Construction and analysis of leadership characteristic model based on deep learning in the process of knowledge management

Fuchun Lin

Graduate School, Emilio Aguinaldo College, Manila, Philippines

Abstract: *Knowledge-based economy, globalization, scientific and technological development and social changes are constantly changing the business environment. With the rapid formation of the knowledge-based economy era with knowledge as its capital and distribution basis all over the world, knowledge-based enterprises are becoming the main body of the globalized knowledge-based economy. Therefore, leadership has become one of the top ten management concepts that will influence the future development of enterprises in China and even the world. However, according to the investigation and research, the leadership level of Chinese enterprises needs to be further improved. In the 21st century, enterprises are faced with a series of changes in ideology, organization, culture and human resources. In the era of knowledge economy, all kinds of new thinking, new methods, new cultures and new creations are everywhere, which affect the development of enterprises. Based on the process of knowledge management, this paper analyzes the construction of leadership characteristic model. It shows different leadership characteristics in different stages of knowledge management. It is expected to help enterprises pay attention to the performance of leadership characteristics in each stage of knowledge management, and promote the process of knowledge management by promoting leadership development strategies.*

Keywords: *Knowledge management; Deep learning; Leadership characteristics; Leadership characteristics model*

1. Introduction

Knowledge economy, globalization, technological development and social change are constantly changing the business environment, creating a globalized, rapid and world-class performance environment for enterprises to obtain high performance in terms of scale, speed and standards. The emergence of a large number of knowledge workers and the acceleration of knowledge innovation challenge the leadership of enterprise executives. Therefore, leadership has become one of the top ten management concepts affecting the future development of enterprises in China and even the world. However, according to the survey and research, compared with foreign countries, the leadership level of Chinese enterprises needs to be further improved. In the era of knowledge economy, leadership is often regarded as the key factor of enterprise growth, transformation and regeneration. In the face of complex and uncertain business environment, enterprises can still obtain the power of change even in difficult times, so as to promote enterprise change and maintain competitive advantage. The standard management function can no longer summarize the new situation. Facing the future, enterprise management has become a new topic, which involves two new management contents (change management and knowledge management) and a core element, that is, rebuilding leadership.

In the 21st century, enterprises are faced with a series of changes in ideology, organization, culture and human resources. In the era of knowledge economy, all kinds of new thinking, new methods, new cultures and new creations are everywhere, which affect the development of enterprises. In recent decades, the world's interest in and concern for leadership education has become stronger and stronger, and a large number of papers and books on leadership and leadership training have been published. Many countries and organizations regard leadership as a superior resource to cope with competition, and continuously increase their investment in training and developing leadership. Student leadership is a kind of influence, not having leadership positions and powers, but the comprehensive strength of various qualities and skills including decision-making, communication, coordination and execution. Therefore, leadership is regarded as the most important issue in the process of reform, and it has become one of the top ten management concepts that affect the future of Chinese enterprises. Paying

attention to leadership means paying attention to the future of enterprises.

2. Research on the Model of Leadership in the Process of Knowledge Management

2.1. Leadership Models in Knowledge Management

Table 1: Research content of the leadership model

Leadership model	Basic content and characteristics	Features
High performance leadership model	Strategic leadership, performance guidance and development guidance are the basic aspects, and performance relationship and self leadership are the inevitable components of the organizational structure.	Performance, Culture
New leadership model	Leadership management mode under Knowledge Economy: how to choose leadership management mode; Build a leadership management model with Chinese characteristics.	Knowledge
Value-based leadership model	Value-based leaders inject values into the organization and work by clearly expressing their vision. They resonate with the values and feelings held by followers, leading to the improvement of followers' self-efficacy and self-worth.	Values
Skill-based leadership model	Leadership based on skill model expands relevant research by verifying some abilities needed at some time. Cognitive performance or skill performance rooted in a specific context is the main aspect of leadership research. Compared with the traditional definition of "leadership traits", the ability to develop knowledge and skills is considered to have a more direct impact on leadership performance.	Knowledge, Skills
Successful leader model	Contains 15 elements of success: Diligence, Enthusiasm, Self-control, Agility, Initiative, Concentration, Status, Skill, Teamwork, Calm, Confidence, Faith, and Patience.	Leadership traits

