

Research on Ancestral Causes of Knowledge Hiding Behavior of Primary and Middle School Physical Education Teachers' Workshop Network Study Members Based on Grounds Theory

Tang Jingen, Deng Huijian, Liu Chicheng, Yi Yongdan

School of Physical Education, Hunan Institute of Science and Technology, Yongzhou, Hunan 414006, China

Keywords: PE teachers in primary and secondary schools, Teachers' workshop, Network study, Knowledge concealment, Grounded theory

Abstract: Knowledge hiding behavior will destroy the situation of mutual help and win-win, Wisdom symbiosis teacher workshop network research and study performance, Based on the grounded theory, Through the in-depth interview of 30 members of Hunan elementary and secondary school physical education teachers' workshop network study, On the basis of step by step reduction, Induction and summary, Three core categories, Eight category categories and 24 conceptual categories of study subject factor, Study object factor and study environment factor are extracted, The grounded theory framework of the antecedents of knowledge concealment behavior is constructed, And the defensive strategies are proposed through qualitative analysis.

1. Introduction

The economist Hayek once argued that “the set of opportunities available to an individual or organization is a function of the knowledge that the individual possesses”. Knowledge is recognized as the most important strategic resource of organizational innovation. Effective knowledge management depends on sufficient knowledge sharing by each individual. However, in 2006, foreign scholars Howlett & Hammer conducted a survey on the intention of knowledge exchange among organization members and found that 76% of them had knowledge concealment, which is not only bad for the generation of knowledge sharing among individuals, but also causes great hindrance to knowledge management. Despite widespread knowledge hidden behavior, but it was not until the Connelly, etc. (2012), after research on knowledge sharing is not the reason behind the success of combing the concept of knowledge hidden behavior gradually, and carries on the clear definition: knowledge hidden behavior is to point to in the organization when facing the knowledge gained from colleagues to seek individual knowledge (owner) deliberately left, hidden knowledge or deliberately hide and not to share. At the same time, Connelly et al. (2012) divided knowledge concealment behavior into three types: vague concealment, dumb concealment and reasonable concealment. The characteristics of knowledge hiding behavior are correlated to some

extent with the behavior patterns such as knowledge hoarding and lack of knowledge sharing in the process of knowledge sharing. The difference lies in the questioning situation, intentional concealment and non-harmfulness (Webster et al., 2002). In the existing researches, the basic theories of knowledge hidden behavior are most commonly involved in social exchange theory (Homans, 1958), social learning theory (Bandura, 1986), psychological ownership theory (Fiske, 1984) and adjustment focus theory (Croew et al., 1997). Connelly & Zweig (2015) on the basis of the original, from the perspective of multidimensional exploring hidden behavior influence factor of the three-dimensional structure of knowledge, mainly involving the behavior main body factors (the individual creativity, decision-making autonomy, domain object, behavior factors (mental work, task dependency, the importance of knowledge) and environmental factors (team creativity and mastery atmosphere, organizational fairness) three levels. Huo et al. (2016) carried out empirical research on knowledge concealment behavior from the above three levels, and further explored the relationship between influencing factors of knowledge concealment behavior proposed by Connelly & Zweig (2015).

Throughout most of the existing research results of domestic and foreign scholars on knowledge hidden behavior, scholars have not only the meaning of the concept of knowledge hidden behavior, style and features, also from different organizations based on the corresponding theory support multiple perspectives analysis the hidden knowledge behavior before, and the factors of influence on empirical research, to deepen the understanding of the mechanism of hidden knowledge. But for a long time, based on the knowledge of teachers distributors as to the identity of the familiar and are convinced that knowledge is hidden discourse qualitative for abnormal behavior between individual teacher, ignored the many side of teacher knowledge, especially the contrast between image and reality performance of knowledge, teachers' knowledge sharing willingness will lower, knowledge hidden highlights (wang shuai, 2020). Road, based on the way to hidden knowledge into teachers workshop network research area, using the Strauss & Glaser (1987) proposed a method of building Theory from raw materials - Grounded, reference Connelly & Zweig (2015), factors affecting the 3 d structure, bao-sheng zhang for reference and qing-pu zhang (2017) research train of thought, training workshops for primary and secondary school physical education teachers network members before because of knowledge hidden behavior analysis.

