Improve Knowledge Management in IT Company in China

— A case study of Taobao

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Abstract

With fast developing economy today, knowledge becomes critical resource in organizations since it creates enterprises’ competitive advantages. Thus, the management of knowledge is highly valued as one of the strategic solutions to business success. In China, although the importance of knowledge management is already recognized by enterprises, its development and implementation still face constrains and obstacles. In high-tech industries, especially for IT companies, knowledge is considered as the key assets for the company to achieve higher competitiveness. Even though information technology provided good platform for knowledge management implementation in IT companies, its knowledge management influenced by various factors such as organizational culture, business process problems, interpersonal relationship and etc. As a result, knowledge management implementation ran into difficulties. The objectives of this thesis are to evaluate current knowledge management status in Chinese IT companies and then to provide possible solutions to improve the knowledge management implementation regarding the investigated results. Because of time and resource limitation, this thesis took Taobao, one of the leading IT companies in China to conduct the case study. To conduct the research, this thesis applied qualitative method. It conducted interviews of four employees in Taobao to collect data, and then use grounded theory method to analyze the results. After analysis, the thesis pointed out Taobao’s current problems of knowledge management implementation and further provided possible solutions from following aspects including understanding of knowledge management, knowledge strategy, training, top management support, knowledge management process, network of experts, knowledge sharing and trustworthy personal relationship, information technology, employee involvement and motivation, and organizational culture in order to improve knowledge management implementation in Taobao.

Keywords

Knowledge management, knowledge sharing, task-based KM framework, knowledge management improvement
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1. Introduction

1.1 Background

Knowledge has been regarded as a critical resource in an enterprise that create competitive advantages (Hoskisson, Hitt, Wan & Yiu, 1999; Spender, 1996). The management of knowledge is recognized as strategic value of enterprises’ stocks of knowledge in different contexts (Sanchez & Heene, 1997). As its core, knowledge management (KM) is about recognizing the characteristics of the knowledge owned by firm, recognizing the process through which knowledge is converted into goods and services, and adapting management practices (including organizational structures) to these factors (Prusak, Matson 2006). In other words, KM focuses on an enterprise’s ability to create, transfer and reuse the knowledge.

Western firms have adopted KM as part of the business strategy in the organization during the past two decades. With the development of information and communication technology, KM is becoming a trend of management theory that sustainable competitive advantage of the enterprise stems from the scarce and valuable resources (Barney, 1991). Thus, the enterprise that owns the knowledge and produces the value containing more knowledge will be able to achieve a superior position in today’s competing business environment. The goal of enterprise knowledge management is facilitating access to information and knowledge in organizations, groups, communities, business, research, and so on whenever it is needed (Kebede, 2010).

With a fast growing economy, China has now become a major global player (Woo, 2008). Chinese high-priority effort to become a more knowledge-base economy and society indicated the increasing importance of KM (Burrows et al. 2005). The concept of KM was introduced in China until the late 1990s. Based on Western theories and experiences, Chinese researchers suggested involving KM in management in the early days of KM in China (Xu and Qang, 1998). However, Burrows (2005) pointed out, despite its significant importance in China, KM still face constrains and obstacles in development not by technological limitations, but influenced by psychological factors such as cultural values among groups and social levels. Although China has made significant growth on a knowledge-based economy, it is lagging behind compared to Western countries because Chinese culture provides a unique environmental influence on KM in business and management (Peng, Moffett, McAdam, 2010).

According to a recent China KM Survey, Chinese KM practice is at its infancy and far from mature since many Chinese companies just started to apply KM practices from KM theory discussion (Saidi, 2007). Besides, not so many from the senior management team understand KM. They lack an operational plan as well as necessary KM skills to solve the problems. These are the primary obstacles for KM implementation in Chinese enterprises today.

1.2 Research Area

In the period 1999 to 2000, KM began to be applied in management practices in China (Saidi, 2007). Nevertheless, the research indicates that the main reason for current low efficiency and effectiveness in state run companies is that the Chinese companies are still not aware of the importance of KM in the knowledge-based economy (Ye and Liu, 1999).

In high-tech industries, especially for IT companies, the firms owning a higher technological and innovative capacity could achieve higher competitiveness than those without this capacity. Therefore, knowledge is considered as key asset in IT companies. When competing in IT business environment, knowledge management is very important for a company to gain its competence. Although IT often provides a platform for KM in Chinese enterprise, knowledge tends to be managed in an ad-hoc
manner based on context, rather than as a process, i.e. it depending more on relationships than on recognized process tasks and rules. Due to Chinese culture, KM activities in Chinese organizations are also influenced by the desire of both managers and employees to avoid conflict and loss of face, to respect hierarchical status. Moreover, KM is not integrated into business processes, ignoring the value chain of knowledge management applications; as a result, there is low participation of knowledge sharing from employees. The KM implementation in Chinese IT companies fell into difficulties.

Burstein and Linger highlighted three factors in the process of implementing KM: people, technology and policy (Burstein & Linger, 2006). Digman asserts that critical success factors are useful for structuring environmental analysis (Cristina, 2009). To identify the link between performance indicators and KM implementation, many KM experts and researchers summarized critical success factors impacting KM. For example, Davenport identified eight KM success factors such as technology infrastructure, organizational infrastructure, shared knowledge and etc. Beside, Ryan and Prybutok (2001) propose five success factors including open organizational culture; senior management leadership and commitment; employee involvement; teamwork and information systems infrastructure. Typically, critical success factors can be categorized into five primary categories: leadership; culture; structure, roles, and responsibilities; information technology infrastructure; and measurement (Hasanali, 2002).

To further research on KM implementation, a recognized task-based KM framework has been developed at Monash University, in Melbourne, Australia, including six activities of knowledge management: capturing, storing, sharing, learning, exploiting and exploring knowledge (Burstein & Linger, 2006).

1.3 Research questions

How does Chinese e-commerce company - Taobao implement KM today?

Literature study including related basic concept and knowledge about KM, as well as current KM status investigation in China would be conducted. With those backgrounds, this thesis took a leading e-commerce business company Taobao as a case study to go deep research on its current KM implementation. With the data gathering from interview, the author analyzed and pointed out the problems upon the factors that may affect KM implementation.

1.4 Research Purpose

The purpose of this research is evaluating the current status of knowledge management in Chinese IT companies and exploring the problems as a result to seek the possible solutions to improve the KM implementation. The results of this research can be utilized in self-improvement of knowledge management in Taobao, and also applied as a reference for other Chinese IT enterprises when they are trying to deploy knowledge management solution for the organization, so that potential obstacles can be avoided, whereas risks can be reduced as well. Upon the importance of knowledge management on IT company’s competitive edge in competing business environment, this research could be regarded as a resolution to address problem if it exists, whereas achieve competitive advantages.

1.5 Delimitation of Study

Knowledge management is critical for IT companies, in which the knowledge is the core for acquiring such competitive capacity. Since there are many Chinese IT companies and time is limited, this thesis could not conduct a thorough and comprehensive research. Thus the author chose one Chinese IT company – Taobao as a case study to conduct this research to evaluate its current KM status based on those KM activities, and to find out the problems according to the factors affecting KM
implementation; as a result, to provide solutions in order to improve KM in Taobao. Taobao is a leading C2C (customer to customer) e-business company in China. It provides online auction service in its website to customers. In today’s competing e-business market, Taobao has acquired more than 80% market share in e-business (http://www.taobao.com/about/intro.php).

Due to the fact of non-existence of previous research in this company, so as to enhance its competence and improve on implementing KM, it is necessary to identify the main problems and provide suggestions to solve them.

2 Methodology

2.1 Choice of Method

Generally, research methods can be classified into qualitative and quantitative research methods. As Michael D. Myers (1997) stated qualitative research methods such as observation, interviews, fieldwork and etc were developed in the social sciences to enable researchers to study social and cultural phenomena, while quantitative research methods such as survey, laboratory experiments and etc were originally developed in the natural sciences to study natural phenomena. Since quantitative methods which relied on statistics are used to gather quantitative data such as information dealing with numbers or anything that is measurable. In this thesis, it aimed to investigate the current status of KM implementation in Chinese IT companies and to provide solutions to improve KM implementation. Quantitative method is hard to describe the narrative facts and is not good at analyzing the logical content. The data of KM implementation included people’s behavior and attitude, which are difficult to be researched in number or measurable data. Thus, qualitative research method with literature review and interview is used.

Qualitative research methods are designed to help researchers recognize people and the social and cultural contexts within which they live (Michael D. Myers, 1997). Qualitative method is selected because it is suitable for researchers who only know roughly in advance what they are looking for, while quantitative method requires researchers know that exactly in advance. This research is mainly based on an in-depth case study of a Chinese IT company. In this thesis, it chose Taobao for the case study for two reasons. One reason is that Taobao is a typical Chinese IT company. Its founder and employees are all Chinese local people. Since its business strategy and operation method are Chinese style, it can represent for a lot of Chinese IT companies in some respects. The research object of this thesis is Chinese IT companies; therefore, a typical Chinese IT company like Taobao is meaningful for the research. The other reason is that as a leading company in Chinese IT industry, its knowledge management implementation is valuable as reference for other Chinese IT companies as empirical practice.

