

# The Impact of Knowledge Capture and Knowledge Sharing on Employees' Outcomes

*Full Paper*

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## Abstract

This study explores the impact of different sub-processes of knowledge capture and sharing on employees' outcome in terms of learning, adaptability, job satisfaction and intention to stay. This research was conducted using a purposive sample from the financial services firms. The findings of this study confirm that it is not the KM processes rather the sub-processes of KM that can positively impact employees' outcomes. The current study contributes theoretically to the existing literature of knowledge management as to how knowledge capture and knowledge sharing motivate employees to learn and adapt and how learning and adaptability contribute to job satisfaction and staying intention. The findings of this study also portend to the fact that when employers take proper knowledge initiatives and when employees understand and make use of knowledge management tools provided by the organizations, employees are able to create new ideas and are prepared to respond to changes.

## Keywords

Knowledge Capture, Knowledge Sharing, Employee Learning, Employee, Adaptability, Job Satisfaction, Intention to Stay.

## Introduction

Over the last almost two decades, Knowledge Management (KM) has progressed from an emergent concept to an increasingly common function in business organizations (Zack et.al, 2009). Therefore, knowledge management is actually not a new concept; on the contrary, it has been the subject of several studies in various settings as companies seek more effective ways of increasing organizational capability for competitive advantage (Zack M. H, 1999). According to Becerra-Fernandez et al. (2004), there are four types of Knowledge management processes such as Knowledge Discovery, Knowledge Capture, Knowledge Sharing, and Knowledge Application. Each of the four sets of KM Processes proposed by Becerra-Fernandez et al. (2004) consists of sub-processes. Knowledge discovery is enabled by the sub-processes of combination and socialization. In Combination, we can combine existing knowledge to create new knowledge and through Socialization sub process, tacit knowledge is combined with interactions between individuals and groups to create new knowledge. Knowledge Capture can take place through externalization and Internalization. In externalization, tacit knowledge is converted to explicit knowledge and through internalization sub-process, explicit knowledge is converted into tacit knowledge. Knowledge sharing can happen through socialization and exchange. Through Socialization, sub-process tacit knowledge is shared or transferred between individuals and through exchange sub process, explicit knowledge is transferred between individuals. Knowledge sharing can take place across individuals, groups, departments, or organizations. Tacit knowledge is shared through socialization and explicit knowledge is shared by exchange process. Tacit knowledge forms the background necessary for assigning the structure to develop and interpret explicit knowledge. The inextricable linkage of tacit and explicit knowledge suggests that only individuals with a requisite level of shared knowledge can truly exchange knowledge (Becerra-Fernandez et.al 2004). Knowledge application process takes place through the sub-process of direction and routines. Direction refers to the process through which individuals possessing the knowledge direct the action of another individual without transferring to that person the knowledge underlying the direction and Routines involve the utilization of knowledge embedded in procedures, rules, and norms that guide future behavior.

Knowledge management can impact an organization at different levels such as: impact on People in terms of employee learning, employee adaptability, and employee job satisfaction, impact on processes in terms of process effectiveness, efficiency and innovation, impact on Products in terms of value added products as well as knowledge-based products, all of which in turn impact organizational performance (Becerra-Fernandez et.al 2004). KM can impact employee learning through internalization, externalization, socialization and exchange. Internalization and externalization sub-processes work together to help individuals learn. For example, when a team is asked to prepare a report on lessons learned from a project, the team members externalize their tacit knowledge acquired during the project. This knowledge can then be internalized by another employee when working on a later related project. Socialization and exchange also help individuals acquire knowledge through meetings and informal conversations. As for the impact of KM on employee adaptability, employees are likely to adapt when they interact with each other. They are more likely to accept change. They are more prepared to respond to change. KM efforts are intended to continually expose employees to new ideas and employees are ready for change as they are in touch with latest ideas and developments and increased employee's adaptability die to KM enabled company to become a fast changing organization. As for the impact of KM on jobs satisfaction and intention to stay, organization having more employees sharing knowledge with one another, turnover rates are reduced, thereby positively affecting revenue and profit. KM also provides employees with solutions to problems they face in case those same problems have been encountered earlier, and effectively addressed. By enabling knowledge reuse, employees can be more productive. Employees facing problems in performing their jobs become de-motivated. Improvement in skills also increases their market value.