From the leadership trait theory, leadership behavior theory and leadership contingency theory, which emerged in the early 20th century, to the transformational theory, strength theory and ethical theory in the later period, people have been studying leadership theory for more than 20 years, and the research on leadership is constantly improving in breadth and depth. The words "leader" and "leader" have a long history. They usually only refer to authoritative figures. The word "leadership" appeared only in the mid-19th century. Its birth and evolution are very complex, and its meaning far exceeds that of leaders. The leadership traits in the traditional leadership theory mainly refer to the natural personality and personality of leaders, and mainly emphasize the genius and congenital nature of leadership. Different from the traditional trait theory, the new leadership trait theory holds that traits can be developed and changed, and they are acquired through constant practice. Therefore, leadership can be improved and cultivated through acquired learning, exercise and cultivation. In recent years, with the development of China's knowledge economy, many scholars have started the research on leadership, and leadership has become one of the top ten management concepts that will influence the future development of Chinese and even world enterprises. Leadership is the premise and foundation for enterprises to continuously gain competitive advantage, maintain long-term development and enhance the cohesion of teams and organizations. As shown in Table 1, we can see the basic summary of the research content of leadership model.

2.2. Research on the style of leadership

Table 2: Research content of leadership styles

Leadership style	Basic contents and features	Characteristic
Transformational leadership	Encourages change and influences subordinates' work values through emotion; focuses on the collective interests of the team; provides confident communication to subordinates, acts as a role model for others, sets challenging performance goals, acknowledges employee achievements and empowers others.	Innovation and performance change
Transactional leadership	One is that leaders guide their subordinates to accomplish their goals and reward them with clear tasks and performance; the other is that they rely entirely on the organization's rewards and punishments to influence employee performance based on the authority and legitimacy of organizational management.	Performance execution
Charming leadership	Personal characteristics: dominant, eager to influence others, confident and firm values, behavior performance: set a strong role model, ability, goal, high expectation, confidence and confidence.	Leadership traits
Implicit leadership	Explore the structure of people's "inner" concept of Leadership: work enthusiasm, participation and motivation.	Participation incentive
Vision leadership	Leaders' imagination of the future organizational state; Leaders effectively describe the vision and communicate it to followers; Empowerment enables followers to effectively achieve their vision.	vision
Paternalistic leadership	Authoritarian leadership, moral leadership and benevolent leadership; Social and cultural factors: familialism, respect for class, particularism, the principle of reciprocity and interpersonal harmony.	Harmonious culture

Then, the leadership characteristics, situations, powers and behaviors of different leadership styles are different. Each leadership style corresponds to a leadership style, corresponding to different situations, powers and behavior patterns, so as to form different leadership types. For example, charismatic leadership is a way of leadership in which leaders encourage followers to achieve organizational goals and make major organizational changes by using their own charismatic characteristics; Transformational leadership is that leaders establish a vision for the future and formulate strategies to stimulate subordinates to realize the vision, so as to ensure that everyone in the organization works together to achieve goals, and ethical leaders can create a strong ethical atmosphere in the organization, enable subordinates to deeply realize the importance of morality, and finally enable subordinates to abide by moral constraints in thought and behavior. Although the perspectives are different, the fundamental starting point of all these leadership theories is to summarize a leadership that can better adapt to the internal and external environment of the enterprise and create higher performance for the enterprise. From the change of domestic research, the focus of leadership research has shifted from considering some characteristics of leaders to defining leadership as an activity mode and activity result. As shown in Table 2, the research contents of leadership style are summarized.

