

Knowledge and Meta-knowledge: From the Generating of Knowledge to the Management of Knowledge

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Abstract. The multiple coexistence of knowledge management model can be a reasonable explanation from the perspective of knowledge development. From knowledge generation, meta-knowledge emerges. It is about the science and theory of knowledge. It is based on knowledge as the object of study and the process of studying the nature, characteristics, formation and development of knowledge. With the development of social informatization and knowledge economy, from the knowledge element to knowledge service, we can achieve the goal of knowledge construction to truly realize knowledge development; from the knowledge element to the basic theory of analysis knowledge management, application status and encountered in the application process the problem of optimizing knowledge management has become an inevitable choice for the current path of knowledge development. Based on the discussion of the connotation and characteristics of the knowledge concept element, the article summarizes the impact of knowledge concept on knowledge management and analyzes the knowledge management technology model and organization model from the perspective of knowledge development, which is knowledge management and in-depth knowledge construction. Provides a train of thought.

1. Introduction

Knowledge is the platform for information, experience, values, and insights. It can evaluate and absorb new content. Among them, subjective elements that vary from person to person are particularly prominent in intentional knowledge. Personal beliefs, values, and perspectives have a great influence. From the ontology, knowledge has two types: personal knowledge and organizational (group, enterprise) knowledge. Since knowledge comes from people's knowledge, knowledge is generated by individuals. Without individuals, organizations cannot produce knowledge. However, in daily activities, organizations also have their own knowledge, especially in terms of technology, patents, and production that enterprises hold. And management procedures, some have embedded products and services. Organizational knowledge is formed by expanding the knowledge generated by individuals and [1] crystallizing them in the organization's knowledge network. Individuals can only obtain and produce specialized domain knowledge. In the innovation activity, various knowledge needs to be integrated and it needs to be converted into productivity. This requires organizational knowledge.

2. Knowledge and Meta-Knowledge

2.1 The Concept of Knowledge.

Human thinking on knowledge issues involves two levels: philosophers focus on ontological knowledge from an abstract level: science, technology, and engineering professionals focus on knowledge function and utility thinking from a practical perspective [2]. With the development of a knowledge-based economy and the arrival of a learning society. People began to define knowledge more from the perspective of economics and management. Knowledge is generated and applied to the human brain. It often exists not only in documents or databases but also in the daily work, procedures, practices, and norms of the organization.

2.2 The Origin of the Meta-Knowledge

Meta-knowledge can also simply be thought of as the origin of knowledge. It is used to describe the knowledge of static form, nature, existence, the state of knowledge, the relationship between knowledge subject and knowledge object, and so on. In fact, knowledge in the traditional sense of knowledge management and knowledge organization can be regarded as a kind of meta-knowledge, except knowledge, perception, experience, thoughts and other cognitive mechanisms and psychological activities, thinking and other knowledge is also meta-knowledge [3]. In other words, meta-knowledge includes both the combining of subjective and objective knowledge as well as the observation, grasping, and understanding of the dynamic knowledge of the subject and object. The establishment of meta-knowledge can ensure that the static organization of knowledge helps the management to be more scientific and effective, making it more maneuverable, integrate able, replaceable, assessable, maintainable, and provable.

Meta-knowledge is "about the origin of knowledge." It is also the result of people's understanding of objective things, and knowledge is hierarchical. This hierarchy reflects the different understanding relationships. The first level is the "thing to knowledge" relationship. Here, objective things are the object of knowledge, and knowledge is about the object's cognitive achievements. Knowledge at this level is "knowledge about things" [4]. The second level is the "knowledge to meta knowledge" relationship. When people obtain knowledge about things, they then study the knowledge as objects of cognition and obtain new findings. This knowledge achievement is "knowledge about knowledge", which is meta-knowledge. Meta-knowledge is a higher level of knowledge. It studies issues such as the objectivity, comprehensiveness, depth, and rigor of knowledge. The significance of meta-knowledge lies in finding and overcoming the limitations of knowledge. If people's understanding only stays on the first level, it is difficult to find the limitations of knowledge. When people use knowledge to solve problems [5], they do not have a conscious understanding of the limitations of knowledge itself, and they cannot consciously go beyond this limitation, making people's thinking activities in trouble and difficult to solve problems effectively. If people's understanding rises to the level of meta-knowledge, they can analyze and study problems at a greater range of knowledge and higher knowledge level, thus effectively solving problems.

