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Manfaat *Knowledge Sharing* pada *Virtual Community of Practice* (VCoP): *A Systematic Literature Review*

Benefit of Knowledge Sharing in Virtual Community of Practice (VCoP): A Systematic Literature Review

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Abstrak

Latar belakang: *Knowledge sharing* (KS) di *Virtual Communities of Practice* (VCoP) telah menjadi elemen kunci dalam menciptakan keunggulan kompetitif organisasi, terutama di era digital. **Tujuan:** Penelitian ini bertujuan untuk mengeksplorasi manfaat KS dalam VCoP melalui metode *systematic literature review*. **Metode:** Penelitian dilakukan dengan menganalisis 11 artikel primer yang dipilih menggunakan pendekatan PRISMA, mencakup publikasi dari 2019 hingga 2024, yang berfokus pada bagaimana KS meningkatkan pembelajaran individu, menciptakan pengetahuan baru, dan mendukung inovasi organisasi. **Hasil:** Hasil analisis menunjukkan bahwa KS dalam VCoP mendukung kolaborasi yang efektif di antara anggota, memungkinkan mereka untuk berbagi pengalaman, mendiskusikan solusi, dan mengembangkan kebijakan yang lebih relevan. Faktor kunci keberhasilan KS mencakup kepercayaan antar anggota, dukungan teknologi yang memadai, dan peran fasilitator yang kompeten. Kepercayaan menciptakan lingkungan yang aman untuk berbagi pengetahuan tacit maupun eksplisit, sementara teknologi mendukung interaksi lintas geografis. Fasilitator memainkan peran penting dalam memoderasi diskusi, membangun kepercayaan, dan memastikan keterlibatan aktif anggota. **Kesimpulan:** Penelitian ini menyimpulkan bahwa KS dalam VCoP berkontribusi pada peningkatan pembelajaran individu, pengembangan keterampilan profesional, dan penciptaan pengetahuan baru yang relevan. Dengan menciptakan lingkungan kolaboratif yang terorganisir, VCoP menjadi sarana efektif untuk meningkatkan daya saing dan inovasi organisasi. Oleh karena itu, investasi dalam pengelolaan VCoP dan pelatihan anggota komunitas sangat diperlukan untuk memastikan keberlanjutan dan efektivitas KS. Studi ini memberikan wawasan penting bagi para praktisi dan peneliti dalam mengembangkan strategi manajemen pengetahuan yang holistik.

Kata kunci: berbagi pengetahuan; *community of practice*; *virtual community of practice*; manajemen pengetahuan; penciptaan pengetahuan.

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Abstract

***Background**: Knowledge Sharing (KS) in Virtual Communities of Practice (VCoP) has become a key element in creating organizational competitive advantage, especially in the digital era. **Purpose**: This study aims to explore the benefits of KS in VCoP using the systematic literature review method. **Methods**:The research was conducted by analyzing 11 primary articles selected through the PRISMA approach, covering publications from 2019 to 2024, focusing on how KS enhances individual learning, facilitates knowledge creation, and supports organizational innovation. **Results**: The analysis revealed that KS in VCoP fosters effective collaboration among members, enabling them to share experiences, discuss solutions, and develop more relevant policies. Key success factors of KS include trust among members, adequate technological support, and the role of competent facilitators. Trust creates a safe environment for sharing both tacit and explicit knowledge, while technology supports interactions across geographical boundaries. Facilitators play a crucial role in moderating discussions, building trust, and ensuring active member engagement. **Conclusion**: This study concludes that KS in VCoP contributes to enhancing individual learning, developing professional skills, and creating relevant new knowledge. By creating an organized collaborative environment, VCoP serves as an effective medium to boost organizational competitiveness and innovation. Therefore, investment in managing VCoP and training community members is essential to ensure the sustainability and effectiveness of KS. This study provides valuable insights for practitioners and researchers in developing holistic knowledge management strategies.*

Keywords: *knowledge sharing; community of practice; virtual community of practice; knowledge management; knowledge creation.*

