than competing firms that do not (Pathirage et al., 2007; Marques and Simon, 2006). Knowledge management practices have been implemented in a wide range of industries including manufacturing, consulting, tourism, and call centers (Koh et al., 2005).

Extensive research has demonstrated the importance of customer-employee interactions in customers’ evaluation of overall quality and/or satisfaction with services (Bitner et al., 1990; Dolen et al., 2004). Research has also identified the relationships between consumer satisfaction and service quality (Parasuraman et al., 1988; Bitner, 1990; Brady et al., 2002), perceived control (Hui and Bateson, 1991; Van Raij and Pruyn, 1998; Namasivayam, 2004), emotional contagion (Pugh, 2001), perceived employee effort (Mohr and Bitner, 1995), perceived fairness (Judge et al., 2006; Colquitt et al., 2001), and service recovery efforts (Webster and Sundaram, 1998; Smith and Bolton, 2002). However, the impact of knowledge management practices on consumer evaluations of service has received less research attention.

Sigala (2005) proposes that organizations need to implement Customer Relationship Management (CRM) strategies to enhance profitability and customer loyalty. Recent research suggests that both CRM and KM are directed towards the same goal: continuous improvement of
processes to meet customer goals (Salomann et al., 2005). Initiatives emerging from this effort have been labeled as ‘customer knowledge management’ (CKM) or ‘knowledge-enabled CRM’ (Gibbert et al., 2002; Gebert et al., 2003). Croteau and Li (2003) note that an organization’s KM capabilities are an important factor affecting CRM impact. However, recent studies indicate an underutilization of KM practices in the hospitality/tourism industry (Cooper, 2006; Sigala and Chalkiti, 2007; Hallin and Marnburg, 2007).

There is substantial evidence of the impact of knowledge management practices in building strong relationships with customers, and enhancing customer satisfaction and organizational performance (Marques and Simon, 2006; Pathirage et al., 2007). However, no prior studies have investigated the influence of KM practices in a service encounter context. KM begins with an understanding that knowledge is broadly classified as explicit knowledge and tacit knowledge. Each has very particular characteristics, discussed more fully later in this paper, that influence KM. This paper commences analysis at this foundational level to ask how consumer reactions differ when service providers use one or the other form of knowledge. More specifically, this study examines the influence of KM practices on consumer satisfaction and consumers’ repurchase intentions. This study focuses strictly on the dyadic interaction between service provider and customer – the service exchange. KM practices outside these bounds are not within the scope of this study. Therefore, the focus of this paper is on the influence of two fundamental knowledge management components, namely tacit and explicit knowledge, on consumer reactions. The next section reviews relevant literature and provides a discussion of CRM and the service product to establish the conceptual basis of this study.

2. Literature Review

2.1. CRM (service relationships)

According to Gutek et al. (1999), service relationships occur when customers have repeated contact with same service provider. Service relationships refer to instances where service providers know their customers personally and expect to see them again in future (Gutek et al., 2002). Three distinguishing characteristics of service relationships are: reciprocal identification, expected future interaction, and a history of shared interaction between customers and service providers (Gutek et al., 2002). Over time customers and service providers get to know each other and develop a history of shared interaction on which they rely to complete a transaction (Gutek et al., 1999). In this study, this conceptualization is adopted to suggest that returning customers seek evidence of reciprocal identification and their history with the service organization. When these elements are evident, customers will be more confident and, consequently, satisfied with the nature of their relationship with the service provider. Customers discern evidence of reciprocal identification and shared history by observing frontline service provider behaviors. When the service provider recognizes the customer (e.g., greet by name) and suggests that the customer occupy the same room as the previous visit, this indicates the quality of the relationship to the customer, leading to greater satisfaction. This action by the service provider reassures the customer that the service organization ‘mutually identifies’ with the customer and that the service provider ‘knows about’ the customers previous transactions with the organization.

Service organizations have recognized this important component of customer relationships and have installed processes – knowledge management processes – to manage the interaction. Sigala (2005) notes the importance of an information and communication
technology system that is well-integrated with KM and relationship management principles to maximize the benefits of a CRM process. The collection, storage, and dissemination of information and data within organizations have been examined in the area of knowledge management and is discussed more fully later in this paper. The next section provides a conceptualization of the service product that forms the basis of this paper.