2. Methods

2.1 The Research Methods

Due to the lack of theoretical results and scales that can be directly referenced at present, the research method of grounded theory is adopted to collect data in the form of in-depth interviews. The specific steps are as follows: (1) Encode the collected initial data item by item after preliminary analysis; (2) Correlation analysis is carried out on the content of the preliminary coding to form conceptual categories and inductive summaries; (3) carry on the higher level abstract generalization to the relevance concept genus, and extract the theoretical core concept genus; (4) the preliminary outline of the theoretical framework is returned to the initial data, with comparison, correction, until saturation; (5) Conduct qualitative analysis on the theoretical framework finally obtained.

2.2 Data Collection and Collation

Selection of P.E. teachers in hunan province workshop (A422, A409, follow-up workshops for short) as the research object, study members randomly selected 30 members of the academic as interview object (preparatory 5 first stage, the second phase of comprehensive analysis of 25),

among them, the gender distribution for 20 (67%) of men, women, 10 (33%); The age distribution included 8 persons aged 25-35, 16 persons aged 35-45, and 6 persons aged over 45. 4 students have received college/higher vocational education, 22 bachelor's degrees and 4 master's degrees. The professional title distribution is intermediate 13 people, deputy senior 9 people, senior 3 people. The interview was conducted in both open and structural ways. According to the workshop's research process, knowledge hiding may occur at any practice node during the process, from the initial problem focus and difficulty identification to typical guidance, internalized migration, evaluation and reflection, and application radiation. Based on this cognition, a one-to-one interview outline was designed in combination with relevant theories to obtain the required research materials.

3. Program

3.1 Open Coding and Associative Coding

Step by step reduction of the interview data records -- open coding: first, question and think about every word in the interview data records, and then display and label the relevant content, and then summarize and form concept categories. Establish association between the results of open coding induction -- association coding: firstly, establish organic association between the results of open coding induction, and then form the category category of association coding through the canonical model. Based on the above ideas, the research firstly abstracts 24 concept genera in the progressively condensed open coding. Then, on the basis of the canonical model of “causal condition → phenomenon → context → mediating condition → action/interaction strategy → result”, eight category genera are constructed (as shown in Table 1). They are: research member psychology, research member character, research and study task attribute, research and study knowledge characteristics, research and study cost avoidance, research and study situation atmosphere, research and study organization platform, research and study organization system.

Table 1 Open Coding and Relevance Coding of Antecedents of Knowledge Hiding Behavior

Correlation coding (Categorization)	Open coding (Conceptualization)	Data Processing (Labeling)
Study member psychology	Potential psychological	Considering that my knowledge sharing will bring negative benefits to me, I will follow the example of other teachers and focus on “free riding”.
	Territory of psychological	Considering my own efforts and difficulties in mastering this knowledge, I will take it with a grain of salt.
	Psychological distance	Given the gap in my knowledge base, I would choose to remain silent.
Study members' personalities	Intellectual personality	When sharing experiences, we often use complex terms and abstract ideas to communicate.
	Affective personality	When sharing experiences, consider the feelings of others and communicate with them in words of interest.
	Volitional character	When sharing experiences, you don't think too much and say what comes to mind.
Study task attributes	Task correlation	When other members ask me about relevant project knowledge, I usually help them without reservation, and usually ignore them if they are not relevant.
	Task Innovation	For creative projects, I focus on the perception of the task and drive the flow of information in a way that regular work doesn't.
	Difficulty of task	For complex tasks, I will support them with relevant skills

