

Affinity and Tacit Knowledge Management in Project Team

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Abstract—Tacit knowledge management requires knowledge owners' participation because of the taciturnity of tacit knowledge and its inseparability from its owners. Project team, as an effective form, provides its members the opportunity and surroundings of sharing tacit knowledge among each other. In a project team, the affinity of members is more important to knowledge management. Interpersonal affinity can be comprehended that within an effective institution, its members can spatially and psychologically work together out of the common interests and benefits, in which they hope to offer an effective solution and make cooperation. Based on affinity, this article constructed the frame of tacit knowledge management in project team. Besides, it also separately discusses the tacit knowledge management in the three levels in project team: member level, team level and corporation level.

Index Terms—Affinity, Tacit Knowledge, Team

I. INTRODUCTION

Durcker predicts, in his book *Appearance of New Organizations* in 1988, knowledge workers are an important individual element of new economy, of which knowledge becomes currency [1]. KM is one of the most important research fields in the 90s', especially in recent years, the research in knowledge management has gained greater progress.

Studies of KM are concentrated more on explicit and decodable knowledge than on tacit knowledge. According to Goldblatt, explicit knowledge only represents the top of the whole iceberg of knowledge, while narrow and limited studies of explicit knowledge will ignore 80 percent of the submerged iceberg [2].

Tom Davenport thinks that at the first phase we keep knowledge in repository and encourage people to make use of it, but people are too busy to consult it and contribute nothing to it. Therefore, at the second phase we must solve the problem of how to introduce

knowledge into knowledge workers' practice, which is a greater challenge [3]. Currently, plenty of measures adopted in the KM practice are ignored because they are unable to meet employee's needs. The article, based on the above study, intends to provide the theoretical support for practice of knowledge management by discussing the laws of TKM.

II. TACIT KNOWLEDGE IN PROJECT TEAM

Polanyi is the first one who put forward the definition of tacit knowledge. Tacit knowledge is hidden knowledge which can not be coded [4].

Nonaka considered that tacit knowledge is such a kind of knowledge: highly personal, difficult to formalize or communicate, difficult to share with others. Besides, he had paid much attention to tacit knowledge in the perspective of cognitive science from the east. In his opinion, tacit knowledge includes mental mode and technical skill [5]. Howells (1996) defined tacit knowledge as, non-codified, disembodied know-how that is acquired via the informal take-up of learned behavior and procedures [6].

Barton explained that tacit knowledge is such a kind of knowledge that even the owner did not recognize it [7]. To learn tacit knowledge is a high personalized process (Kolb, 2005) [8]. Smith (2007) thought transferring tacit knowledge should take different model according to the type of tacit knowledge [9].

Social aspects of knowledge retention and transfer has been emphasized, especially in the context of project. Bresnen (2003) examined the significance of social factors in enhancing knowledge management capabilities in a project environment in construction industry [10]. Koskinen (2003) explained that social engagements provide the proper project work context for tacit knowledge acquisition and sharing [11]. The conception of tacit knowledge in a context of project is given in the following. Tacit knowledge, with no clear expressions and its sole existence in perceptions and sensations, lies not only at the member level, but also at the team level and the corporation level. The degree of perception of tacit knowledge is not unchanged, but becomes more and

This article is the research achievement at the current stage of the program of Tacit Knowledge Management in Project Team: From the Perspective of Social Network Analysis (No. 10YJA630151), financed by Social Science Fund from Ministry of Education.

more clear and explicit with time changing, happenings of particular events and mutual communications.

Compared with explicit knowledge, tacit knowledge, as the implicit and decodable knowledge, is hard to be copied or imitated and constitutes the foundation of corporation' key competition. The excavation and explicitness of tacit knowledge are the source of knowledge creation. The apparent role of tacit knowledge in driving a company forward predicts the necessity and urgency of TKM.

Tacit knowledge management requires knowledge owners to participate in knowledge process because its taciturnity and its inseparability from its owners. Project team, as an effective form, provides its members with the opportunity and surroundings of sharing tacit knowledge. Definition of project team is that members with complementary abilities and skills mutually cooperate with each other and constitute a formal community in order to accomplish a certain task. Team member communicate and cooperate to accomplish a task in the team. During such a period, members could share knowledge and innovate automatically. The most important section of generating operational knowledge lies in the team level [12].

