Postprint: Problem Analysis and Path Selection for Knowledge Management in University Think Tanks Based on the SECI Model

Authors: Ling Hongfa, Yang Yang, Xie Zhitao

Date: 2018-10-19T00:00:00+00:00

Abstract

University think tanks represent an important category of think tanks and constitute a crucial component of new-type think tanks with Chinese characteristics. Their development is of great significance for modernizing the national governance system and governance capabilities. As knowledge management-oriented research institutions, the level of knowledge management in university think tanks affects their development, with knowledge management capability forming the core of think tank competitiveness. To address current issues in university think tanks—including the evident trend of "selective management," unstable organizational endogenous environments, "apathy" in individual participation in think tank research, and "suspension" of think tank research outcomes—this paper introduces the SECI model from knowledge management theory into problem analysis. The analysis reveals that knowledge conversion rates are low in the socialization and externalization stages, while knowledge conversion has not yet occurred in the combination and internalization stages. We should reshape the organizational environment in the socialization and externalization stages, and promote knowledge accumulation, digestion, and absorption in the combination and internalization stages through measures such as strengthening knowledge system integration and providing projects for trainees.

Full Text

Preamble

Analysis and Path Selection of Knowledge Management Problems in University Think Tanks Based on the SECI Model

LING Hongfa[1], YANG Yang[2], XIE Zhitao[3]
(Department of Liberal Arts Construction, Shanghai Jiao Tong University, Shanghai 200240)

[1] LING Hongfa, male, from Wuhan, Hubei; research interests: higher education management
[2] YANG Yang, female, from Weifang, Shandong; research interests: higher education management
[3] XIE Zhitao, male, from Yuxi, Yunnan; research interests: higher education management and organizational behavior

Abstract

University think tanks represent an important category of think tanks and constitute a vital component of new-type think tanks with Chinese characteristics. Their development holds significant implications for modernizing the national governance system and governance capabilities. As knowledge management research institutions, the level of knowledge management in university think tanks directly influences their development, with knowledge management capability forming the core of think tank competitiveness. Addressing current challenges —including the prominent trend of "selective management," unstable organizational endogenous environments, the "indifferent" participation of individuals in think tank research, and the "suspension" of research outputs—this paper applies the SECI model from knowledge management theory to problem analysis. The findings reveal low knowledge conversion rates in the socialization and externalization phases, while knowledge transformation has yet to occur in the combination and internalization phases. The study proposes reshaping the organizational environment during the socialization and externalization phases, and promoting knowledge accumulation, digestion, and absorption during the combination and internalization phases through enhanced knowledge system integration and project provision for trainees.

Keywords: SECI model; university think tanks; knowledge management; sharing; transformation
CLC number: G646

Think tanks are policy research and consulting institutions based on policy analysis, operating through policy consultation, and aiming to influence public policy and public opinion. They can shape national decision-making, guide public discourse, and advance national diplomacy, representing an important force in enhancing national soft power. Currently, China's think tank ecosystem has evolved into a collaborative system comprising public institution think tanks, university think tanks, private think tanks, and intra-party/military system think tanks, all developing together and mutually reinforcing one another.

As a crucial component of this system, university think tanks distinguish themselves by leveraging university resources to attract over 80% of scientific research personnel, nearly half of academicians from the Chinese Academy of Sciences and Chinese Academy of Engineering, 60% of "Thousand Talents Plan" recipients, and a substantial number of doctoral and master's students. This

concentration has created rich talent reserves encompassing diverse disciplines and specialties, generating formidable research capacity. However, in terms of talent development and utilization, university think tanks remain in the initial stages of exploration, having tapped only a small fraction of their research potential while producing limited outputs with low knowledge conversion rates. This situation fails to meet the demands of rapid think tank development and has become a significant constraint on building new-type think tanks. Accelerating knowledge transformation in university think tanks has emerged as a critical issue requiring urgent resolution.

