A Systematic Review of Knowledge Sharing Behavior in Chinese Virtual Communities: Multilevel Influencing Factors

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Abstract
This study systematically reviews knowledge sharing behaviors in Chinese virtual communities, focusing on multi-level influencing factors and research contributions of Chinese scholars. Using a systematic literature review approach and following the PRISMA framework, this study analyzes 65 high-quality articles published between 2000 and 2023, which are selected from a comprehensive dataset of 1,515 records retrieved from the CNKI database and the CNKI Academic Database. These complementary data sources provide a balanced view of Chinese research disseminated domestically and internationally. The results show that influencing factors cover individual, team, and organizational levels. Individual-level factors, such as self-efficacy, perceived usefulness, and altruism, are mainly positive, while perceived costs and neuroticism represent a minority of negative influences. Team-level factors, including trust and social network centrality, and organizational-level factors, such as rewards and cultural norms, further enhance knowledge sharing behaviors. Despite much attention paid to positive drivers, negative effects such as information overload and privacy concerns remain underexplored. In addition, emerging technologies with transformative potential, such as blockchain and artificial intelligence, have received little attention.This review highlights the interdisciplinary and evolving nature of research on knowledge sharing behavior in Chinese virtual communities. It explores research gaps, including the need to study negative factors and emerging technologies, laying the foundation for future theoretical and practical advances.

Introduction

Knowledge sharing, as a key driver of organisational learning and innovation, plays an increasingly crucial role in today's knowledge-based economy (Nonaka and Takeuchi, 1995). It not only facilitates the flow of knowledge between individuals but also forms the basis for creating sustainable competitive advantages for organisations (Argote and Ingram, 2000). With the rapid development of information technology, virtual community platforms have emerged as significant vehicles for knowledge sharing, offering users opportunities for communication and collaboration that transcend spatial and temporal boundaries (Chiu et al., 2006).

In existing studies on knowledge-sharing behavior in virtual communities, researchers have made significant progress in identifying key factors and their mechanisms. However, existing reviews often share the following limitations: First, most reviews are based on Western cultural contexts, emphasizing individualistic perspectives and technology-driven factors, such as the Technology Acceptance Model (TAM) and Social Capital Theory (Chiu et al., 2006; Ma & Agarwal, 2007). These insights, while foundational, may not fully apply to virtual communities embedded in collectivist cultures like China. Second, while Chinese scholars have conducted extensive research on specific platforms (e.g., WeChat, Zhihu), such studies often lack cross-platform comparisons and comprehensive theoretical integration (Zuo, 2017; Zheng & Zhang, 2020). Finally, emerging technologies such as artificial intelligence (AI) and blockchain have not been systematically examined in terms of their transformative potential for knowledge-sharing behaviors.

This study aims to fill these gaps in three significant ways: (1) exploring how China's unique cultural traits, such as collectivism and relationship orientation, influence knowledge-sharing behavior; (2) integrating existing theoretical models (e.g., Social Cognitive Theory, Social Capital Theory, TAM) into a unified framework; and (3) examining the potential impact of emerging technologies (e.g., AI, blockchain) on knowledge-sharing practices, providing actionable insights for platform design and management.

Virtual community platforms, as a novel form of social media, provide a unique environment for knowledge sharing. These platforms not only break down geographical barriers but also create an open, interactive space for knowledge exchange (Ma and Agarwal, 2007). In China, with the proliferation of the Internet and mobile technologies, virtual community platforms have become an integral part of people's daily lives and work, fundamentally altering the ways in which individuals acquire and share knowledge (Zhao et al., 2013).

However, despite the convenience offered by virtual community platforms for knowledge sharing, the factors influencing users' knowledge sharing behaviour remain complex and diverse. Understanding these influencing factors is crucial for promoting effective knowledge sharing (Wasko and Faraj, 2005). In recent years, Chinese scholars have conducted extensive research in this field, providing valuable insights into knowledge sharing behaviour within virtual communities.

Based on this context, this paper aims to systematically review and synthesise the research findings of Chinese scholars regarding the factors influencing knowledge sharing behaviour on virtual community platforms. Through a comprehensive analysis of existing literature, this study will summarise the main influencing factors identified in past research, assess the limitations of current studies, and provide suggestions for future research directions. This review not only contributes to deepening our understanding of knowledge sharing behaviour in virtual communities but also offers theoretical guidance for practitioners to optimise the design and management of virtual community platforms.

Methodology
This study adopted a systematic literature review approach and strictly followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework to ensure the transparency and replicability of the selection and analysis of relevant studies. Through this structured approach, this study systematically examined the factors that affect knowledge sharing behavior on virtual community platforms, with a particular focus on the contributions of Chinese scholars. The following sections detail the data sources, search strategies, screening process, and analysis methods of this study.

