



## Analysis on the Management of College Teachers' Tacit Knowledge

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### Abstract

Knowledge management, especially, tacit knowledge management, is a significant guarantee for the sustainable development of universities. The transfer of college teachers' tacit knowledge is the key and difficult point in tacit knowledge management of universities. This paper starts from the existence and application condition of college teachers' tacit knowledge in China and puts forward countermeasures and suggestions for college teachers' tacit knowledge management.

**Keywords:** Higher education, Knowledge management, Tacit knowledge

Polanyi, British physical chemist and ideologist, divides knowledge into two types, namely, explicit knowledge and tacit knowledge. Explicit knowledge is formalized, is explained with texts, and is easy to be spread. Tacit knowledge exists in people's mind, is implicit, and is hard to be coded. Tacit knowledge expresses itself as a kind of wisdom, experience, even feeling. Therefore, it is extremely difficult to transfer tacit knowledge. In traditional university management mode, people are used to attaching emphasis on the evaluation of teachers' explicit knowledge and on the explicit knowledge teaching of teachers, whilst people usually neglect the obtaining and transfer of tacit knowledge. As a matter of fact, tacit knowledge is better than explicit knowledge in creating values and determines the levels of scientific researches and knowledge innovation of universities. Even, tacit knowledge plays dominant role in the formation of students' knowledge system, world value and value concepts. Therefore, tacit knowledge management is the key point in teaching management and knowledge management of universities.

### 1. The characteristics of college teachers' tacit knowledge

Fundamental knowledge of teachers is usually evaluated and examined by way of its source or functions. Sternberg and Horvath divide fundamental knowledge of teachers into discipline knowledge, teaching knowledge, discipline teaching knowledge and social and political context knowledge related to teaching. Shulman believes that fundamental knowledge of teachers includes discipline content knowledge, general knowledge on teaching methods, course knowledge, discipline teaching knowledge, knowledge about students and students' characteristics, educational environment knowledge, and knowledge on teaching aims and values as well as its philosophy and historical origin. Each knowledge type covers both explicit knowledge that can be observed and evaluated and tacit knowledge that is difficult to describe. Based on the afore mentioned knowledge frame, strengthening the development and management of college teachers' tacit knowledge is the main way to improve comprehensive powers of universities.

Tacit knowledge has remarkable personal characteristics. Explicit knowledge is standard and systematical, while tacit knowledge has not yet been or is hard to be standardized. The existence of tacit knowledge is sparking, usually is teemed with personal styles, and is interlaced with personal characteristics, experience and contexts. Therefore, it is hard for people to distinguish whether the knowledge is common knowledge and talents or is distinctive talents related to personal characteristics. Personalization is the chief characteristic of college teachers' tacit knowledge.

Secondly, it is hard for tacit knowledge to flow because it is difficult to express tacit knowledge in systematical and coded language and usually tacit knowledge could only be understood but not expressed. Because tacit knowledge is not coded, it is hard to imitate it and to transfer it. Tacit knowledge does not have clear definition in independent and dependent variable, the mutual relationship among elements in contradictions, and the relationship between objects and

conditions. A large amount of research knowledge is still of tacit or half-tacit and half-explicit status.

Researches have shown that tacit knowledge is obtained through experience. Tacit knowledge is expressed through an individual's actions rather than the explanations made by the individual on the subjects that he or she knows. Tacit knowledge of college teachers is obtained through teaching and professional practices. From perspective of skills and knowledge of teachers, tacit knowledge can be divided into two types. One is knowledge on skill, including the informal and hard-to-be-expressed skills, experience and knacks in teaching and professional skills; the other is tacit knowledge in cognition, including the insight, intuition, feeling, value concept, psychological mode, and cultural customs.

## **2. Analysis on obstacles existing in the transfer of college teachers' tacit knowledge**

### *2.1 Difficulty in defining teachers' tacit knowledge*

China's university knowledge management institutions lack professional knowledge management personnel. Knowledge management is a new subject in university management. Many universities have not realized the significance and complexities of knowledge management, tacit knowledge management in particular, and have not done sufficient researches and taken effective management methods on tacit knowledge.