There has been a gamut of studies done on the effectiveness of knowledge management in driving excellence, growth and making a significant difference in the performance of an organization. Although the implementation of knowledge management has been cited widely as a challenge in organizational effectiveness and performance, there is a little research on the broader aspects of the nature and means through which internalization and externalization sub-processes of knowledge capture, as well as socialization and exchange sub-processes of knowledge sharing, can impact employee learning, adaptability and how employee learning and adaptability lead to job satisfaction and how job satisfaction leads to employees' intention to stay on the job.

With that in mind, this study has tried to examine the following:

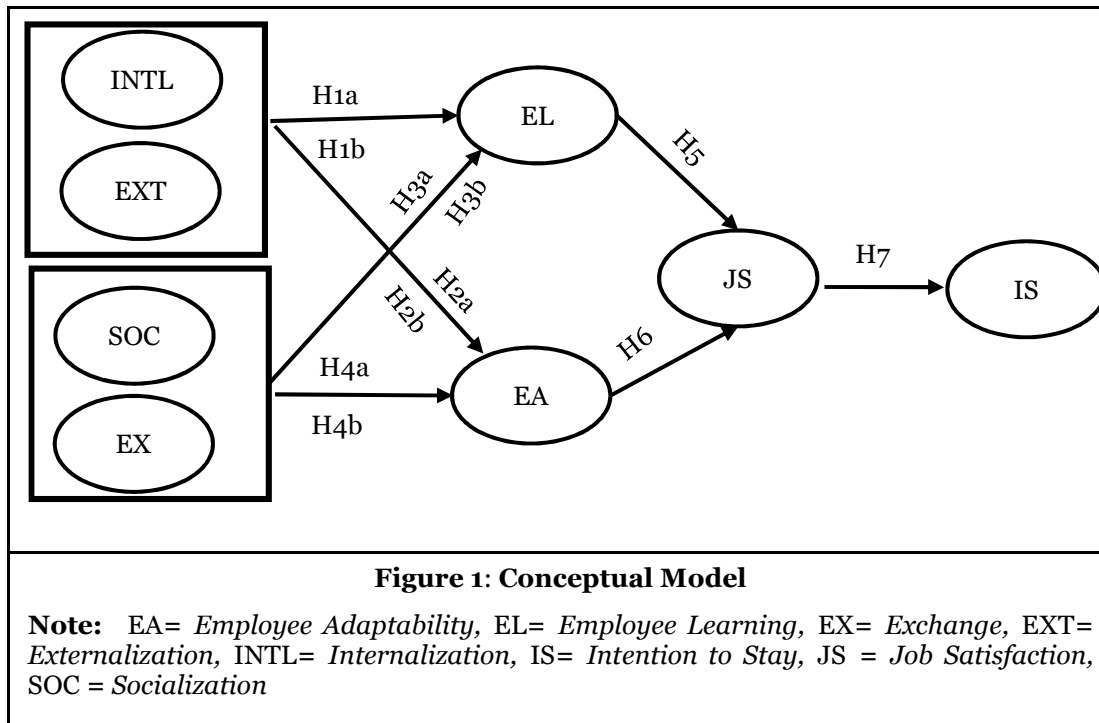
- 1) Impact of internalization and externalization sub processes of knowledge capture on employee learning, adaptability, job satisfaction and the intention to stay on the job.
- 2) Impact of socialization and exchange sub processes of knowledge sharing on employee learning, adaptability, job satisfaction and the intention to stay on the job.