Data Sources
The data for this study come from two complementary databases under the China National Knowledge Infrastructure (CNKI) system: the CNKI Database and the CNKI Academic Database. The CNKI Database provides a comprehensive range of Chinese academic journals and conference proceedings, covering the breadth of domestic academic contributions. Meanwhile, the CNKI Academic Database expands this coverage to include English publications in the CNKI index, reflecting the international dissemination of Chinese research. The combination of these two data sources ensures a balanced and inclusive dataset that covers both the depth of domestic literature and the visibility of Chinese scholarship in the global academic community.

The search was conducted using keywords such as "knowledge sharing behavior" and "virtual community," with Boolean operators (**AND**, **OR**) to expand the scope of the query. The timeframe for data collection was set between **2000 and 2023**, capturing the evolution of research over two decades (Zheng & Zhang, 2020). A total of 1,515 records were retrieved from these two databases to form the initial dataset for screening.

Literature Screening
The literature screening followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework to ensure methodological rigor and transparency (Moher et al., 2009). The screening process included three stages in figure1: First, 1,515 articles were initially retrieved and screened based on their titles and abstracts. Irrelevant studies that did not focus on virtual communities or knowledge sharing behaviors were excluded. Second, the remaining 317 articles were reviewed in full text, and studies that lacked methodological rigor or rich research content were further excluded. Finally, 65 high-quality studies were selected for detailed analysis.
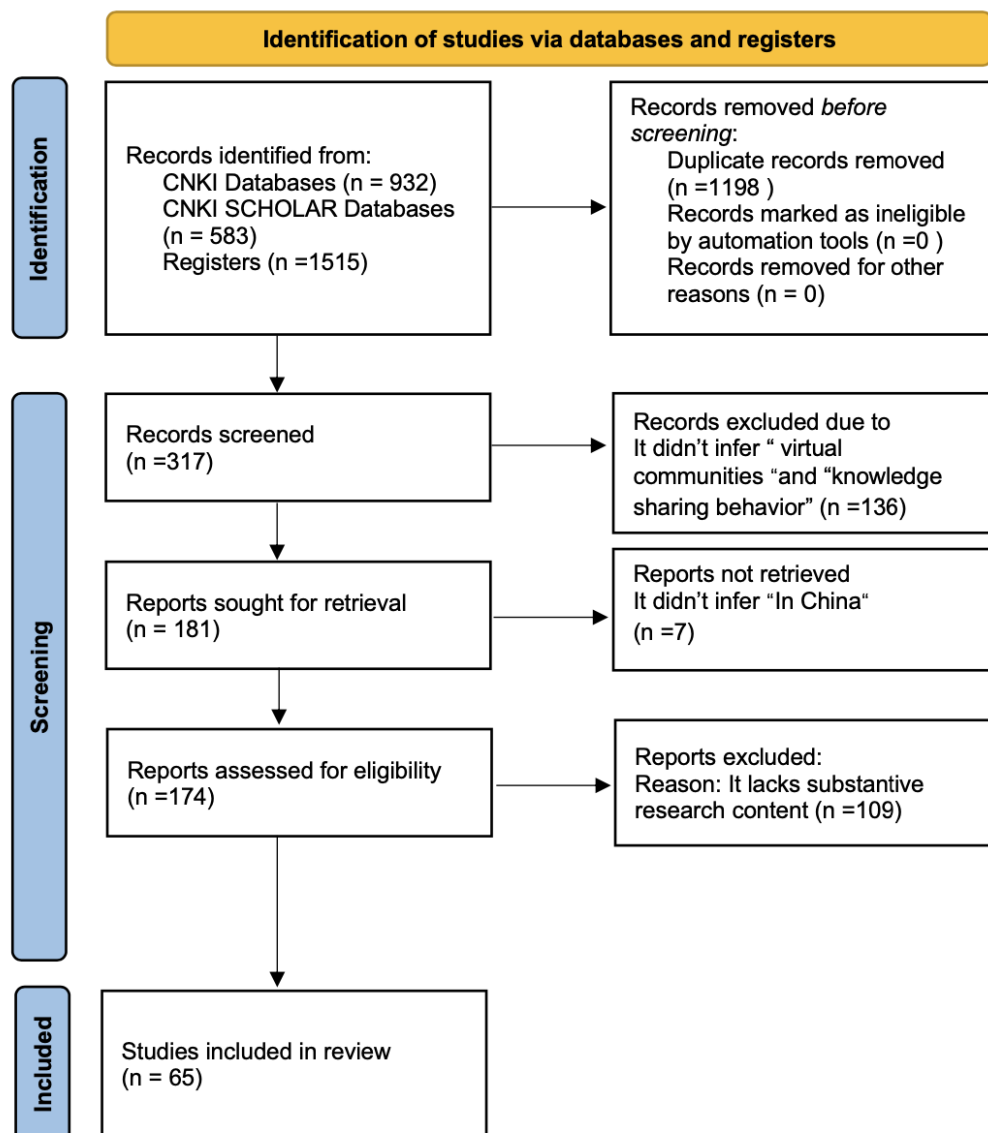
Figure 1. PRISMA Flow Diagram for the Identification, Screening, and Inclusion of Studies

The inclusion criteria required that the study (1) be an empirical study using quantitative or qualitative methods; (2) focus on the Chinese context; and (3) directly explore the factors that affect knowledge sharing behaviors in virtual communities. To ensure the relevance and quality of the selected articles, we excluded studies that did not focus on the Chinese context, did not involve virtual communities, or were only brief reviews or comments.