Project team, as a place for cooperation of knowledge workers, are more and more adopted by large corporations. 235 teams were successively established when Boeing Company developed 777-Airliner. Some large corporations, such as IBM, GE, AT&T have over one hundred teams. Not only can these teams provide chances for their members' mutual learning, but also can make tacit knowledge gained by members explicit in teams so that it can be mutually shared by its staffs and executives. Senge pointed out that team learning is extremely important, where exists the relationship just like a Chinese proverb: with the skin gone, what can the hair adhere to, that is, without team learning, there is no organization learning [13].

A large amount of knowledge is generated in team, which had never been dealt with by traditional project management. Project Management Institute (PMI) of the United States, the largest project management organization in the world, divides project management into nine aspects: scope management, time management, cost management, human resources management, experience management, quality control management, purchase management, communication management and integration management, but there are no systematic research of knowledge management in this area.

Project team provided intimate surroundings for team members to communicate. This kind of surrounding is an important element for knowledge management, especially for tacit knowledge management. It could act as a bridge to transfer personal tacit knowledge to organization explicit knowledge. Project team is not only a unit to accomplish this task, but also a community to produce knowledge and serves a transfer station from member knowledge to organization knowledge.

III. AFFINITY--- THE NUCLEUS OF KM OF PROJECT TEAM

Different from explicit knowledge, tacit knowledge, because of its monopoly and perception, has its own uniqueness that exchanging and sharing of it needs a close contact between transferees and receivers of. Close contact and its influence need an intimate personal relationship, which plays an important role in arousing people's willing to share and create tacit knowledge.

A. Conception of Affinity

Interpersonal affinity can be comprehended that within an effective institution, its members can spatially and psychologically work together out of the common interests and benefits, in which they hope to offer an effective solution and to realize cooperation.

The conception of affinity is put forward because the knowledge people learn comes mostly from the information people get through interacting with others, not through learning directly from some written materials. Some researches show that managers get the 2/3 information from face to face meeting and conversation, only 1/3 comes from documents [14].

We are familiar with the wooden cask theory which refers that how much water a wooden cask can hold depends on the length of the shortest board, but not on the longest one. This metaphor can be extended to another theory that how much water a wooden cask can hold depends not only on the length of the board, but also on the well-knit of the board. If the gap between the boards is large, the wooden cask can not hold much water. Therefore boards need to be banded together. This theory can be called banded wooden cask theory. The performance of a team is decided not only by the abilities of each member, but also by the coordination of the team members.

The conception of affinity can be explained in the following:

Firstly, affinity between people depends on their adjacency in space.

The degree of affinity between people depends on the geographical adjacency of people and their chance to communicate face to face. Professor Tom Allen in MIT reached the conclusion from the data and materials during the past several decades that the range of cooperation is very limited and that people will not be inclined to cooperate frequently if their distance is longer than fifty inches [15]. The connection between people can facilitate the affinity. For example, in US Army, there is a tradition of "Time for connection" which is considered to be important to erect the inner affinity in American US Army.

The adjacency in space exists in all daily working life. When one first comes to a new place, he or she connects with, talks and works with other people, then he or she develops a good relationship with these people and the relationship with the people he or she connected before becomes weak.

Secondly, the affinity between members not only depends on the adjacency in space, but also on the acceptance among each member.

In reality, there are lots of such phenomena. Two colleagues almost do not communicate and talk. In a department and a team, the members almost have no connection and even combat with each other because of the psychological conflict. Therefore, adjacency in space is not the only requirement for people to have affinity.

In an organization, the more a member accept his colleagues psychologically, the more he trust them, the more he likes what they do, and the more they can communicate and cooperate with each other. On the contrary, the more a member in an organization can not accept his colleagues, the more he does not trust them, the more he does not like what they do.

In a cordial and friendly atmosphere, one is easy to feel something others feel and easy to communicate and talk with others deeply and thoughtfully. On the contrary, in an unfriendly atmosphere, one can not feel and know others feel, and even becomes a setback to others, and it is difficult to communicate and cooperate.

Thirdly, generally speaking, affinity is developed because people need to come together and connect with each other due to some reasons, such as common interest, talk and work, etc. But there also is affinity without any special reasons. People just get together and feel cordial and friendly to each other.

The affinity which is developed from common interest is very popular in corporation. Corporation by itself is a combination of different interests, with corporation common interest, employee's individual interest and all kinds of group interest. Although every employee has his or her own interest, there is common interest among different employees. These employees will cooperate and work for their own interest.

The example of affinity because of common talk is "Community of Practice". COP is usually combined by several small groups. The members in COP discuss their values and exchange their viewpoints. These values and viewpoints will give them common objectives and meaning in their work.

The affinity which is developed by working together includes the following forms: working together in the same department; an old worker teaching a new comer; working together by employees from different departments; working together by employees from different corporations; working together by members within a project team.