The source data of the case study of Taobao was collected through semi-structured interview with four employees. The author wanted to grasp their opinion and perception about knowledge management implementation in the organization in order to evaluate and explore the current problems. With qualitative approach, conducting interview to discuss with the employees is a direct and perceptive way to gain their opinions and practical experience.
2.2 Application of Method

2.2.1 Literature Review

To achieve the research, at first, literature review would be performed in order to gain related knowledge. This included literature review on basic knowledge management concept, knowledge management development and status in Chinese IT enterprises, knowledge management success and failure factors on implementation. The systematic search approach to find related articles was broadly searching reference database through KTH/SU libraries (http://lib.kth.se) and through search engines like Google scholar (http://scholar.google.com). The author used tools like IEEE Xplorer and SpringerLink search websites to get some journals and thesis in this field.

In order to reach the related information, the author used open queries, keywords such as ‘knowledge management’, ‘knowledge management implementation’, ‘knowledge management in China’, and combination of keywords like ‘success factor’, ‘failure factor’, etc. Not only the result of the literature search and review is used for conducting interview design, but also throughout in this thesis that all the articles used will be listed in the reference part.

2.2.2 Interview

Regarding qualitative methodology, the interview that is commonly used in survey designs and in exploratory and descriptive studies is an important data gathering technique involving verbal communication between the researcher and the participant (Nigel, Fox, & Hunn, 2009). And semi-structured interviews are useful to collect attitudinal information on a large scale, or when it is not possible to draw up a list of pre-codes because little is known about the subject area (Nigel, Fox, & Hunn, 2009).

Based on the literature review, the author acknowledged some potential factors affecting the KM implementation in the organization. Regarding these factors, the author designed a semi-structured interview based on open-ended questions with the purpose of exploring the current status and problems of KM in Taobao. A semi-structured interview is used to explore the perceptions and opinions about complex and sensitive such as the interviewee’s personal experience and objective viewpoint which is hard to be structured into formatted questionnaire (Barriball, 1994), as well as to detect ideas and general topics allowing for future investigation (Macpherson et al., 2004). Besides, the open-ended nature of the question defines the topic under investigation together with providing opportunities for the researcher and interviewee to discuss more details related to the topic (Nigel, Fox, & Hunn, 2009).

The author conducted interview via phone call with four employees in Taobao who have rich knowledge management experience in different roles. The four employees are selected because the author needed to talk with the people having knowledge within the certain area in this topic so as to gain useful information for the research. Their real practical experience and opinion on KM area are valuable for this research thesis. Before the interview, advanced information that stated the aim of the interview was delivered to the interviewees for time efficiency. Except for the phone call, the author also contacted with the interviewees via email if unclear information required to be clarified. The questions listed in the appendix were used to maintain the focus during the interview and some questions was modified according to the position and working role of the interviewees.

The interview questions started from some general questions as followings in order to get brief acknowledgment about the interviewees’ background and responsibility, as well as their understanding on the concept of KM.

- Could you introduce yourself and give a brief description about your position and major responsibility?
- In your opinion, what is Knowledge Management?
- Do you think knowledge management is important to your organization? Why? If it is important, from which perspective?
- What are the advantages and disadvantages of knowledge management in your organization currently? And in your opinion, how to improve the disadvantages?

Then the questions that focused on were divided into six categories including technology infrastructure, organizational culture and environment, senior management support and leadership, trustworthy teamwork, employee training and involvement, mechanism (see table 1). These six categories stemmed from previous literature review study regarding factors, which may influence organization’s KM implementation. Meanwhile, some questions based on Monash framework were asked in order to indicate how those KM activities implemented in Taobao. According to different working roles, additional questions were delivered to different employee. For example, the question ‘Do you think the IT facility is sufficient to support the KM? And how does it support?’ was asked to IT support in order to know further about the impact of technology on KM. Except for those prepared questions, additional questions were stimulated according to the interviewees’ answer during the interviews so as to extract more information for further and comprehensive analysis.

Table 1. Interview Questions in categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology infrastructure (information systems infrastructure)</td>
<td>How do your organization use information systems to manage the knowledge? Is it any database or ICT (information and communication technology) tools to support it?</td>
</tr>
<tr>
<td></td>
<td>Is any network for employee to contact and share the knowledge with others?</td>
</tr>
<tr>
<td></td>
<td>Does the knowledge database upgrade, renew or integrate in time?</td>
</tr>
<tr>
<td>Organizational culture and environment</td>
<td>In your opinion, does your company provide a trustful and open environment for knowledge sharing?</td>
</tr>
<tr>
<td></td>
<td>Does the organizational culture encourage employees to develop, share and use the knowledge? Example.</td>
</tr>
<tr>
<td>Senior management support and leadership</td>
<td>Does the senior management support or lead the knowledge management implementation? How?</td>
</tr>
<tr>
<td>Trustworthy teamwork (personality relationship)</td>
<td>How is the teamwork in your organization?</td>
</tr>
<tr>
<td></td>
<td>Do you think your colleagues are willing to share the knowledge? Why?</td>
</tr>
<tr>
<td>Employee training and involvement</td>
<td>Is any related training on knowledge management for employee? For example, the training of using knowledge management system/database to store or share the knowledge.</td>
</tr>
<tr>
<td></td>
<td>In your point of view, do employees rely on the knowledge in their daily work?</td>
</tr>
<tr>
<td></td>
<td>Does employees involve in learning, sharing and creating the knowledge?</td>
</tr>
<tr>
<td></td>
<td>How do the employee share the tacit knowledge with others?</td>
</tr>
<tr>
<td>Mechanism</td>
<td>What’s your organization’s knowledge management strategy?</td>
</tr>
<tr>
<td></td>
<td>What’s the purpose of implementing knowledge management in your company? For example, for storing the documents, exploring the internal experts to transfer the knowledge, reuse the</td>
</tr>
</tbody>
</table>
Is any knowledge management process in your company? For example, a knowledge management process including capturing, storing, sharing, learning, exploiting and exploring. Please provide details.

Is any mechanism in your organization to motivate knowledge management? For example, link the performance measurement to knowledge management implementation?

2.2.3 Findings Analysis

The logical approach used for this research is induction where conclusions are drawn from qualitative analysis (Brash, 2010). To do analyze qualitative data, the author coded the interview transcripts firstly. From the transcripts, essential statements and opinions were selected and used as a foundation for evaluating and excavating the potential problems. To analyze the qualitative data, this thesis applied Grounded Theory method, which is used to discover or generate conceptual properties from context-based and process-oriented descriptions (Myers, 1997; Urquhart, 2001). Moreover, Monash framework was used to check whether those KM activities were implemented effectively. After finding analysis, solutions and suggestions were discussed and provided according to related problems at the end.

When conducting the analysis, the author used grounded theory method to approach the qualitative research. Grounded Theory method is an inductive method of qualitative research which through a process of structured analysis to generate a generalizable idea from data (Lacey A. and Luff D, 2007). The five analysis stages are advocated by Lacey A. and Luff D. (2007). It is taken as following:

Step One: Transcription
All qualitative raw data from phone interview and email communication was transcribed to text format, which was presented in Appendix B.

Step Two and Step Three: Organizing data and Familiarization
After transcription, it is important to organize the data into easily traceable sections. Since the author designed the interview questions into different sections, it was readily for late classification. As Lacey A. and Luff D. (2007) indicated, before the formal analysis began, narrative data should be summarized. The author clustered the phrases and summarized the statements in Chapter Four.

Step Four: Coding
After familiarization, the marked text was coded referring to the interview results. For example, Ling Shi said, “Knowledge management is like a system which could transfer the knowledge and experience to the engineers, from engineer to engineer.” Cao Zhang said, “I think the meaning of knowledge management is to accumulate and transfer the knowledge.” It could be marked “Knowledge management transfers the knowledge and experience as a system” and “Knowledge management accumulates and transfer the knowledge” as text sector. From these two text sectors, the author could identify a category about the concept of KM. Since the four interviewees were asked some same questions, in this step, the similar answers would be clustered and coded into the same category.

Step Five: Themes
Since the author applied grounded theory method, all the identified themes were created from the data. Although in the prior stages, the interview data was categorized into certain parts, it was just rough classification that required further analysis into emergent themes. For example, when the interviewees talked about advantages and disadvantages on KM, they mentioned that the successor could obtain the
knowledge and handle the work quickly through the KM system when someone was resigned. This content should be categorized into the theme “Business process on KM” since it described how Taobao implemented knowledge learning activity. Another example is that the interviewees pointed out, although the document management systems could store the knowledge, they were not integrated in a platform. From this, it could emerge the theme “information technology” that discussed how information technology influenced KM.