A review of existing research on university think tanks reveals three primary focus areas: first, static descriptions of think tanks themselves, including their connotation, characteristics, and developmental history; second, dynamic descriptions of think tank operations, including construction objectives and functional analyses, drawing lessons from prominent domestic and international university think tanks such as the Chongyang Institute for Financial Studies at Renmin University of China and the Woodrow Wilson School of Public and International Affairs at Princeton University; and third, think tank influence building, encompassing decision-making influence, academic influence, social influence, and international influence. Research on internal talent cultivation and knowledge transformation remains scarce, particularly regarding think tank knowledge management. Existing studies predominantly adopt a library and information science perspective, focusing on external intelligence and information services for think tanks, with limited coverage of basic knowledge production processes and knowledge management model construction. Internal knowledge management research is notably lacking.

High-level think tanks can provide more meaningful judgments or policy consulting opinions than others either because they possess broader knowledge and information channels with access to exclusive information, or because they demonstrate stronger knowledge operation capabilities, enabling them to produce more valuable and meaningful judgments and recommendations under equivalent conditions. While individual researchers may vary in research background, approach, and capability, organizational and institutional think tanks primarily differ in their knowledge management capabilities and levels. Consequently, knowledge management capability constitutes the core of think tank competitiveness. For university think tanks specifically, they function both as institutional entities bearing organizational and behavioral responsibilities, and as carriers for knowledge resource production, transformation, and sharing, serving as platforms for knowledge flow, sharing, and transformation. Knowledge management thus represents both their principal responsibility in participating in national governance system modernization and a critical pathway for enhancing overall think tank capacity. Therefore, under current efforts to advance think tanks with Chinese characteristics, knowledge management in university think tanks assumes particular importance.

The SECI model, proposed by Ikujiro Nonaka, represents a mature and classic

model in knowledge management theory. It provides a comprehensive analysis of general knowledge management stages and detailed explanations of internal organizational knowledge transformation, offering strong guidance for knowledge management in general organizational systems. In recent years, numerous domestic scholars have built upon the SECI model, confirming through extensive empirical research that knowledge transformation constitutes the core of knowledge management and significantly enhances enterprise core competitiveness. This paper introduces the SECI model to analyze problems in university think tank knowledge management and propose countermeasures and recommendations, aiming to provide references for university think tank construction.

2.1 Introduction to the SECI Model

The SECI model was proposed by the renowned Japanese knowledge management scholar Ikujiro Nonaka based on his summary of corporate practices. Drawing upon Michael Polanyi' s epistemological classification of knowledge, Nonaka categorized knowledge into explicit knowledge and tacit knowledge. Explicit knowledge can be expressed through systematic language and is easily processed, disseminated, stored, and shared, including reports, articles, manuals, and images. Tacit knowledge refers to highly personalized knowledge that is difficult to articulate and not readily transmitted or shared, encompassing subjective insights, intuition, premonitions, individual experiences, and skills. Building upon this distinction between tacit and explicit knowledge, Nonaka proposed four stages of knowledge transformation: socialization, externalization, combination, and internalization.

[Figure 1: see original paper] The SECI Model of Knowledge Transformation

2.2 Mechanism Analysis

The **socialization** phase represents the process of transforming tacit knowledge into tacit knowledge. During this stage, individuals share tacit knowledge through observation, imitation, and practice. The key to this phase is "shared experience," as tacit knowledge can only function and transform among subjects within the same environment. Socialization can occur both within and outside the organization, and the transformed tacit knowledge may originate from internal or external sources.

The **externalization** phase involves transforming tacit knowledge into explicit knowledge. Trainers clarify their tacit knowledge through teaching materials and written documents, transmitting it to trainees and enabling them to systematically acquire explicit knowledge. Since externalizing tacit knowledge is inherently difficult, the critical factor in this stage is the trainer' s creative thinking. Externalization primarily occurs within the organization.