Different from other form of working together, the members working in a project team have a definite objection, and they have to communicate and cooperate during a certain period. Communication and cooperation are very important to the success of team. A successful team needs the affinity among team members which is also very important to the tacit knowledge management in project team.

B. Classification of Affinity

According to the reasons which induce affinity, affinity can be divided into the following classifications. The first kind of affinity is interest affinity which is caused when employees connect to each other due to the same interest. The second kind is interest

affinity duo to discuss about some problems technically or practically. The third is cooperation affinity which is developed because the employees have to work together to finish a task. The fourth kind is communication affinity caused by employees, who have seldom or never meet before, but for some reason, they need to communicate by letters, e-mail or video system.

According to the forms of affinity, affinity can be divided into the following classifications: firstly, affinity based on space, for example, the feeling among employees in the same office is much better than strangers. Secondly, affinity based on psychology, that means employees who have the same interest are much closer than those who have no common interest.

C. Depth and Validity of Affinity

The conception affinity can be analyzed from two dimensions: the depth and the validity.

Firstly, the depth of affinity

The depth of affinity means intimacy degree of connections of project team members. The depth of affinity has more relevance to interpersonal relations.

The depth of affinity between members is manifested in the following aspects: the degree of familiarity between members, the degree of acceptance of members on psychology and the willing to cooperation.

There are many factors affecting the depth of affinity, for example, the adjacent of members on space, the degree of affection by the same factors (for example, common interest,), the degree of attraction by other member's characteristics, the atmosphere of team, communication and cooperation.

Second, the validity of affinity

The validity of affinity means the validity to solve problems, accomplish tasks, share and create knowledge.

The affinity does not mean a common relationship of people in real life living, but means the intimate relation of members in enterprise, whose goal is to accomplish the project task. Therefore, the key problem the validity care about is how to accomplish the team goal effectively, and about how to communicate and cooperate effectively to achieve the team target.

The validity of affinity of team members lies in the following aspects: how much have accomplished, how much knowledge the members have shared, and how much knowledge the team has accumulated.

The validity could be affected by many factors. For example, the sustainment of the enterprise, the team manager's affect to the team, the ways of communication between members, the diversity of team members which means the difference of member's skill, experience, characteristics. It can not be denied that persons who are socially connected closed can hardly to be creative.

IV. THE OUTLINE OF TKM OF PROJECT TEAM

Based on interactive relations of members, the whole framework of TKM of team project is constructed as the figure 1:

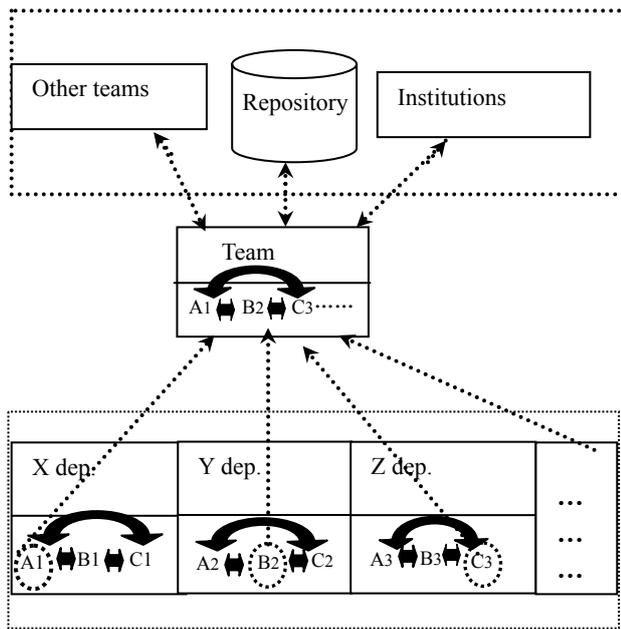


Fig.1 Outline of knowledge management

1. Contact and communication in every level

At the member level, as shown above, A1, B2, C3... are picked out from functional departments of X, Y, Z... to form a project team. The communication and cooperation produced by affinity at the individual level means A1, B2, C3 ... to communicate with other members in their own departments.

At the team level, team's learning comes from its member's learning and communications, because the project team provides a favorable environment for share and creation of tacit knowledge.

At the enterprise level, various forms of documents and files of the team are transferred to the repository. When team's members communicate with other members of the whole enterprise, with other teams or knowledge management departments, team knowledge is transformed to the whole enterprise.

2. Connection between different levels

The relation between the individual level and team level can be seen in the two aspects below. Firstly, members can accumulate their tacit knowledge by learning from other team members through communicating and contacting with them. Secondly, the accumulation of member's tacit knowledge would greatly increase the tacit knowledge of the whole team.

