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Knowledge Hiding of Scientific Research Teams in Colleges and Universities within the Chinese Context

Abstract: - Knowledge hiding is a concept corresponding to knowledge sharing, hindering knowledge integration and innovation of scientific research teams. Study on knowledge hiding is beneficial to improving the innovation ability and performance of scientific research teams. Current research on knowledge hiding behaviors of scientific research teams in colleges and universities within the Chinese context have made new progress, including but not limited to: (1) Characteristics of scientific research teams in colleges and universities within the Chinese context, and the unique knowledge hiding behavior patterns caused by such characteristics; (2) How to effectively measure knowledge hiding behaviors within the Chinese context; (3) Local factors triggering knowledge hiding behaviors; (4) Chinese leadership in scientific research teams; (5) Impact of the unique office culture in China on knowledge hiding behaviors.

Keywords: knowledge hiding, scientific research teams in colleges and universities, implicit knowledge, knowledge sharing, knowledge management

I.   INTRODUCTION

At present, the world has entered the era of knowledge economy as knowledge has become the most important means of production and core resources to keep promoting productivity and long-term and stable economic growth [1]. In order to create knowledge, we need to rely on the strength of knowledge-based teams [2], which effectively and continuously improved the competitiveness and creativity of their organizations through knowledge management. Scientific research teams in colleges and universities should consider strengthening the high-efficiency knowledge sharing quality and efficiency in scientific research teams as the top priority in knowledge management[3]. Because knowledge sharing can spread innovation by accelerating knowledge circulation among team members, thus improving the innovation ability, vitality and overall performance of scientific research teams in colleges and universities[4]. knowledge sharing can significantly improve the performance and innovation ability of an organization [5], but the circumstance that team members are reluctant to spread knowledge still exist universally in reality [6]. The knowledge reservation circumstance has drawn more and more attention, so the "knowledge hiding" concept corresponding to "knowledge sharing" was born accordingly.

In 2012, Connelly et al. first proposed knowledge hiding and defined it as "an intentional behavior that an individual adopts for knowledge reservation or hiding when questioned by others" [7]. Some relevant scholars considered that knowledge hiding behavior appeared due to the hiding in the process of knowledge sharing [8]. At the same time, Connelly distinguishes "knowledge hiding" from "knowledge hoarding"、"counterproductive workplace behaviors"、"workplace aggression"、"workplace incivility"、"employee silence"、"deception" and other concepts with potential relevance. According to Connelly, knowledge hiding behavior can be roughly divided into three categories: evasive hiding, playing dumb, and rational hiding. Another scholar divided knowledge hiding into 5 dimensions by trigger antecedent variables: unconscious hiding (driven by occasional scenarios), motivated hiding (driven by behaviors and competition), controlled hiding (driven by psychological ownership), victim hiding (driven by shared hostility and leaders' abuse) and preference hiding (driven by identity and standards)[9].

Knowledge hiding behavior exists in scientific research teams of Chinese universities. An investigation showed that 46% of the members had knowledge hiding behaviors[10.11]. In other words, when team members received request from other members for knowledge, they would adopt diversified strategies to hide their knowledge [12].

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This would not only hinder normal knowledge circulation in teams[13], reduce the cooperation efficiency, harm the formation of a knowledge-related mental map among the team members and impede knowledge integration and innovation. Some progress has been made in knowledge hiding among scientific research teams in Chinese colleges and universities in recent years. Scholars have proposed useful ideas about the difference between scientific research teams in colleges and universities and corporate scientific research teams, measurement of knowledge hiding, induction of knowledge hiding behaviors, effect of leadership in scientific research teams, the unique professional settings in China and etc., but some of these ideas are still in dispute.

(1) The characteristics of scientific research teams in colleges and universities

First, compared with business organizations, colleges and universities are non-profit, resulting in that material incentives, job promotion and other measures commonly used in enterprises to reduce knowledge hiding behaviors do not apply to scientific research teams in colleges and universities [14]; second, scientific research team members in colleges and universities feature relatively abundant explicit knowledge reserves, so they prefer hiding behaviors concerning complex tacit knowledge that is highly stick to the organizational tasks; third, scientific research teams in colleges and universities are established spontaneously with loose management and the lack of official and written institutional arrangement, so the yield distribution after knowledge sharing is blurry and uncertain and their knowledge hiding behaviors become more universal[15]; at last, scientific research teams in colleges and universities are characterized by a more complex interpersonal interaction environment. Except for rational working relationships, they can be subject to personal relationships, e.g., teacher and student, and peers. Consequently, they may face ethical pressure when adopting knowledge hiding behaviors.