## **Research Model and Hypotheses**

There have some studies that demonstrated how KM and KM processes helped improve overall organizational performance. The study of possible effects of introducing KM in the firms has centered on determining whether it is able to carry out quantifiable improvements. Marques and Simon (2006), Ho (2008), have discussed the relationship between KM , KM processes and performance of organizations at length. However, study conducted by Zack et.al (2009) have found no direct relationship between KM and financial performance but KM to related to Organizational performance which in turn related to financial performance. Studies undertook by Dibella and Navis (1998) Salazar et.al (2003), Singh et.al (2006), Lundvall and Nielsen (2007) examined the use of KM and the competitive advantages in an organization. They have demonstrated that organizations with knowledge management orientation outperformed organizations with market orientation and suggested that competitive advantage comes from the way organization performs knowledge activity. Sabherwal & Becerra-Fernandez (2003), Yang (2007), Marques and Simon (2006), demonstrated that knowledge stock accumulate knowledge assets that are

internal to the firm and knowledge sharing facilitates the transformation of the collective individual knowledge to organizational knowledge which results in the advancement of organizational learning and eventually the enrichment of organizational effectiveness. Kianto et.al (2016), Teh & Sun (2012), Lee-Kelley et. al (2007) studied how implementation of KM processes help improve employees' job satisfaction and retention (Intention to stay). They have demonstrated through empirical studies how organizations that adopted KM initiatives, were able to improve employees' job satisfaction and retention.

Based on the review of the prior literature, the following conceptual model is developed.



Employees with inadequate knowledge of the organization's products-will increase the overall costs of the organization (Benton, 2014). Internalization is defined as the degree of tacit knowledge accumulation through personal experiences, simulations and experimentation and the externalization is defined as the degree of articulating tacit knowledge (Ideas or images) in the form of words, concepts, visuals, or figurative language (e.g. analogies, metaphors, narratives). So, Knowledge management through externalization and internalization can enhance employee learning. Based on this, this study hypothesizes that:

H1<sub>a</sub>: Internalization leads to employee learning.

H1<sub>b</sub>: Externalization leads to employee learning.

Employees with inadequate knowledge of the organization's products-will increase the overall costs of the organization (Benton, 2014). So, Knowledge management through externalization and internalization can enhance employee learning. Based on this, this study hypothesizes that:

H2<sub>a</sub>: Internalization facilitates employee adaptability.

H2<sub>b</sub>: Externalization facilitates employee adaptability.

Socialization helps individuals acquire knowledge through meetings and informal conversations. Through Socialization, sub process tacit knowledge is shared or transferred between individuals and through exchange sub process, explicit knowledge is transferred between individuals. The operational definition of socialization is the degree of tacit knowledge sharing between individuals through social interaction related to the task and task efficiency and the operational definition of exchange is the degree of sharing

explicit knowledge among individuals, groups, departments or organizations. Thus, this study hypothesizes that:

H3a: Socialization facilitates employee learning.

H3b: Exchange facilitates employee learning.

People within an organization, by way of sharing their thoughts, beliefs, knowledge and experience, mutually establish their common understandings. Improvement in skills and employees' adaptability of new knowledge and skills can increase market value as well as can make an organization as fast changing organization. This study thus hypothesizes that:

H4a: Socialization facilitates employee adaptability.

H4b: Exchange facilitates employee adaptability.

Organization learning is also grounded in individual learning because employees engage in learning activities and develop the knowledge base for the cognitive system and shared memories that lead to organizational learning (Cheung, 2011). This feeling of job satisfaction is mainly based on an individual's perception of satisfaction. For any organization to flourish, it must be able to improve employees' job satisfaction. Thus, this study hypothesizes that:

H5: Employee learning increases job satisfaction

According to Murray (1999) as cited by Suliman and Al-Hosani (2014), researchers have attempted to correlate job satisfaction with performance, turnover and absenteeism but the relationship between Employee adaptability and job satisfaction in the knowledge management context have not been heavily discussed in the literature. With this in mind, this study hypothesizes that:

H6: Employee adaptability facilitates job satisfaction.

The opposite of turn over intention is the intention to stay that refers to the extent to which an employee intends to continue working for an organization and is not participating in activities that make quitting more likely (Hair Jr., Black, Babin, & Anderson, 2010). Thus, this study hypothesizes that:

H7: Job satisfaction leads to Intention to stay.

## Analysis Strategy and Discussion

### Sample Description:

The sample for this study consisted of 254 respondents from 23 different branches of eight commercial banks. For the survey, the respondents indicated their agreement or disagreement with statement concerning each construct. A 5-point Likert scale was used. Every organization under study has over 100 employees. The respondents were from many different departments, including Finance, Customer Service, Information Systems, Human Resources, Administration etc. Out of 300 questionnaires, 254 were returned and this represented 84.66% of returned questionnaires.