Analytical Framework
To ensure the comprehensiveness of the analysis in terms of time coverage, field inclusiveness, and structural integration of theories and influencing factors, this study adopted a combination of thematic analysis and content analysis.

Thematic analysis can explore how knowledge sharing behavior in the Chinese context integrates and adapts to the Western theoretical framework. It also lays the foundation for subsequent content analysis and helps to classify the core dimensions that affect knowledge

sharing behavior. These dimensions are divided into three levels: individual, team, and organization. At the individual level, factors include performance, psychological influence, personality traits, and motivation. The team level focuses on social networks and team atmosphere. The organizational level includes rewards, cultural elements, and experiential factors (Zuo, 2017).

Based on thematic analysis, content analysis is used to further study the interrelationships between these factors. Using NVivo to extract high-frequency terms and cluster keywords helps to identify recurring patterns and connections in the literature. This method can comprehensively examine how Chinese scholars deal with various influencing factors in the study of knowledge sharing behavior, highlighting their specific characteristics and meanings. The combination of thematic analysis and content analysis not only ensures a detailed understanding of the factors that influence knowledge sharing behavior, but also systematically identifies the relationships between factors at the individual, team, and organizational levels. This framework provides an analytical basis for the findings and discussion sections, which more deeply explores the complexity and multidimensionality of knowledge sharing behavior in virtual community platforms.

Integration of Theoretical Framework
This study integrates multiple theoretical perspectives, including social cognitive theory, social capital theory, and the Technology Acceptance Model (TAM), to construct a multidimensional analytical framework. The purpose is to explore the use of the above theoretical framework in the existing literature on knowledge sharing research. At the same time, this study also sorts out the influencing factors of knowledge sharing behavior in the Chinese context based on the integrated theoretical perspective. Further analysis, such as social cognitive theory, helps to understand the psychological and motivational drivers, while social capital theory emphasizes the role of trust and social networks. TAM complements these theories by addressing the role of technology adoption and acceptance in influencing knowledge sharing behavior (Davis, 1989).

This methodology provides a systematic and rigorous foundation for analyzing knowledge sharing behavior in virtual communities. By integrating multiple theoretical perspectives, classifying factors at the individual, team, and organizational levels, and combining them with China's unique cultural background, this study provides a comprehensive framework for understanding this complex phenomenon.

Findings
Descriptive Results
Through a systematic analysis of 65 articles focusing on the influencing factors of knowledge sharing behaviour in virtual community platforms, we can observe several key characteristics and trends in this field of research.

Research Trends in Reviewed Literature
In recent years, the research on knowledge sharing behavior in virtual community platforms has shown a trend of continuous growth. In 2008, as mobile Internet technology began to popularize in China, people's behavior of sharing knowledge through online virtual platforms gradually emerged. From 2008 to 2023, with the vigorous development of Internet

technology and the continuous increase in the number of mobile Internet users, the number of related studies increased year by year, reflecting scholars' continued interest in this topic. There was a significant increase in the number of studies between 2020 and 2023, which may be related to the increased importance of online communication and knowledge sharing during the epidemic. For example, the research of Zhou et al. (2020) and Zhang et al. (2022) focused on this period and explored knowledge sharing behavior in online health communities.
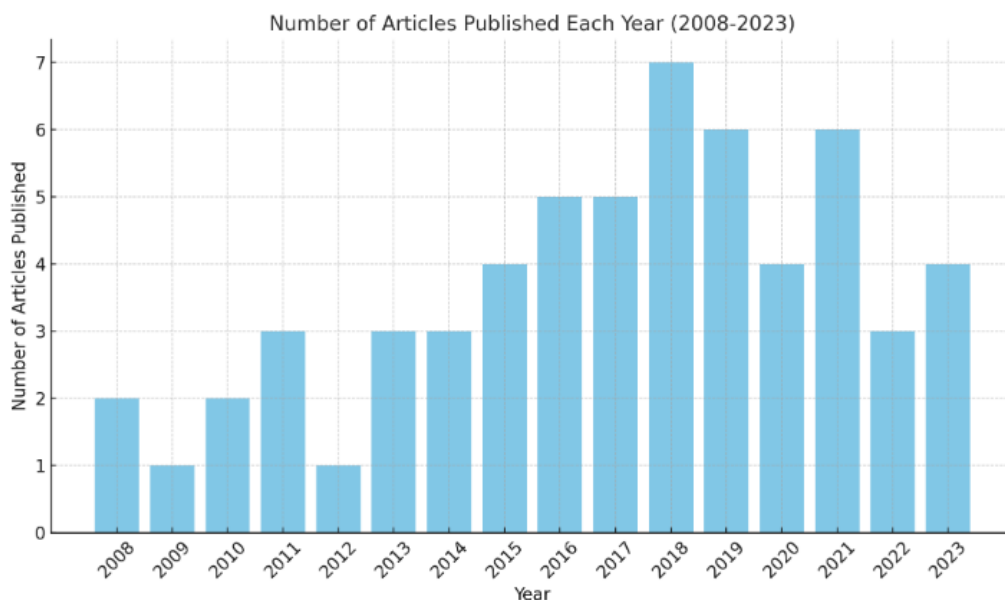