The **combination** phase transforms explicit knowledge into explicit knowledge. Trainees systematically and conceptually integrate fragmented, scattered knowl-

edge through organization, classification, and synthesis, making the knowledge system more systematic to facilitate intra-organizational dissemination and sharing. This phase occurs both inside and outside the organization, with dispersed knowledge potentially comprising employees' explicit knowledge or externally obtained explicit knowledge.

The **internalization** phase refers to transforming explicit knowledge into tacit knowledge. Through practical project exercises and continuous practice and operation, explicit knowledge becomes visualized and concretized, truly applied in practice, digested, and absorbed to lay the groundwork for the next knowledge transformation cycle. Internalization occurs within the organization, representing the process of converting organizational explicit knowledge into individual tacit knowledge.

Through interaction across these four phases, explicit and tacit knowledge continuously diffuse and transform at individual, group, and organizational levels, forming a "knowledge spiral" that promotes knowledge transformation and dissemination, achieving organizational knowledge diffusion, embedding, accumulation, and innovation.

2.3 Development of the SECI Model

In the 1990s, Nonaka proposed the SECI model of knowledge management theory. Over the subsequent two decades, although numerous experts and scholars have built upon SECI to propose various extensions and evolutions—including knowledge creation engineering based on complex systems theory, knowledge ecology cycle models, IDE-SECI models, Q-SECI models, BaS-C-SECI models, PPCO models, and G-SECI models—these all represent extensions of the SECI model or evolutions based on new technologies and methodologies. Overall, the SECI model remains the most classic analytical model for knowledge creation and transformation processes in the field of knowledge management. It comprehensively describes the overall process of organizational knowledge creation under general conditions, reveals the essence of knowledge growth and innovation in a spiral dynamic process, provides a clear analytical framework for knowledge management and transformation in entity organizations, and offers important guidance for analyzing the internal causes of organizational knowledge management problems.

3 Analysis of Dilemmas in University Think Tank Construction

3.1 Prominent Trend of "Selective Management"

University management of think tanks encompasses both external and internal management, which should theoretically adopt comprehensive and integrated approaches. Management processes should fully consider external management components such as ecological environment construction for think tank devel-

opment while also addressing internal management mechanisms including organizational management, funding management, and performance evaluation. In practice, however, university management of think tanks concentrates primarily on internal aspects like organizational management, funding management, and facilities, leaving little capacity for external management such as top-level design and macro-level planning. This reflects a lack of in-depth consideration regarding think tank construction objectives, positioning, and medium-to-long-term development plans, with management behaviors exhibiting a trend toward "selective management." Consequently, goal orientation is weak overall, distinctive advantages are unclear, brand effects are insufficient, and policy implementation lacks effective "school-appropriate" development strategies, resulting in policy mismatch phenomena.

3.2 Unstable Organizational Endogenous Environment

In terms of organizational structure design, university think tanks are predominantly established through reliance on internal university departments and schools, conducting research around the research directions or shared interests of chief experts. This results in relatively clear yet singular research directions with limited external communication. Regarding personnel composition, most lack fixed full-time researchers and primarily rely on part-time researchers for research activities. These part-time researchers come from faculty members, postdoctoral fellows, doctoral and master' s students within the same research direction, and faculty from other universities. Influenced by the knowledge structure and age structure of researchers, think tank research work exhibits intermittent characteristics, yielding unstable and discontinuous outputs with numerous small, emergency-oriented achievements but few important results capable of influencing macro-level policies. Overall, the comparative advantages of university think tanks—multidisciplinary foundations, long-term perspectives, and strategic focus—are difficult to realize.

3.3 "Indifference" in Individual Participation in Think Tank Research

For the vast majority of domestic universities, decision-making consulting research outputs have not yet been incorporated into faculty evaluation systems. Faculty promotion and career advancement still rely primarily on vertical research projects at various levels, journal publications, and monographs. Driven by evaluation pressures, faculty pursuit of evaluation targets weakens their motivation to participate in think tank research to some extent. Without significant external incentives or constraints, individual behavior becomes markedly individualized and atomized, relying solely on spontaneous interest, which exacerbates the indifference toward think tank research participation. Correspondingly, think tank research exhibits limited cross-disciplinary collaboration, excessive "lone wolf" approaches, poor research continuity, and scarce high-quality think tank outputs.