Constructs	Items	Ref
Internalization	<p>INTL1: I believe learning by continuous self-refinement through on the job training can help accumulate tacit knowledge</p> <p>INTL2: I share and try to understand management visions through communications with other employees</p> <p>INTL3: I agree that learning by doing (which means that written procedures and rules/practices have to be carried through action), training and exercises allow the individual to access the knowledge dominion of the organization.</p> <p>INTL4: I collect tacit knowledge (Belief, perception, point of view) by increasing the use of formal knowledge (explicit knowledge) in real life or computer-generated applications.</p>	New

	INTL5: I can use the knowledge repository (Internet/Database/Library) to obtain knowledge for my job.	
Externalization	<p>EXT1: I believe my organization recognize contradiction through metaphor/symbol and resolve them through analogy.</p> <p>EXT2: I agree with the notion that my organization encourages dialogue, "Listening and contributing to the benefit of all participants' within the organization.</p> <p>EXT3: I produce and document/record concepts in by screening ideas from others.</p> <p>EXT4: For the efficiency and effectiveness of my work, I record/ document subjective opinions of other employees of my organization.</p> <p>EXT5: I capture and translate tacit knowledge (ideas, beliefs, perception) of customers or experts into readily understandable forms (write them down or record them).</p> <p>EXT6: I create manuals/handbooks/booklets and documents on products and services</p>	New
Socialization	<p>SOC1: I share information and knowledge necessary for the tasks.</p> <p>SOC2: I improve task efficiency by sharing information and knowledge.</p> <p>SOC3: I promote sharing of information and knowledge with other teams in my organization.</p> <p>SOC4: I promote and organize brainstorming retreats or camps for knowledge sharing to solve problem.</p> <p>SOC5: I believe employee rotation across areas for knowledge seeking and sharing should be encouraged.</p> <p>SOC6: I believe employees from various functional units should work together to achieve a common goal.</p>	New
Exchange	<p>EX1: I use information systems, like intranet and electronic bulletin boards developed by my organization to share information and knowledge with other employees.</p> <p>EX2: I use repositories of information (database), best practices, and lessons learned to share explicit knowledge related to the task.</p> <p>EX3: I prefer to exchange explicit knowledge through computerized communication networks (Social Media).</p> <p>EX4: I am happy the way my organization uses Memos, manuals, letters and presentations to share information with employees.</p> <p>EX5: My Company creates/produces materials by gathering management figures and technical information to share with employees.</p> <p>EX6: I feel the need for reconfiguration of existing documents through sorting, adding, combining and categorizing of explicit knowledge.</p>	New
Employee Learning	<p>EL1: I get various formal training programs for performance of duties provided by my organization.</p> <p>EL2: I receive informal individual development other than formal training such as work assignments and job rotation provided by my organization.</p> <p>EL3: Employees are encouraged to seek professional development (attending seminars, symposia, and so on).</p>	New

	EL4: I consider employees' development through learning as a key to success rather than a cost to the organization. EL5: I am continuously learning and trying to improve myself.	
Employee Adaptability	EA1: I am able to take on new tasks. EA2: I can step in for co-workers when needed. EA3: I consider myself effective in adjusting to changes. EA4: I am open to doing things in a new way EA5: My organization encourages employees to adjust to changing situations through innovation and creativity.	New
Job Satisfaction	JS1: All things considered, I feel very satisfied when I think about my job JS2: I am made to feel that I am an important part of the company. JS3: I have good working relationships with my co-workers. JS4: I enjoy working in this organization. JS5: My job is rewarding/ I get a sense of personal accomplishment from my work.	Hair et.al (2010)
Intention to Stay	IS1: I am not actively searching for another job. IS2: I seldom look at the job listings online. IS3: I have no interest in searching for a job in the next year. IS4: It is very likely that I will be working at my company one year from today?	Hair et.al (2010)