The relation of the team level and the enterprise level is in the following aspects. Firstly, in a team, there are documents, files which can be translated into the repository. Secondly, the other team and apartment of this enterprise and the repository would undoubtedly give a helping hand to the team to finish the project.

The relation between the enterprise level and the member level can be comprehended in the following way. The enterprise provides the unfold knowledge for the members, and store the knowledge generated by members into the repository. And members finishing the project could share the knowledge learned with other members in the team.

V. TACIT KNOWLEDGE LEARNING IN THREE LEVELS

A. Tacit Knowledge Learning in the Member Level

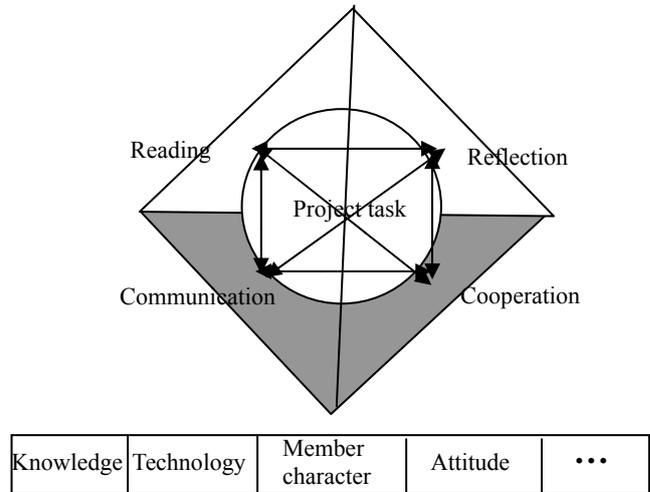


Fig.2 Tacit Knowledge Learning in Member Level

Project task, which connect the members just like a bond, lies in the middle of the figure 2, and is the foundation and operation of the whole team. Team members to work and gain tacit knowledge through the following approaches: reading, communication, cooperation and reflection.

Firstly, reading

To accomplish a task, team member must complement the knowledge and skills which he or she lacks by learning from other experienced employee or look up relative documents, including relative files of project, database of the company, and books. Team member could enhance knowledge by reading, and this process would be affected by the following factors. One is the diversity of the files attainable which is affected greatly by the knowledge the company has accumulated. Another is familiarity to the ways of finding files, which is affected not only by the amount of knowledge, but also by the social network of team members.

Secondly, communication

Communication is an efficient way for knowledge accumulation and innovation. Working in the social network, through communicating with others is a good way to transfer tacit knowledge into explicit knowledge and to spur knowledge innovation in the process of communication [16]. In a team, efficient communication plays a key role to accomplish task. In the process of communication, every member has his or her personal views to the project, through talking and communicating with others, this would apparently make the ideas more perfect and create new knowledge.

Thirdly, cooperation

Studying when you are cooperating with others would be more useful to learn tacit knowledge than just studying when working alone. It lies in the following aspects. Firstly, new member could learn knowledge and skill from experienced members in the process of cooperation. This could reduce the cost of studying and increase the efficiency. Secondly, in the process of cooperation, members could discuss the problem they got with others.

Thirdly, during the cooperation, members could not only learn practical procedure knowledge, more importantly, learn how to cooperate well with others, which would be very useful to the team member to cooperate efficiently with others later.

Fourthly, reflection

Reflection is a personal activity, in which one can think over what he or she has experienced and learned which he or she did not sense or thought before, as well as compare, consider and learn the contradiction between the new knowledge and the old one which he owned before. Although reflection is a personal activity, it should take place in a team. Different ideas, conflict and new idea will be generated in the process of communication and cooperation. All of these could be the source for the member's reflection. Therefore, it can be said like this, reflection is a personal activity and it can hardly exist without connection with others.

Tacit knowledge learning at team level is influenced by many factors, including individual owned knowledge, characteristics of team members, the atmosphere of the team and the corporation. The influence of team members is the most important among the three factors. Member's characteristics would always be different, including the ability to learn and accept knowledge, the ability to collaborate and communicate with others, etc.

Tacit knowledge learning at team level is influenced by every member's personal characteristics. Corsini argued that the personal factors which influencing one's learning include individual knowledge, intelligence, ability to learn, attitude and skills, etc. [17].