Introduction

The benefits of Knowledge sharing (KS) in Virtual Communities of Practice (VCoP) have become an increasingly relevant topic in the current digital era. Knowledge sharing is a key element of knowledge management, playing a vital role in creating a competitive advantage for organizations. Various studies have shown that KS contributes to knowledge implementation, innovation, and enhancing organizational competitiveness (Chuang, Jackson, and Jiang 2016). However, despite the significant potential of VCoP, several challenges influencing KS behavior in these virtual communities require further investigation through a systematic literature review. In this context, Ellison, Gibbs, and Weber (2015) provides a valuable theoretical contribution by examining how enterprise social networking systems (ESNSs) offer specific organizational affordances that support knowledge-sharing practices, particularly in distributed and multinational organizational environments.

A VCoP is a virtual community of individuals who share common interests, concerns, or problems and collaborate over an extended period to build and share knowledge. Theoretically, interactions within VCoPs are seen as effective mechanisms for creating environments that support collaborative learning and innovation. This aligns with the concept of Communities of Practice (CoP) introduced by Etienne and Wenger-Trayner (2015), which emphasizes that sustained interactions among community members deepen their knowledge and skills. Therefore, VCoPs provide a robust framework for mutually beneficial knowledge sharing, fostering sustainable organizational innovation.

Systematic literature reviews suggest that KS within VCoPs offers substantial benefits not only for organizations but also for the individuals involved. Specifically, KS enables community members to enrich their understanding by drawing on practical experiences and the collective expertise embedded within the community. However, the effectiveness of KS in VCoPs is not without its challenges. One frequently highlighted factor in the literature is the critical role of facilitators. Facilitators help mitigate common

barriers to KS, such as a lack of trust among participants, communication constraints, and cultural differences within and across organizations. By cultivating an atmosphere of mutual trust and psychological safety, facilitators foster a conducive environment for open knowledge exchange. Moreover, managers acting as facilitators are encouraged to promote positive attitudes, intentions, and behaviors related to KS, as these contribute significantly to the development of innovative work behaviors among employees (Akhavan et al. 2015). Therefore, the presence of effective facilitation mechanisms is essential for optimizing KS dynamics within VCoPs and realizing their full potential.

In the context of VCoPs, trust and social interaction are widely recognized as critical enablers of effective KS. Trust among community members fosters a sense of psychological safety, which is essential for the voluntary exchange of both explicit and tacit knowledge. Tacit knowledge, characterized by its experiential and non-codified nature, is particularly reliant on informal and socially embedded interactions. Pyrko, Dörfler, and Eden (2017) highlight that KS in VCoPs is often facilitated through robust interpersonal relationships underpinned by mutual trust, shared values, and communal norms. Such relational dynamics are instrumental in promoting sustained engagement and deep knowledge exchange within the virtual setting.

The benefits of KS within VCoPs extend beyond individual cognitive development, encompassing organizational knowledge creation and innovation. Through collaborative engagement, community members are able to leverage diverse expertise, exchange problem-solving strategies, and co-create contextually relevant knowledge. This process not only enhances organizational learning but also contributes to innovation by facilitating the emergence of novel ideas and solutions. As noted by Botelho (2020), VCoPs serve as a mechanism for reducing knowledge silos, mitigating information redundancy, and promoting the relevance and applicability of shared knowledge.

Furthermore, systematic literature reviews underscore the indispensable role of managerial support in fostering a knowledge-sharing culture within VCoPs. Effective managerial involvement entails the provision of adequate resources, the implementation of incentive structures, and the cultivation of an environment conducive to collaborative knowledge practices. Haas et al. (2020) argue that strategic investment in the establishment and sustainability of VCoPs is critical to the advancement of organizational knowledge management systems. Such support not only reinforces community vitality but also aligns VCoP objectives with broader institutional goals, thereby enhancing the long-term competitiveness and adaptive capacity of organizations.