Table 1: Constructs' indicators

### Analysis and Results

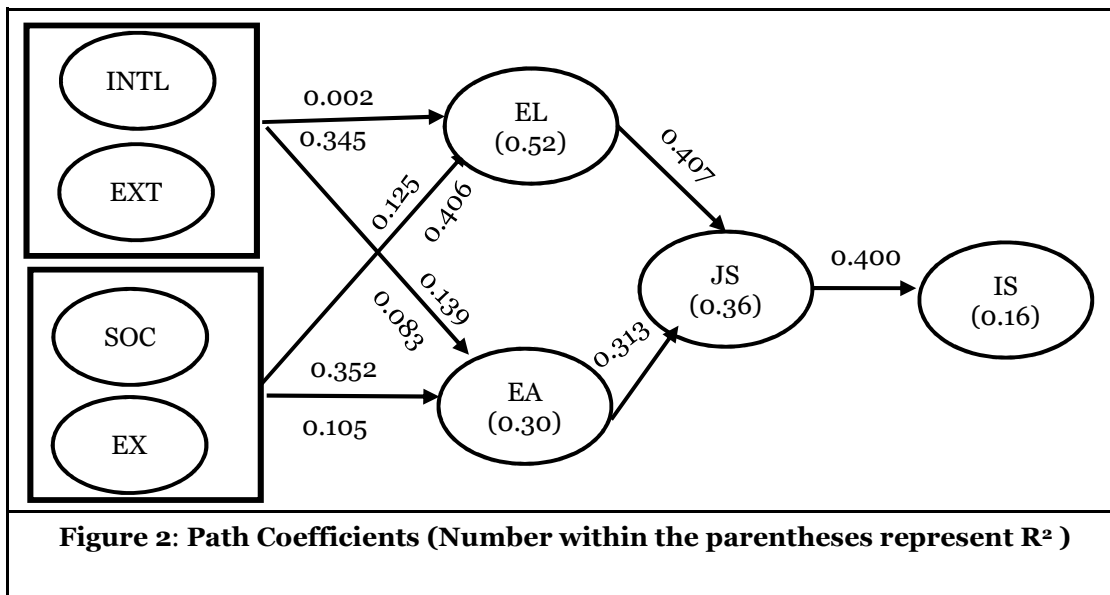
This study used SmartPLS. The internal consistency of each construct was assessed using composite reliability and Cronbach alpha. The average variance extracted (AVE) was calculated for each latent construct; and all constructs exceeded Chin's (1988) guideline of 0.5, meaning at least 50% of the variance in indicators was accounted for by its respective construct (as cited in Bateman, Gray, & Butler 2011). Table 2 and 3 provides the results of these measurement model analyses.

	EA	EL	EX	EXT	INTL	IS	JS	SOC
EA	<b>0.805</b>	0	0	0	0	0	0	0
EL	0.373	<b>0.821</b>	0	0	0	0	0	0
EX	0.371	0.641	<b>0.754</b>	0	0	0	0	0
EXT	0.301	0.599	0.516	<b>0.873</b>	0	0	0	0
INTL	0.395	0.354	0.456	0.295	<b>0.773</b>	0	0	0
IS	0.212	0.288	0.341	0.346	0.225	<b>0.815</b>	0	0
JS	0.465	0.524	0.514	0.424	0.307	0.400	<b>0.819</b>	0
SOC	0.501	0.431	0.455	0.348	0.523	0.233	0.389	<b>0.812</b>

Table 2: Bolded values are the SQRT of AVE for each latent construct.

The results of the square root of AVE on the PLS algorithm (Table 1) shows a necessary aspect of the discriminant validity of the latent constructs. Cronbach's alpha and the composite reliability show high validity and reliability.