		and knowledge, and I am well aware that failure to provide them may affect the achievement of my goals.
Study the characteristics of knowledge	Implicit knowledge	I don't explain my unique experience and skills very clearly, and I don't really try to impart them to others.
	Ambiguity of knowledge	For information that is ambiguous and uncertain, even if I have some knowledge, I may say that I do not know much about the topic.
	Complexity of knowledge	When I am asked too much complex and complicated knowledge, I usually do not give complete and exact answers even if I know them.
Study cost avoidance	Time loss	Work is already busy enough, so when people ask me for knowledge, I may put it off as much as possible.
	The energy consumption	Knowledge sharing requires careful planning and teaching, so when others ask me for knowledge, I may be perfunctory.
	Material consumption	The imparting of some knowledge, skills and methods requires tools and materials, which will become a burden to me. I will pretend to be unaware of his problems.
Study environment atmosphere	Lack of cohesion	Organizations lack spiritual leaders and a sense of belonging, so they tend not to respond to inquiries.
	Lack of communication skills	The organization lacks effective communication. Most messages are stuffed with emotional packages or invalid information and do not say what they have in mind.
	Lack of trust	There is a lack of mutual trust in the organization, and the assigned tasks are passed on to each other by people who are capable but do not want to undertake them.
Research organization platform	Resource suitability	If the platform provides appropriate learning resources, I will share my learning experience with others.
	Set up scaffolding	If the platform helps to build a learning scaffold, I will work with others to complete the tasks assigned by the organization.
	Convenience of conditions	If the platform provides convenient communication conditions, I will naturally communicate a lot of information.
Research organization system	Incentive system	The organization emphasizes knowledge sharing, and encourages and rewards such behavior. Under the affirmation of the organization, people are positive to knowledge sharing.
	Performance expectations	The organization has clear requirements for team performance, and I will clearly tell them what they need to know in order to achieve our common goal.
	Participate in the system	The organization provides a system of dialogue with management, where everyone's opinions are fully respected and their opinions are generally not held back.

3.2 Selective Coding

From the category genera obtained by the correlation coding, the theoretical core genera is extracted by further analyzing its systematic relations. And the preliminary outline of the theory, back to the initial data for comparison, correction, until saturation. Based on the above ideas, the first of all, on the basis of positive organizational behavior (Luthans, 2002) a survey of positive psychological quality and ability, development and effective management of research paradigm, and behavioral dynamics (Woodworth, 1958) - OW - R - W W - S theory, the second reference Connelly & Zweig (2015) hidden behavior influence factor of the three-dimensional structure of knowledge, in ensuring that code in the process of conceptualization and category has a certain scientific and systematic basis, ultimately determine the workshop before academic members of

network knowledge hidden behavior for the core category of: Study subject factors, study object factors and study environment factors (as shown in Table 2).

Table 2 Selective Encoding and Core Categories

Core category	Main categories	Connotation of the relationship
Study Main factors	Study member psychology	The tendency to retain knowledge is common when perceived knowledge sharing is at variance with its values.
	Study members' personalities	Personality characteristics have a positive effect on knowledge hiding behavior, which is related to the role of the members.
Study Object factors	Study task attributes	The more relevant and difficult the task is to the teaching, the less likely the members are to hide the knowledge.
	Study the characteristics of knowledge	The more implicit, complex, and ambiguous the knowledge, the better the reason for an inexact, incomplete answer.
	Study cost avoidance	Members tend to engage in knowledge concealment when they perceive that the cost of knowledge assistance exceeds the benefit.
Study environmental factors	Study environment atmosphere	In organizations lacking cohesion, communication and trust, members will adopt negative reciprocity, and knowledge concealment will be common.
	Research organization platform	Unsuitable resources and low service level will reduce the sense of belonging of members, and the lack of convenient sharing will create conditions for knowledge concealment.
	Research organization system	Good incentive system, performance system and participation system will reduce the intention of knowledge concealment. On the contrary, knowledge hiding behavior is more likely to occur.

4. Results and Discussion

Based on the transcendental setting of “teachers as unreserved knowledge sharers”, this study reexamines the abnormal knowledge concealment behavior between individual teachers, which is characterized by discourse. Based on the in-depth interview of 30 students in the PE teachers' workshop (A422, A409) of primary and secondary schools in Hunan Province, the data collected were reduced step by step by applying the grounded theory, and 3 core categories, 8 category categories and 24 conceptual categories were concluded. According to the behavioral dynamics theory W-S-OW-R-W (Woodworth, 1958), the grounded theoretical framework for the antecedents of the knowledge hiding behavior in the workshop was constructed(as shown in Figure 1).

