



Quality of Knowledge

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Abstract

In terms of modern knowledge management, it is divided into tacit knowledge and explicit knowledge. Tacit knowledge consists of two levels. The first is the "technical" level, which includes informal and difficult to explain skills or crafts, often referred to as "Know-How." From the firsthand experience, highly subjective and personal insight, intuition, foreboding and inspiration are all at this level. The other is the "Cognitive" dimension, including beliefs, insights, ideals, values, emotions and mental models. This level affects how we feel about the world around us. Explicit knowledge can be obtained through oral teaching, textbooks, reference materials, journals, patent documents, audio-visual media, software and databases. It can be transmitted through language, books, texts, databases, etc. The leader of an organization leads the organization to what level of the configuration that depending on the tacit knowledge accumulated by the leader over the years or the explicit knowledge formed through the transformation of the data → information → knowledge, and then wisdom is formed by the conversion of the two kinds of knowledge, and leads the stakeholders with wisdom. Therefore, an organization can establish a vision for the organization's sustainable development in the future; formulate reasonable goals; develop effective strategies; take feasible action plans; monitor and adjust goals, strategies, and plans.

Keywords: Bloom's taxonomy of education objectives; Great learning; The deming system of profound knowledge; SECI model of Nojiro Yoshijiro

Introduction

Talking about personal quality of cognition, it same as discuss the individual's quality level. It would be a little bit sensitive to talk about the individual's quality level. It is better to say that how to promote personal quality of cognition. The qualities of cognition of relevant personnels within the organization are improved, through organizational learning; the cognitive quality of the organization is also improved. Enhancing the individual's knowledge is to upgrade the level of quality of cognition. Knowledge is divided into special field of knowledge and general knowledge, study of special field of knowledge should be intensive, general knowledge should be extensive. In the field of education, there is Bloom's Taxonomy of Education Objectives, which is worthy of reference [1] (Figure 1).

Those who try to improve the level of self-cognition, they should study the essence of substance first; substance being investigated, then their knowledge became complete; their knowledge being

complete, then their thoughts were sincere; their thoughts being sincere, then their hearts were rectified; their hearts being rectified, then their personality were cultivated. As I always said that when we discuss the issue of economic and social development of a country, with quality as its topic, it will get less controversy in ideology.

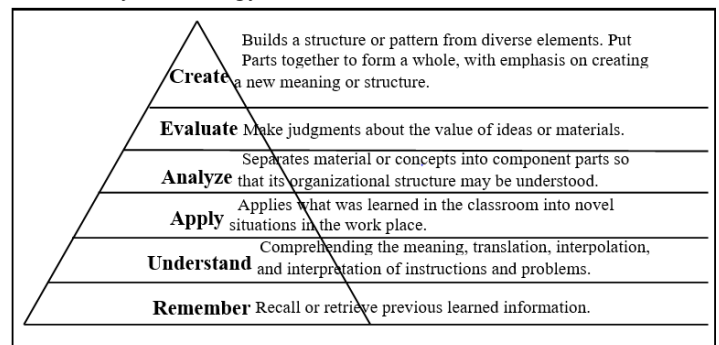


Figure 1: Bloom's taxonomy of education objectives.



The quality of the subject to the "essence of substance" requirements are precise, accurate and reliable; to the "process of business" focus on efficiency, effectiveness and value; to the "conduct oneself" emphasis on words and deeds should be consistent; to the "organizational operations" master opportunities and avoid risks coupled with addressing strategies; to the "quality of life" pursue the balance of production, ecology, and life; to the society "Datong (The Ideal World)" is our dream. It is strange to say that the book on "Great Learning" to me in the past, it seems to be ignorant, now I am aware of it. Listed it below, in order to be able to recite [2].