Although the above perspectives are different, the fundamental starting point of all these leadership theories is to summarize a leadership that can better adapt to the internal and external environment of the enterprise and create higher performance for the enterprise. From the change of research in China,

the focus of leadership research has shifted from considering some characteristics of leaders to defining leadership as an activity mode and activity resul.

3. Characteristic model of knowledge management process on Leadership

3.1. Analysis of Leadership Characteristics in the Process of Knowledge Management

It has been said that once an enterprise has acquired knowledge and product manufacturing skills, the next step is to turn it into tangible assets and develop them to obtain "basic products". On the composition of leadership characteristics, scholars at home and abroad have conducted extensive research in combination with specific situations, such as information level, interpersonal level, action level, building ability, cognitive ability, cooperative ability, etc. The concept of knowledge management has a wide range. It is not a single functional management, but the integration of information management, human resource management, strategic management, target management and other functional management. It is a comprehensive management method. Then the leader's psychology and learning ability are one of the indicators for the sustainable survival and development of knowledge-based enterprises with knowledge management as the core. Leadership in the process of knowledge management has the general characteristics of leadership, but it is more important to consider the unity and cooperation among leaders and give full play to the role of different levels of leadership. Figure 1 Model diagram of leadership characteristics of knowledge management process.
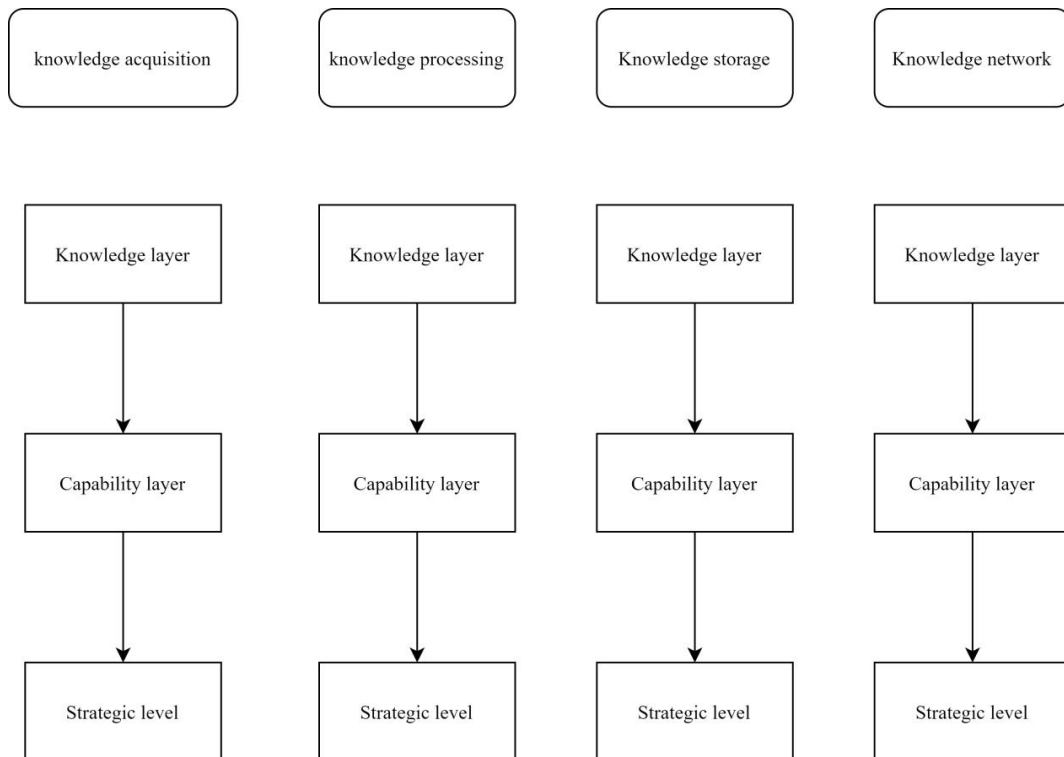

Figure1: Leadership characteristic model of knowledge management process

In the process of knowledge management, especially in the two links of knowledge acquisition and knowledge processing, knowledge workers play an important role in the initial establishment, debugging and application of knowledge-based systems, the expansion and update of knowledge base, the construction of infrastructure aiming at knowledge management, the establishment of knowledge management process and the construction of knowledge management system.