3.4 "Suspension" of Think Tank Research Outputs

University faculty primarily engage in basic theoretical and applied research, having limited contact with policy departments and relatively weak awareness of policy recommendations. Simultaneously, influenced by long-standing research paradigms and patterns, think tank talents approach policy research primarily from academic perspectives, focusing more on academic issues and less on research targeting major problem-solving and policy consultation. High-quality policy advisory reports that identify and resolve significant practical problems and translate research into policy are scarce, resulting in decision-making consulting research that appears obviously detached and hollow. Research outputs largely disengage from actual decision-making consulting needs, suspended between academic and policy research.

4 Mechanism Analysis of Knowledge Management Problems in University Think Tanks Based on the SECI Model

University think tank support for policy decision-making depends on their internal knowledge management. This paper attempts to analyze existing problems in university think tanks from the perspective of the SECI model, explaining the underlying mechanisms to achieve deeper understanding. The analysis examines problems in university think tank knowledge management by stage, following the general phases of knowledge management in the SECI model.

Based on the SECI model' s definitions of trainers, trainees, and external management forces within organizations, this paper defines university think tank decision-making consulting experts as trainers, ordinary think tank researchers as trainees, and internal university think tank management departments as external management forces.

4.1 Socialization Phase

The core of the socialization phase is "shared experience." Specifically, achieving tacit knowledge transformation within an organization requires two conditions: first, a relatively stable organizational environment, as tacit knowledge can only function among subjects within the same environment; and second, enhanced openness in organizational design to ensure sufficient individual contact for communication and exchange. The socialization phase requires knowledge exchange, such as direct face-to-face sharing of experiences and skills among university think tank members to achieve knowledge transfer. Think tank personnel can also engage in face-to-face exchanges, study visits, expert lectures, and internet-based communication with other research institutions to increase tacit knowledge accumulation.

In current Chinese university think tank construction, personnel stability is clearly insufficient. High personnel mobility makes it difficult to maintain a stable endogenous environment for think tanks, preventing the organization from

ensuring stable original contexts for tacit knowledge transformation. Additionally, frequent personnel changes result in inadequate contact among subjects, poor knowledge continuity, and difficulty in forming stable knowledge flows for timely and effective knowledge diffusion and transfer, let alone deep knowledge sharing and transformation. Meanwhile, current university think tank organizations remain relatively conservative with limited external communication. This closed activity radius directly leads to minimal tacit knowledge sharing, insignificant changes in internal knowledge stock, and difficulty in achieving knowledge fusion and innovation both within and outside the organization. Therefore, during this phase, tacit-to-tacit knowledge transformation does not involve changes in knowledge form but rather focuses on changes in internal knowledge stock—a stage where university think tanks have not demonstrated noticeable knowledge stock increases or high sharing levels.

4.2 Externalization Phase

The externalization phase requires trainers to externalize tacit knowledge and transmit it to trainees, enabling systematic acquisition of explicit knowledge. The core of this phase is trainers transforming tacit knowledge into explicit knowledge through innovative thinking. Externalization represents a crucial link in knowledge creation. In university think tanks, trainers can collect and acquire information resources based on current knowledge needs, organizing knowledge through concepts and models to form structured knowledge.

In reality, however, two factors constrain this process. First, influenced by factors such as professional title evaluation and career promotion, trainers lack sufficient internal motivation, drive, and capacity to transform tacit knowledge into conceptual explicit knowledge such as teaching materials and written documents. Knowledge remains at the stage of abstract, disorganized hybrid knowledge with inadequate representation and low knowledge creation output. Second, external attention to think tank connotation construction is relatively limited, with insufficient organized training for trainers and inadequate extraction and expression of trainers' thinking, ideas, and techniques as tacit knowledge, further constraining the formation of structured knowledge within the organization. Both aspects restrict the tacit-to-explicit knowledge transformation process.