Due to the implicitness of tacit knowledge and the difficulty in expressing it, it is difficult for universities, who need to obtain tacit knowledge, to find out who have the tacit knowledge, where it is and what type it is. For lacking of sufficient information, for one hand, universities could not find the exact position of tacit knowledge and its possessors; for another, because of the lack of effective identification methods and ways, it is hard to identify and explore important tacit knowledge whose values have not yet been realized. Therefore, universities are reluctant to input their energy in finding and obtaining tacit knowledge, which blocks the communication and share of college teachers' tacit knowledge.

### *2.2 Monopolization of tacit knowledge*

Monopolization of tacit knowledge restricts tacit knowledge from entering public transmitting field, which, in turn, limits the transfer of tacit knowledge. The typical expression of monopolization of teachers' tacit knowledge is its proprietary feature. Teachers are afraid that once they turn their tacit knowledge into explicit knowledge, they will lose competition advantage. Therefore, they control the experience, skills, thoughts, techniques or information that have high commercial and social values so as to guarantee or promote their status or to wait for good chances to use their tacit knowledge to achieve better economical or social values. In addition, if college teachers assign their knowledge to others, the receivers will obtain tacit knowledge without making payment, which is unfair. Therefore, teachers in possession of tacit knowledge will try to protect their "intellectual property".

### *2.3 Lack of credit system to protect college teachers' tacit knowledge*

The base of knowledge transformation is credit rather than economic profits. Tacit knowledge possessed by an individual teacher, especially the part related to experience and capacity, is hard for others to imitate and is invisible property of teachers. If a teacher is willing to share his or her tacit knowledge, her or his individual fame established in the public will bring him or her many visible or invisible social returns. In order to encourage teachers to be willing to share their tacit knowledge, institutional credit guarantee system must be set up, which means that tacit knowledge share is a part of the institution culture and the tacit knowledge shared by an individual will not be embezzled by others.

### *2.4 Insufficient knowledge communication and share environment in universities*

Many universities in China lack good environment and atmosphere that could promote knowledge communication, knowledge learning, knowledge share and knowledge innovation and lack the value concepts of "the awareness of communication", "the awareness of cooperation" and "the awareness of share". The human and cultural environment of universities that encourages knowledge communication, share and innovation has not been formed yet.

## **3. Methods to help the transfer of college teachers' tacit knowledge**

### *3.1 Setting up university knowledge management system and digging out teachers' tacit knowledge*

Universities shall, according to their specific conditions, employ full time management personnel and set up special knowledge management system. Firstly, universities shall identify and dig out tacit knowledge, especially core tacit knowledge, that universities need in their development. According to specific conditions of each university, university knowledge management personnel shall organize experts, professional technicians, and technicians to systematically identify and dig out tacit knowledge by way of knowledge maps, expert systems and knowledge projects based on development needs of specialties and courses of universities, the needs of forming and maintaining the specialty and course features. Subsequently, universities shall scientifically divide and systematically measure tacit knowledge from the perspective of significance, difficulty in obtaining, share property and uniqueness and effectively integrate tacit knowledge so as to change the out-of-order tacit knowledge into orderly and well-organized knowledge and to gradually cultivate and form core knowledge in university specialties.

### *3.2 Promoting explicitness of teachers' tacit knowledge*

Teaching is a major that stores a large amount of tacit knowledge explicitness. "Teaching is without definite methods" reflects that in the field of teaching, there exists a large number of effective methods and knowledge that has not been standardized or made explicit. Education is a special research field. The growth of teachers and students share common growth rules, but still, they have their particular capacities, cognition styles, and growth rhythm as well as psychological and cognitive structure formed by the special combination of those elements. What is more, the educational environment each teacher is in and the educational objects that each teacher faces are also special. Therefore, specialty knowledge and capacity in teaching is far from the educational scientific knowledge that educational experts have found, concluded, and coded in certain format. Richer knowledge and capacity accumulates in a teacher's teaching and education experience. In this connection, universities shall pay particular attention to specialty reflection capacity of teachers as well as teachers' specialty experience. It shall be requested that teachers shall not only learn the existing educational theories and methods but also shall explore and learn tacit specialty knowledge, and promote teachers' tacit knowledge to become explicit so as to realize the life-time specialty growth of teachers.