3. The Development of Knowledge

The generation of knowledge is useful information that can be controlled, that is, knowledge, what is knowledge? This is an ancient philosophical proposition. Plato, Descartes, Leibniz, Locke, Titus, Kondeyak, Kant, Hegel, Popper, Chomsky, Piaget, have all expressed different opinions on this proposition. overall, traditionally we are accustomed to the sum of the knowledge of the objective world and the subjective experience [6]. However, this kind of static knowledge regulation is obviously congenitally deficient and fails to express the paradoxical relationship between subject and object in knowledge. This relationship is the essential element of knowledge. The configurations within the knowledge space, which generate a variety of empirical knowledge, can be used as a search for cognitive dynamics; knowledge, information, and cognitive mechanisms are inextricably linked to the need to clarify what knowledge is., we need to first analyze and position the relationship between information and cognition.

3.1 Information Development Process.

There was a relatively common view in China that "information is a sequence of characters arranged in space on the media." However, this definition is only a representation of the external form of a certain level of information [7], and its circulation application value is generally limited to the traditional knowledge of the organization of knowledge, and does not touch the essence of information, and therefore is an unscientific expression. Here we need to distinguish between the information ontologies and the media or carriers that record the information, and the differences in the entries of the information. The media or carrier for recording information is a variety of books such as books, newspapers, films, tapes, and optical discs, etc. The characters and data of words are the record of the information, ie the record of the statement, and cannot represent the information

itself. At the same time, we should also realize that information is not only a simple object, it is not only physical but also spiritual. It is the medium of interaction between life activities and the world (including the external environment of life activities and itself). The characterization and verification of the existence or movement of things. It is this characteristic of information that makes it one of the original things that constitute the ontology of the world.

3.2 The Origin of Cognitive Mechanism.

The origins of cognition are like feelings, experiences, thoughts, imaginations, memories, and discoveries as human instincts. From ignorance to knowledge is the logical necessity of our lives. When a person is born, he begins to recognize and he begins to receive information from the outside world and himself. Some information will cause his sensory reactions and spiritual reactions. He obtains the world's initial answers through various senses. These answers are completely for him. Transcendental, and once he enters his experience, his knowledge becomes his knowledge (this knowledge is not necessarily clear and orderly, but it must be controlled and used by him.) The process of use is not necessarily clear and expressible, it may also be vague and unconsciously digested, and it becomes a source of knowledge and energy for him to further feel, experience, think, imagine, recall, and discover. Then he can use this new brand. The knowledge and energy reserves further recognize the world, and so on and on, spiral forward, endless cycle, this is the mechanism of cognition.

3.3 The Development of Knowledge.

Since knowledge is a part of information, knowledge should also have the general characteristics of information. It is also the result of interaction between subject and object. Some people once defined knowledge as "the cognitive subject's cognitive schematizing, assimilation of the information content of the object to be perceived, and the conceptualization and symbolic ordered information combination reconstructed through integration and reconstruction". This view of course has consciously strengthened the relationship between subject and object in cognitive activities. However, it does not make knowledge dynamic, but still considers knowledge to be a static "conceptualized, symbolic ordered information combination." In fact, knowledge of knowledge, knowledge (whether subjective or objective) must be a dynamic glued existence. As part of the information, knowledge must have the interaction and isomorphism between the subject and the object, but this dynamic feature of knowledge is more hidden. The connotation of such knowledge is expanded, not only including knowledge in the traditional sense, but also including pieces of feelings, experiences, ideas, wisdom, and even psychological activities, thinking, etc., if they are useful information relative to the subject of acceptance and can be controlled. The information that can be used for the main operation. In simple terms, useful information that can be controlled is knowledge. Of course, this "controllable" knowledge can either be controlled by individuals or controlled by groups, and the process of manipulation can be either explicit or vague implicit.

3.4 Ways to Comprehend and Gain Knowledge

The knowledge under the new concept explicitly opposes the knowledge of logocentrism. The Logos centrist tradition divides the world and knowledge arbitrarily into two areas: essence and phenomena, metaphysics and metaphysics, existence and thinking, schema and content, the other side and this shore. From the perspective of us living in the post-industrial society and knowledge economy era, this division simplifies and externalizes our object. The last resort of artificially dividing the face of the world can only be to keep us away from the real world.