Figure 2. Annual Publication Trends on Knowledge Sharing Behavior in Virtual Communities (2008–2023)

Research Fields in Reviewed Literature
Research on knowledge sharing behavior in virtual communities covers different disciplines and application scenarios, reflecting the interdisciplinary nature of the field. The main research areas can be divided into the following categories, each with different focuses and contributions:

Healthcare
Knowledge sharing behavior in healthcare is one of the most widely studied areas, especially in online health communities. These studies explore how users exchange health-related information and support. For example, Zhang et al. (2022) and Zhou et al. (2019) conducted in-depth analyses of user engagement and factors affecting knowledge sharing in these platforms. This area highlights the key role of virtual communities in improving healthcare access and support.

Education
Research related to education emphasizes knowledge sharing in institutional and informal learning environments. Studies have examined platforms such as university libraries (Li, 2022) and MOOCs (Yang, 2017), focusing on how technology can enhance knowledge exchange and collaborative learning. These studies provide insights into how virtual communities can promote learning outside of traditional classroom settings.

Social Media

Social media platforms are another important research area. Studies such as Zhang (2021) and Zheng and Zhang (2020) have investigated how knowledge sharing behaviors manifest themselves on platforms such as WeChat and on social media networks more broadly. This area highlights the impact of social networking tools in facilitating informal and spontaneous knowledge sharing.

Innovation Communities

Research on innovation communities explores how knowledge sharing behaviors drive collaborative innovation. For example, He (2021) and Zhou and He (2020) studied open innovation platforms, highlighting the dynamics of collective creativity and the sharing of intellectual resources in these professional virtual communities.

Corporate Teams

The role of knowledge sharing in corporate teams has been studied through virtual team collaboration. Hao et al. (2019) studied the factors that influence knowledge exchange between virtual team members, highlighting its importance for organizational performance and innovation.

Tourism

Research on tourism focuses on mobile user-generated content (UGC) environments. Yang and Peng (2015) studied tourists' knowledge sharing behaviors, revealing how travelers contribute to and benefit from collective insights into travel experiences and destinations.
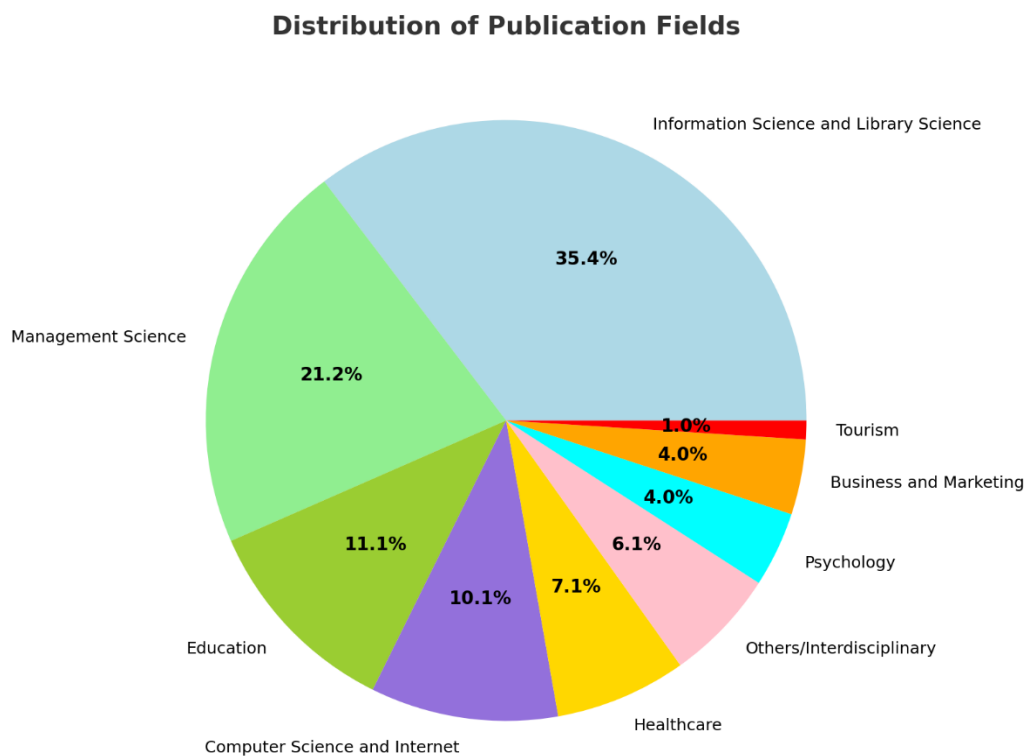