- The way of great learning consists in manifesting one's bright virtue, consists in loving the people, and consists in stopping in perfect goodness.
- When you know where to stop, then you have stability; when you have stability, then you can be tranquil; when you are tranquil, then you can be at ease; when you are at ease, then you can deliberate; when you can deliberate, then you can attain your aims.
- Things have their roots and branches, affairs have their end and beginning; when you know what comes first and what comes last, then you are near the Way.
- The ancients who wanted to manifest their bright virtue to all in the world first governed well their own states; wanting to govern well their states, they first harmonized their own clans; wanting to harmonize their own clan, they first cultivated themselves; wanting to cultivate themselves, they first corrected their minds; wanting to correct their minds, they first made their wills sincere; wanting to make their wills sincere, they first extended their knowledge; extension of knowledge consists of the investigation of things.
- When things are investigated, knowledge is extended; when knowledge is extended, the will becomes sincere; when the will is sincere, the mind is correct; when the mind is correct, the self is cultivated; when the self is cultivated, the clan is harmonized; when the clan is harmonized, the country is well governed; when the country is well governed, there will be peace throughout the land.
- From the king down to the common people, all must regard the cultivation of the self as the most essential thing.
- It is impossible to have a situation wherein the essentials are in disorder, and the externals are well-managed. You simply cannot take the essential things as superficial, and the superficial things as essential. This is called, "Knowing the root." This is called "The extension of knowledge."

The Deming System of Profound Knowledge (SOPK) including Appreciation of a system, Theory of knowledge, Psychology of change and Knowledge about variation. My personal interpretation is as follows.

Appreciation of a system: The overall operational status of the organizational components is called the system. The system must have a central idea. The constituents are united in thought, and then the beliefs are generated, consensus can be turned into power. Therefore, the leadership of the organization must first establish the vision, goals, and strategies for the purpose of the organization, and thus serve as the guiding principle for the operation of the organization.

Theory of knowledge: The more knowledge of the organization's constituents has, the more solid the foundation is, the more able to solve the problems which are faced by the organization and solve the problems.

The psychology of change: Deming believes that the intangible motivation is far more effective than the tangible incentive. The intangible motivation is the spiritual one, and it is from the inner heart; the tangible incentive is the material one, and it will destroy the self-motivation.

Knowledge about variation: The constituents of the organization must have statistical thinking.

In recent years, there have been cross-disciplinary academic researchers in brain neuroscience and quality management. Yvonne Lagrosen and Fred Travis's paper use the coherence of the brain to interpret the Appreciation of a system; use the brain's homeostatic feedback loops to interpret Knowledge about variation; Interpreting Theory of knowledge with neural plasticity-experience changes the brain; Interpreting psychology with brain areas underlying emotions and cognition both contribute to decision making. By linking Profound Knowledge System to the way of brain works, these findings provide a deeper understanding of the deep knowledge of quality management, which is valuable for leaders who are striving for excellence in the organization [3]. In particular, the neuroplasticity means that repetitive experience can change the structure of the brain, which was proposed by Richard J. Davidson in 1992. Neuroplasticity is a recent finding, and scientists in the past often believe that brain structure often does not change after a critical period of babies. The brain is made up of neuronal cells and glial cells, which are connected to each other. By strengthening or weakening these connections, the structure of the brain can change. Therefore, life-long learning will not be a pastime for retirement only, but also an alternative contribution. In terms of modern knowledge management, it is divided into tacit knowledge and explicit knowledge. Tacit knowledge consists of two levels. The first is the "technical" level, which includes informal and difficult to explain skills or crafts, often referred to as "Know-How." From the firsthand experience, highly subjective and personal insight, intuition, foreboding and inspiration are all at this level. The other is the "Cognitive" dimension, including beliefs, insights, ideals, values, emotions and mental models. This level affects how we feel about the world around us. Explicit knowledge can be

obtained through oral teaching, textbooks, reference materials, journals, patent documents, audio-visual media, software and databases. It can be transmitted through language, books, texts, databases, etc. The leader of an organization leads the organization to what level of the configuration that depending on the tacit knowledge accumulated by the leader over the years or the explicit knowledge formed through the transformation of the data → information → knowledge, and then wisdom is formed by the conversion of the two kinds of knowledge, and leads the stakeholders with wisdom. Therefore, an organization can establish a vision for the organization's sustainable development in the future; formulate reasonable goals; develop effective strategies; take feasible action plans; monitor and adjust goals, strategies, and plans (Figure 2).

