Abstract: Knowledge Management and learning organization are two closely related concepts. This article first describes some research results of the implementation model of learning organization based on knowledge management, including SLOM model by Michael J. Marquardt, the ten-pillar ideal learning organization model by Bryan T. Phillips and the learning organization network model by Constance R. James. Then comparative analysis on these models has been done which indicates that knowledge management process is essential for the implementation of learning organization. Finally the direction of future research prospects has been proposed.

Keywords: learning organization, knowledge management, implementation model, comparative study

I. Introduction

In the knowledge economy era, knowledge is of unprecedented value and the relationship between knowledge and learning has been even more closely. Knowledge management is the core element to promote competitiveness and keep sustainable development of organizations. Since “The Fifth Discipline” been published by Peter Senge in 1990, the concept of learning organization had been rapidly spread in the world like a wildfire. Excellence companies around the world are scrambling to transform into learning organizations, scholars from various countries have also devoted to research the implementation model of learning organization. This article first describes some research results of the implementation model of learning organization based on knowledge management, including SLOM model by Michael J. Marquardt, 10 pillar model by Bryan T. Phillips and the learning organization network model by Constance R. James. Then comparative analysis on these models has been done which indicates that knowledge management process is essential for the implementation of learning organization. Finally the direction of future research prospects has been proposed.

II. System Learning Organization Model (SLOM Model)

Dr. Michael J. Marquardt of George Washington University had presented a comprehensive model (System Learning Organization Model) to understand and build a learning organization based on the practices of a number of enterprises in the creation of learning organizations. The model has been accepted by many enterprises and theorists all over the world and had been proven to be effective. System Learning Organization Model (SLOM) includes five subsystems, namely, learning subsystem, organization subsystem, people subsystem, knowledge subsystem and technology subsystem, which are interrelated and mutually support and promote the occurrence and development of organizational learning (Fig.1). In this model, organization subsystem, personnel subsystem, knowledge subsystem and technology subsystem are vital necessary to strengthen and support the learning subsystem. In turn, learning subsystem is interpenetrative with other four subsystems. Thus if one subsystem was lack or very weak, other subsystems will be affected correspondingly.

SLOM suggests that knowledge subsystem is the management process of knowledge acquainted and produced by organization, which includes six interrelated procedure -- knowledge acquisition, knowledge creation, knowledge analysis and data mining, knowledge transmission and distribution, knowledge application and knowledge confirmation (Fig.2). Knowledge management is very important in the establishment of learning organization. During the process knowledge can be transferred and applied in the organization operation which will enhance the learning and problem solving ability of both individual and organization. At the same time, technical support of technology subsystem is indispensable to the knowledge management process. The role of technology subsystem is to manage knowledge and facilitate learning. Technology subsystem includes both information tools and supporting technology network which can support learning and the access and exchange of information. It includes not only the technical processes, systems, collaborative framework and other skills, but also includes electronic tools and sophisticated learning tools, such as simulation technology,
computer conferences. Integrate all of these technologies, you can create the knowledge highway.

Ⅲ. Ten-Pillar Ideal Learning Organization Model


Will

The entire organization maintains a passionate and enthusiastic commitment to continuous improvement through continuous learning.

Leadership

Leadership is continually mindful that the vision is understood and shared at all levels and removes obstacles where necessary. It thinks systemically, is leanly aware of current reality and organizes its structure appropriately.

Strategic thinking and vision

Strategic leadership maintains the clarity and acceptance of the strategic direction, setting realistic goals that take into account the competitive position. Employees are encouraged to be systems-thinkers.

Communication

Free and open communication pervades the entire organization and barriers removed that threaten to impede it. Open dialogue at all levels encourages the sharing of ideas, knowledge and insights.

Learning and Development

A continuous learning philosophy based both on individuals and teams and learning by doings, is actively promoted, valued and provided for. The acquisition of innovative ideas and knowledge is facilitated, feedback loops evaluate its usefulness, and new technology is embraced to foster learning and development.

Innovation and decision making

An innovation mindset prevails throughout where members manage their own decision making. Initiative and experimentation are encouraged. Accountable mistakes are seen as an opportunity to learn, and are accepted as a by-product of the search for continuous improvement.