2.2. Service Product

Recent research in services marketing has shifted conceptual and analytical focus from a goods-dominant (G-D) to a service-dominant (S-D) logic. G-D logic refers to goods or products (tangible output) as the main focus of economic exchange and services (intangible good) as an add-on that enhances the value of a good (Vargo and Lusch, 2008). Contrarily, S-D logic refers to service as a process of doing something using one’s resources (i.e., knowledge and skills) to benefit another party, and is identified as the primary focus of a service oriented economic exchange (Vargo and Lusch, 2008). In a service transaction, therefore, the focus is on the creation of value rather than products (Lusch and Vargo, 2006). Value estimations by customers are idiosyncratic and are based on customers’ specific needs. This service-centric and process-driven logic shifts the locus of value creation from service providers to a collaborative process of co-creation between customers and service providers (Vargo and Lusch, 2008). This shift in analysis from service delivery to value creation adds emphasis to the role of the frontline service provider. Lusch et al. (2008) propose that service provider competencies (i.e., knowledge and skills) are essential to value creation.

Following this conceptualization, this study connects the literatures on knowledge management to customers’ satisfaction with a service. As earlier noted, the knowledge and skills of the service provider are essential to value creation. Within the bounded area of a dyadic service interaction, the knowledge and skills of a front line service employee are considered an intangible component of the service. Research has noted that intangible components, especially service provider behaviors, have an important role as indicators of relationship strength (Namasivayam, 2005). Customers estimate they have a stronger relationship with a service organization when the service provider demonstrates knowledge of the customer’s preferences. However, the manner in which this knowledge or understanding is demonstrated has an effect on customer evaluations. Whether the service provider relies on tacit or explicit knowledge will influence consumers’ satisfaction with the service.

2.3. Explicit and Tacit Knowledge

Knowledge has been classified as personal or shared and public, practical or theoretical, hard or soft, internal or external, and foreground or background; however, the classification of knowledge as tacit or explicit is the most widely accepted categorization (Meyer and Sugiyama, 2007; Nonaka, 1994; Polanyi, 1958; Pathirage et al., 2007). “Explicit” or codified knowledge is transmittable in formal, systematic language. “Tacit” knowledge, on the other hand, has a personal quality which makes it difficult to formalize and communicate. Importantly, tacit knowledge is deeply rooted in individual action, commitment, and involvement in specific circumstances (Nonaka, 1994).

Jasimuddin et al. (2005) differentiates tacit knowledge and explicit knowledge based on eight features. Explicit knowledge represents knowledge that can be (a) articulated (Nonaka and Takeuchi, 1995); (b) codified in a tangible form (Nonaka and Kanno, 1998); (c) documented and transmitted, stored in the printed and the electronic media (Koh et al., 2005); (d) stored in external databases (outside human mind); (e) available in organizational repositories (e.g.
organizational databases, documents, computers, organizational manuals, databases of corporate procedures, and best practices) (Grant, 1996; Alter, 2002); (f) is easily available to anyone in the organization (Hansen et al., 1999); (g) is transferred from the “giver” to the “receiver” indirectly through information technology (i.e., no direct face-to-face contact is required); and, (h) is not owned by individuals.

Herrgard (2000) suggests that tacit knowledge is the unarticulated knowledge that exists in human beings acquired by individual processes like experience, reflection, internalization, or individual talents. The presence of personal elements makes tacit knowledge valuable, rare, inimitable, and non-substitutable (Brown and Duguid, 1998). This paper suggests that when service providers employ tacit knowledge in the value creation process, the above mentioned characteristics of tacit knowledge increase the value of the service product to the customer. The use of tacit knowledge will strengthen customers’ judgments of the quality of the relationship with the service provider. Contrarily, when the service provider refers to documentation, databases, or other sources of information (explicit knowledge) in the value creation process, customers are likely to discern lower levels of relationship with the service provider and consequently influence their overall judgments of satisfaction and value in the exchange. Explicit knowledge management is not context specific, as service employees simply reuse the knowledge provided by the organization.