Given the increasing significance of VCoPs in contemporary knowledge ecosystems, the academic discourse on KS in virtual environments has gained substantial momentum in recent years. Accordingly, the present study seeks to synthesize the extant literature concerning the benefits of KS in VCoPs. Employing a systematic literature review methodology guided by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework, this research aims to identify, analyze, and integrate key findings from peer-reviewed sources. The overarching objective is to provide a comprehensive understanding of how KS practices within VCoPs contribute to individual, organizational, and systemic knowledge outcomes. The following are the questions that will be answered regarding the collection of studies on the benefits of KS in VCoP:

RQ1. What are the key factors that contribute to the success of KS in VCoP?
RQ2. How does KS in VCoP enhance individual learning?
RQ3. How does KS in VCoP contribute to the creation of new knowledge among its members?

KS refers to the process through which individuals exchange knowledge, encompassing both task-related insights and skill-based expertise, typically within formal organizational contexts. It is a critical component of KS that facilitates organizational learning and innovation. Prior research suggests that KS serves as a cross-level contextual factor that moderates the relationship between individual-focused transformational leadership, skill development, and individual creativity (Dong et al. 2017). Within the framework of this systematic literature review, several definitions of KS have been extracted from the selected scholarly articles. These definitions are summarized in Table 1 to provide a foundational understanding of how KS is conceptualized across the literature.

Table 1. Some knowledge sharing definitions from primary studies

Definitions	References
Knowledge sharing serves as a means of providing knowledge in the context of task completion and idea development.	Li-Ying, Zhang and Long (2018)
Knowledge sharing can be defined as the process of exchanging knowledge between two or more individuals, which becomes a valuable asset within an organization.	Nxumalo and Mnkandla (2019)
Knowledge sharing is defined as a process that enables a social agent to transfer their knowledge with the aim of persuading or influencing others, referring to the utilization of that knowledge by another agent.	Oliveira and Cardoso (2022)
Knowledge sharing, as a core element of knowledge management practices, can be defined as the exchange of knowledge among members within a community or organization.	Romero-Mas et al. (2024)
Knowledge sharing is the process of sharing knowledge on online platforms to conduct research and engage in collaborative knowledge practices.	van der Graaf et al. (2024)

Source: Data Processing, 2024

Knowledge sharing (KS) is recognized as an effective organizational activity, primarily due to the substantial benefits it provides to both individuals and the organization as a whole (Omotayo 2015; Yan et al. 2016). The effectiveness of KS is often determined by the extent to which the shared knowledge benefits its intended recipients. Therefore, when the outcomes align with the objectives and needs of the recipients, the knowledge-sharing process can be considered successful. However, accurately evaluating the success of KS requires consideration of multiple factors to avoid biased or incomplete assessments.

The success of KS is commonly evaluated through two key dimensions: quality and quantity. These dimensions are essential because the effectiveness of KS varies according to individual understanding, engagement levels, and contextual relevance. The quality dimension assesses the degree to which the knowledge shared is useful, applicable, and meaningful to the recipients, while the quantity dimension refers to the frequency and consistency of knowledge-sharing activities (Zhu, Chiu, and Infante Holguin-Veras 2018). Measuring both aspects provides a more holistic understanding of the impact and sustainability of knowledge-sharing practices within an organization.

KS typically involves the transfer of knowledge that is closely aligned with the expertise of the knowledge provider. This process is most effective when it occurs among individuals who share similar professional backgrounds, interests, or areas of specialization.

Such alignment facilitates targeted, contextually appropriate knowledge exchange and enhances the practical value of the information shared. According to Setini et al. (2020), knowledge-sharing activities are often directed toward recipients who possess comparable expertise to the provider, thereby fostering a collaborative environment grounded in mutual understanding. This alignment not only promotes efficient knowledge transfer but also ensures that the shared knowledge is more likely to be implemented effectively by the recipients. In this regard, KS serves not merely as a mechanism for information dissemination, but as a strategic process for enabling meaningful, actionable knowledge integration within competent communities.

KS offers significant and distinctive benefits within the context of VCoPs. These communities have evolved from traditional CoPs, which gained rapid momentum with the advancement of Information and Communication Technology (ICT). The integration of ICT into collaborative environments has given rise to VCoPs, digitally mediated spaces where individuals with shared interests or professional goals can interact, collaborate, and share knowledge regardless of geographical constraints (Tong, Tak, and Wong 2015).