The main factors influencing tacit knowledge learning at member level can be concluded as follows:

1. Knowledge mastered by members

The width and depth of knowledge mastered by individual could greatly affect one's ability to learn knowledge. One's ability to assimilate knowledge and message is correlated to his or her knowledge structure and the diversity of knowledge one possess would definitely enhance one's ability to solve problems which he or she met in the project. The width of knowledge is useful to know how to solve problems and it is very helpful to solve problems [18].

2. Character of individuals

Jung analyzed individual characteristics from the perspective of individual inclination and put forward that characteristics could be divided into four aspects including relationship with others, collecting message, taking use of message and ways of decision making. The four divisions explained the relation between individual characteristics and knowledge learning [19].

Base on Jung's research, Ramapra put forward six types according to the difference between the attitude of accepting message and the method of taking use of knowledge. These types are styles of synthesis, relevancy, analysis, observing, message handing and technician. Individual of different styles usually plays different roles in a team.

3. Attitude of individual

Work attitude of individual is decided by individual

promise and working satisfaction. Member's promise to the corporation, which means member's devotion and appreciation to the corporation, could be divided into three levels: the first one is emotion promise which is decided by whether the member's actual satisfaction matches his or her appreciation and expectation to the corporation. The second one is continual promise. Whether the staff is willing to work continuously is affected by the cost he or she gets after leaving the corporation. The third one is standardization promise. A staff's obligation to the corporation is decided by the social criterion. Emotional promise is the highest promise to a staff and at this level member would deal with work initiatives for the corporation. Member in a team equally got the same promise to the team and his or her attitude will directly influence his or her enthusiasm to work with others.

4. Individual social relationship network

The Structure Holes Theory put forward that the so-called "structure holes" will be posed if there is no cross of relationship network of any individual. The more structure holes, the more social capability an individual has. A stronger capability could offer the owner sufficient knowledge resource and friendly help and it will be very helpful for the owner to acquire and spread knowledge.

B. Tacit Knowledge Learning Exists at the Team Level

In different phases of a project, the affinity of members in a team is changing continuously and it will affect the knowledge sharing and knowledge innovation of a team and influence the corporation's achievement.

The first phase is that of pre-developing. Before the team was established formally, members may contact with other members of this team privately to develop the relationship with other member and cultivate emotional acceptance. Team achievement has not been manifested in this phase.

The second phase is that of developing. In this phase members will communicate and contact with each another to find out their same interest and topic. The aim of this phase is to let the member to know his or her team partners and the range of the project and start to establish basic rule of activity. Achievement will be made initially in this phase.

The third phase is that of integrating. In this phase the team and its member will face a series of fluctuation and changes of behavior mode. Collision and frustration will be manifested in this phase and the affinity among members will degrade to a lower level. Team task will be performed formally in this phase, however, the achievement in this phase will not so good because of the collision and distrust among members.

The fourth phase is that of perfecting. After a long time of fluctuation, team members will calm down gradually and start to share message, accept different points, strive to work together for the benefit of compromise and shift their attention to the assignment and the goal of the team. In this phase, the atmosphere in the team will be more harmony and member's affinity will enhance greatly, which will promote the team's achievement.

The fifth phase is that of performing. In this phase, all

members have recognized what work they should take on and learn to put forward constructive ideas. They will believe and respect each other to pursue the goal of the team. The task of the team is carried out the most effectively in this phase.

The sixth phase is that of transferring. In this phase, the team may be dismissed after completing the task of the project. The last goal for the team at this phase is to have a meeting to conclude what have achieved and what are the problems for the project. In the phase of transferring, the team is ready to be dismissed and the main task is to end the project.

The tacit knowledge learning at this level is distinguished from that at the member level. If the learning at the latter level is more easily influenced by those factors of members themselves, the learning at the former level is rather more influenced by the interpersonal affinity of the whole team.

The relation between tacit knowledge learning at team level and the team achievement is positive, which means that, the more knowledge shared and created in a team, the better the team achievement will be. Therefore, the relation between affinity of team members and tacit knowledge management at team level could be the same between affinity at member level and the work efficiency of the project.

The phases of the development of the project team, the corresponding affinity in each phase and the fluctuations of the achievement of the team are as follows:

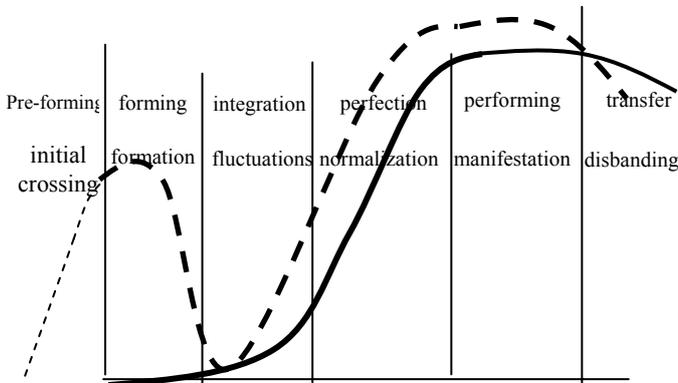


Fig3. The relation of team Achievements efficiency of the team work

The depth and validity of affinity have something to do with the team achievement. To show more simply in the figure, we will just discuss how the affinity curve is influenced by the depth and the validity of affinity. The influence the depth and validity of affinity exert to the team achievement could be concluded through the relativity between the affinity curve and the team achievement curve.