Change management

Challenges and change are regarded without suspicion and the means to respond are provided. The core knowledge base is continually questioned and evaluated, and mutual support coexists with allowance made for the transience of employees.

Intellectual capital and knowledge management

All employees are encouraged to share responsibility for the development of intellectual capital. Continuous adjustments are made as new information arrives, its diffusion facilitated and systems ensure that it is added to the core knowledge base. Tacit knowledge is willingly and readily transferred.

Measurement and assessment

Measurement and assessment are accepted as necessary indicators of changes in attitude, behavior, performance and commitment to continuous improvement. They are used for comparison between individuals and across teams, and the analysis of processes, procedures and performance.

Reward and recognition

Incentives improve performance, strengthen motivation, encourage personal learning and advancement and foster job satisfaction. New work patterns are provided, and individuals rewarded for their effort, recognized for their talent and genuinely valued for their contribution.

For the assessment of organizational attitudes and perceptions of the position, the model was converted into questionnaire form and applied to the four functional areas, namely, CEOs, human resources or learning development managers, line managers, and employees. The four groups were separately asked to rate the importance of a varying number of attributes on a scale of 1 to 4. The results was able to show the differences in emphasis and perspective between CEOs, HR/LD managers, line managers and employees.

The ten-pillar ideal learning organization model emphasizes the importance of knowledge management in learning organization also. The model suggests that the organization should have a continuously updated core knowledge base, encourage innovation and learning at work, and provide...
organizational support for learning, innovation and knowledge acquisition. The model points out with special emphasis that the intellectual capital management and transfer of tacit knowledge are very important during the implementation of learning organization and that is necessary to establish organizational systems to ensure the core knowledge base to be effectively updated and knowledge to be effectively disseminated.

IV. Web Model of Learning Organization

Constance R. James (2003) defines learning organization from the perspective of the acquisition and dissemination of organization knowledge and presents a learning organization web model (Fig. 3). In the learning organization web model, everyone is committed to the exploration, development and transmission of knowledge, so as to enhance the ability of overall learning and the ability to create the future of the organization.

The learning organization web requires a framework to drive the transformation and generative learning processes. The 4 Bs framework is the glue that provides cohesion and connections (Fig. 4). The learning organization web includes not only the composition of the web elements, namely, transformational leadership, egalitarian culture, dispersed strategy, integrating mechanism, horizontal structures and knowledge workers, but also includes the intrinsic link and interrelationship between the various elements. To achieve effective integration of elements in learning organization web, the following four aspects, namely, beliefs, balance, behavior and boundlessness should be considered.

Beliefs describe the underlying support for knowledge workers that makes learning forms transformational. Balance describes how the web design creates organizational learning that is collective and generative. Behavior relates to how the internal parts interact in a synergistic way to create transformation. Boundlessness describes how the web design minimizes boundaries both inside and outside of the organization to enhance learning and sustain superior performance overtime.

In the web model of learning organization, organizational learning is the central part and knowledge management is an effective way to achieve organizational learning. The senior leaders, middle managers and knowledge workers of the organization are committed to the exploration, development and transmission of knowledge and can continue to explore new knowledge and enhance their creative learn ability. Thus the learning ability of the whole organization and the competence of creation future of the organization will be enhanced. At the same time, the model has also placed special emphasis on the open communication between the organization and the external environment. Organizational learning is occurring not only within the organization, but also occurring in connection between the organization and its customers and suppliers. Thus knowledge management of the organization should be considered in an open environment so as to meet the needs of customer needs continuously and achieve sustainable development of the organization.

V. Comparative Evaluation of Three Models and Prospects

The implementation model of the learning organization has been described by the above-mentioned three kinds of models from different aspects. The common feature of the three models is that they emphasized the important role. Knowledge management played in the realization of learning organizations. Among them, the SLOM of Michael J. Marquardt has pointed out that the knowledge subsystem among SLOM refers to knowledge management, which includes the process of knowledge acquisition, knowledge creation, knowledge analysis and data mining, knowledge transmission and distribution, knowledge application and knowledge confirmation. The technology subsystem provides effective technical support for the implementation of knowledge management. Knowledge subsystem, technology subsystem, organization subsystem and people subsystem are interrelated to support the core subsystem, namely, learning subsystem. Thus the effective organizational learning will take place and be strengthened. The learning organization web of James stresses the intrinsic link and interrelationships between the various elements. The model emphasizes the role of knowledge workers and
beliefs that everyone in the organization can be a knowledge worker who is an essential building block of the learning organization. Each person contributes, continuously learns and transfers knowledge to others in the organization. This creates the ability to enhance collective learning throughout the organization. The model also points out that the distinctiveness of a learning organization goes beyond balancing exploration and exploitation learning and extends to managing the collective learning across organizational boundaries.