ICT plays a central role in facilitating dynamic and asynchronous communication, enabling members of VCoPs to engage in meaningful knowledge exchange. One of the primary advantages of KS in VCoPs is the opportunity it provides for individuals from diverse backgrounds and with varied expertise to interact and collaborate. Through these virtual platforms, members can contribute and access knowledge through discussions, shared resources, and problem-solving activities (Ganguly, Talukdar, and Chatterjee 2019; Setini et al. 2020). The openness of VCoPs fosters a culture of continuous learning, where participants are encouraged to seek out information and engage with more knowledgeable members, particularly in the context of complex or specialized knowledge domains (Tausczik and Huang 2020).

Research Method

The results of this systematic literature review, using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach, will answer research questions that will also serve as a guide and reference for readers to understand the development of the research topic regarding the benefits of KS in VCoP over the past five years. This systematic literature review with the PRISMA approach will focus on the contributions to the development of research on KS activities and the existence of VCoP, analyzing 11 primary studies that will be reviewed in this research. A qualitative approach through thorough reading and scoring of articles based on quality assessment will also be conducted by the researcher.

The search strategy for reviewing the literature related to the title of this study involves two search approaches: automated search and manual search. After conducting the automated search, the next step is to find research through a manual search to identify primary studies for analysis (Gupta et al. 2018). Both approaches are used to search for and filter various research publications that align with the study's title, in order to obtain deeper insights into the topic of the research.

The automated search process is carried out by inputting keywords as a tool for electronic searches based on online scientific databases. The next step involves selecting three online databases, which were chosen based on the prior search process. These

databases are Cambridge Core, IEE Explore, and Scopus. These three online databases will be the primary sources explored in this systematic literature review. They were chosen because they provide the most relevant information to the research title and offer comprehensive insights into the benefits of knowledge sharing among communities of practice.

Table 2. Inclusion and Exclusion Criteria

Included Articles	▪ Available in Full-Text format ▪ Published between 2019 and 2024 ▪ Written in English ▪ Relevant to the Research Questions ▪ Domain: KS for VCoP
Excluded Articles	▪ Not Available in Full-Text format ▪ Published before 2019 ▪ Not written in English ▪ Not relevant to the Research Questions ▪ Article content does not discuss KS for VCoP ▪ Duplicated Study