Since this thesis aimed to evaluate the KM status in Taobao and to explore the factors affecting KM, the themes should be emerged from the angle of elements, which may affect KM in Taobao.

2.3 Ethical issue

This research is a case study on a certain company, and it attempted to obtain individual opinion on specific issues. Although the employees of Taobao who accepted the interview didn’t mind to enclose their name, the result showed in this thesis didn’t represent Taobao’s official remarks. Thus, in order to avoid any issue related to privacy protection and confidential information, if any individual or organization wants to publish or reprint this article, it should get the approval from the interviewees and Taobao Company.

2.4 Validity and reliability

While regarding validity and reliability in qualitative research, Patton (2001) pointed out that these two factors should be concerned about while the researcher designing a study, analyzing results and judging the quality of the study. The validity is influenced by the researcher’s perception of validity in the study and the choice of paradigm assumption (Creswell and Miller, 2000). As a result, many concepts of validity were generated as terms such as quality, rigor and trustworthiness (Davies and Dodd, 2002). For example, Patton (2001) stated quality case studies depending on the case selected and studied. In this thesis, it selected a Chinese IT company – Taobao as a case to study KM implementation in China. Taobao was chosen because that, on one hand, it is a leading company in e-Business field; thus, its IT practices are valuable as a reference for other IT companies in same field who want to achieve a dominant position for business success. On the other hand, it is a typical chinese company. Thus, its some factors could be referred as a general sample for studying. With a proper case selected, this thesis would be valid to be a quality research. Lincoln and Guba (1985) explicated the term reliability and validity in qualitative paradigms as the terms credibility, neutrality or confirmability, consistency or dependability and applicability or transferability. In this research, it applied interview method to collect data and grounded theory for analysis. While gathering the data and transforming it to text, the author was objective and transcripted the raw data without any bias. Besides, the analysis was relied on the fact; the themes were emerged from the result. This case study research was meaningful since it could be used as a reference for other Chinese IT companies to implement KM practices. Thus, its transferability maximized the reliability of a quality study.
3 Extend Background

3.1 Task-based Knowledge Management Framework

Knowledge is the key to drive the development of an organization in today’s knowledge-based economy (Sunassee and Sewry, 2003). The type of knowledge could be distinct to tacit and explicit. While explicit knowledge comprises facts, theories, and sets of instructions which could be transferred across individuals, space, and time, tacit knowledge is primarily in nature that cannot be easily articulated or codified and transfer between people (Grant, 2002).

Burstein and Linger introduced a task-based KM framework, which was developed from a task-based model of work. Task-based KM argues for a “bottom-up” approach to KM, which facilitates explicating of otherwise hidden, work practices (Burstein, Linger, Zanner, 2008). The Monash Task-based KM framework includes six activities of knowledge management: capturing, storing, sharing, learning, exploiting and exploring knowledge to illustrate how knowledge works in an organization (F.X. Chen, 2006).

Knowledge capturing is the beginning of KM. It requires the organization to know where and how can get the knowledge needed when it decides to implement KM strategies (F.X Chen, 2006).

After capturing knowledge, the organizations should consider how to store it. Knowledge storing is the process of identifying, classifying, and storing knowledge and establishing repositories (F.X. Chen, 2006). Knowledge can be viewed as an item to be stored for future usage (Zack, 1999). Therefore, many organizations utilize IT to store knowledge in database so that employees could use it conveniently.

Knowledge sharing is a very important activity. Becerra-Fernandez, Gonzalez, and Sabherwal (2004) determined that knowledge sharing is the process through which explicit or tacit knowledge is communicated to others. The knowledge is used effectively and efficiently only when knowledge is shared in daily work (F.X. Chen, 2006).

Knowledge learning means that employees in the organization can learn explicit knowledge from documents, books, and other materials.

Knowledge exploring and exploiting are the core activities when organizations develop KM projects in order to retain their competitive advantages (F.X. Chen, 2006). When the organization may need to create new knowledge to keep pace in the industry, it requires organization to be an explorer to create or acquire the knowledge to become and remain competitive in its strategic position. On the other hand, if knowledge resources and capabilities exceed the requirements of a competitive position, the organization could have opportunity to exploit knowledge (Zack, 1999).

3.2 Introduction of Taobao

Taobao, which was set up in 2003 by Alibaba Group, is the biggest network retailer marketplace in Asia. It is a Chinese language website for online shopping, similar to eBay and Amazon. Currently, Taobao marketplace focus on C2C (Consumer to Consumer) and B2C (Business to Consumer). With 6 years development, Taobao already owned 170 million registered members until the end of 2009; this number is still increasing day by day (http://baike.baidu.com/view/3629.htm). According to statistics, the transaction amount of Taobao was up to 400 billion RMB in 2010 compared to 208.3 billion RMB in 2009, becoming the biggest network retail marketplace in Asia.
Taobao’s service focus on C2C and B2C and its merchandise varies from household goods to cars, computers with clear categories. In April 2008, Taobao introduced a dedicated B2C platform called TMall to enhance its focus on product verticals and improvements in shopping experience. In October 2010, eTao was built for online shopping search engine, providing product and merchant information from a number of major consumer e-commerce websites in China. In June 2011, Alibaba Group Chairman and CEO Yun Ma announced that Taobao would be split into three different companies: Taobao Marketplace (a C2C platform), Tmall.com (a B2C platform; then called Taobao Mall), and eTao (a shopping search engine). This strategy aimed to reduce the competitive threats from Internet and e-commerce market that have changed dramatically.

Taobao advocates honest, active, fast network business culture, persist in "treasure can not be sought, but the honesty can't be abandoned." When making more secure and efficient network business platform for taobao members, taobao is also trying to create and encourage mutually helpful, relaxed and lively family atmosphere. Each one who trades in taobao trades not only more quickly but also more efficiently, and makes more friends (http://baike.baidu.com/view/3629.htm).

4 Results

The interviews were conducted in order to evaluate KM implementation in Taobao. As the result, the author was able to collect four interview data from the employees in Taobao. Ling Shi, working in Taobao for six years, is a project manager who is responsible for leading a project team to complete the project. Zhe Zhao, a test architect with four years working experience supporting the architecture of Taobao’s advertisement testing. Cao Zhang, a test development engineer with major responsibility of creating test plan for the products, executing test case and trying to use various test methods to ensure the products’ quality and stability. Yuan Cao, an IT support engineer who provides IT support especially support in software system. Since they have rich working experience in Taobao, they are very familiar with Taobao’s business operation. Besides, they are involved in Taobao’s KM in different aspects. Therefore, those interviews could help the author to acquire the information about the KM in Taobao.

Ling Shi was interviewed firstly and it took approximately one hour. And the rest interviews took half an hour to forty minutes separately because the author had acquired general information about the KM in Taobao. After the interview, the transcripts were conducted which can be referred in Appendix A. The following texts are the essential statements from the interviews. Since the interview questions were divided into categories, the result was presented referring to the categories.

Part one: The concept and importance of KM

Two previous warm-up questions ’In your opinion, what is Knowledge Management?’ and ’Do you think knowledge management is important to your organization? Why? If it is important, from which perspective?’ were asked to grasp the interviewees' intuitive perception about the concept and importance of KM. Ling Shi indicated KM used information system to transfer the knowledge. For example, it used database to manage and store the knowledge for employees to use and share. Thus, KM was very important since it could provide the knowledge for employees to learn as to improve themselves. Beside, KM could help the company accumulate the knowledge that was the most precious assets. As Cao Zhang also said, the aim of knowledge management was to accumulate and transfer the knowledge. She also pointed out the knowledge including valuable experience could be divided to tacit and explicit knowledge. In her opinion, KM was important for three reasons. Firstly, it
was an effective way to hand over the knowledge to new employees. Secondly, it offered a good platform for employees to communicate with each other. Thirdly, KM provided good opportunities for those who wanted to obtain the knowledge. And in Zhe Zhao and Yuan Cao’s eyes, KM was about organizing the knowledge according to various categories and through the way of classification and researching to get the knowledge needed more easily. Therefore, its importance was that, through KM, people could find the information conveniently. Zhe Zhao also emphasized, as IT engineers, they should learn new and cutting-edge knowledge in order to catch up with fast developing information technology; hence, effective KM would help IT engineers to update the knowledge timely and efficiently.