The enhancement of the depth of affinity could be seen through the change of the shape of the affinity curve. On the one hand, shortening the length between phase of the formation and that of integration and getting into the phase of perfection and performing earlier will pull the affinity curve forward. Team achievement could be generated more early by this way. On the other hand,

promoting member's communication to decrease the negative influence which the phase of integration exerted, the affinity curve will shift up in the phase of integration and team achievement will increase in this phase. Both changes could be seen in the figure 4 and figure 5 below.

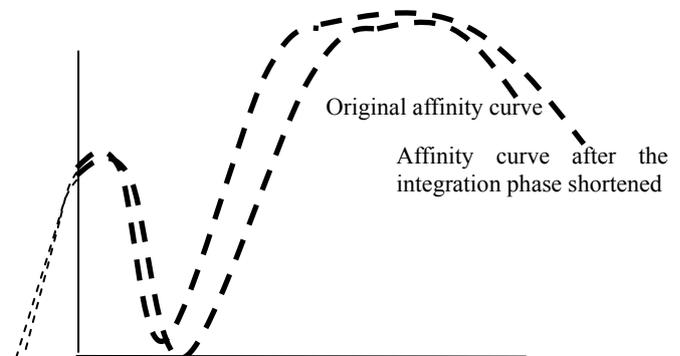


Fig4. Affinity curve after shortening in the phase of formation and integration

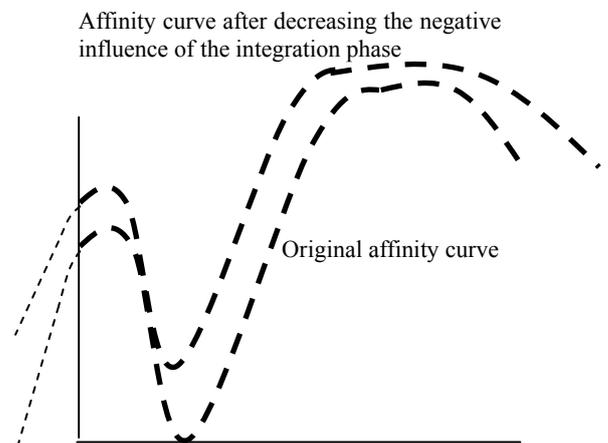


Fig5. New affinity curve after the influence was decreased in the phase of integration

Increasing the validity of affinity will enhance the efficiency for team member's communication and cooperation, what we can see from the figure 6 is that the whole affinity curve shifts up and the team achievement increases.

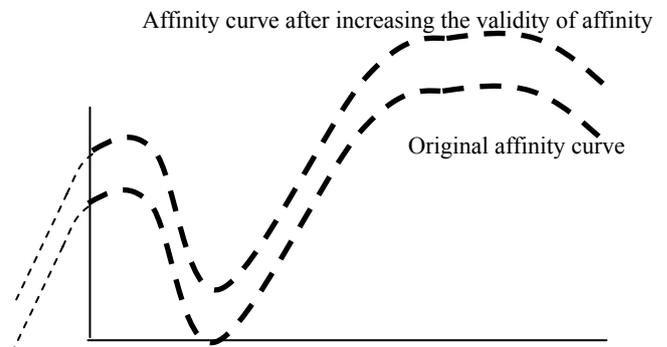


Fig6. Affinity curve after increasing the validity of affinity

According to the analysis above, the factors that influence tacit knowledge learning at the team level can be divided into two aspects of affinity: the depth and the validity of affinity.

1. Factors influencing the depth of affinity

First, informal communication between team members
Intimate relationship between members can hardly been established without communication between members, especially informal communication. With talking and discussing with others, members can establish the trust and become acquaintance to others. This would be very helpful for sharing knowledge, enhancing the depth of affinity between members, promoting cooperation in a team.