3.2. Construction of Leadership Model in the Process of Knowledge Management

There are different correlations between leadership characteristics and knowledge management. Knowledge management strategies can be used to promote the development of enterprise leadership in different stages. Therefore, there are rules to follow for establishing the knowledge management model of knowledge management process, but due to the particularity of knowledge management, its

leadership model has many different places. We must establish the corresponding leadership model according to the characteristics of knowledge management. As shown in Figure 2, the leadership model in the process of knowledge management.
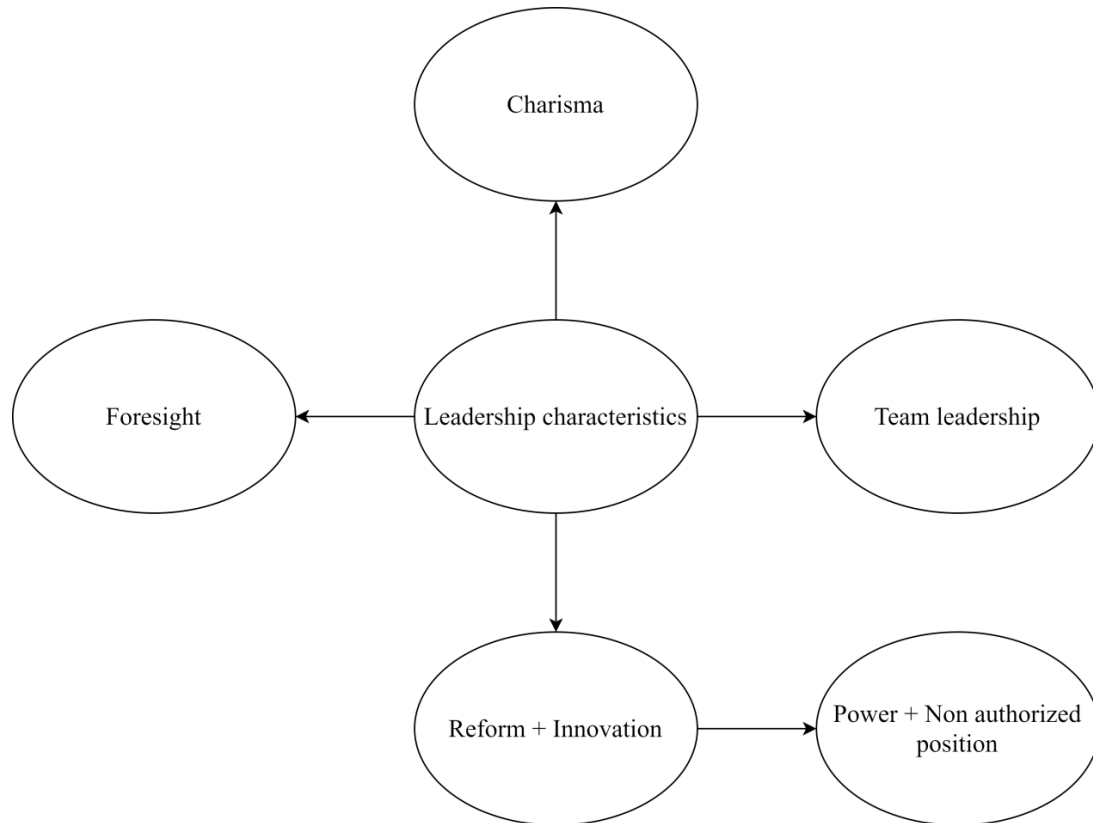