Part Two: Advantages and disadvantages of KM in Taobao
The advantages of KM in Taobao, as Cao Zhang said, KM provided a platform for employees to communicate with each other and to learn the knowledge. The knowledge storing in Taobao was implemented effectively. Especially when someone was resigned, the successor could obtain the knowledge and handle the work quickly through the KM system. Taobao used document management system such as twiki, sps, baike and etc to manage the knowledge. Since Taobao’s organization structure was project-based, different teams were responsible for different project assignments. As a result, different project team could choose any system to manage their own project documents. Thus, for the teams, it was very convenient to choose the tools as they like. But the disadvantage was, those tools were not in an integrated platform; therefore, it was not easy for searching and sharing across teams. Ling Shi further explained, in Taobao, each team was responsible for its own products. During the project, they created documents and stored them in their preferred document management system. Since each document management system was independent, it was difficult to share and search the knowledge if the documents were in different systems. Yuan Cao further pointed out, since there were various document management systems not in an integrated platform, it was very inconvenient for them to do IT support work; wheras, it created more workload on support.

Cao Zhang indicated that although the knowledge was stored in the system, it was not used effectually. Some forms of knowledge were not read easily since the templates of documents were not unified and the forms of storing the knowledge were various. Gradually, people didn’t want to read such chaos documents. Diverse forms of knowledge storing affected knowledge sharing. The worse problem on KM was that the knowledge was not updated in time since engineers were always busy on the project work, there was less time for them to do the documentation. As a test development engineer, Cao Zhang considered documentation as an extra work. Moreover, Ling Shi indicated that the scope of KM in Taobao was not very clear. It seems that Taobao was implementing KM, but no one could tell what the Taobao’s KM was because there was no any specific process of KM.

When considering the improvement on KM, the interviewees all thought Taobao should set up an integrated KM system or platform that could index and categorize all the knowledge for easier searching and sharing. On the other hand, Taobao also should unify the forms of knowledge storing to stop current chaos situation. However, Cao Zhang concerned the core point of improvement on people. He considered that the employees should be aware of the importance of KM so that they would be keen to do it.

Part Three: Technology infrastructure (information systems infrastructure)
From the four interviews, especially from IT support Yuan Cao’s interview, it was known that Taobao provided technology facilities and IT support on KM. There were various document management systems for project team to choose for managing documentation. Normally, the information would be spread by email, but email was not effective way to deliver the news. Since the employees would receive amounts of emails everyday, so the information was buried in the sea of emails. Taobao owned company intranet to publish news and spread information; besides, In order to improve communication, Taobao developed a forum to provide a platform for employees to discuss the technical issues and share the knowledge, but few people used it. Except for email, employees used social network such as micro-blog (a kind of Chinese Twitter) for sharing the information.
Actually, Taobao had a company database to store and share the knowledge, as the team member of IT support team, Yuan Cao’s responsibility was to maintain the systems and ensure database in good operation. For example, if the system was down or the database could not be accessed, the IT support team would solve the problems quickly, but they didn’t manage the system. The project team managed the system that they decided what and how to store the knowledge. The IT support team only provided technical support. Since those project teams owned document management systems were not integrated into the central database, the knowledge were not updated timely. The document management systems such as SPS and baike were developed by employees in Taobao. In past few years, the systems were not upgraded since they were satisfied for using.

Part Four: Organizational culture and environment

When the interviewees were asked about Taobao’s organizational culture to encourage employees to develop, share and use the knowledge. They all said although Taobao didn’t point out developing, sharing and using the knowledge in organizational culture, it did encourage sharing and highly value teamwork. Taobao highly valued personal knowledge; hence, it provided legal support for applying for patent.

Zhe Zhao believed Taobao provided an open-minded environment for employees to discuss and share their own opinions. Everyone could propose its viewpoint, even against others’; and they respected those diverse thoughts. The team members in the project team frequently communicate with each other. Moreover, the project team also held regular meeting to share experience and sometimes invited experts to give lectures to transfer the technical knowledge. But communication between different teams was little because each project team was responsible for different product line.

Part Five: Senior management support and leadership

Regarding senior management support and leadership, the interviewees all indicated that although there was no specific strategy for knowledge management implementation, the top management encouraged employees to share the knowledge; besides, they delegated an internal IT team to support the enterprise knowledge management, for example, to maintain the network and system in order to ensure IT facility satisfied for KM.

Ling Shi said, as a team leader, he had responsibility to improve KM, for example, he would hold seminar regularly for team members to share the knowledge, and he emphasized knowledge sharing was essential in KM.

Part Six: Trustworthy personality relationship

When the interviewees were asked about their impression on the teamwork relationship among the colleagues, they showed diverse views. As a team leader, Ling Shi supposed the personality relationship in his team was very harmony, and team members were keen to communicate with others to solve the problems together. But he thought the cooperation and sharing between the project teams was not enough. And in Cao Zhang’s eyes, he also agreed that it was lack of communication across the teams. Zhe Zhao considered that the communication between teams was not frequent because of two reasons; one was that engineers were very busy on project deadline, even though they were very willing to share the knowledge. The other reason was Chinese people were shy to initiative to share with others especially those were not related to your own work.

Part Seven: Employee training and involvement

From the interviews, it is known that employees in Taobao relied on the knowledge in their daily work. The interviewees pointed out that knowledge was the core competitiveness in IT companies since they used knowledge to create products. Thus, employees all involved in learning, sharing and creating the knowledge. Although KM was very important in Taobao, there was no any related training on KM, for example, the training of using system or database to store or share the knowledge. The engineers learnt that in their daily work, when they started to use, they would be familiar with the system gradually. Regarding the tacit knowledge such as experience, they hold review meeting and
used micro blog (a Chinese Twitter) to share. Besides, there were experts to provide technical mentorship and transfer their experience during the project work.

**Part Eight: Mechanism**

There was no specific KM strategy in Taobao, but Taobao was trying to create a knowledge-based organization. The interviewees reflected various purposes of implementing KM, such as transferring knowledge, whereas, employees’ capability could be improved; increasing the intelligence of the organization as to enhance the organizational memories; and reusing the knowledge to reduce duplicated workload. But they all agreed that the aim of implementing KM was sharing knowledge, for the reason that knowledge was very crucial for IT engineers in their daily work.

When discussing about the KM process in Taobao, all the interviewees expressed regret since there was no formal processes upon on KM. But Taobao actually carried out KM activities such as capturing, storing, sharing. Cao Zhang explained, they captured knowledge during project work from the initiative project planning to the final product delivery; then stored those knowledge and experience in database as documents, which could be shared through network. Furthermore, people would use or exploit the knowledge in future project works. All those activities were carried out in a common sense.

Ling Shi told that Taobao had incentives for the experts to give lectures and the project team would also reward engineers who wrote useful technical documents. He also stated that Taobao should link the KM implementation to the performance measurement in order to motivate employees devote on KM.

**5 Analysis of the results**

In order to evaluate the current status of KM in Taobao and explore the problems as a result to seek the possible solutions to improve the KM implementation, the analyzed results from the interviews were listed as following themes. With grounded theory, all the themes were emerged from results. From the divided categories of interview questions, the themes of training, top management support, knowledge sharing and trustworthy personal relationship, information technology, employee involvement and motivation, and organizational culture could be directly emerged. With the interviewees’ answer to the concept and importance of KM, the theme of understanding of knowledge management was created in order to analyze how employees’ understanding of KM would influence KM implementation in organization. From the result of part five ‘Senior management support and leadership’ and part eight ‘Mechanism’, interviewees indicated knowledge strategy effected on KM implementation; thus, the theme of knowledge strategy illustrated its impact. Also from result part eight ‘Mechanism’, it showed how Taobao carried out KM activities. Compared to task-based KM framework, the theme of KM process analyzed why Taobao needed formal KM process. In the result, the interviewees mentioned that experts played a certain role in knowledge transfer and training. Therefore, the theme network of experts explained its effect.

**Understanding of Knowledge Management**

When talked about the understanding of KM, the interviewees showed their diverse opinions, but they all had general concept about KM and already realized its importance. In a word, they recognized that KM was to store and transfer the knowledge for further reuse. Besides, they all supposed KM was very important for the organization to accumulate the knowledge and it could help improve the employees. The correct understanding of KM is good for KM implementation in the enterprise. When the employees realize its importance, it will stimulate the implementation of KM. Otherwise, if they don’t recognize the importance of KM or they even have no idea about what KM is, they won’t devote to it. Thus, at this point, Taobao has a big advantage.
Knowledge Strategy

Although Taobao was trying to create a knowledge-based organization, there was no clear KM strategy. The interviewees reflected the purpose of implementing KM was to transfer knowledge in order to improve employees’ capability, to increase the intelligence of the organization, and to reuse the knowledge to reduce duplicated workload. Why the organization needs strategy? Liebowitz (1999) indicated that a clear and well-planned strategy was the key to drive the success of KM. Strategy helps to identify KM initiatives to support its purpose and strengthen its competitive position (Michael H. Zack, 1999). In a word, strategy guides KM that it decides the direction and manner to carry out KM activities. Since Taobao didn’t develop a knowledge strategy, there was no clear KM process to follow; as a result, KM activities were not implemented effectively. Even though the purpose was reflected, they were unsure of how to deploy capabilities and resource in strategic actions to achieve these goals. Therefore, Taobao urges to call for a visible knowledge strategy. This strategy should not only link with its business strategy, but also be understood and shared by employees with its vision and value.