Second, conflict between members

Team conflict is one of the characteristics which are unavoidable in a team. It means that, because of incompatibility among goals, resources, expectations, feelings and view of value, there will be differences between members or between teams. How much the team was influenced by the conflict depends on many factors. If conflict in a team could not be controlled in a certain degree, anxious and hostility would be generated among members and this kind of feeling will expand in the team [20].

2 Factors influencing the validity of affinity

The validity of affinity increases the team achievements by enhancing the efficiency of member's communication and cooperation. Factors influencing the validity of member's affinity could be concluded as in following:

Firstly, validity of formal communication

Different kinds of communication network have different influence on the behaviors of members and teams. Lewit's research has proved that efficiency of different communication networks is totally different and can be used in different circumstances. A big project needs authorization in management, so it is better to use a chain network. The wheel communication network is good for making decision quickly, so the project could be controlled easily. Supervisor in this kind of network gets many messages from different resources, get more power and responsibility which is good for him to control the whole team efficiently. Members in circle chain get as much message as in wheel communication network, so it could enhance the morale of the whole team efficiently. If the supervisor gets too much work to do and he or needs others to choose message for him, then the Y communication network is the best choice.

Secondly, the management of team leader

Team members have different characteristics, background, goals and benefits, all of these must be integrated by communication and cooperation to assure a project carried out successfully. It is easy to integrate knowledge between two people, but it is totally different to coordinate all of the team members and integrate knowledge in a team. Therefore, a lot of problems appeared because of those reasons, and should be dealt with by manager in a team. A project manager plays the key role in a team and his or her responsibility is to make sure the project is accomplished successfully. A project could never succeed when the manager is not indulged fully in this project. Besides, a team manager must make sure there are good communication among higher

supervisor, client and the members in project team.

C. Tacit Knowledge Learnings at the Enterprise Level

This learning mainly appears when the member knowledge and team knowledge are transferred to the enterprise. It can be comprehended in figure 7:

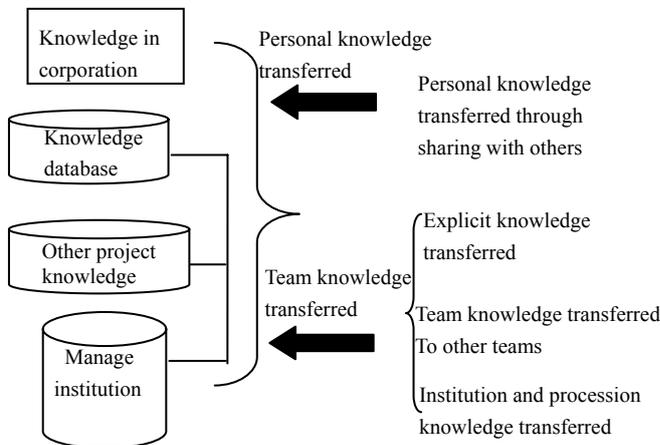


Fig7. Tacit knowledge learning at enterprise level

Both knowledge in member level and that in team level are transferred to the corporation level. The transferred knowledge includes knowledge in corporation repository, knowledge of management and regulations, and knowledge in other projects.

1. Knowledge in member level transferred to corporation

Judging by contents, team member's own knowledge could be divided into two parts, operational knowledge and relational knowledge. Operational knowledge, which is helpful to operate in a project, is much known and discussed by researches. On the contrary, relational knowledge, which is about how to deal well with the relationship generated in a project, is usually neglected. In fact, relational knowledge is very important for knowledge transferring.

Team member's knowledge acquired in the project could be divided into two types. One is knowledge about skills which usually is called Know-how. The other one is knowledge about theory which usually is called Know-why and is the linguistic ability to understand the conception [21].

There are several ways for member's knowledge transferred to corporation.

First, informal team

Informal team could be formal sometimes, which is established because of the down to up communication and up to down authorization. It has some organization formation and management institution. Informal team could be informal sometimes and is established by people who have the same interest and enthusiasm. They can discuss freely and deeply in this team. Knowledge transferred in the process of discussion is helpful for member's knowledge transferring to enterprise.

Second, knowledge sharing in function apartment

The function apartment is the place where staff gets in touch with others. After a project team, member would

get back to his or her apartment, work and communicate with others. This is a process of transferring knowledge.

Third, knowledge sharing among different filial

To meet the need of development, enterprise sets up filial in different regions and some multinational companies even set different filial in different countries. Little communication exists among filial in these corporations. Urging members in different filial to communicate and share knowledge would be very helpful for a filial to learn from each other, for members in different filial to understand others more deeply, and to cooperation.

Fourth, virtual relation on network

With the development of internet and computer technology, staff has much choice to communicate with others. They do not have to meet to communicate, and they could contact even they do not know each other.