(2) Measurement issue within the Chinese context

In the pioneering research of Connelly, knowledge hiding occurred in the Canadian working environment and the 12-question scale was applied. Is the partially subjective scale applicable to measuring knowledge hiding, a kind of behavior without social desirability? Some scholars doubted its applicability[16]; while other scholars considered the measurement appropriate[17]. Additionally, whether knowledge hiding measurement should be localized? The Saudi Arabian example seemingly demonstrated no need for subversive modification [18], but Peng et al.[19] deemed it necessary to re-design a scale within the Chinese context as "collectivism" was an important localization dimension for the measurement within the Chinese context[20].

(3) Triggering factors at different levels

Research on knowledge hiding behaviors should include individual factors considering that individuals can develop their subjective initiative during knowledge sharing/hiding. Some psychologists analyzed knowledge hiding behaviors from the perspective of personality characteristics of an individual, proposing that the evil side of an individual could always result in his/her distrust, negative affect and insecurity for the surroundings and interpersonal relationships and further influencing his/her behaviors [21]; "knowledge ownership" (knowledge territory awareness) can easily trigger commonly existing knowledge hiding behaviors in intellectual organizations[22].

Furthermore, if knowledge hiding behaviors are analyzed from the perspective of collective psychological consciousness, factors including "competitive atmosphere perception" are mediated by employees' negative feeling factors, triggering knowledge hiding behaviors[23]; organizational climate and organizational system are the main organizational situational factors that trigger the knowledge hiding behavior of scientific research team members in colleges and universities. Organizational climate is the workplace environment on which scientific research team members in colleges and universities rely for survival. The workplace ostracism and interpersonal conflict in groups felt by scientific research team members in the organization will force scientific research members to conduct knowledge hiding[24]. Relevant research shows that the organizational knowledge sharing atmosphere has a good inhibitory effect on knowledge hiding behavior. In other words, when scientific research team members in colleges and universities are in an organizational climate that advocates fairness and justice and actively promotes knowledge sharing, they will take the initiative to suppress knowledge hiding behavior to avoid violating organizational regulations[25]. On the contrary, when scientific research team members in colleges and universities are in an organization with a strong negative atmosphere, the lack of sense of identity from the organization will lead team members to adopt the power strategy of knowledge hiding in response to the uncertainty of the organizational environment to further maintain their own interests in the unfair organizational culture.

(4) Leadership in scientific research teams

Research on the role of leadership also concluded important clues for knowledge hiding behaviors of scientific research teams in Chinese colleges and universities. Abusive leaders are quite rare in scientific research teams of Chinese colleges and universities. Commonly seen leadership type includes intellectual leadership, which fights against knowledge hiding behaviors in a team through team goal commitment and knowledge-oriented pro-socialization[26]; a team within the Chinese cultural context has the value orientation featuring strong interpersonal relationships and weak working relationships, collective identity and etc., so the team members emphasize affective maintenance and accumulation of their social capital more besides ensuring the completion of scientific research tasks. Under such circumstances, tutors' care for team members is beneficial to strengthening the members' identity and collective cohesive, thus shaping the pro-social knowledge behavior willingness of the members and significantly promoting knowledge sharing [27]. This can also be called differential leadership, which will help reduce knowledge hiding behaviors with high team identification and otherwise play a strengthening role[28]; ethical leadership is very helpful in adjusting knowledge hiding behaviors within the Chinese context, in other words, reducing knowledge hiding behaviors by promoting mutual benefits of employees and the leader, establishing moral models and strengthening communication, etc.[29

](5) Impact of the unique professional settings in China

"Golden mean thinking" constitutes the unique thinking model and professional settings in China, which emphasizes harmonious actions of a team, the long-term thinking during the interaction with others, and the organic combination of personal benefits and collective benefits. These ideas adjust men's behaviors and indirectly influence knowledge hiding. Some scholars found that the golden mean thinking could cast significantly positive influence on employees' creativity and for employees with a higher degree of psychological ownership of knowledge, the golden mean thinking casts a stronger adverse impact on knowledge hiding.

II. CONCLUSION

Research on knowledge hiding now mainly involves the analysis of enterprise employees and from the individual perspective. Though the research in the Chinese background has started, there is still a long way to go in the future. In fact, as the research settings are defined as scientific research teams in Chinese colleges and universities, knowledge hiding behaviors show more special characteristics than general characteristics. These special characteristics are closely associated with the unique Chinese political culture, professional settings and social interaction patterns. The promising research fields further include the consequences of knowledge hiding behaviors within the Chinese context, the hiding characteristics of different types of knowledge within the Chinese context, intervention of knowledge hiding behaviors within the Chinese context, etc. except for the professional characteristics, measuring methods, trigger conditions, leadership and cultural factors listed in the paper.

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