Training

From the interview, we know that Taobao didn’t provide any training on KM such as delivering the knowledge and principle of KM, or giving guidance to show how to use related systems and tools. The employees learned the technological tools while they were using. Although they could handle the tools since they had IT background, it was not efficient because they had to spend time to familiarize with them. On the other hand, since it lacked of formal training on KM, the employees couldn’t gain enough knowledge, it was hard for the company to carry out the KM activities. For example, in the interview of Cao Zhang, he mentioned that some forms of knowledge in database were not read easily because the templates of documents were not unified and the forms of knowledge storing were various. If Taobao could provide prior training to teach the engineers how to store the knowledge in a unified format with a structured template, this problem could be addressed. Beside, as it indicated above, many employees had general conception about KM, but because of lacking related training, they didn’t know about exactly what KM actually did and what their roles were in KM activities; hence, it would hinder successful KM implementation. With proper training, it not only help to construct awareness of how to define the knowledge and perception of how to think about KM, but also help the individuals to cognize their roles for managing knowledge.

Top management support

Regarding the top management support on KM, it is known from the interview that Taobao’s top management encouraged knowledge sharing, and it also delegated an IT team to support KM implementation. It seems that the top management recognized the importance of KM and very support it. But from the result we know, they didn’t create a definite knowledge strategy and KM process for KM implementation. Without knowledge strategy and process, it’s hard to carry out the KM activities effectively. Successful KM requires effective management of knowledge. Furthermore, effective management of knowledge depends on leadership quality. In that case, top management leadership is the most critical factor for successful KM. In Taobao, there was no specific position assigned on leading KM implementation. Although as a team leader, Ling Shi felt he had responsibility to promote KM practice, the KM implementation in Taobao was cumbersome without strong top management leadership. Top management should take the leadership to lead KM implementation. The leadership includes creating the vision, strategy and process of KM for Taobao, building a culture for knowledge sharing, and promoting KM practices. Only strong leadership could provide clear direction and deploy KM activities successfully.

KM process

Since Taobao didn’t have clear knowledge strategy, it didn’t build up a KM process to carry out the KM activities. But from the interviews, it is found that although there was no formal process, Taobao actually did KM activities such as capturing, storing, sharing and learning. With Burstein and Linger’s task-based KM framework, we know it includes six activities of KM: capturing, storing, sharing,
learning, exploiting and exploring knowledge to illustrate how knowledge works in an organization. Compared with this framework, we can check how knowledge works in Taobao.

As F. X Chen (2006) indicated knowledge capturing required the organization to know where and how can get the knowledge needed. From the interview with Cao Zhang, engineers captured knowledge during project work from the initiative project planning to final product delivery. The project team dealt with IT product development, and related technology issue would create during intelligent work. At the same time, in each development phase, the project team would create documents to store all the information such as development details and experience. Those project documents were very valuable knowledge for other project for future reference.

After capturing knowledge, the organizations should consider how to store it. In this case, Taobao utilized IT tools such as various document management systems to store knowledge so that employees could use it conveniently. Furthermore, the knowledge also would be further stored into the central database for the whole organization to access.

Becerra-Fernandez, Gonzalez, and Sabherwal (2004) determined that knowledge sharing is the process through which explicit or tacit knowledge is communicated to others. In Taobao, the engineers in project team communicated with others in their daily work. Besides, they also held regular meeting to share the technical knowledge and experience. Email is the main IT tool to contact with each other for knowledge sharing.

Knowledge learning means that employees in the organization can learn explicit knowledge from documents, books, and other materials. The engineers in Taobao should learn the cutting-edge technology in order to fulfill the requirement of development work. Thus, they will learn the technical knowledge from books. In the project, they also will gain some experience from previous project documents to solve current problems. Moreover, the experts in Taobao sometimes will give lecture for engineers to learn the knowledge.

Since knowledge exploring and exploiting are the core activities for organization to retain their competitive advantages (F.X. Chen, 2006), Taobao didn’t take any actions on this. Exploring requires organization to be an explorer to create or acquire the knowledge when the organization needs to keep pace in the industry in its strategic position. Vice versa, if knowledge resources and capabilities exceed the requirements of a competitive position, the organization could have opportunity to exploit knowledge (Zack, 1999). Taobao didn’t consider about this because it lack of definite strategy. Therefore, it cannot decide when to explore or exploit.

We could see that Taobao did actually carry out related KM activities. But KM process is necessary to be determined. Well-designed KM process could define the activities in a systematic way, then KM can be implemented correctly. If there is a problem happened in the activities, it is easy to check with systematic process and figure it out. In Taobao’s current situation, if there is a problem, it is hard to track the problem point because you cannot tell where the problem point is without a process.

**Network of experts**

In Taobao, when new employees were on board, some experts and old employees would teach them necessary knowledge in order to make them to handle the work quickly. Besides, project teams would invite technical experts to give lectures to transfer the technical knowledge. In this situation, experts play a vital role in employee development and facilitating share of knowledge.

Some scholars suggested companies to set up communities of practice especially in team-structured organization in order to capture and spread ideas and knowledge. What’s Communities of Practice? Etienne C. and William M. (2000) defined communities of practice as groups of people informally bound together by shared expertise (Etienne C. Wenger and William M. Snyder, 2000). They pointed out communities of practice as an effective way to drive strategy, solve problems, spread knowledge and promote best practices. In this case, there were some technical experts to provide advice and
guidance to new employees as teachers in Taobao. They were all equipped with solid technical expertise and very helpful in addressing problems, but there was not a community of practice to bound them together. The experts were passive in the organization. They showed up when problems came. It’s better to create a community of practice to bound these experts together. There are two benefits of community of practice. On one hand, it can promote best practice effectively such as lectures so as to spread and share knowledge. On the other hand, it also can help drive the strategy to implement KM successfully; and at the same time, this organizational form won’t destroy the organization structure.

Knowledge sharing and trustworthy personal relationship
When talking about the purpose of implementing KM, the interviewees all agreed that the aim of implementing KM was sharing knowledge, for the reason that knowledge was very crucial for IT engineers in their daily work. As we can see knowledge sharing is the core of KM. As F.X. Chen (2006) said, the knowledge is used effectively and efficiently only when knowledge is shared in daily work. Knowledge sharing within the project team in Taobao was effective. The same as the interviewees thought, people were very willing to share the knowledge with others in the project team. But the communication across the teams was not frequent because engineers were busy on their own project. Except for utilizing effective IT tools, knowledge sharing requires an open-minded organizational culture and trust personal relationship. A trustworthy personal relationship is a significant condition for people to communicate with others. Chinese people hesitate to involve in the issues that were not directly related to their own work. Due to Chinese culture, people are afraid of losing face if there is conflict opinion. In their opinion, it is none of my business if the thing is not their work responsibility. As we can see, a trustworthy personal relationship is important anyhow. Constructing a trustworthy personal relationship is a long-term work, at first, employees should give trust and respect to others. Beside, the organization should create an open-minded atmosphere for knowledge sharing, so that employees can be encouraged to speak out their diverse opinions.

Information Technology
As an IT company, Taobao was well equipped with information system infrastructure. As we know, IT is one of significant factors in KM implementation. In Tabao, IT leads to efficient knowledge storing and more convenient knowledge sharing and communication. With document management system, knowledge was effectively stored in the database for further searching and retrieving. With internal intranet, it could spread information. With email and forum, employees could share the knowledge conveniently. Besides, there was an IT team to provide technology support to maintain the normal operation of information system. With well-equipped information system infrastructure, it seems taobao’s knowledge storing and sharing should be effective. But unfortunately, since the form of strong knowledge is not unified, the knowledge stored in the system is chaos. And document management systems used by project teams are not integrated in a platform; thus, knowledge sharing across project teams is very difficult. With independent document management systems, the knowledge in central database for whole organization cannot be updated in time. Moreover, applying social network to spread and share the knowledge is a smart solution, but lacking of disciplines, the forum and email are not used effectively. Taobao should enhance its management on using these IT tools firstly. It'd better integrate those document management systems into a unit platform. Thus, the knowledge sharing will be convenient and easier. Although those systems are satisfied for using currently, in a long term planning, it should upgrade in a timely manner if the system could not sustain in case knowledge explosion in future. Since the forum was already built, Taobao can set up reward regulations to attract people to use it. If it is used effectively, it will highly enhance knowledge sharing. In a conclusion, IT is just a tool. Effectively use and management is the key for successful KM.