Source: Data processing, 2024

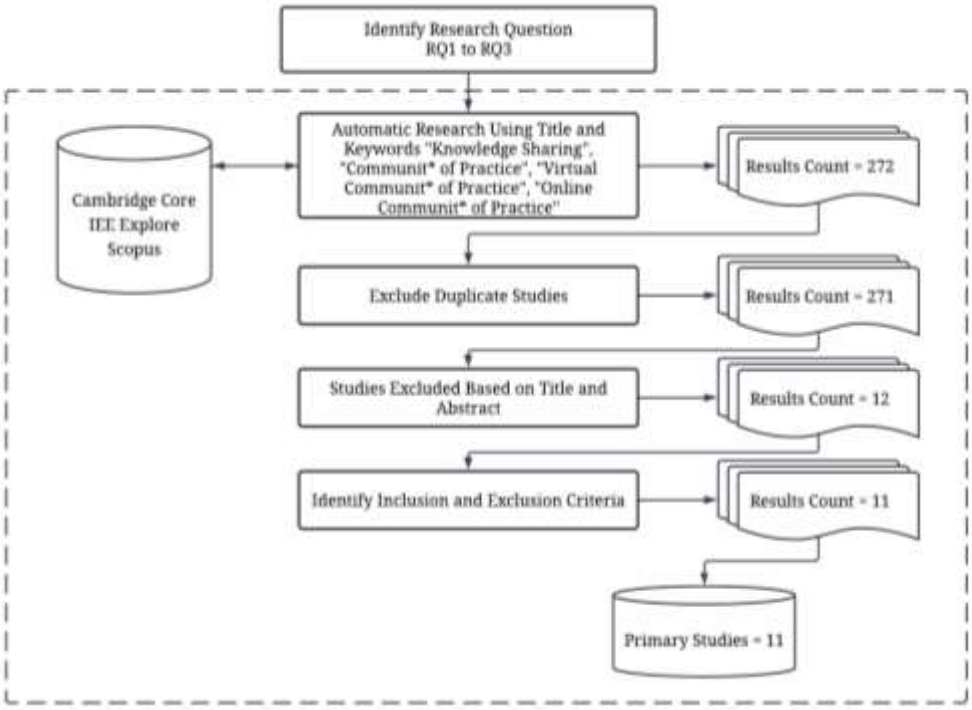

Diagram 1. Study selection process
Source: Data processing, 2024

The selection of reference sources for this Systematic Literature Review (SLR) is guided by the relevance and quality of the content, following established criteria outlined by (Gupta et al. 2018). The general methodology for conducting an SLR involves several key steps: defining the research question, establishing inclusion criteria, conducting a comprehensive search for studies, selecting relevant studies and extracting data, assessing the risk of bias, analyzing the data, and reporting the findings. This study also incorporates a quality assessment aligned with the research questions to evaluate the value of knowledge sharing within virtual communities of practice.

There are four aspects of quality assessment included in this study, designed to provide in-depth insights into the relevance and benefits of knowledge sharing in the context of virtual communities. These aspects aim to assess the credibility, relevance, and contribution of the literature used towards the research objectives. If the reference article fully meets the quality criteria, it is given a score of 2, if it partially meets the quality criteria, it is given a score of 1, and if it does not meet the quality criteria, it is given a score of 0 (Ahmed et al. 2019). The five quality assessments are as follows:

QA1. Is the topic of the reference article related to the discussion in accordance with the title of the systematic literature review?
QA2. Does the reference article have a clear research context?
QA3. Does the reference article provide a detailed explanation of the research methodology used?
QA4. Does the reference article explain how the data collection process was conducted in the research?
QA5. Does the reference article accurately evaluate the data analysis process?

The quality assessment of the reference articles is conducted using a three-tier scale: 'low,' 'medium,' and 'high', based on the evaluation of five previously defined quality criteria. This assessment is designed to ensure the selected studies are closely aligned with the research topic, particularly within the context of a systematic literature review, thereby strengthening the discussion of the final results (Matalonga, Rodrigues, and Travassos 2017). The weighted scores derived from this evaluation determine the overall quality rating of each study. Subsequently, the studies are categorized into three ranking groups according to these quality levels.

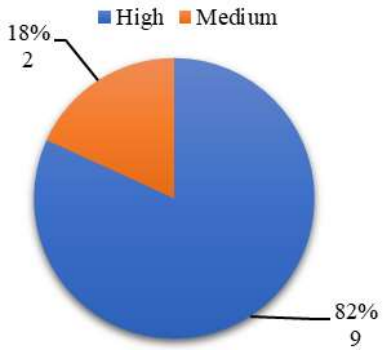

Diagram 2. Quality assessment percentage
Source: Data processing, 2024

Result and Discussion

The selection of reference articles for this systematic literature review resulted in 11 primary studies as a result of data extraction. Data extraction was performed to filter all reference articles as sources for the writing to align with the topic of the current research. This systematic literature review is based on several underlying elements, such as the novelty of the data extraction in reference articles, including the research domain, theory, research methodology, and the scope of the topics discussed in the studies (Gupta et al. 2018; Snyder 2019). Data extraction tools such as Google Spreadsheet and Mendeley were also used with the aim of making data extraction management more structured.

Publication Source Overview

The data extraction process identified a total of 11 primary studies deemed relevant for in-depth analysis within the framework of this systematic literature review. An examination of the publication sources reveals that 9 of these studies were published in peer-reviewed academic journals, while the remaining 2 were presented at reputable scientific conferences. This distribution indicates a strong foundation of evidence derived predominantly from scholarly journal literature, supplemented by current findings from conference proceedings, thereby enhancing the comprehensiveness and relevance of the review.