4.3 Combination Phase

The combination phase requires trainees to systematically and conceptually integrate fragmented, scattered knowledge through organization, classification, and synthesis, making the knowledge system more systematic. In university think tanks, researchers can leverage university knowledge resource advantages to filter, clean, transform, and process government decision-making-related data, forming classified and structured knowledge repositories.

However, due to influences from the previous two phases and insufficient top-level design, think tank internal personnel structures lack relative stability, with

no fixed personnel to systematically and conceptually integrate explicit knowledge. Trainees struggle to form systematic knowledge frameworks or structured knowledge repositories, let alone conduct formalization and standardization processing through modeling, expression, and organization. The knowledge form shows virtually no change during the combination phase, nor does it produce any meaningful knowledge transformation. Moreover, this phase serves as a bridge between externalization and internalization, inheriting knowledge acquisition from the previous stage and terminating with knowledge storage for the next stage. Inadequate knowledge transformation during this phase directly affects the efficiency of knowledge transformation in adjacent phases and the overall effectiveness of the knowledge transformation process, making subsequent specific work difficult to carry out.

4.4 Internalization Phase

The internalization phase involves transforming explicit knowledge into tacit knowledge. During this stage, explicit knowledge must be translated into concrete measures and implemented through action. Through continuous practice, trainees ultimately achieve complete digestion and absorption. University think tanks apply their research outputs to government decision-making, with implementation and evaluation results feeding back into the think tanks to form dynamic entities and initiate a new cycle of knowledge management and creation.

In practice, because knowledge transformation in think tanks stagnates in the "externalization" and "combination" phases, the internalization phase cannot function effectively. The direct manifestation is that trainees' think tank research awareness and capabilities remain noticeably inadequate, preventing a virtuous cycle between knowledge and practice and hindering the formation of stable knowledge sharing systems within the organization. Resource allocation within the organization continues to favor trainers, with trainees receiving fewer opportunities, which constrains the next round of knowledge transformation. Additionally, because knowledge resources are not effectively shared, knowledge transfer and diffusion proceed slowly, affecting the open innovation capacity of university think tanks and potentially creating significant lags in their innovative capabilities over time.

Analysis of the current state of university think tank knowledge management through the SECI model reveals that while knowledge transformation is occurring in the socialization and externalization phases, the effects are unsatisfactory. The combination and internalization phases have yet to initiate knowledge transformation. The inadequate knowledge transformation in the socialization and externalization phases stems from insufficient internal organizational stability and lack of comprehensive management such as top-level design. The combination and internalization phases cannot proceed with further knowledge transformation due to impacts from the previous phases. Therefore, to enhance think tank knowledge management capabilities, the socialization and external-

ization phases require organizational environment reconstruction and stable resource support, while the combination and internalization phases need further deepening and improvement.

[Figure 2: see original paper] Current State of Knowledge Transformation in University Think Tanks Based on the SECI Model
Note: Solid arrows indicate ongoing knowledge transformation; hollow arrows represent knowledge transformation not yet initiated.

5 Pathways for Enhancing Knowledge Transformation in University Think Tanks Based on the SECI Model

Building upon the analysis of major problems and internal mechanisms in each phase of current Chinese university think tank knowledge management, this section seeks general pathways for knowledge transformation from the SECI model perspective.

5.1 Reconstructing the Organizational Environment to Achieve Knowledge Sharing

To address problems in the socialization phase of university think tank knowledge management, solutions can be sought from two angles: reconstructing the organizational environment to enhance stability, and convening exchange meetings to achieve knowledge sharing. A stable organizational environment forms the foundation, while internal and external exchanges serve as pathways for knowledge transformation. In reconstructing the organizational environment, efforts should focus on internal personnel environment construction, establishing structurally stable talent teams to provide a benign environment for internal and external knowledge transformation.