Employee involvement and motivation
The employees in Taobao were involved in KM in their daily work. They captured and stored the knowledge from the initial of project to the end. Most of knowledge is collected in the documents. Project documents are an important resource of knowledge. But the documents are not updated in time. Cao Zhang pointed out that all the engineers were too busy on the project to do the documentation. Sometimes, they even considered documentation as an extra work. Gradually,
employees wouldn’t want to be involved in KM because they feel it like a burden. In this case, the organization needs motivation to encourage employees to be involved in KM, not to encourage them to work more. A good point in Taobao is that it has incentives for the experts to give lectures, and the project team will also reward engineers who write valuable technical documents. This reward system could motivate employees to create and share the knowledge. But to involve employees in KM implementation in their daily work, only reward system is not enough, performance measurement linked to KM activities is required. Ling Shi also stated that Taobao should link the KM implementation to the performance measurement in order to motivate employees to devote on KM.

Why did the employees consider documentation as an extra work? Just because documentation is not part of their work responsibility. Their performance measurement depends on their working result on developing products; thus, they will spare no effort to complete the task. If the organization can design a positive performance measurement on KM implementation, the employees will be more active in KM activities. For example, it can measure effective knowledge delivery and timely knowledge updated in database. With incentive and performance measurement, employees will be encouraged and motivated on KM implementation.

Organizational culture
Taobao’s organizational culture encourages sharing and highly values teamwork. The interviewees thought Taobao provided an open-minded environment for employees to discuss and share their diverse opinions. Culture can influence the organization and its employees’ behavior and perception of actions. Since Taobao highly valued personal knowledge; hence, it provided legal support for employees to apply for technology patent. In open-minded environment, employees could propose their own viewpoint in order to improve knowledge sharing. Positive culture on KM could facilitate KM practices for organization to build learning and innovation organization. Organizational culture is a key factor of managing KM practices. Taobao’s organizational culture that encourages sharing and values teamwork is an advantage for successful KM implementation. What it should do is to construct trustworthy personal relationship among the employees in this culture to improve its knowledge sharing.

6 Conclusions and discussion

6.1 Conclusions
In current fast developing information technology society, KM becomes key competence of advance for enterprise in business market. In order to evaluate the current status of KM in Chinese IT companies and exploring the problems as a result to seek the possible solutions to improve the KM implementation, this thesis took Taobao as a case study using qualitative methodology to do the research. With four interviews with Taobao’s employees, the author collected data about KM implementation in Taobao. With those empirical data, the author analyzed through grounded theory method to conclude the following themes that investigate current status of KM implementation as well as the factors effecting on it in Taobao:

- Understanding of Knowledge Management
- Knowledge Strategy
- Training
- Top management support
- KM process
- Network of experts
- Knowledge sharing and trustworthy personal relationship
- Information Technology
From the result and analysis, although Taobao has advantages in some perspectives such as understanding of knowledge management, network of experts, organizational culture and information technology, Taobao’s KM is still in initial stage. It has to improve and address problems.

As an IT company, Taobao is well equipped with IT facilities; thus, it provides good foundation to build knowledge management system and also provides available IT tools for knowledge sharing. Besides, the employees are aware of knowledge management and realize its importance. With its reward system and organizational culture that encourages knowledge sharing, it stimulates KM implementation in Taobao. Moreover, the experts in project team help spread knowledge. But since Taobao lacks of systematic training on KM; for example, there is no training on storing knowledge in a structured format; as a result, knowledge was not stored properly. Furthermore, it hinders knowledge sharing. The proper training on KM is required in Taobao because it not only help to construct awareness of KM, but also help the individuals to cognize their roles for managing knowledge. Except for proper training on KM, Taobao urges to call for knowledge strategy as a guideline to set up KM process in order to deploy KM activities. Knowledge strategy is the key to drive the success of KM. To create knowledge strategy, top management’s leadership is very important. Top management should take the leadership including creating the vision, strategy and process of KM for Taobao. Only strong leadership could provide clear direction and deploy KM activities successfully. Moreover, with formal KM process can define and implement the activities in a systematic way. If there is a problem happened during KM implementing, it will be easy to check with systematic process. Although the employees cooperate well with others within the project team, the communication across teams is not effective and frequent. To solve this problem, trustworthy personal relationship is essential. Since Taobao’s organizational culture encourages knowledge sharing and values teamwork, it provides an open-minded environment for communication. What it should do is to construct trustworthy personal relationship and enhance communication among the project teams so as to improve knowledge sharing. Taobao uses reward system to motivate employees to create and share the knowledge. But only reward system is not enough to involve employees in KM implementation in their daily work. The employees are not obliged for documentation, thus knowledge storing is not in timely manner. To address this problem, linking KM activities to performance measurement would be a good solution.

The result of this research can be utilized in self-improvement of KM in Taobao. It can be referred to the analysis to find a solution to address current problems. And this result could be considered as a reference for other IT enterprises to implement KM, thus, they can try to avoid similar problems and reduce the risk.

6.2 Discussion for future research

With time and resource limitation, this research cannot be comprehensive to consider all the factors effecting on KM implementation. For example, detailed knowledge structure, financial issue, or external Chinese economic environment and etc may influence KM implementation in Taobao. Therefore, in future research, more factors can be included in interview questions in order to conduct more deep and comprehensive research. Besides, this research only took Taobao as a case study. It cannot represent other IT enterprises since different companies have different situations. Thus, when using the analysis result as reference in other enterprises, the company should take more factors into account according to its own circumstance.
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Appendix

● Transcripts for interview with Ling Shi

Author: Hello, Ling Shi, thank you so much for spending time for the interview. Could you introduce yourself and give a brief description about your position and major responsibility?

Ling Shi: I am a project manager, responsible for leading the project team to complete the project.

Author: In your opinion, what is Knowledge Management?

Ling Shi: Knowledge management, er……I think knowledge Management is like a system which could transfer the knowledge and experience to the engineers, from engineer to engineer, I mean.

Author: So, in your opinion, knowledge management is a system?

Ling Shi: Not actually, I mean, knowledge management could use information system such as database to manage the knowledge in order to transfer the knowledge and make it used by engineers.

Author: Do you think knowledge management is important to your organization? Why? If it is important, from which perspective?

Ling Shi: Of course it’s very important. Because in many cases, for example, some employees changed the job and left the company, their knowledge could not be accumulated…..Or, it is hard to maintain current system, in this case, it is urgent to have a knowledge management system to store related knowledge for new employees to learn and handle the work quickly. Furthermore, those accumulated knowledge also could help employees improve themselves.

Author: What are the advantages and disadvantages of knowledge management in your organization currently?
Ling Shi: Actually, in honest, there is no any specific things, or system called knowledge management in Taobao.

Author: Is it meant that knowledge management, this concept, is not universal in Taobao?

Ling Shi: Yes, there is no specific process or system on knowledge management, but we actually did a lot in knowledge management. For example, we have document management system, twiki and sps, to store and manage documents, but in honest, they are not used very well.

Author: Why they are not used very well?

Ling Shi: Well, in Taobao, the organization structure is project structure. Each project team is responsible for its own product. They choose their own document management system to store and manage their own project documents. Since we use different documents management system, it is difficult to share the documents.

Author: So the document management systems are independent? If a document that one team wants to use is stored in another team’s document management system, what can they do?

Ling Shi: That’s a big problem. You have to use another different system to search it, because each system is independent.

Author: So what do you think how to solve this problem?

Ling Shi: In order to improve the communication and knowledge sharing, we also have developed a forum to provide a platform for employees to speak out their opinion, but since there is no discipline to force to use, less employees use it, and a lot of employees even never know about the forum. Thus, in my own point, to improve the knowledge management, I think Taobao should set up an integrated management system that could index and categorize all the knowledge, or we could say documents, because the knowledge is stored in documents. That’s my suggestion, at the current stage, different documents management system is very difficult to search and share the knowledge.

Author: How do your organization use information systems to manage the knowledge? Is it any database or ICT (information and communication technology) tools to support it?

Ling Shi: As I said before, we use SPS and twiki to store and manage the project documents, and we update them regularly.

Author: Is any network for employee to contact and share the knowledge with others?

Ling Shi: Well, normally, we use email to deliver or spread the information. For example, to publish a new document template, or to spread new edge technology knowledge. But this is not effective. Since every employee will receive amounts of emails everyday, so those information or knowledge would buried in the sea of emails. Such as the forum I mentioned before, there is not a lot of support, few people use it, thus, it is not very useful.

Author: Does the knowledge database upgrade, renew or integrate in time?

Ling Shi: Actually, the database is not upgraded in time…… in past a few years, we still use SPS and twiki, since it could satisfy our need, we don’t upgrade it. And those knowledge are not integrated at all.

Author: In your opinion, does your company provide a trustful and open environment for knowledge sharing?

Ling Shi: To be honest, we never seriously think about this. The team members in the project team communicate with each other very well. And we also have regular meeting to share experience. But
communication between different teams is little, maybe because we are responsible for different product line.