If excellent teachers not only teach their experience to young teachers in subtle ways but also develop their work experience into system that can develop and control universities' education and teaching quality, people could not only turn educational teaching and management experience into explicit education and management professional knowledge but also let the entire university and more teachers to learn and share by way of spreading the explicit knowledge.

### *3.3 Methods and platforms for the transfer of college teachers' tacit knowledge*

Proper methods and tools are needed when expressing tacit knowledge. Metaphor words, symbolic languages, modes, and concepts are effective tools that people use to express their intuition, experience and inspirational sense. To transform tacit knowledge into understandable forms also covers deduction and reasoning skills. Therefore, creative deduction shall be adopted. To draw on the wisdom of the masses could inspire people's inspirational sense, could spread and share teachers' tacit knowledge by way of brain storm or one-to-one communication, and could achieve good effect. Graphs, pictures, images, videos, and multi-media are also important tools and methods to express tacit knowledge.

Universities shall gradually put tacit knowledge into work documents, such as operation standards, management systems, and teachers handbooks, by which way teachers' tacit knowledge communication and share could be expedited and the communication and share scale could be enlarged. Most of the operation skills, knacks and experience are difficult to be expressed fully and correctly in language or words. Therefore, the communication and share shall be realized through observation, imitation and constant practice. Universities can create various proper conditions to spread and share tacit knowledge through the teaching of teachers who have rich experience to new teachers.

Universities that have established university knowledge base and intranet shall give full consideration on how to facilitate the communication and share of teachers' tacit knowledge. For example, internet discussion system can be adopted, where teachers could write down their experience and practices and store them into the discussion data base for communication and share. To apply expert system in internet could expedite the explicitness of teachers' tacit knowledge. Groupware can be applied to summarize teachers' skills, experience and knacks, which could expedite the communication and share process of tacit knowledge to certain extent. For the experience and skills that are hard to code, "searching peopled data base", "knowledge map" and expert network system shall be established so that people can quickly find teachers who have certain tacit knowledge. Also, formal or informal sites that are suitable for communication shall be set up so as to provide favorable environment for the communication and share of teachers' tacit knowledge. Universities can organize those who have particular knowledge and capacity into various project groups and task groups and let the members of the groups to get familiar with each other, to fully exchange thoughts and experience, and to mutually enlighten each other so as to realize the communication and share of tacit knowledge.

### *3.4 Inspiring teachers' enthusiasm in contributing their tacit knowledge*

Universities shall consider teachers as knowledge persons and adopt balanced and high-effective methods from the perspective of materials and spirits to inspire teachers' enthusiasm. Material inspiring shall admit the special creation and particular property of teachers' personal tacit knowledge, set up inspiring system, "distributing according to knowledge contribution", connect teachers' involvement in knowledge share with salary and promotion, drive the communication and share of teachers' tacit knowledge by way of material profits. Spiritual inspiring shall satisfy knowledge personnel's desire for respect, for achievement, for creation and for self-realization, which is very important for promoting the share and creation of tacit knowledge. The share of tacit knowledge is not simply a technical problem. The key point is to create knowledge-dominant university culture that is human-oriented and encourages knowledge communication, knowledge share and knowledge creation, to set up value concepts of "the awareness of communication", "the awareness of cooperation" and "the awareness of share, and to promote teachers to communicate actively, to share and to create knowledge. To create a mutual trust, mutual cooperation and deep communication spirit

in universities is very important for the forming of such university culture.

#### 4. Conclusion

Knowledge innovation and spreading are the main functions of universities, while the identification and management of tacit knowledge, the base for realizing those functions, is at initial stage home and abroad and in theory and practice. This paper points out that the key point for tacit knowledge management is to provide and create favorable system, organization, cultural atmosphere, and various favorable environment and technical conditions for the spread, transformation, creation and application of tacit knowledge. It is necessary to fully develop and make use of tacit knowledge of college teachers, to promote sustainable development of comprehensive teaching and scientific research levels of universities, and to enhance management on tacit knowledge in universities.

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