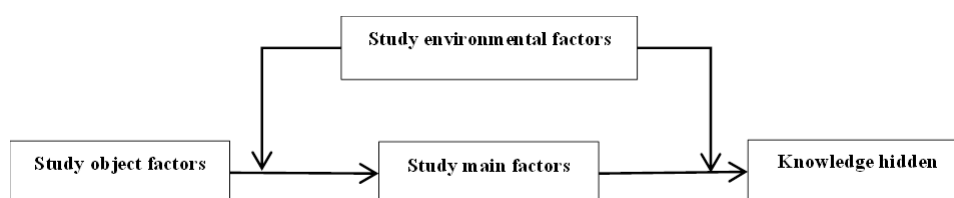


Fig.1 Before Knowledge Hidden Behavior by Grounded Theory Framework

4.1 Study Main Factors

Primary and secondary school physical education teachers in hunan province workshop (A422, A409) academic members of the network as the research of organisms, inevitably affected by members of the psychological and personality traits, is a common research task, members to share knowledge knowledge hidden behavior produces in the process of the main intermediary factors, at the same time will also study the regulating effect of environmental factors. Petty et al. (1983) pointed out that subjects with high involvement often put more cognitive effort into processing and

evaluating information related to the object, and they would think more carefully when making decisions related to the object. On the contrary, subjects with low involvement spend little energy to process and think about information related to the object, and they are more likely to be affected by peripheral information related to the object. The involvement of the academic subject of attitudes exist in more or less in network training, lanes and main team members should promote research on system design value feeling and sense of identity, system guarantee and enhance the organizational commitment, improve the ownership concept of knowledge, and by learning atmosphere to create a member of the hidden knowledge in psychological pressure, thus effectively overcome the psychological barriers, to avoid the hidden knowledge.

4.2 Study Object Factors

The object factors such as task attribute, knowledge characteristic and cost avoidance in the network training of Hunan elementary and secondary school physical education teachers' workshop (A422, A409) will influence the knowledge hiding behavior through the study subjects, and they are the external factors of the knowledge hiding behavior of the study members. When the task knowledge is complex, fuzzy and implicit, the subjects are more inclined to hide when they perceive knowledge sharing to be different from its value. This is because this part of knowledge is more valuable or needs to pay more cost to share, the reason for knowledge hiding will become more reasonable and sufficient. In addition, when the research and training tasks are highly relevant to teaching, which are not only difficult but also require originality, members will weigh the expected performance and expected benefits, and their vision will shift from narrow personal losses to win-win cooperation. The rich inner experience and sense of achievement will also encourage members to fully share knowledge. In order to avoid the phenomenon of "free rider", the master team should take the knowledge contribution as the necessary performance evaluation index.

4.3 Study Environmental Factors

Under the influence of the study environment, the network training members of the physical education teachers' workshops (A422, A409) in Hunan Province tended to follow the internal rules and intentions, which were the controlling factors of knowledge hiding behavior. The research environment is internalized in the psychology and behavior of the network research members, and then they choose to share or hide knowledge. The standardization and convenience of the communication and sharing platform within the organization creates conditions for the choice of the research members' behavior. A good incentive system, performance system and management system will guide and standardize the behaviors of the members and reduce the tendency of knowledge concealment. In addition, in a study group lacking cohesion, communication and trust, negative reciprocity and weak emotional relationship will aggravate the behavioral orientation of knowledge concealment. Therefore, to build a standardized and convenient knowledge sharing platform; Create a positive and fair study atmosphere; Establishment of research and training partners with similar interests; Establish an objective public assessment mechanism; The formation of mutual help and win-win research team will facilitate knowledge sharing and reduce members' knowledge hiding behavior. In addition, the cost of time, energy and materials consumed by knowledge sharing is also the reason for knowledge concealment. The master team should pay attention to the coding and explicit of the hidden knowledge to reduce the difficulty of knowledge transfer. The time of knowledge sharing should be guaranteed, compensation should be given to members' knowledge sharing behavior, and the efforts and benefits of members should be balanced.