Regarding internal and external exchanges, on one hand, exchange activities should be conducted within think tanks. Since think tank research skills, methods, and thinking patterns are highly personalized and difficult to standardize, stable internal exchanges provide fixed contexts for socialization transformation. Trainees can directly acquire skills and methods through observation, imitation, and learning from trainers, achieving knowledge sharing of research methods and skills while accelerating the integration of research fields and directions within think tanks and promoting academic knowledge sharing. On the other hand, exchanges should occur between university and external think tanks and among researchers. Inter-think tank exchanges can promote collision and fusion in macro-level fields, better grasp the overall think tank research landscape, and facilitate internal adjustments to talent cultivation directions and methods by drawing on other institutions' training models. Additionally, introducing external think tank research experts can expose trainees to new ideas, fields, methods, and paradigms, promoting knowledge transformation and innovation among think tank personnel and reducing the cost of internal knowledge creation.

5.2 Developing Training Programs and Organizing Systematic Professional Training

The primary objective of the externalization phase is to promote the transformation of tacit knowledge into explicit knowledge. Trainers must externalize their tacit knowledge systems, converting think tank research experience into teaching materials and written documents for transmission to trainees. On one hand, external entities should develop organized training programs for trainers, encouraging them to adopt innovative thinking and periodically summarize their think tank research experiences and insights into transferable fragmented texts, teaching materials, and documents. For instance, some think tank research experts with high rates of policy advice adoption and endorsement should be encouraged to transform their research ideas and methods into written materials. On the other hand, decision-making consulting experts should transmit the explicit knowledge they have formed to other think tank researchers, including the importance and significance of think tank research work as well as specific research methodologies.

5.3 Integrating Knowledge and Improving Knowledge Structure

The combination phase aims to transform explicit knowledge by integrating individual and organizational explicit knowledge to systematize, standardize, and complete the overall knowledge system, facilitating effective intra-organizational sharing of explicit knowledge. During this phase, external or internal fixed members should systematically integrate trainers' research methods, including fragmented texts and teaching materials acquired in previous phases as well as scattered knowledge obtained externally, to form conceptualized, systematized, and holistic research frameworks, methodologies, and databases. This enables trainees to develop a more macro-level understanding of think tank research work, master research methods more objectively and scientifically, digest and absorb fragmented knowledge, improve knowledge structures, and cultivate compound talents.

5.4 Strengthening Practice and Building Dynamic Think Tanks

The internalization phase aims to apply explicit knowledge in practice through continuous exercise and operation in practical projects, ultimately transforming it into tacit knowledge and preparing for the next knowledge transformation cycle. Providing practical projects for trainees can enhance their think tank research awareness and capabilities. Offering think tank research projects such as decision-making consulting research topics and commissioned reports enables trainees to continuously identify and solve problems during research, ultimately transforming acquired explicit knowledge into tacit knowledge and achieving capability improvement.

In university think tank construction, knowledge feedback should be emphasized. Current advanced technologies such as big data, cloud computing, and artificial

intelligence can be leveraged to build more open knowledge sharing platforms, encouraging the development and innovation of university think tank knowledge, forming dynamic and open knowledge management models, and achieving the spiral movement of knowledge.

Conclusion and Discussion

This paper addresses existing problems in university think tanks by introducing the SECI knowledge management model. Analyzing from the four stages of the SECI model, it examines the mechanisms of these problems and proposes pathways for resolution. The main content and conclusions are as follows:

First, the SECI model introduction. The SECI model divides knowledge transformation into four modes: socialization, externalization, combination, and internalization. Through interaction across these four stages, explicit and tacit knowledge diffuse and transform among individuals, groups, and organizations, forming a "knowledge spiral" that promotes knowledge dissemination and transformation.