Figure 2: Leadership Model in knowledge management process

The ability of a leader to have foresight means that a leader should be able to grasp the context of time and depict attractive opportunities that he and his subordinates can have in the future. It is a kind of ability to look at the future, predict the future and grasp the future. This is the first quality that leaders should possess in the process of knowledge management. If a leader wants to attract and influence more followers, he must have a strong charisma. Only in this way can he be competent for the leadership role and lead the whole organization to achieve its goals. Finally, the most important thing is innovation. Innovation is the soul of a nation's progress, especially in enterprises. Continuous learning and innovation will be the lifeline of knowledge-based social leadership based on intelligent activities. Leaders should advocate innovation, protect innovation, practice innovation, learn to understand human nature, respect individuality, encourage the use of imagination, and create initiative needs to meet the needs of social development in the era of knowledge economy.

4. Conclusions

To sum up, in today's economic transformation and change, leadership has become a very critical factor that affects and hinders the further development and growth of enterprises. To pay attention to the development of leadership is to pay attention to the future of the enterprise. However, because the influencing factors of organizational performance have changed from internal to external, enterprises must have the ability to face uncertainty, focus on developing the organization's knowledge development capabilities, innovation capabilities, and transformation capabilities from the perspective of capabilities, and have a strategic vision, including strategic management. Strategic and efficient decision-making, decisive and value-based leadership, and pay attention to the development from the knowledge level, pay attention to openness and internationalization, tap the potential of the enterprise with multi-dimensional perspectives and capabilities, and enhance the core knowledge management capabilities. Knowledge innovation is the continuous pursuit of new development, the exploration of new laws, the creation of new theories, and the continuous application of knowledge to new fields and in new fields through the knowledge management of enterprises. Continuous innovation, promote the

continuous enhancement of the core competitiveness of enterprises, create added value of knowledge, and enable enterprises to achieve business success. The leadership of knowledge-based enterprises spreads into the established knowledge management network along with the process of knowledge management, which will influence knowledge workers to deepen their knowledge management activities in the future.

References

[1] Ye Yingping, Chen Haitao, Chen Hao. Knowledge management process, technical tools, models and countermeasures in the era of big data [J]. Library and Information Service, 2019, 63(5):9.

[2] Wang Yue, Zhao Huichen. Research on the information leadership model of college students [J]. Digital Education, 2019, 5(5):6.

[3] Liu Yixuan, Wu Xin. Analysis on the Development Characteristics of Leadership Training Model [J]. Leadership Science Forum, 2019(1):5.

[4] Liang Qiuping, Hu Ronghua, He Gaoda, et al. Future Perfect Organization: On Leadership in the 21st Century [J]. Journal of Guangdong Youth Vocational College, 2018, 32(1):7.

[5] Xu Xu, Wang Yi, Ma Qianyue. The application of leadership model in enterprise human resource management [J]. Time-honored Brand Marketing, 2021(8):2.

[6] Wu Di. Research on the correlation between innovation climate, knowledge management ability and breakthrough innovation ability [J]. Science and Technology Management Research, 2018, v.38; No.409(15):184-189.

[7] Zhang Wenlan, Liu Panpan, Yan Yi. A glimpse and enlightenment of American education administrators' information-based leadership improvement strategies: Based on the interpretation of "Leadership Characteristics for the Future: A Research Review" [J]. China Electronic Education, 2019(12):7.

[8] Liu Feng. The construction and promotion of Chinese leadership [J]. Chinese Leadership Science, 2018(1):5.

[9] Zhang Jinhua. On the Development and Application of Leadership in the New Situation [J]. Copying Newspaper Materials: Management Digest, 2017(2):2.

[10] Ou Jingjing. How to improve the leadership of modern enterprise managers [J]. Business News, 2020, No.205(15):85-86.