With the continuous development of personal knowledge generation, information processing technology using personal knowledge as a tool has undergone knowledge and meta-knowledge phases and has entered the stage of knowledge management and processing. That is, knowledge can have creative thinking in humans. Ability. This means that the knowledge-based society has entered a new era of knowledge information processing, and the knowledge base technology will enable the knowledge management application system to have more development. The knowledge economy is another new social and economic form after the agricultural economy and the industrial economy. Knowledge is not only a resource juxtaposed with traditional factors of production, but it is also the

only meaningful special resource in the world. For the first time, knowledge appears as an economic basis in the process of human development.

Understanding as a knowledge-based form. Knowledge as a social resource, its production, distribution and use has long been one of the foundations of the operation in the understanding process, but its basic position and role have not received people's attention for a long time. Only in recent years, the advancement of science and technology to the economy and social life has been increasing. Its important position has only begun to be known by people.

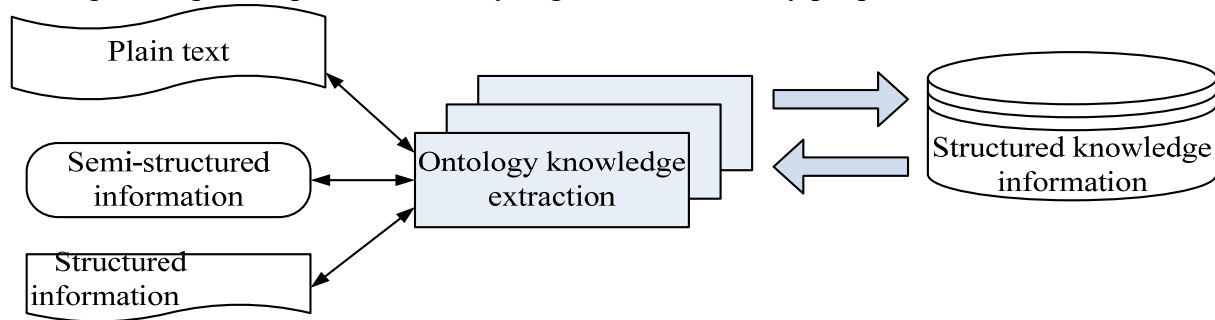


Fig. 1. Ontology knowledge acquisition schematic

Knowledge management is the use of information technology means to fully integrate people and knowledge, and create a knowledge-sharing culture, in order to accelerate the staff to learn, create and apply knowledge, enhance the organization's core capabilities, the core of people, organizations and technology, referred to as HOT. In recent years, research on knowledge management has been conducted along two main lines. One is to focus on information management because information is the carrier of knowledge. Knowledge management is implemented through the management of information content and information tools, and it is devoted to the research of information systems, artificial intelligence and other tools. The other main line is to focus on people's management, focusing on researching people's behaviors, skills, and ways of thinking.

3.5 The Development of Knowledge Management

After the process of study and practice, people gain certain knowledge and master certain methods to form a certain ability to understand things and solve problems. This ability composed of "knowledge" and "method" is called "cognitive ability". For most people, there is such cognitive ability. With this cognitive ability, people can solve many problems in life and work, and make life work and work. Taking "knowledge" and "methods" as research objects, "knowledge" rises to "meta-knowledge", and "method" rises to "meta-method", human cognitive ability is raised to a higher level. This ability composed of "meta-knowledge" and "meta-method" is called "meta-cognitive ability." People with metacognitive ability can observe problems from a broader perspective of thinking and can analyze problems from a higher level of methodology so that they can solve problems creatively. In social activities, those who make creative achievements in various fields such as management, scientific research, and art are often those who have higher metacognitive ability. We not only need to learn knowledge, but also to re-understand knowledge and form meta-knowledge; we must not only master methods, but also cope with research methods to form meta-methods, so that we can cultivate and improve our meta-cognitive abilities so as to be creative in our understanding and practical activities. Solve the problem.