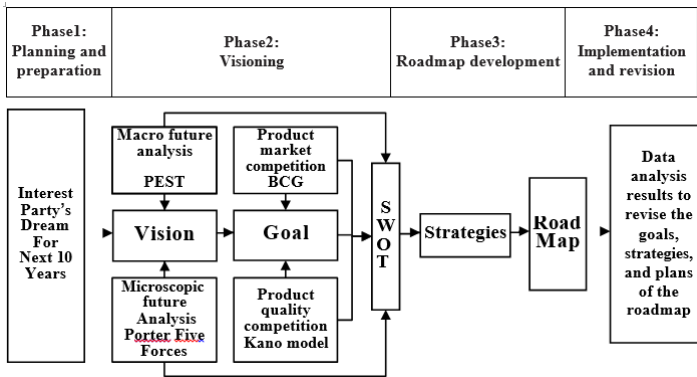


Figure 2: The formation of visions, goals, strategies, and plans.

The vision, goals, and strategies are formed by the tacit knowledge and explicit knowledge of the organization's management leader that are like how the organization wants to achieve an ideal dream in the future. How to let the stakeholders transform through organizational learning, and by the process of socialization, externalization, combination and internalization generate beliefs, all stakeholders in the organization have common beliefs, and the power to implement the vision, goals, and strategies of the organization is significantly increased, it is the responsibility of the organization's management leader. The following is based on the SECI model of Nonaka and Takeuchi [4]. Japanese knowledge management expert prof. Ikujiro Nonaka proposed that in the process of organizing innovation activities, tacit knowledge and explicit knowledge interact and transform each other, and the process of knowledge transformation is actually the process of knowledge creation. There are four basic models of knowledge transformation: socialization, externalization, combination, and internalization, the well-known SECI model (Figure 3).

Socialization

The conversion of tacit knowledge to tacit knowledge

This is the process of sharing tacit knowledge among individuals and is the socialization of knowledge. Tacit knowledge is transmitted mainly through observation, imitation and hands-on practice. The teacher's apprenticeship is a typical form of sharing tacit knowledge among individuals. The establishment of virtual knowledge communities through information technology creates conditions for the transformation from tacit knowledge to tacit knowledge in a wider range.

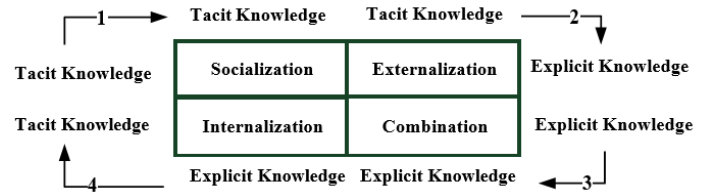


Figure 3: SECI model.

Externalization

The conversion of tacit knowledge to explicit knowledge

This is an explicit description of tacit knowledge, which is transformed into a form that is easily understood by others. The transformation uses methods such as analogy, metaphor and hypothesis, listening and deep talks. Some current smart technologies, such as big data, business intelligence, and expert systems, provide a means to realize the explicitization of tacit knowledge.

Combination

The conversion of explicit knowledge to explicit knowledge

This is a process of knowledge diffusion, usually the further systematic integration of piece-by-piece explicit knowledge. By integrating this piece-by-piece knowledge and presenting it in a professional language, personal knowledge rises to organizational knowledge and makes it easier to share and create organizational value for more people. Such as documented information and knowledge management, organizational internal database, etc. are effective tools to achieve explicit knowledge combination.

Internalization

The conversion of explicit knowledge to tacit knowledge

This means that the explicit knowledge of the organization translates into the tacit knowledge of the members of the organization. That is to say, knowledge is spread among the organization's employees. After the employees receive the new knowledge, they can use it in their own work and create new tacit knowledge. Team work, doing by learning and Training within Industry (TWI) are effective ways to achieve explicit knowledge



recession. In this regard, there are also some collaborative tools, such as knowledge communities, E-learning systems, TWI and so on.

References

1. Bloom's taxonomy of Education Objectives is a set of three hierarchical models used to classify educational learning objectives into levels of complexity and specificity. The three lists cover the learning objectives in cognitive, affective and sensory domains. The cognitive domain list has been the primary focus of most traditional education and is frequently used to structure curriculum learning objectives, assessments and activities.
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