There are many communication methods based on network including LAN of the enterprise, BBS, e-mail and video system.

2. Team knowledge transfer red to corporation.

Team knowledge is different from member's knowledge and corporation knowledge. Team knowledge is the result of member's communication, it contains not only the knowledge on operation and skills, but also the knowledge on cooperation generated in a project, which is the precious experience for staff to work in a team. Compared with personal knowledge, team knowledge is harder to be transferred, and it is much harder after the team has achieved its goal. Because transferring such knowledge must let all members come to an agreement on what happened and why it happened. [22]

Team knowledge is different from corporation knowledge. The function apartment in an enterprise is literally steady. Knowledge accumulated in apartments could last for a long time, correspondingly, while the team is established temporarily and could not last long. Knowledge accumulated in a team, especially the tacit knowledge, would disappear with dismiss of the team.

The main ways of team knowledge transferred into corporation can be concluded as follows:

First, explicit knowledge transferred to enterprise repository

Tacit knowledge in a team becomes into the final knowledge after it gets explicit, such as products, service, reports, documents or files. This is an important way for tacit knowledge of a team transferred to corporation.

Transferring explicit knowledge of a team to corporation does not mean simply transferring products, service and files to the company. Parts of knowledge is explicit for the team, however, it is tacit knowledge for others outside the team. Therefore, it is needed to contact with the receivers and to translate the knowledge into their own knowledge.

Second, transferring team knowledge to other teams

Team is usually accepted in enterprise. There are some common place between the way of operating a new project and the old one, so for the new team, something can be learned from the old one. Besides, there are many

projects carried out in a corporation during a same period, and these projects could learn from each other. Besides, after completing a project, the team could take another project, and experience accumulated in the former project could also be transferred to the latter one.

Third, teams could exchange experience after completing the project.

Exchanging experience and knowledge between teams after the end of project is an efficient way for promoting team's communication with other staff in the company. In this way staff in company could absorb tacit knowledge of this team. Exchanging experience among teams could not be spontaneous. If the performance index is just how perfect the project is carried out, there would be no customs and atmosphere for sharing knowledge. And exchanging team experience could not be taken under such condition.

Fourth, accumulating knowledge of management and procedure

Knowledge generated in a team contains not only the explicit final knowledge, but also the knowledge on project management and procedure. Generally speaking, the final knowledge after a project, especially the files and documents are paid more attention, on the contrary, the procedure knowledge of project management is more likely to be neglected.

3. Factors influencing member's knowledge and team knowledge transferred to corporation

Firstly, supervisor's support

The leader is responsible for team's learning. Leader's functions in team's learning include the following: the first function is to establish a culture which could be helpful for team learning. The second function is matching this culture to a series of proper actions which encourage the innovation of core knowledge to enhance the efficiency of the team and to get ready for the future. The third is to cultivate three communication channels. The first channel is the relation between supervisor and specialized team. The second channel has something to do with the integration contributed by knowledge of experts in different regions, including management knowledge database and efficient team work system. The third channel is to promote the exchange of knowledge and message across the boundary of the team by obtaining message from these teams and groups including clients, suppliers, network partners, competitors and research community.

Secondly, structural uniqueness of organization as well as its ability of knowledge absorption

Knowledge of member and team transferred into enterprise is rested with the structural uniqueness of organization as well as its ability of knowledge absorption. The ability of members and inner team of a company is determined by several factors together. The structure uniqueness of organization, memory of the organization, ability to understand and absorb of members, and member's ability to conclude from the experience they have got. The latter three factors could be comprehended as the team's ability to absorb knowledge.

The structure uniqueness of the organization is the relation between the team and behaviors of member. In the view of Zucker, when a social system or characters of nation evolved gradually in an organization and came into being a rule to instruct member's behavior and communication, these characters and system will be assimilated by this organization and will be kept. The more it is framed, the more durative it would be [23]. The transferring from knowledge of member and team to enterprise would also affected by organization's ability of knowledge absorption which is decided by knowledge the organization accumulated.

Thirdly, factors that could restrict the knowledge transferring among teams

When the team knowledge is transferred to other teams, it may be restricted by many factors. Bresnen considered that, because of the difference on time, space and culture, the task of the team will play a negative effect on transferring team knowledge [24].

Dixon, an America scholar, maintained that, the main factors which could restrict knowledge transferring among teams can be concluded as: comparability of mission and circumstance of the transferring knowledge team and the accepting knowledge team, the type of the knowledge being transferred, the attitude and absorption ability of the team which is going to receive knowledge [25].

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