In high relationship service contexts, employees possess unique customer-provider dyadic knowledge based on past transactions with the customer and do not depend on knowledge made available to them by the organization (Gutek, 1999). Therefore, when consumers perceive the service provider is using tacit knowledge management practices in a service exchange they are more likely to perceive the service to have (a) more personal meaning for them; (b) a higher relationship (membership) value (Namasivayam, 2005); and, (c) are more likely to trust the service provider’s assistance in value creation leading to higher satisfaction and behavioral intentions. Based on the above the following hypothesis is proposed:

**H1.** Tacit knowledge management practices will have a stronger impact on consumer satisfaction than explicit knowledge management.

### 2.4. Mediation of Fairness and Control

The positive influence of perceived control and perceived fairness on consumer satisfaction and behavioral intentions has been demonstrated in a number of studies (Namasivayam, 2004; Seiders and Berry, 1998). Researchers have mostly studied control and fairness as important antecedents of customer satisfaction and behavioral intentions. However, not much attention has been given to study the antecedents of control and fairness, other than studies related to service failure and service recovery (Goodwin and Ross, 1992; Seiders and Berry, 1998). This study proposes that service providers’ knowledge management practices have a significant impact on control and fairness perceptions of customers. Further, when consumers perceive high control and fairness in the service exchange they are more likely to evaluate the service positively.

#### 2.4.1. Control and KM

Scholars have suggested that people are more likely to feel and behave more positively when they perceive high control in any environment (Proshansky et al., 1974). Empirical studies have found a significant positive relationship between perceived control and human physical and psychological well-being. In a service encounter any situational or interpersonal characteristic
that enhances customers’ perceived control will positively affect customer satisfaction and behavioral intentions (Namasivayam and Hinkin, 2003; Hui and Bateson, 1991; Dabholkar and Sheng, 2009). Suprenant and Solomon (1987) explained “personalized service” in service encounters as a service provided based on the recognition of specific unique requirements of a customer as an individual over and above his/her status as an anonymous service recipient. Personalization was proposed by scholars as a significant determinant of perceptions of control and customer satisfaction (Suprenant and Solomon, 1987; Bateson, 1985).

Researchers recommend that service organizations adopt effective KM practices to provide personalized service experiences that fulfill customers’ unique needs (Sigala, 2004) and enhance customers’ perceptions of control of the service value creation process leading to higher satisfaction and behavioral intentions.

Suprenant and Solomon (1987) suggests that “programmed personalization” consisting of routine actions (such as explicit knowledge management practices including common information provided to service providers by the organization) to make each person feel like an individual and not just another customer may not necessarily lead to higher customer satisfaction. However “customized personalization” (e.g., tacit knowledge management practices such as service workers using personal and unique knowledge to assist individual customers) will increase customers’ confidence (perceived control) that they will obtain the best alternative, one that fulfills their unique needs and influence their satisfaction evaluations.

More specifically, in a high relationship oriented service, customers will perceive higher control of the value creation process when service providers employ knowledge about customer-specific preferences developed through prior transactions. When customers observe service providers using tacit knowledge to assist in building their desired service product, they feel more in control. The use of tacit knowledge indicates to customers that the service provider will provide the required service components based on their awareness of the consumers’ preferences. Higher perceptions of control lead to higher satisfaction and behavioral intentions. Therefore, the following hypotheses are proposed.

**H2a.** Perceived control will mediate the relationship between knowledge management practices and satisfaction.

**H2b.** Tacit knowledge management practices will have a stronger impact on perceived control than explicit knowledge management practices.

### 2.4.2. Fairness and KM

As noted in the previous section, appropriate KM practices ensure customers desired levels of perceived control over the value creation process. However, KM practices may not always influence customers’ perceptions of control over the value creation process. For example, when in order to create a suitable product a service provider performs certain value adding processes obscured from customers’ direct observation, customers are unlikely to perceive control over the processes. In this instance, service provider behaviors indicate the quality of the interaction to the customer. Research has shown that when service providers demonstrate courtesy, consideration, impartiality, and appropriate knowledge collectively termed fair behaviors, customers are reassured of the service providers’ service intentions (Namasivayam, 2004; Seiders and Berry, 1998). As noted earlier, when service providers demonstrate knowledge about the customers’ preferences, this is important to establishing relationship quality in the minds of the customer with effects on satisfaction (McColl-Kennedy...
Accordingly, in the absence of perceptions of control over the processes, appropriate demonstration of customer and product knowledge reassures customers of both, their value to the organization and that they will receive their desired product (Namasivayam and Hinkin, 2003).