Second, problems in Chinese university think tanks. Current university think tanks exhibit prominent "selective management" trends, unstable organizational endogenous environments, "indifferent" individual participation in think tank research, and "suspended" research outputs. These problems constrain the development of Chinese university think tanks and affect the effectiveness of government decision-making recommendations.

Third, mechanism analysis of existing problems based on the SECI model. Regarding the four stages of the SECI model, the analysis reveals reasons for these problems. In the knowledge transformation process of university think tanks, the socialization and externalization phases show low knowledge conversion rates, while the combination and internalization phases have yet to initiate knowledge transformation.

Fourth, improvement pathways based on the SECI model. In the socialization phase, organizational environments must be reconstructed to enhance stability, with internal exchanges promoted and inter-think tank and researcher exchanges facilitated. In the externalization phase, organized training programs should be developed for trainers to promote tacit-to-explicit knowledge transformation and transmission to trainees. In the combination phase, organized integration of trainers' explicit knowledge and scattered external knowledge should be conceptualized and systematized to complete trainees' knowledge structure building. In the internalization phase, practical projects should be provided to trainees while strengthening platform construction and information transmission speed to further transform explicit knowledge into tacit knowledge, ultimately achieving the spiral movement of knowledge.

As this study' s status analysis primarily draws from literature and practical think tank management experience, the problem analysis lacks depth. Future

research will conduct quantitative analysis for in-depth exploration of think tank talent, organizational structures, and external influencing factors.

References

[1] ZHU Xufeng. Building a Theoretical Framework for Research on New-Type Think Tanks with Chinese Characteristics[J]. Chinese Public Administration, 2014, 347(05): 29-33.
[2-3] XIONG Liyong. Research on the Construction of New-Type Think Tanks with Chinese Characteristics from an International Comparative Perspective[D]. University of Science and Technology of China, 2017.
[4] GENG Ruili, SHEN Jing. Construction and Application of a Think Tank Knowledge Management Model Based on Open Innovation[J]. Library and Information Service, 2017, 61(02): 121-128.
[5] WEN Shaobao. The Logical Starting Point, Difficulties, and Strategies of University Think Tank Services for Government Decision-Making—From the Perspective of National Governance Capacity Modernization[J]. China Higher Education Research, 2015, 257(1): 34-38.
[6] ZHU Xufeng, HAN Wanqu. The Rise, Dilemmas, and Exploration of New-Type University Think Tanks with Chinese Characteristics—Taking the Think Tank Construction of Renmin University of China as an Example[J]. Higher Education Review, 2015, 3(01): 32-44.
[7] ZHU Min. Innovative Thinking on Talent Cultivation and Management in New-Type Think Tanks[J]. Management World, 2016, 270(03): 178-179.
[8] Clark, Julia, Roodman D. Measuring Think Tank Performance[J]. An Index of Public Profile, 2013: 1-2.
[9] Li M, Liu H, Zhou J. G-SECI Model-Based Knowledge Creation for CoPS Innovation: The Role of Grey Knowledge[J]. Journal of Knowledge Management, 2018(1).
[10] CHU Jiewang, LI Zhangchao. Review of SECI and Its Derivative Models[J]. New Century Library, 2017(3): 63-67.
[11] FU Zhu, WANG Yuefen, GUAN Peng. Research on Knowledge Flow in Conceptual Design Knowledge Management: From the Perspective of Management Process[J]. Information Studies: Theory & Application, 2017, 40(03): 99-106.
[12] Nonaka Ikjurio, Takeuchi Hirotaka. The Knowledge-Creating Company[M]. Translated by LI Meng, GAO Fei. Beijing: Intellectual Property Publishing House, 2006: 71.

Correspondence:
Email: yangyang1993@sjtu.edu.cn
Phone: 13914721946
Address: Room 527, New Administration Building B, 800 Dongchuan Road, Minhang District, Shanghai

Received: July 2, 2018
Revised: July 15, 2018
Responsible Editor: TANG Guoyuan