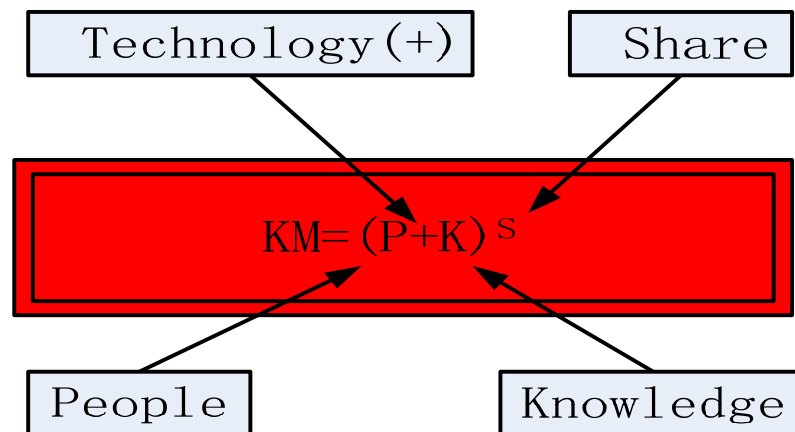


Fig. 2. The composition of knowledge management

The specific process can achieve results, but the lack of overall grasp. If systemic methods are used to analyze and synthesize the whole, it is possible to consider more comprehensively and deeply the various factors and their mutual influence. The research ideas and methods of modern systems disciplines for complex systems can be used as an important tool for knowledge management.

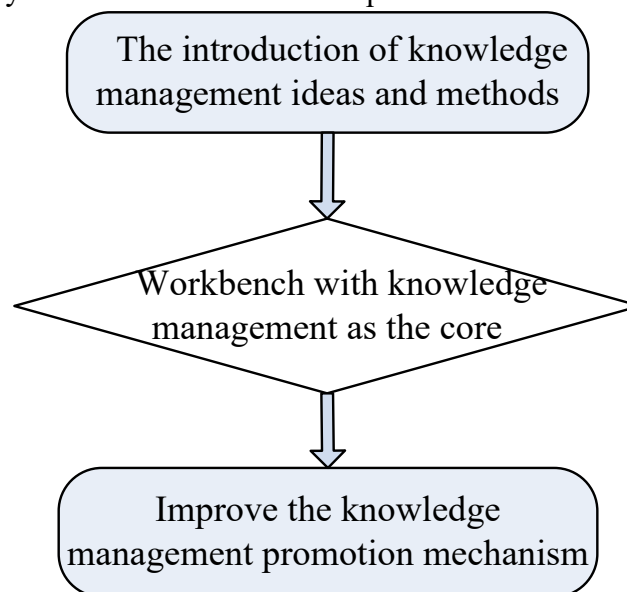


Fig. 3. The process of knowledge management

4. Analysis of Knowledge Management Based on Knowledge Element

4.1 Analysis of Knowledge Management Technology.

What supports the knowledge management technology model is the modern knowledge concept. The researchers of this model generally have a background in computer or information science. Also has experience in knowledge management software development. They see knowledge as the result of a static accumulation of experience. Only pay attention to understanding the logic of the meaning and development of the ready-made, well-known knowledge. Instead of focusing on the subject that generates the knowledge. It holds that knowledge does not depend on individuals. Knowledge has stativity, external storage and explicitness, and excludes the participation, initiative and practicality of the subject in the process of knowledge formation. Think of knowledge as an objective entity that can be managed. The technology model has objective, universal, and knowledge-free knowledge standards. It defines the main content of knowledge management as objective explicit knowledge. Knowledge management mainly includes processes such as knowledge collection, knowledge storage, knowledge processing, and knowledge sharing. Rely on a powerful knowledge search, filtering and integration tool to search the knowledge needed by organizations now and in the future from inside and outside the organization, classify, organize and store the searched knowledge, form a

“knowledge warehouse”, and take this knowledge as The most appropriate way to layout and present, or by providing an intelligent search engine, so that the needs of the needs of convenient access to the required knowledge: at the same time for the staff to establish a convenient upload tool to encourage employees to contribute their knowledge, experience and expertise for the knowledge base It forms the system and mechanism for knowledge allocation, transfer, and sharing with "knowledge warehouse" as the core node.