Recently, scholars have proposed more focus on CRM strategies to seek, gather, and store the right information to provide personalized and unique guest experiences (Sigala, 2004). In a service encounter when consumers perceive that service providers are effectively using knowledge management to assist them create the desired service product customers are more likely to perceive the service exchange process to be fair.

Customers in a service relationship who perceive that their service provider employs tacit knowledge to assist in the value creation process will report higher levels of perceived fairness. As noted earlier, the adoption of tacit knowledge in interactions indicates a stronger relationship and adds value to any interpersonal interaction. Further, reliance on tacit knowledge reassures the customer of the service intentions of the service provider – that the customer will receive the best ‘deal’ possible due to expected future interactions, shared history, and reciprocal identification (Gutek et al., 1999). Since explicit knowledge is codified and external to the service provider, it is less likely to reassure customers of reciprocal identification and a shared history. Therefore the following hypotheses are formulated:

**H3a.** Tacit knowledge management rather than explicit knowledge management practices will have a stronger impact on perceived fairness.

**H3b.** Perceived fairness will mediate the relationship between knowledge management practices and satisfaction.

3. Methodology

3.1. Sample and Procedure

Participants included 36 staff members and 110 management students from two management departments at a Northeastern university in United States. Since no significant differences were found, the student and non student samples were combined making the overall sample size 146. Fifty two percent of the sample was female and the average age was 26 years (range 18-64 years). The study attempts to attain diversity in sample demographics to overcome one major limitation of an experimental study, namely the limited generalizability of findings to a population. Deliberate sampling for heterogeneity was adopted in this study by recruiting both student and non-student sample, to increase external validity of the findings of this study (Cook & Campbell, 1979). Participants were randomly assigned to either a tacit or explicit knowledge management experimental condition.

Researchers have demonstrated the ecological validity of videos in general, and also in simulating service settings (Bateson and Hui, 1992). Moreover, video clips have been shown to have high predictive validity in a number of different settings, including interpersonal interactions (Ambadi et al., 2000). Knowledge management practices were manipulated using two video scenarios. The experiment was conducted in a hotel setting. Before watching the video, participants were asked to imagine they were in a hotel, where they had stayed in the past. The video showed a front desk clerk enacting the two experimental conditions. The video was made from the point of view of the camera - the front desk clerk looks and speaks directly into the lens of the camera as if the respondent were being addressed. In the first video scenario, the...
front desk clerk uses tacit knowledge to assist the customer (i.e., the employee recognizes the
guest and assists the customer with the knowledge about the customers’ preferences based on
past service transactions). In the second video scenario, the front desk clerk uses explicit
knowledge to help the customer (i.e., the service employee uses external resources (e.g., a
computer) to retrieve information and does not possess any knowledge about the customer from
past transactions). To control for gender effects, both male and female front-desk clerks were
used in the study. Respondents were randomly assigned to watch one of the two video scenarios.
After watching the video, respondents completed a survey questionnaire consisting of Likert type
scale items.

A between subject analysis of variance (ANOVA) and an analysis of covariance
(ANCOVA) design in SPSS 17.0 was utilized to test the hypotheses. The dependent variables
measured were satisfaction and behavioral intentions, and the mediating variables were
perceived fairness and perceived control.

3.2. Knowledge Management Manipulation Check Item Generation
The success of the knowledge management manipulation was measured using two scales
developed for this study. The scales measured tacit and explicit knowledge management. Items
were generated for each scale based on the dimensions proposed by Jasimuddin et al. (2005).
Face and content validity of the scales was ensured following Hinkin and Tracey’s (1999)
analysis of variance approach.

Using ANOVA to assess each item (Hinkin and Tracey, 1999), the results showed that 14
of 32 explicit KM items had significantly higher mean score on explicit KM construct than tacit
KM construct. These 14 items were retained. Similarly, 14 items out of 32 were retained for the
tacit KM construct.

Cronbach’s alpha for perceived tacit KM scale was .95. A sample item is, “The service
provider helped me using knowledge off the top of his/her head.” Cronbach’s alpha for
perceived explicit KM scale was .92 indicating adequate reliability. A sample item is, “The
service provider used external sources (e.g. computers; manuals) to retrieve information, in order
to help me.”