The ten-pillar ideal learning organization model of Bryan T. Phillips suggests that knowledge management and learning development are important aspects of the learning organization. A continuous learning philosophy based on individuals and teams is actively promoted and provided. The acquisition of innovative ideas and knowledge is facilitated and new technology is embraced to foster learning and development. An innovation mindset prevails throughout where members manage their own decision making. Initiative and experimentation are encouraged in the organization. Accountable mistakes are seen as an opportunity to learn, and are accepted as a by-product of the search for continuous improvement. Challenge and change are regarded without suspicion and the means to respond are provided. The core knowledge base is continually questioned and evaluated, and mutual support coexists with allowance made for the transience of employees. All employees are encouraged to share responsibility for the development of intellectual capital. Continuous adjustments are made as new information arrives, its diffusion facilitated and systems ensure that it is added to the core knowledge base. Tacit knowledge is willingly and readily transferred. Table 1 shows some comparison results of three models.

### Table 1. Comparison of three learning organization models

<table>
<thead>
<tr>
<th>Model</th>
<th>Elements</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOM</td>
<td>Learning subsystem, organization</td>
<td>CEO, HR/LD managers, transformational leaders,</td>
</tr>
<tr>
<td></td>
<td>subsystem, people subsystem,</td>
<td>line managers, employees</td>
</tr>
<tr>
<td></td>
<td>knowledge subsystem,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>technology subsystem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Will, Leadership, Strategic thinking,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication, Learning and development,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Innovation and decision making,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Change management, Intellectual</td>
<td></td>
</tr>
<tr>
<td></td>
<td>capital and knowledge management, Measurement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and assessment, Reward and recognition</td>
<td></td>
</tr>
<tr>
<td>Ten-pillar</td>
<td>Transformational leadership, egalitarian</td>
<td></td>
</tr>
<tr>
<td>model</td>
<td>culture, dispersed strategy, integrating</td>
<td></td>
</tr>
<tr>
<td></td>
<td>mechanism, horizontal structures, knowledge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>workers</td>
<td></td>
</tr>
<tr>
<td>Learning</td>
<td>Organizational learning</td>
<td></td>
</tr>
<tr>
<td>organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>web</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above three models are all focused on the implementation of learning organization and emphasized the important role of knowledge management. They have provided useful references on the way of studying on learning organizations. The establishment of learning organization is a systematic project rather than an overnight thing. There is not a dedicated fast track in the road leading to the learning organization. Because each organization has its own unique background, culture and cohesive force, the way and degree of effort of each organization shown when becoming a learning organization will not be the same. Nevertheless, knowledge management is an essential part in the implementation of learning organization. It may be confirmed that effective knowledge management is the requirement of and protection for sustainable development of organization. At present, enterprises in China are still relatively unsubstantial in knowledge management and organizational learning. Therefore, there is a need for more empirical research in order to clearly determine the level and existing problems of knowledge management and organizational learning of Chinese enterprises. Fortunately, some scholars have begun to explore this area. The research group led by Professor Chen Guoquan in Tsinghua University have conducted an empirical study in more than 200 enterprises in China and clarified the status of organizational learning level of Chinese enterprises. Their results confirmed that there was a positive correlation between the ability of organizational learning and the organizational performance. We strongly believe that with the continuous integration of theory and practice, the level of knowledge management of Chinese enterprises will be continuously enhanced and the learning organization theory will be able to achieve a successful landing in China.

### References


### Background of Authors

Yun shaohui received the ph.d. in management from Tianjin University. She is an associate professor at Jiujiang University (China). Her research interests include learning organization, organizational learning and knowledge management theory.