Figure3. Distribution of Publication Fields on Knowledge-Sharing Behavior in Virtual Communities

Research Methods and Theoretical Frameworks in Reviewed Literature
The literature review of knowledge sharing behavior on virtual community platforms mainly adopts quantitative research methods. Among them, questionnaires and statistical analysis are the most commonly used, providing strong empirical insights into the factors that affect knowledge sharing behavior. However, some studies have adopted mixed methods to enhance the depth of analysis by combining qualitative and quantitative perspectives. For example, Zuo (2017) cleverly integrated various theories and methods to examine knowledge sharing behavior on social question-and-answer websites, demonstrating the value of adopting multiple methodologies.

In addition to the diversity of methodologies, the reviewed studies often draw on established theoretical frameworks to guide their analysis. The most prominent of these are social cognitive theory, which explores psychological and motivational drivers; social capital theory, which emphasizes trust, social networks, and relationships; and the technology acceptance model (TAM), which studies how perceived usefulness and ease of use affect knowledge sharing behavior. The consistent application of these theories highlights the interdisciplinary nature of the field while providing a comprehensive perspective to analyze the complex dynamics of knowledge sharing behavior in virtual communities.Social Cognitive Theory: This theory has been applied in various fields, such as Zhang's (2021) research on social media and Yan's (2021) study on social Q&A communities.

The reviewed literature on knowledge sharing behavior in virtual community platforms highlights the application of a range of established theories, demonstrating the interdisciplinary and multi-domain nature of this research area. These theories offer multiple perspectives for understanding the complex dynamics of knowledge sharing:

Social Capital Theory
This theory has been widely used to explore the role of trust, relationships, and social networks in facilitating knowledge sharing. Its application is particularly prominent in the study of open innovation communities (He, 2021; Zhou & He, 2020) and social question-and-answer sites (Zuo, 2017), where social connections and interactions are crucial for knowledge exchange.

Technology Acceptance Model (TAM)
TAM has been widely used in the education field, especially in understanding how technological tools affect knowledge sharing. For example, Li (2022) studied micromedia usage in university libraries, while Yang (2017) studied MOOC platforms, focusing on how perceived ease of use and usefulness drive participation.

Theory of Planned Behavior (TPB)
This theory has been applied in various fields to explore motivational and behavioral aspects of knowledge sharing. For example, Zheng and Zhang (2020) used TPB to study how social and attitudinal factors influence knowledge sharing behavior on WeChat.

Motivation-Opportunity-Ability (MOA) Model
The MOA model provides a comprehensive perspective to examine how individual motivations, available opportunities, and abilities influence knowledge sharing. It has been

used in various settings, such as online health knowledge sharing (Wang, 2021) and social question-and-answer sites (Zuo, 2017).

Social Influence Theory
This theory focuses on how external influences, such as peer behavior and social norms, influence knowledge sharing behavior. Its application is evident in the health field, where Zhou and Yang (2020) analyzed online health communities to understand how social interactions drive participation.

The widespread use of these theories highlights the multidisciplinary approaches that researchers have taken to address the complexity of knowledge sharing behavior. Each theoretical framework contributes a unique perspective that together enriches the understanding of this phenomenon. It highlights the need for continued exploration as technology advances and social needs change. The integration of these frameworks not only demonstrates the theoretical richness of the field, but also reveals opportunities for future research to further deepen our understanding of knowledge sharing in virtual communities. These efforts may involve improving existing models, integrating emerging theories, or exploring new areas affected by the development of new technologies.

Influencing Factors of Knowledge Sharing Behavior in Chinese Virtual Communities
Table 1
Key effects of knowledge sharing in empirical studies

Impact level	Impact type	Key impact factors	Nature of impact
Individual	Performance	Self-efficacy	Positive
		Knowledge self-efficacy	Positive
		Work skill requirements	Positive
	Psychological effects	Perceived usefulness	Positive
		Perceived cost	Negative
		Self-worth	Positive
		Gaining social support	Positive
	Personal traits	Conscientiousness	Positive
		Extraversion	Positive
		Neuroticism	Negative
	Motivation	Altruism	Positive
		Reputation/Online reputation	Positive
		Reciprocity expectation	Positive
		External reward expectation	Positive
Team	Performance	Social network centrality	Positive
		Advice network centrality	Positive
		Emotional network centrality	Positive
	Climate	Trust	Positive
		Social interaction	Positive
		Reciprocity norm	Positive
		Shared vision	Positive
Organization	Performance	Organizational rewards	Positive
	Culture	Virtual brand community culture	Positive
	Experience	Sensory experience	Positive
		Affective experience	Positive
		Intellectual experience	Positive
		Behavioral experience	Positive
		Relational experience	Positive

Individual Factors
Individual factors play a significant role in shaping knowledge-sharing behavior within virtual communities. These factors include performance, psychological effects, personal traits, and motivation.