3.3. Measures
Satisfaction was measured with three items adapted from a three-item satisfaction scale
developed by Lee et al. (2000). A sample item is, “I am satisfied to do business with this hotel.”
Cronbach’s alpha was .94.

Behavioral Intention was measured with three items adapted from a three item behavioral
intention scale developed by Lee et al. (2000). A sample item is, “I will definitely use this hotel
again.” Cronbach’s alpha was .93.

Perceived control was measured with three items adapted from a perceived control scale
developed by Namasivayam (2004). A sample item is, “The service encounter had everything
that was essential for the service I needed.” Cronbach’s alpha was found to be .85.

Perceived fairness was measured with eight items adapted from Truxillo and Bauer
(1999), and Colquitt (2001). A sample item is, “Overall, I believe that the service process was
fair.” Cronbach’s alpha was found to be .81.

All items were measured on a scale of 1 (do not agree) to 7 (completely agree).

3.4. Analysis
ANOVA was used to test the influence of knowledge management practices on consumer
satisfaction, behavioral intentions, perceived fairness, and perceived control. The hypothesized
mediation effects of perceived control and perceived fairness on the relationship between knowledge management and dependent variables (satisfaction and behavioral intentions) were tested using ANCOVA.

4. Results

4.1. Manipulation Checks

To examine the effectiveness of the knowledge management manipulation, participants completed the perceived tacit and explicit knowledge management scales developed for this study.

Results indicate that respondents in the tacit KM condition perceived higher tacit KM ($M = 3.56, \text{s.d.} = .84$) than respondents in the explicit KM condition ($M = 2.41, \text{s.d.} = .84; F[1,106] = 50.16, p < .01$). Similarly, results also indicate that respondents in the explicit KM condition perceived higher explicit KM ($M = 3.80, \text{s.d.} = .52$) than respondents in the tacit KM condition ($M = 2.53, \text{s.d.} = .78; F[1,108] = 100.06, p < .01$) providing support for the effectiveness of the manipulations.

Table 1 here

Table 1 presents the correlation matrix. The correlations are all in the desired direction. Significant correlations were found between KM practices and perceived fairness, satisfaction, and behavioral intentions. Although the correlation between KM and perceived control was in the desired direction, the relationship was not significant. Therefore, the correlations indicate that the respondents reported higher perceptions of fairness, satisfaction, and behavioral intentions in the tacit KM condition compared to the explicit KM condition. Additionally, positive correlations were found between perceived control, perceived fairness, satisfaction, and behavioral intentions.

Table 2 here

Table 2 reports the means and standard deviations for all variables of interest. The means reported in Table 2 show patterns as expected. The means of perceived control, perceived fairness, satisfaction, and behavioral intentions were higher in the tacit knowledge management condition than explicit knowledge management condition.

4.2. Tests of Hypotheses

The analyses included gender of service employee, gender of respondents, and age as control variables. Age and gender of respondents did not have any influence on outcomes and are therefore not discussed further in this paper. Since employee gender was found to influence the outcomes (outcome variable means were higher for the male employee), employee gender was used as a covariate in further analyses. The dependent variable, consumer satisfaction, was first subjected to an analysis of variance (ANOVA) to compare the tacit and explicit knowledge management conditions. The ANOVA table (Table 3) shows significant effect of knowledge management on consumer satisfaction with the service exchange. Results show that tacit KM has a greater impact on customer satisfaction compared to explicit KM ($F[1, 144] = 25.83, p < .01$). Therefore, hypothesis 1 is strongly supported.