Author: Does the organizational culture encourage employees to develop, share and use the knowledge? Example.

Ling Shi: No. Taobao’s organizational culture is customer first. And we encourage teamwork. But I think teamwork spirit could improve knowledge sharing. Unfortunately, until now, taobao doesn’t provide platform for employees to develop the knowledge.

Author: Does the senior management support or lead the knowledge management implementation?

Ling Shi: As far as I know, the senior management doesn’t do anything to implement the knowledge management. Maybe they realized knowledge management is very important for the organization, but they still don’t carry out any effective implementation.

Author: How is the teamwork in your organization?

Ling Shi: As I indicated before, in the project team, the communication work is very good. But between the project team, it is lack of sharing and enough communication.

Author: Do you think your colleagues are willing to share the knowledge?

Ling Shi: I think everyone wants to share the knowledge. When someone has problems at work, the others are very willing to help solving them. But we are very busy, especially when the product will be delivered online. I think everyone in the project team is pushed by the deadline at most of time, thus, even though we are very willing to share the knowledge, we don’t have much time to do it.

Author: Is any related training on knowledge management for employee? For example, the training of using knowledge management system/database to store or share the knowledge.

Ling Shi: There is no any training on knowledge management. Even for the document management system, the engineers have to learn to use it by themselves. And they will be familiar with it in their daily use.

Author: In your point of view, do employees rely on the knowledge in their daily work?

Ling Shi: Off course. Especially in IT company, technical knowledge is precious treasure.

Author: Does employees involve in learning, sharing and creating the knowledge?

Ling Shi: Yes. We participate in our daily work.

Author: How do the employee share the tacit knowledge with others?

Ling Shi: To share tacit knowledge, we mainly hold regular project meeting to share the experience. And the company will organize lectures or training by experts to transfer the technical knowledge. Besides, in our daily work, we will communicate with each other timely. And the most important thing is we have experts to mentor new engineers.

Author: What’s your organization’s knowledge management strategy?

Ling Shi: Sorry, I don’t know.
Author: What’s the purpose of implementing knowledge management in your company? For example, for storing the documents, exploring the internal experts to transfer the knowledge, reuse the knowledge and etc.

Ling Shi: The main purpose of implementing knowledge management is to transfer and reuse the knowledge. And I think it could also improve employees’ capability. After all, the knowledge is our important productivity. On the other side, knowledge management could enhance the influence of company.

Author: Is any knowledge management process in your company? For example, a knowledge management process including capturing, storing, sharing, learning, exploiting and exploring. Please provide details.

Ling Shi: Currently, we only have lecture mechanism. We encourage employees to have lecture to transfer the knowledge and improve discussion. But we don’t have systematic process for knowledge management.

Author: Is any mechanism in your organization to motivate knowledge management? For example, link the performance measurement to knowledge management implementation?

Ling Shi: There is system of reward in taobao for the experts to have lectures. Some project teams will encourage and provide reward for engineers who write useful and valuable technology paper, but it is not organizational system of reward.

Author: Thank you so much for your time.

Ling Shi: You are welcome. I hope I provide useful information for your research.

Author: Thank you thank you. If I need further information, could I contact you via email?

Ling Shi: Yeah, sure, please feel free to contact me.

Author: Thanks a lot! Bye!

● Transcripts of interview with Zhe Zhao

Author: Hello, Zhe Zhao. Could you introduce yourself and give a brief description about your position and major responsibility?

Zhe Zhao: I am a test architect and my responsibility is to support the architecture of advertisement testing.

Author: In your opinion, what is Knowledge Management?

Zhe Zhao: In my opinion, knowledge management is to organize the knowledge according to the category of knowledge; and it is also about through the way of classification and researching the knowledge to get what we want more easily.

Author: Do you think knowledge management is important to your organization? Why? If it is important, from which perspective?

Zhe Zhao: I think it is very important, because the human beings can not remember too much detailed information, at most of time, they only can grasp a general framework about that knowledge, thus, through knowledge management, we can find the information we need conveniently. You know, the information technology develops fast, as an IT engineer, we need to learn new and advanced
knowledge. Thus, effective knowledge management will help us update the knowledge timely and efficiently.

Author: What are the advantages and disadvantages of knowledge management in your organization currently? And how to improve the disadvantages?

Zhe Zhao: In Taobao, we use twiki, sps, baike and etc to manage the knowledge, depends on the project team, different project teams prefer to use different tools. The advantage is, for different teams, it is very convenient to choose the tool as they like. But the disadvantage is, those tools are not in an integrated platform, as a result, it is very hard for searching.

Author: How do your organization use information systems to manage the knowledge? Is it any database or ICT (information and communication technology) tools to support it?

Zhe Zhao: Those document management systems such as twiki, sps and baike may have backstage database to support. Sorry, this question you have to ask related database administrators, I am not very clear about that.

Author: Is any network for employee to contact and share the knowledge with others?

Zhe Zhao: Yes, we have internal intranet to publish news and spread information. We also have a special technical forum, like bbs, for engineers to discuss about technology. But the problem is that few people use it. We are always busy on our own tasks, therefore, it is less time left for us to concern about other things.

Author: Does the knowledge database upgrade, renew or integrate in time?

Zhe Zhao: Well, each project team manages and maintains its own document management system internally. So they would update the database when new documents are created. But until now, we still use the old system. It have not upgraded because it could satisfy our requirement. The document management systems are independent. We once considered integrating them in an integrated platform, but due to little time and resource, such plan died at the end.

Author: In your opinion, does your company provide a trustful and open environment for knowledge sharing?

Zhe Zhao: Taobao provides us an open-minded environment. We could discuss and talk about our opinions freely.

Author: Could you give me an example?

Zhe Zhao: For example, you can propose your own viewpoint against others’, and we respect those opposite opinions. And the team leaders like different opinions because sometimes innovated ideas would sprout.

Author: Does the organizational culture encourage employees to develop, share and use the knowledge?

Zhe Zhao: Yes, Taobao highly values personal knowledge. Our company provides legal support for employees to apply for the patent. When an engineer created innovation during development, Taobao will help them to apply for the patent. Moreover, the project team would also invite experts to give lecture to share the knowledge.

Author: Does the senior management support or lead the knowledge management implementation? How?
Zhe Zhao: Yes, there is an internal IT team to do the enterprise knowledge management. I think the senior management has such concern about the knowledge management, thus Taobao has an IT team to deal with it.

Author: How is the teamwork in your organization?

Zhe Zhao: To be honest, I think the teamwork is Okay.

Author: What’s Okay meant?

Zhe Zhao: Emmm, you know, in Chinese culture, people like to solve the problems by themselves. We communicate and discuss in the project team, but less communication with other project team.

Author: Do you think your colleagues are willing to share the knowledge?

Zhe Zhao: Yes, we are willing to share the knowledge because the project work is teamwork. We have to cooperate with others to solve the problems and complete the tasks.

Author: Is any related training on knowledge management for employee? For example, the training of using knowledge management system/database to store or share the knowledge.

Zhe Zhao: As far as now, there is no training on knowledge management.

Author: In your point of view, do employees rely on the knowledge in their daily work?

Zhe Zhao: Off course. The IT project work is to use knowledge to create final products.

Author: Does employees involve in learning, sharing and creating the knowledge?

Zhe Zhao: Yes, each employee involves in sharing the knowledge. We communicate during the project development.

Author: How do the employee share the tacit knowledge with others?

Zhe Zhao: Except for technology seminar and project discussion meeting, engineers use blogs to share their own project experience.

Author: What’s your organization’s knowledge management strategy?

Zhe Zhao: I don’t know the actual strategy of knowledge management. Taobao is trying to eliminate information asymmetric.

Author: What’s the purpose of implementing knowledge management in your company? For example, for storing the documents, exploring the internal experts to transfer the knowledge, reuse the knowledge and etc.

Zhe Zhao: I think the biggest purpose is sharing information. In IT company, information or knowledge is very essential for us to complete the work.

Author: Is any knowledge management process in your company? For example, a knowledge management process including capturing, storing, sharing, learning, exploiting and exploring. Please provide details.

Zhe Zhao: There is no formal process on knowledge management. We implement knowledge management with common sense. For example, after engineers create project documents, the next step
they will store those documents to the management system. If someone needs the document or have to search for the knowledge, they will search for it.

Author: If today there is a new technology published, or there is new knowledge comes out, how do you to transfer the knowledge?

Zhe Zhao: We will send email to all to spread it, if they are interested in it, they will contact or they will ignore it.

Author: Is any mechanism in your organization to motivate knowledge management? For example, link the performance measurement to knowledge management implementation?

Zhe Zhao: Currently, as far as I know, there is no mechanism in Taobao to motivate knowledge management. But in my opinion, taobao should link the knowledge management implementation to the performance measurement in order to motivate it. We should have an incentive to push it.