	EA	EL	EX	EXT	INTL	IS	JS	SOC
AVE	0.65	0.67	0.57	0.76	0.60	0.66	0.67	0.66
Composite Reliability	0.88	0.86	0.84	0.86	0.82	0.86	0.89	0.89
Cronbach's Alpha	0.82	0.76	0.75	0.69	0.66	0.75	0.84	0.83

**Table 3 : Descriptive Statistics****Hypothesis Test**

The PLS results are shown in Figure 2. As for hypotheses H1, externalization positively affects employee learning ( $\beta = 0.345$ ,  $p < 0.05$ ) but not internalization ( $\beta = 0.002$ ). For hypotheses H2, when it comes to employee adaptability, the findings of this study show that internalization positively affect employee adaptability ( $\beta = 0.139$ ,  $p < 0.05$ ) but not externalization ( $\beta = 0.083$ ). For hypotheses H3, both socialization and exchange significantly affect employee learning ( $\beta = 0.125$ ,  $0.406$   $p < 0.05$ ). For hypothesis H4, knowledge sharing and employee adaptability, only socialization turns out to be significantly affect employee adaptability ( $\beta = 0.352$ ,  $p < 0.05$ ) but not exchange ( $\beta = 0.105$ ). This study also finds that Employee learning positively affect employees' job satisfaction ( $\beta = 0.407$ ,  $p < 0.05$ ). In addition to employee learning, this study also finds a significant relationship between employee adaptability and job satisfaction ( $\beta = 0.313$ ,  $p < 0.05$ ) as well as job satisfaction and intention to stay ( $\beta = 0.400$ ,  $p < 0.05$ ). Thus, both the hypotheses 6 and 7 are supported.

**Discussions**

Of the two sub-processes of knowledge capture, only externalization has been found to be significantly related to employee learning. Externalization is the key to knowledge creation as it creates new explicit knowledge from tacit knowledge (Nonaka, Toyama & Byosiere, 2001). Employees engage in learning activities and develop the knowledge base for the cognitive systems and shared memories, which lead to organizational learning. The positive impact of externalization on employees learning may cause employees to focus on learning for their own job, resulting in a knowledge base that focuses on a relatively narrow domain of interest (i.e., one's own job) and also outside their current job, resulting in a knowledge base that broadly covers several domains of interest (Cheung, 2011). As for employee adaptability, in this study, only internalization has been found to have a significant relationship with employee adaptability. Adaptable individuals take responsibility for adjusting to the situation. The proactive, resourceful, and resilient nature of adaptable employees allows them to acquire these skills on their own and to also seek out and use support from their organization (Cullen, Edwards, Casper, & Gue, 2014). As for the two sub-processes of knowledge sharing: socialization and exchange have been found to be significantly related to employee learning in an organization. The process of learning by way of sharing information and knowledge among the employees in an organization may enable individuals and organizations to reflect on the consequences of their behaviors and actions, to obtain insights from an environment where they operate, to understand the environment, and hence to interpret the meaning and react to it in more accurate approaches (Jones et al., 2003 cited in Yang, 2007). As for knowledge sharing and employee

adaptability, only socialization sub-process of knowledge sharing process turns out to be significantly related to employee adaptability in the case of banking industry under study. That means tacit knowledge shared between employees enable employees to be more adaptable. This is consistent with hypothesis H2a that was also found to significant in this study. This study also finds the relationship between employee learning and job satisfaction is significantly related to each other. Employees' willingness to learn may provide employees domain-specific knowledge skills and may be used for the production of novel ideas with the potential utility to the particular domain of interest (Cheung, 2011). In addition to employee learning, this study also finds a significant relationship between employee adaptability and job satisfaction. This study also supports the relationship between job satisfaction and employees' intention to stay. Employee turnover as mentioned by Abelson and Baysiner (1994), Dalton et al., (1981) may at times benefit firms by reducing stagnation, improving innovation, eliminating poor performers and reducing costs (cited in Droege & Hoobler, 2003). The potential disadvantage of employee turnover as mentioned also by Droege & Hoobler (2003) is the loss of organizational level tacit knowledge and as a result, employee turnover is considered as a major obstacle for many organizations.

### ***Theoretical Implications***

The results of this study have important theoretical implications that impact academics within the KM community. The findings of this study contribute to further the understanding of the way in which knowledge management initiatives should be implemented in organizations especially financial organizations. From a theoretical perspective, the results confirmed that knowledge capture and knowledge sharing play a major explanatory role in how employee learning and adaptability influence employees' job satisfaction and intention to stay. The current study contributes theoretically to the existing literature of knowledge management that how knowledge capture and knowledge sharing motivate employees to learn and adapt and how learning and adaptability contribute to job satisfaction and staying intention. The results also revealed that the employees' quest for knowledge and adaptability are shaped by the knowledge management initiatives. The results of this research also confirm that for the financial service firms studied, knowledge management plays an important role in employees' job satisfaction and intention to stay in the job. A successful knowledge capture and knowledge sharing processes would result in employees interacting and serving customers better. The results of this study show that not all the sub-processes will have equal impact on employees.