Hypothesis 2a proposes the mediating effect of perceived control on the relationship between KM practices and customer satisfaction. Hypothesis 2b predicts that KM will have a positive effect on perceived control (i.e., tacit KM will have a greater impact on perceived control than explicit KM). Baron and Kenny (1986) propose several necessary steps to test mediation. First, the independent variable (KM) should have a significant effect on the
dependent variable (satisfaction). As reported earlier, KM significantly affects consumer satisfaction ($F[1, 144] = 25.83, p < .01$). Second, the independent variable (KM) should significantly affect the mediator (perceived control); this requirement was marginally supported ($F[1, 143] = 2.81, p < .1$). Therefore, hypothesis 2b is partially supported as well. Third, an analysis of covariance (ANCOVA) was conducted with perceived control as covariate to test the third and fourth requirements for mediation. Results show that control was significantly related to satisfaction ($F[1, 142] = 58.82, p < .01$). Results indicate that although KM has a significant relationship with satisfaction the size of the relationship reduces (from ($\beta = .71; F[1, 144] = 25.83, p < .01$) to ($\beta = .54; F[1, 142] = 20.67, p < .01$)) when control was partialed out, indicating a partial mediating effect. Therefore, hypothesis 2a is supported.

A similar procedure was followed to test hypothesis 3b which predicted that perceived fairness mediates the relationship between KM and customer satisfaction. The influence of KM on customer satisfaction was reported earlier satisfying step 1. There was a significant effect of KM on perceived fairness ($F[1, 140] = 14.30, p < .01$), satisfying step 2. Results indicate that tacit KM had a greater impact on customer perceptions of fairness in the service exchange process, compared to explicit KM, supporting hypothesis 3a. When fairness was introduced as covariate in the model, fairness had a significant effect on satisfaction ($F[1, 140], 126.06, p < .01$). The effect of KM on satisfaction is reduced (from ($\beta = .71; F[1, 144] = 25.83, p < .01$) to ($\beta = .36; F[1, 140] = 11.17, p < .01$)) when fairness was partialed out, indicating a partial mediating effect. Therefore, hypothesis 3b is supported.

### 5. Discussion

The results show that tacit, rather than explicit, knowledge management has a greater influence on customer satisfaction and behavioral intentions in a service encounter. This shows the importance of tacit knowledge management in value creation especially in a high relationship-oriented service context. When customers perceive that the service provider is using tacit knowledge they are more likely to believe that service providers possess knowledge of the customer’s preferences (customer-provider dyadic knowledge developed through personal experience with the customers in past transactions). Use of tacit knowledge strengthens the customer-service provider relationship. In these conditions, customers are more likely to trust the service provider’s assistance in value creation resulting in positive evaluations of the service exchange.

Moreover, a partial mediation effect of perceived control on the relationship between KM practices and customer satisfaction was also found in the study. The results clearly indicate that when service providers use tacit knowledge during a service exchange customers are more likely to perceive higher control in the value creation process compared to when service providers use explicit knowledge. Use of tacit knowledge by service providers ensure the customers that service providers possess knowledge about customer-specific preferences developed through prior transactions. Therefore, the use of tacit knowledge by service employees provide an indication to customers that the service employee will provide the appropriate service components (based on their knowledge about the customers’ preferences) to assist customers in building their desired service product. This assurance enhances customer perceptions of control in the service exchange process as they are certain that they will be able to create the desired
service product. Consequently, higher perceptions of control lead to positive service exchange evaluations.

Although a partial mediating effect of control was found, the effect was weak. Additionally, the effect of KM on control was not very high. The results clearly support the propositions made earlier that KM practices may not always influence customers’ perceptions of control over the value creation process as often service provider perform certain value adding processes which customers might fail to observe, resulting in lower perceptions of control. In these conditions, customers look for fair service provider behaviors which indicate the quality of customer-service provider interaction (Namasivayam and Hinkin, 2003).

A mediating effect of perceived fairness on the relationship between KM practices and customer satisfaction was found in this study. These results indicate that when service providers use tacit knowledge to assist customers in a service exchange, the customers consider the service exchange to be fairer compared to when service providers use explicit knowledge. Use of tacit knowledge indicates stronger relationships and adds value to the interpersonal interaction between customers and service providers. Reliance on tacit knowledge also assures customers about the service intentions of the service provider to provide the best service components possible to maintain the service relationship. More specifically, when customers believe that the service providers are adopting the appropriate procedures (i.e., use of tacit knowledge in service encounters) to maintain the customer-provider service relationship, customers are assured that they will be treated fairly. These higher perceptions of fairness result in higher satisfaction levels and positive behavioral intentions.