Performance
Self-efficacy is a critical determinant of knowledge-sharing behavior. Self-efficacy refers to an individual's confidence in their ability to perform a task. Fang et al. (2013) found that higher self-efficacy significantly enhanced individuals' willingness and behavior to share knowledge in virtual teams because they believed that their knowledge could add value to the team. Knowledge self-efficacy also plays a crucial role in virtual communities. Hao et al. (2019) noted that in virtual teams, knowledge self-efficacy not only increases the frequency of knowledge sharing but also improves the quality of shared knowledge.

Work skill requirements influence individuals' participation in knowledge-sharing activities. Studies show that individuals with higher work skill requirements are more inclined to share knowledge in virtual communities to obtain additional resources and skill support (Hao et al., 2019).

Psychological Effects
Perceived usefulness is an essential psychological driver for knowledge-sharing behavior. When individuals believe that sharing knowledge is useful to others or themselves, they are more likely to engage. Zhang et al. (2018) found that perceived usefulness played a significant role in knowledge-sharing behavior in online health communities. Perceived cost is a negative factor that inhibits knowledge-sharing behavior. Li Chengze (2022) demonstrated that as users perceive higher time, effort, or financial costs, their willingness to share knowledge decreases.

Self-worth is another critical factor that drives knowledge sharing. When individuals receive positive feedback or support from the virtual community, their sense of self-worth increases, motivating them to continue sharing knowledge. Zhang Si (2017) noted that social support could enhance self-worth, thus promoting knowledge-sharing behavior. Gaining social support also positively influences knowledge-sharing behavior in virtual communities. Individuals who receive emotional or informational support are more likely to develop a continuous intention to share knowledge (Zhang Si, 2017).

Personal Traits
Conscientiousness and extraversion are personality traits positively correlated with knowledge-sharing behavior. Yan Wenbo (2021) found that extraversion had a significant positive relationship with knowledge-sharing behavior, as extraverted individuals are more sociable and tend to facilitate the transmission and sharing of information. Neuroticism, on the other hand, negatively impacts knowledge-sharing behavior. Individuals with high levels of neuroticism tend to withhold knowledge due to anxiety and stress, inhibiting their willingness to share (Yan Wenbo, 2021).

Motivation

Motivation is a key driver of knowledge-sharing behavior in virtual communities, encompassing factors such as altruism, reputation, reciprocity expectation, and external rewards. Altruism is considered a powerful intrinsic motivator for knowledge sharing. Zhang et al. (2018) found that individuals in virtual communities often experience satisfaction from helping others, which significantly drives their knowledge-sharing behavior.

Reputation/Online reputation serves as an external incentive that enhances individuals' willingness to share knowledge in virtual communities. Wang Guoxin (2021) pointed out that reputation systems in online communities foster knowledge-sharing through social recognition and approval.

Reciprocity expectation and external reward expectation are additional motivators for individuals to participate in knowledge-sharing behavior in virtual communities. Research shows that individuals expect to receive equivalent rewards (such as others' knowledge or resources) in exchange for sharing knowledge, further promoting knowledge-sharing behavior (Zuo Li, 2017).

Team Factors

Team factors play a significant role in influencing knowledge-sharing behavior within virtual communities, particularly in the context of collaboration and knowledge transfer. These factors can be categorized into two main dimensions: Performance and Climate.

Performance

a. Social Network Centrality

Social network centrality is a crucial factor affecting knowledge-sharing behavior in virtual communities. According to Zhou Zhimin et al. (2014), an individual's position in the social network determines the resources they can access. Individuals positioned centrally within the network are better able to access the flow of information and resources, giving them an advantage in knowledge-sharing processes . These centrally positioned individuals are seen as having greater control over information flow and resource allocation, contributing more to knowledge-sharing than those on the periphery . Consequently, social network centrality is positively correlated with both the frequency and quality of knowledge-sharing .

b. Advice Network Centrality

Advice network centrality is another network characteristic closely related to knowledge-sharing behavior. Studies indicate that individuals in central positions within advice networks typically have greater access to resources and are more efficient in acquiring and disseminating knowledge . As a result, they tend to enhance their work performance and exhibit higher levels of innovation within their teams or communities .

c. Emotional Network Centrality

Emotional network centrality plays a positive role in knowledge-sharing behavior. Research shows that central individuals in emotional networks, due to stronger emotional connections, are better able to foster knowledge-sharing behavior . These individuals contribute positively to the cooperation and knowledge transfer within teams or communities through emotional support and information exchange, enhancing the effectiveness of knowledge-sharing .