5. Conclusion

Grounded theory is applied in this article, through in-depth interviews to collect data, on the basis of the in-depth analysis induction, summary of downsizing, step by step refined workshop P.E. teachers in Hunan province (A422, A409) because before academic members of network knowledge hidden behavior, on the basis of related theory, in-depth analysis before because of the mechanism of action, and build up the academic members of knowledge hidden behavior before because of the grounded theory framework, put forward countermeasures for defense, and for the further research of primary and secondary school physical education teachers training workshop network members knowledge hidden problems provides basic results. Due to the complexity of the research problem, there are also the following limitations: firstly, the knowledge hiding behaviors are discussed together, and there is no distinguishing research on the three kinds of knowledge hiding behaviors: vague hiding, playing dumb hiding and reasonable hiding; Secondly, the research did not distinguish the types of network research members, and whether there are differences in the behavior of the master team, the leader and the ordinary members, and the interaction mechanism between different types of members are worth further exploration. P.E. teachers again, this article refined workshop before academic members of network knowledge hidden behavior because of the three core categories, eight categories of generic concept category, 24, on this basis to further large-scale data collection, through a structural equation model or qualitative analysis of the former because of the relationship between and their role in the mechanism of knowledge hidden behavior together, form a more perfect theoretical framework, or to conclude before three categories for detailed study, the above is the research direction of the future.

Acknowledgments

Fund projects: Project of Hunan Social Science Achievement Appraisal Committee “A Study on knowledge concealment behavior of physical education teachers in Hunan Elementary and secondary Schools (XSP21YBC387)””; Scientific Research Project of Hunan Education Department” Research on the Defense Strategy of members' knowledge hiding behavior in physical Education teachers' Workshop(20C0898)”

References

- [1] Howlett K, Hammer K(2006). *The Globe and Mail. The Weekly Web Poll.*
- [2] Connelly C E, Zweig D, Webster J, et al(2012). *Knowledge hiding in organizations. Journal of Organizational Behavior, no.33, pp.64-88.*
- [3] Webster J, Watson R T(2002). *Analyzing the Past to Prepare for the Future: Writing a Literature Review. MIS Quarterly, no.2, pp.xiii-xxiii.*
- [4] Homans G G(1958). *Social Behavior as Exchange. American Journal of Sociology, no.6, pp.597-606.*
- [5] Bandura A(1986). *Social Foundations of Thought and Action: A Social Cognitive Theory. Upper Saddle River: PRENTICE-HALL, pp.169-171.*
- [6] Fiske S T, Taylor S E(1984). *Social Cognition. Upper Saddle River: Addison-Wesley Pub, pp.102-114.*
- [7] Crowe E, Higgins E T(1997). *Regulatory Focus and Strategic Inclinations: Promotion and Prevention in Decision-Making. Organizational Behavior and Human Decision Processes, no.2, pp.117-132.*
- [8] Connelly C E, Zweig D(2015). *How Perpetrators and Targets Construe Knowledge Hiding in Organizations. European Journal of Work & Organizational Psychology, no.3, pp.479-489.*
- [9] Huo W W, Cai Z Y, Luo J L, et al(2016). *Antecedents and intervention mechanisms: A multi-level study of R & D team's knowledge hiding behavior. Journal of Knowledge Management, 2016, vol.20, no.5, pp.880-897.*
- [10] Wang S(2020). *Mechanism and multi-dimensional correction of knowledge concealment among individual teachers. Journal of Nanjing Normal University (Social Science Edition). no.1, pp.55-67.*
- [11] Zhang B S, Zhang P Q(2017). *Research on Antecedents of Knowledge Hiding Behavior of Members in Knowledge-based Organizations Based on Grounded-up Theory. Scientific and technological progress and*

countermeasures, no.10, pp.105-110.

[12] Petty R E, Cacioppo J T, Schumann D(1983). *Central and Peripheral Routes to Advertising Effectiveness-the Moderating Role of Involvement. Journal of Consumer Research, vol.10, no.2, pp.135-146.*