The knowledge management technology model places greater emphasis on the importance of technology. The development of a knowledge management system is a key concept of this model, which determines the researchers’ research methods and methods. IT and related systems provide an ideal framework, a reliable platform, and an efficient management tool for knowledge management. The essence of knowledge management is IT management of information resources. Groupware, information indexing and retrieval systems, knowledge warehouses, data warehouses, knowledge maps, document management and imaging technologies are the best ways to solve knowledge sharing within an organization. Knowledge management technology model emphasizes the inheritance of explicit knowledge, the purpose is to promote individual knowledge to organizational knowledge, improve the organization of internal knowledge, and use advanced information technology and intelligent technology to improve the efficiency of knowledge management. Change the traditional thinking and concept of smallholder knowledge management. It can be said that it is the promotion of the knowledge management technology model. It really gave birth to the knowledge management in the modern sense of the enterprise and related organizations, without the drive of advanced technology. There is no intelligent technology-built knowledge management platform. There is no modern sense of knowledge management. With the development of ICT technology, the frontier and trend of the development of knowledge management technology model is chasing intelligent and humanized technology. Apply artificial intelligence technology to the development and application of knowledge management systems.

4.2 Analysis of Knowledge Management Organization Mode.

5. The model of supporting knowledge management organization is postmodern knowledge. Researchers in this model generally have a background in philosophy, psychology, sociology, and experience in human resource management. Knowledge is a continuously generated spiritual achievement that is the interaction between subject and object. Think of individuals and organizations as owners of intellectual capital. It is believed that knowledge management is rooted in and constructed in collective practice activities. Its essence is a complex and dynamic process for the development of continuously improving intellectual resources. Knowledge management is innovation management. It is the management of human resources. Through the management of people, the process of knowledge development, innovation and utilization is realized. Knowledge management organization model questions the excessive attention to knowledge collection, coding, and sharing. It believes that the focus of knowledge management activities is to naturally create an environment of innovation and creativity. It is to help organizations create new knowledge faster. In knowledge classification. Knowledge management complies with post-modern knowledge standards. While acknowledging the importance of explicit knowledge, it pays more attention to tacit knowledge both inside and outside the organization. The process of knowledge management emphasizes the integration of high-efficiency organizational learning. The focus of organizational model research includes the identification, cultivation, appreciation, measurement and monitoring of intellectual capital, the promotion of the overall level of intellectual capital, the formulation of organizational knowledge management strategies, and the establishment of knowledge sharing incentive mechanisms. The KM model emphasizes the importance of learning. Creating a learning organization is a key concept of this model. A learning organization is an environment and platform for organizational learning. It can help organizations and individuals create, acquire and transfer knowledge. At the same time, it constantly revised its behavior to adapt to new knowledge and insights.

Under the organizational model, the research includes the nature of knowledge, the type of knowledge, the nature of organizational learning, and the process of knowledge management. It also

emphasizes the interactivity of individual groups in knowledge sharing and processing procedures, and places knowledge management on individuals. Study in different contexts such as organization, organization networks, regions, and cross-culture. The organization model of knowledge management emphasizes the generative nature of tacit knowledge. The purpose is to create an environment for knowledge generation. Individuals and organizations are regarded as nodes in the knowledge network, and knowledge production, transfer and diffusion are achieved through interactive learning between nodes. Think that talent is the true creator and consumer of knowledge. The knowledge management organization model regards the organization as a complex knowledge network system with self-organizing features, changes the traditional “elite knowledge” thinking and concept, and opens a new concept of “popularization” knowledge management. It can be said that it is the promotion of the knowledge management organization model that really promotes the transformation of the knowledge management methodology.

5. Conclusion

The development of knowledge is viewed from the perspective of the knowledge element, and the current knowledge management technology model and organizational model are interpreted. Provides an understanding and explanation of knowledge theory for the status of knowledge management. The current knowledge element is in basic knowledge, and the modern knowledge concept faces the questioning and criticism of postmodern knowledge development. Post-modern knowledge development itself also faces many problems and difficulties. In the research and practice of knowledge management, modern and postmodern approaches to knowledge development exist side by side, making the knowledge management practice in a dilemma. In accordance with the development of modern knowledge and knowledge management, combining the origins of knowledge elements in practice and integrating different knowledge standards is of great significance to the future development of knowledge management models.

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