Climate
a. Trust
Trust is a critical factor in team climate. In virtual communities, establishing trust helps promote knowledge-sharing behavior. Xu Linyu and Yang Jianlin (2019) noted that when trust exists between members, individuals are more willing to share knowledge . Trust fosters and sustains cooperative relationships, which, in turn, improve the quality of shared knowledge . For instance, users in academic virtual communities demonstrate their authenticity through email verification, increasing trust among other members .

b. Social Interaction
Social interaction is a vital component of structural social capital, referring to the various forms of interaction that strengthen connections and trust between members. Chiu et al. (2019) found that social interaction in virtual communities effectively promotes the flow of knowledge between members . Through social interaction, members can better exchange knowledge and resources, which not only increases the frequency of knowledge-sharing but also enhances the depth and breadth of shared knowledge .

c. Reciprocity Norm
The reciprocity norm is an important motivating factor for virtual community members engaged in knowledge-sharing. Reciprocity emphasizes that knowledge exchange is mutual and that both parties perceive it as fair . In academic virtual communities, reciprocity often manifests through mechanisms like forum credits, balancing the contributions and rewards of members, thereby encouraging more active participation in knowledge-sharing .

d. Shared Vision
Shared vision is a core dimension of cognitive social capital, representing the alignment of goals and aspirations among team members. According to Ghoshal T S, a shared vision facilitates knowledge-sharing and resource exchange among members . In virtual communities, members with a shared vision are more likely to support one another and actively participate in knowledge-sharing behavior . For instance, in academic virtual communities, the number of friends can represent shared vision, with friend interactions enhancing both the frequency and quality of knowledge-sharing .

Organizational Factors
Performance (Organizational Rewards)
Organizational rewards play a crucial role in influencing knowledge-sharing behavior, as they provide external motivation that supplements intrinsic motivation. As Yu Wei (2017) points out, the academic community has long debated whether internal and external motivations complement or substitute each other. Some argue that external rewards reinforce internal motivation by providing additional recognition, while others believe that they undermine it by restricting personal autonomy. The latter is often referred to as the "Deci effect," where external rewards diminish the value of intrinsic motivation (Yu, 2017). However, organizational rewards in the context of knowledge sharing differ because knowledge sharing is a voluntary, altruistic behavior outside of one's primary job duties. While knowledge sharing improves team and organizational performance, the knowledge sharer may not receive immediate or direct compensation from colleagues or the organization for the shared knowledge.

Research suggests that organizational rewards are essential to compensating for the effort, time, and energy invested in knowledge sharing. Yu Wei (2017) highlights that when individuals perceive that their knowledge-sharing behavior will be rewarded, they are more likely to engage in such activities. This is especially true when individuals have a strong sense of self-efficacy in sharing knowledge—believing that their contributions will be recognized and rewarded strengthens their motivation to share. Wahetal (2007) also shows that high-performing employees are less inclined to share their knowledge when they perceive insufficient rewards, reinforcing the importance of organizational rewards in enhancing knowledge sharing (Yu, 2017). Therefore, organizational rewards not only acknowledge the knowledge sharer's contribution but also serve to offset the costs associated with knowledge sharing. This leads to the hypothesis that higher expectations of organizational rewards positively moderate the relationship between knowledge self-efficacy and knowledge-sharing behavior.

Culture (Virtual Brand Community Culture)
Culture within a virtual brand community significantly influences knowledge-sharing behavior. Lin Yan and Jing Peng (2018) argue that a well-established virtual brand community culture fosters a relaxed and open environment, encouraging users to share brand-related knowledge. When the material culture of the community is robust, with solid infrastructure in place, it becomes easier for users to share their knowledge. Additionally, a community with strong service culture promotes interaction and creates a supportive environment where users are willing to share their brand knowledge (Lin & Jing, 2018).

Organizational management culture is another vital factor. When management systems are rational, well-organized, and regularly host brand-related activities, users feel motivated to share their experiences and knowledge about those activities. This structured and engaging environment enhances users' psychological ownership of the community, resulting in greater participation in knowledge sharing (Lin & Jing, 2018). Spiritual culture also plays a crucial role in cultivating users' identification with the community. As members develop a sense of belonging and emotional attachment to the community, they naturally want to contribute to the community's growth by sharing valuable brand knowledge. Based on this analysis, it is hypothesized that virtual brand community culture positively influences users' brand knowledge-sharing behavior, with material, service, management, and spiritual aspects of culture each contributing to this positive influence.

Experience
Experiential factors, particularly sensory, affective, intellectual, behavioral, and relational experiences, strongly impact users' knowledge-sharing behaviors in virtual communities. According to Yang Yukun (2017), sensory experience is derived from direct sensory stimuli, such as visuals, sounds, and textures, which can lead to positive behavioral outcomes. Sensory experience in a virtual community setting positively influences users' knowledge-sharing behaviors. When users find pleasure and satisfaction in sharing knowledge, they are more likely to engage in and continue this behavior (Yang, 2017).