### ***Practical Implications***

The findings of this study suggest that in order to have positive impact on employees, the focus of an organization should not be specific knowledge management processes, rather focus should be sub-processes of specific knowledge management processes.

A major takeaway for practitioners especially the management or managers from this study is that employees may be nurtured to create, capture, and share the type of knowledge desired by the organization. Managers can establish platforms for employees within the same functional area and across different functional units to engage in knowledge and experience sharing. This study also suggests that employees' learning and adaptability depend on the usability and comfortability of the knowledge management initiatives undertaken by the management. Practitioners may also employ the same experimental method using the instruments developed for this study to analyze the impact of internalization and externalization of knowledge capture and socialization as well as the exchange of knowledge sharing on employee learning, adaptability, job satisfaction and finally employees' intention to stay in the job. Practitioners may also employ the same experimental method using the instruments developed for this study as the knowledge management assessment instrument developed in this study have passed the tests of reliability and validity.

### ***Limitations and Directions for Future Research***

As with any empirical study, this study is fraught with some limitations. First, sample in this study can be considered as purposive sampling. This study involved self-administrated questionnaires and was open to all levels of staff. The second limitation in this study is the sample size. The sample size in some of the eight commercial banks from 23 different branches was small and might not be representative of all the



players who might be instrumental in effective utilization of knowledge management initiatives. Third, it can be safely stated that, since the hypotheses were tested only with a sample from the financial institutions in Bangladesh, it may not be appropriate to generalize the results to other cultures and countries. Future studies need to test this measure and the related hypotheses in a cross-cultural setting.

For future research that deserve consideration, it is recommended to explore other two process of knowledge management or all the processes of knowledge management at a much more granular level as elucidated as Sabherwal, R. et al. (2003) and the impact on four endogenous variables that were studied here. Researchers could also explore the impact of other variables such as organizational climate, leadership behaviors, and organizational commitment on knowledge sharing and knowledge capture and how knowledge sharing and knowledge capture impact employee learning, adaptability, job satisfaction and intention to stay. Researchers should also look at the usage of IT artifacts and how those IT artifacts can help improve employees' learning and adaptability thereby job satisfaction and intention to stay. In order to see whether the organization has proper knowledge management mechanisms and technologies, future research should investigate IT artifacts in terms of system quality, information quality, and service quality and user satisfaction

## Conclusion

Knowledge capture and knowledge sharing lie at the core of knowledge management and it reflects employees' willingness to learn and share their valuable knowledge as well as their actions facilitating the exchange of relevant information with other members across the organization (Trivellas et al., 2015). Building on the shared values, norms, accepted practices or perceptions held by employees within an organization, knowledge capture and knowledge sharing are evolved and treated as a knowledge-centered culture which molds individual behavior (Trivellas et al. 2015). The findings of this study clearly show that knowledge capture and knowledge sharing are the precursor of employee learning, adaptability, job satisfaction and intention to stay. There is a need for management or organizations to adopt knowledge capture and sharing techniques, practices, and nurture knowledge management culture through appropriate mechanisms and technologies to improve employees learning quest and adaptability. To remain competitive in a very competitive world, knowledgeable and adaptable employees are the important resources. As KM evolves and new factors are introduced, knowledge (both the tacit and explicit) must be captured through internalization and externalization and shared through socialization and exchange. Since organizations need to become smarter and faster, intellectual capital is the means for transferring the knowledge to knowledge workers. The information is captured and transferred so that relevant data are transmitted from one individual to another (Misuraca, 2013). As organizations shift toward a dynamic workforce that applies knowledge management mechanisms to foster learning and adaptability among employees in the organization, it becomes important that these organizations understand the impact of knowledge capture and knowledge sharing on job satisfaction and intention to stay.

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