Author: Thank you, Zhe Zhao. Thanks a lot for your precious time.

Zhe Zhao: You are welcome.

Transcripts of interview with Cao Zhang

Author: Hi Cao Zhang, thank a lot for your time for the interview. Could you introduce yourself and give a brief description about your position and major responsibility?

Cao Zhang: Hi. As a test development engineer, my major responsibility is creating test plan for the products, executing test case and trying to use various test methods to ensure the products’ quality and stability.

Author: In your opinion, what is Knowledge Management?

Cao Zhang: I think the meaning of knowledge management is to accumulate and transfer the knowledge. The knowledge including valuable experience accumulated generation by generation will be considered as guideline or reference for later users to develop and research more knowledge.

Author: It seems you have deep understanding about the knowledge management.

Cao Zhang: Oh, it is just my opinion, of course, the range of knowledge is too broad; it includes much tacit and explicit knowledge.

Author: Do you think knowledge management is important to your organization? Why? If it is important, from which perspective?

Cao Zhang: No doubt that it is very important. I think there are three reasons: Firstly, it is an effective way to hand over the knowledge to new comers; Secondly, it is a good platform for employees to communicate with each other; Thirdly, for those who want to accumulate knowledge and learn more, it is a good opportunity for them.

Author: What are the advantages and disadvantages of knowledge management in your organization currently?

Cao Zhang: The advantages are those I mention above. The disadvantages currently, some forms of knowledge is not readable, it is not easy for employees to read. Many reasons to cause this, for example, the template for document is not unified, one team use this type while other team use those type, the form of storing the knowledge is various……As a result, people don’t want to read such
chaos documents. And the other big problem is that the knowledge is not updated in time. Therefore, the knowledge is not used effectively.

Author: And in your opinion, how to improve the disadvantages?

Cao Zhang: The process of improvement is a long way. The first step is to change the way of knowledge management. Because knowledge is created by people, so the quality of knowledge management depends on people.

Author: So as I understand, you suppose the essence of managing knowledge is managing people?

Cao Zhang: Yes. Almost. The employees should be aware of the importance of KM. And then they will be keen to do it.

Author: How do your organization use information systems to manage the knowledge? Is it any database or ICT (information and communication technology) tools to support it?

Cao Zhang: We have a database for the whole company to visit for information. The information system stores shared documents for employees to check and track the project progress. Every project team stored the project documents in their own document management system, but the shared folder is not updated timely.

Author: Is any network for employee to contact and share the knowledge with others?

Cao Zhang: Yes, company email is a big network to contact and share the knowledge with others.

Author: Does the knowledge database upgrade, renew or integrate in time?

Cao Zhang: The project team’s document management system is updated timely because all the documents are created during the project period. The engineers would upload the documents once they are created. But the database system for shared folder is updated slowly.

Author: In your opinion, does your company provide a trustful and open environment for knowledge sharing?

Cao Zhang: Yes, I think every enterprise advocates employees to communicate and share with others. Taobao also encourage employees to share the knowledge.

Author: Does the organizational culture encourage employees to develop, share and use the knowledge?

Cao Zhang: Yes, taobao encourage employees to share the knowledge.

Author: Does the senior management support or lead the knowledge management implementation?

Cao Zhang: Although there is no specific strategy for knowledge management implementation, top management encourages employees to share the knowledge.

Author: How is the teamwork in your organization?

Cao Zhang: It's hard to say good or bad. The atmosphere in project team is good for communication. But the communication crossover the team is not very frequent.

Author: Do you think your colleagues are willing to share the knowledge?
Cao Zhang: Yes. We are very willing to carry out activities such as shared meeting to discuss and exchange each other’s opinions.

Author: Is any related training on knowledge management for employee? For example, the training of using knowledge management system/database to store or share the knowledge.

Cao Zhang: Taobao doesn’t provide specific training on knowledge management, but the employees will know how to use in their daily work. They will learn in the process of using.

Author: In your point of view, do employees rely on the knowledge in their daily work?

Cao Zhang: Yes. Off course. IT business is intelligence business. Knowledge is core competitiveness.

Author: How do the employee share the tacit knowledge with others?

Cao Zhang: We will hold seminar or review meeting to share the project experience.

Author: What’s your organization’s knowledge management strategy?

Cao Zhang: There is no clear knowledge management strategy. But taobao is trying to make an informational organization. Maybe they will institutionalize knowledge management to make it systematic.

Author: What’s the purpose of implementing knowledge management in your company? For example, for storing the documents, exploring the internal experts to transfer the knowledge, reuse the knowledge and etc.

Cao Zhang: I think it has three purposes: to increase the intelligence of the organization; to enhance the organizational memories; to reduce duplicated workload.

Author: Is any knowledge management process in your company? For example, a knowledge management process including capturing, storing, sharing, learning, exploiting and exploring. Please provide details.

Cao Zhang: I don’t know about this. But I don’t hear about any knowledge management process. The process as you indicated including capturing, storing, sharing and etc is like common sense in our daily work. We captured knowledge in our project, then stored those knowledge and experience in the system as documents, those documents could be shared through using the database. Sometimes we will hold meeting or seminar to learn the knowledge. All the activities are carried out in a common sense. There is no specific process in Taobao.

Transcripts of interview with Yuan Cao

Author: Hi, it is nice to talk with you. Thank you for accepting my interview. I have some questions to ask you, mainly about the IT facility and IT environment to support knowledge management. Firstly, could you introduce yourself and give a brief description about your position and major responsibility?

Yuan Cao: I am an IT support engineer in IT support team. My major responsibility is to provide IT supports to project team if needed. For example, if there is any problem on hardware, software, operation systems or backstage database, we will solve the problems to ensure the project team could work in a good operated IT environment.

Author: In your opinion, what is Knowledge Management?
Yuan Cao From my common sense, knowledge management is about the strategy and method to manage knowledge effectively in order to use these knowledge to achieve business success.

Author: Do you think knowledge management is important to your organization? Why? If it is important, from which perspective?

Yuan Cao: In IT company, I think knowledge is the most important asset. We use knowledge to create product and to achieve business success. Thus, knowledge management decides how to manage these asset. We can image, if Taobao is lack of knowledge, or it ignore the importance of knowledge management, the company would not develop as well as today.

Author: What are the advantages and disadvantages of knowledge management in your organization currently? And how to improve the disadvantages?

Yuan Cao: My duty is to ensure a well operated IT environment for project teams. Since the project teams use various document management systems, and those systems are not in an integrated platform. Thus, it is not convenient for us to do the support work. Independent systems bring more workload to support.

Author: How do your organization use information systems to manage the knowledge? Is it any database or ICT (information and communication technology) tools to support it?

Yuan Cao: No doubt, as an IT company, Taobao has advantaged IT infrastructure and system. There are various document management systems for project team to choose for managing documentation. Actually, Taobao has a company database to store and share the knowledge, as IT support, one of my major responsibility is to maintain the systems and ensure database in good operation. For example, if the system is down or the database can not be accessed, we will solve the problems, but we don’t manage the system. The project teams manage the system themselves. They decide what and how to store the knowledge.

Author: Is any network for employee to contact and share the knowledge with others?

Yuan Cao: Yes, we have internal company intranet for employees to publish and share information. The system administrator will upload news in the website to spread the information. Each employee owns email account. So email is another way to deliver the knowledge and communicate with others. Besides, few years ago, Taobao decided to create a forum for employees to discuss technology and share knowledge, but even the forum was set up well, few people use it.

Author: Is seems that the forum is not welcomed by employees?

Yuan Cao: It does not matter that people like it or not. I have asked some employees why they didn’t use it. They told me they didn’t have much time for it. Since few people use it, there is little information on it; gradually, more and more people consider it is useless to visit the forum because they can not find any information on it. At the end, the forum is useless.

Author: Does the knowledge database upgrade, renew or integrate in time?

Yuan Cao: The document management systems such as SPS and baike were developed by employees in Taobao. In past few years, the systems were not upgraded since they were satisfied for their daily use. Thus, the company won’t invest money on it.

Author: So, in your opinion, do you think the IT facility is sufficient to support the KM?

Yuan Cao: Er…..in my opinion, in current stage, the IT facility such as document management system and backup database is already satisfied for work requirement. But in long-term plan, I think Taobao should invest money to upgrade the system. First of all, I think it should integrate those document
management systems in a platform, it is a big issue. Then, with the development of business and the requirement for knowledge management in future, current simple systems can not support and deal with complex knowledge. Thus, the financial investment is required. But it is just my own viewpoint, the decision depends on top management and their business strategy.

Author: Ok. Thanks a lot for your time for the interview. I got a lot valuable information.

Yuan Cao: You are welcome. If you need more information, just feel free to contact me.

Author: Thank you so much for your support.