Affective experience is equally important, as it involves users' emotional responses. As Yang Yukun (2017) notes, affective experiences trigger emotions and create resonance, promoting particular behaviors, including knowledge sharing. When users in virtual communities feel

emotionally connected and resonate with the content being shared, they are more likely to engage in knowledge-sharing activities.

Intellectual experience refers to the cognitive engagement users experience when interacting with the community, often involving creative thinking and problem-solving. This engagement enhances users' satisfaction with the virtual community and, in turn, increases their willingness to share knowledge. Similarly, behavioral experiences, which enrich users' lives by offering diverse interactive opportunities, further incentivize knowledge sharing. When users can immerse themselves in interactive and meaningful experiences, their desire to share their insights and knowledge grows.

Relational experience encompasses the social connections users build within the community, including their sense of belonging to the group. A strong relational experience fosters trust and strengthens the bonds between community members, leading to increased knowledge-sharing behavior. Yang Yukun (2017) suggests that when users feel a deep sense of connection to the community and its members, their desire to share knowledge is further enhanced.

In conclusion, the various experiential factors—sensory, affective, intellectual, behavioral, and relational—have significant positive impacts on users' willingness to share knowledge within virtual communities. These experiences not only stimulate users' engagement with the platform but also foster a sense of belonging, satisfaction, and emotional connection, all of which contribute to the enhancement of knowledge-sharing behavior.

Discussion and Future Research Directions
This study makes significant contributions to the understanding of knowledge-sharing behavior in Chinese virtual communities by systematically reviewing and synthesizing existing research. Its primary focus is to map the academic landscape, highlight prevailing trends, and explore research gaps, offering a foundation for future studies.

Theoretical Significance
Theoretically, this study consolidates multilevel factors influencing knowledge-sharing behaviors—individual, team, and organizational—within the context of Chinese cultural characteristics, such as collectivism and relational orientations. By integrating established frameworks, including Social Cognitive Theory (Bandura, 1986), Social Capital Theory (Chiu, Hsu, & Wang, 2006), and the Technology Acceptance Model (Davis, 1989), the research emphasizes how these theories are applied and adapted in non-Western settings. For instance, core elements of Social Capital Theory, such as trust and reciprocity, are shown to be pivotal in fostering collaboration within Chinese virtual communities where guanxi (interpersonal relationships) profoundly influence interactions (Zhao, Lu, Wang, Chau, & Zhang, 2013). Similarly, perceived usefulness and self-efficacy, central to the Technology Acceptance Model and Social Cognitive Theory, are validated as critical individual drivers, particularly in platforms like online health communities (Zhang, Kong, Li, Feng, & Li, 2022).

By contextualizing these frameworks within Chinese virtual communities, the study identifies both their strengths and limitations. Notably, the underrepresentation of collective-oriented technological adoption in existing theories is highlighted, as well as insufficient integration of emerging technologies such as blockchain and artificial intelligence. These technologies, with

their potential to enhance transparency, optimize knowledge flow, and incentivize participation, represent an important avenue for theoretical and practical exploration (Wang, 2021).

Contextual Significance
Contextually, this study highlights the unique dynamics of knowledge-sharing behaviors in Chinese virtual communities. Relationally driven behaviors characteristic of collectivist societies, such as trust, reciprocity norms, and social network centrality, are identified as key enablers of effective knowledge sharing (Zheng & Zhang, 2020). For example, the presence of shared vision within teams fosters collaboration and strengthens the exchange of knowledge in virtual settings (Zhou, Wang, & Deng, 2019).

While emphasizing positive drivers, this study also addresses underexplored challenges specific to Chinese virtual communities, including negative influences such as information overload and privacy concerns, which can undermine users' willingness to engage (Yang & Peng, 2015). Moreover, the narrow focus of many studies on specific platforms like WeChat and Zhihu limits the generalizability of findings across different types of virtual communities, underscoring the need for cross-platform comparative research (Zheng & Zhang, 2020).

Contribution and Future Directions
This study provides a valuable synthesis of existing research, organizing findings to identify gaps and emergent opportunities for future exploration. It underscores the importance of addressing underexamined areas, such as the transformative potential of blockchain technology in establishing transparent reward systems and artificial intelligence in delivering personalized recommendations. By doing so, it not only enriches the theoretical understanding of knowledge-sharing behaviors but also informs the practical design and management of virtual community platforms.

Future research directions should aim to integrate these emerging technologies and explore their implications for user engagement, platform functionality, and knowledge sharing dynamics. Furthermore, developing comprehensive theoretical frameworks that capture the complexities of knowledge sharing in diverse cultural and technological contexts will be critical for advancing this field. By bridging theoretical insights with real-world applications, this study lays the groundwork for meaningful innovation in virtual community research and practice.

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