The correlation matrix (Table 1), and means and standard deviations (Table 2), provide evidence of the relationship between knowledge management and behavioral intentions, and satisfaction and behavioral intentions. The correlation matrix shows positive relationships between KM and behavioral intentions. Table 2 shows means for behavioral intentions which are higher for tacit KM condition compared to explicit KM condition. Significant relationships were found between satisfaction and behavioral intentions. Moreover, ANCOVA results clearly indicate that tacit rather than explicit knowledge practices have a greater influence on customers’ behavioral intentions ($\beta = .66; F[1, 146]= 15.54, p < .01$) after controlling for employee gender. No separate hypotheses were formulated to test satisfaction-behavioral intentions linkages as the relationship is well established and current results replicate prior findings (Brady and Robertson, 2001; Gonzalez et al., 2007).

6. Implications

Managers need to understand the value of tacit knowledge and focus on the tacit knowledge that front-line workers possess. Front-line workers regularly interact with customers in service encounters and as a result service relationships develop. Based on their personal experiences, service providers build their tacit knowledge about customers’ preferences and employ this tacit knowledge in future service encounters to strengthen customer-service provider relationship. Therefore, managers need to install organizational systems that encourage front-line workers to develop and use tacit knowledge in service encounters.

Moreover, managers need to understand that it is not always possible for front-line workers in a service setting to follow strict rules and regulations to assist customers. Each customer might approach a service provider with completely different requirements. Managers cannot provide front-line employees with solutions to every problem (i.e. explicit knowledge is
not always available to employees) (Namasivayam, 2005). Therefore, front-line employees have to use their tacit knowledge to handle customers’ unique problems (Gutek, 1999).

Organizational leaders can take necessary steps (e.g. training) to enhance the skills and knowledge of their front-line employees so that employees utilize tacit knowledge management in service encounters.

However, this study does not intend to suggest that tacit knowledge practices are uniformly better. Managers must make informed decisions about the appropriate knowledge practice in customer facing processes based on their organization’s strategic intent. If a repeat and loyal client base and a differentiated product are important facets of the organization’s strategy then tacit knowledge practices add value. If on the other hand, the organization competes on the basis of volume or a low cost standardized or commoditized product, then explicit knowledge practices will add value to the strategic posture.

7. Limitations and Future Directions

Although the study makes valuable contributions in the field of service management, it has limitations. The study utilizes video clips to simulate the setting. The main disadvantage of this method is that subjects may not completely identify with the imaginary situation; however, previous studies have demonstrated the validity of using such methods (Bateson and Hui, 1992). Future studies need to test the findings in field settings with actual knowledge management practices used by service providers. The studies can be done in settings such as airports, restaurants, supermarkets, and other service establishments to ensure broader generalizability of the results.

Second, future studies can also test the relationships with a different sample. Although age and the student and non-student sample did not affect influence of knowledge management on outcomes, the current sample may not be entirely representative of the population. The current study makes no attempt to generalize the findings to broader population. However field studies in future can enhance the generalizability of this study. Future field studies can be done with samples that include business travelers, and repeat customers in hotels, restaurants, banks, which may be more representative of the population. Additionally, an investigation of these relationships in different cultural contexts is also important. In some cultures, it might be considered as invasion of privacy if service providers assist customers utilizing knowledge based on prior transactions.

Third, future studies should compare the influence of knowledge management dimensions in high versus low relationship-oriented service (Gutek et al., 1999). It may be that in low relationship services customers prefer service providers to use explicit knowledge management practices, and their use of tacit knowledge may be considered “programmed” leading to negative evaluations. These propositions need to be tested in future studies.

Fourth, this study manipulated knowledge management and gender of service providers. Although service provider gender emerged as a significant factor, no interactions between gender and KM practices were found. Gender of service providers was used as a control variable in the current study. Future studies can explore if service employee gender, customer gender, and knowledge practices interact. Further, studies can also investigate the influence of employee race, gender and knowledge management to see the impact on outcomes. Under what conditions is the interaction seen as most fair or satisfying?
This study used perceptions of control and fairness as mediators. Partial mediating effects of perceived fairness and control were found in this study. Future studies can investigate the three way interaction of control, fairness, and knowledge management. Other mediating variables such as trust and self-esteem need to be investigated. Service providers using tacit knowledge management and making sincere efforts to maintain relationships with their customers are likely to enhance customer self-esteem and customer trust with the provider and the organization, which leads to positive evaluations.

Although there was substantial evidence of the influence of KM on perceptions of control, the impact was not strong. One explanation for the lower influence of KM practices on perceptions of control could be that customers often do not perceive direct control in a service exchange process. In this case, consumers focus more on the fairness of the procedures adopted by service employees to evaluate the exchange. These procedural fairness perceptions re-establish customer perceptions of control (Namasivayam, 2004). Therefore, future studies can investigate if certain KM practices, lead to higher fairness perceptions and whether such increase in fairness perceptions leads to perceptions of control and customers’ satisfaction in an exchange.

The current study focused on one dimension, procedural fairness. Future studies can perform a detailed examination of the influence of knowledge practices on three dimensions of fairness: procedural, interactional and informational fairness. These investigations can help researchers and practitioners better understand the relationships between knowledge practices and customer evaluations of service exchanges.

References


Table 1

<table>
<thead>
<tr>
<th>KM</th>
<th>Fairness</th>
<th>Control</th>
<th>Satisfaction</th>
<th>Behavioral Intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>KM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© Emerald Group Publishing Limited
This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.
Knowledge Management

<table>
<thead>
<tr>
<th>Variables</th>
<th>Fairness</th>
<th>Control</th>
<th>Satisfaction</th>
<th>Behavioral Intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit KM</td>
<td>3.6(.59)</td>
<td>3.3(.85)</td>
<td>3.4(.88)</td>
<td>3.4(.94)</td>
</tr>
</tbody>
</table>

Table 2

Means and Standard Deviations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Fairness $(N = 141)$</th>
<th>Control $(N = 144)$</th>
<th>Satisfaction $(N = 145)$</th>
<th>Behavioral Intentions $(N = 146)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit KM</td>
<td>3.6(.59)</td>
<td>3.3(.85)</td>
<td>3.4(.88)</td>
<td>3.4(.94)</td>
</tr>
</tbody>
</table>

Note. Cronbach’s alphas reported on the diagonal in parentheses.

$^1$KM : 1 = Tacit KM; 0 = Explicit KM

** $p < 0.01$

* $p < 0.05$

+ $p < 0.1$
Table 3  
*Summary of ANOVA, Satisfaction as Dependent Variable.*

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>24.88</td>
<td>2</td>
<td>12.44</td>
<td>17.91**</td>
</tr>
</tbody>
</table>

Tacit KM  | 4.0(.57) | 3.60(.87) | 4.1(.85) | 4.1(.84) |
<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Degree of Freedom</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>791.72</td>
<td>1</td>
<td>791.72</td>
<td>1139.69**</td>
</tr>
<tr>
<td>(^1)Employee Gender</td>
<td>8.24</td>
<td>1</td>
<td>8.24</td>
<td>11.86**</td>
</tr>
<tr>
<td>KM</td>
<td>17.94</td>
<td>1</td>
<td>17.95</td>
<td>25.83**</td>
</tr>
<tr>
<td>Error</td>
<td>98.64</td>
<td>142</td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2189.56</td>
<td>145</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>123.53</td>
<td>144</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\)Employee Gender: 1= Male; 0=Female

*p < .05

**p < .01
Karthik Namasivayam is an Associate Professor of Organizational Behavior at the School of Hospitality Management, The Pennsylvania State University. He received his Masters and PhD from Cornell University. He has published peer-reviewed articles in the areas of intellectual capital in service industry, services management, consumer satisfaction, and human resources management (karthik@psu.edu).
Pui-Wa Lei is an Associate Professor at the Department of Educational and School Psychology and Special Education, Pennsylvania State University. She received her Ph.D. from the University of Iowa. Her research interests are in methodological issues of multivariate statistical analyses, particularly structural equation modeling and multilevel modeling. Her research has been published in professional journals of measurement and statistics (puiwa@psu.edu).
Priyanko Guchait is a doctoral student in the School of Hospitality Management at The Pennsylvania State University. His research focuses on the application of the theoretical frames from organizational behavior, and organizational psychology to the service industry. He received his Masters in Hospitality Management from University of Missouri-Columbia and Masters in Human Resources and Employment Relations from The Pennsylvania State University. He has published peer-reviewed articles in the areas of services management/marketing, consumer satisfaction, and human resources management (pug117@psu.edu).