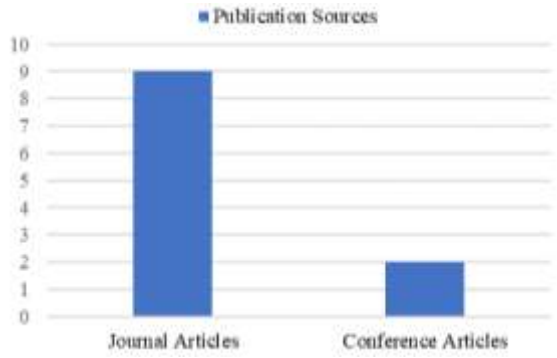

Diagram 3. Publication sources
Source: Data processing, 2024

Publication Chronological Overview

Research on the benefits of knowledge sharing within communities of practice, particularly in the context of VCoPs has garnered increasing scholarly attention in recent years. A notable concentration of studies specifically focusing on VCoPs has emerged over the past five years, spanning from 2019 to 2024. In 2019, a total of five relevant publications were identified, marking a significant starting point for sustained academic interest in the topic. However, the subsequent years of 2020 and 2021 did not yield any qualifying studies, indicating a temporary decline or gap in research output. Interest in the subject resumed in 2022, with three studies published, followed by a single study in 2023 and two additional publications in 2024.

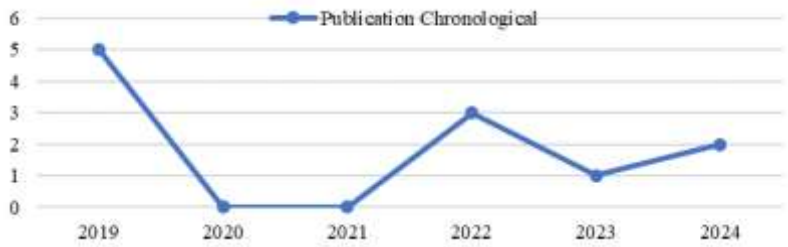

Diagram 4. Publication by years (2019-2024)
Source: Data processing, 2024

Publication Methodologies Overview

A diverse array of research methodologies has been employed in studies investigating knowledge sharing within communities of practice, particularly within the

context of VCoPs. As noted by Charband and Jafari Navimipour (2016), this field does not adhere to a single methodological paradigm, it encompasses a variety of approaches tailored to the complexity of the subject matter. The methodologies identified across the selected primary studies include quantitative methods, qualitative methods, mixed-methods approaches, and conceptual frameworks. This methodological diversity reflects the multifaceted nature of knowledge sharing, which involves both measurable behavioral patterns and nuanced, context-dependent social dynamics.

The data extraction process revealed that out of the 11 primary studies analyzed, five employed quantitative methodologies, emphasizing the use of statistical tools to measure variables such as frequency, motivation, and the impact of knowledge sharing. Four studies adopted mixed-methods approaches, integrating both qualitative insights and quantitative data to provide a more comprehensive understanding of the phenomena under investigation. One study utilized a qualitative approach, focusing on interpretive analysis through interviews or case studies to explore participant experiences and perceptions in depth. Lastly, one study applied a conceptual methodology, aiming to develop theoretical models or frameworks based on existing literature rather than empirical data. This distribution highlights a research trend favoring empirical investigation, particularly through quantitative and mixed methods, while also recognizing the value of theoretical and interpretive approaches in enriching the discourse on virtual knowledge-sharing practices.

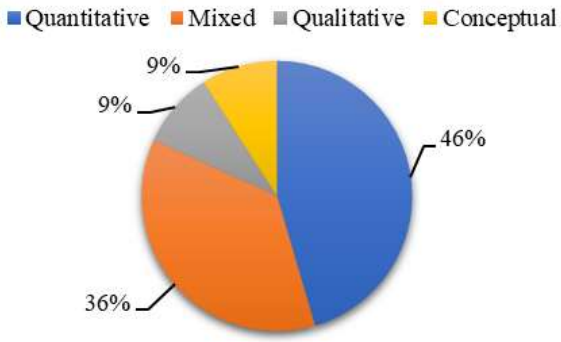

Diagram 5. Publication methods
Source: Data processing, 2024

Publication Regions Overview

An analysis of the geographical distribution of the 11 primary studies, as illustrated in Diagram 6, reveals three main publication regions. The majority of the research on knowledge sharing within virtual communities of practice originates from Europe, which accounts for eight of the included studies. This is followed by the Asia-Pacific region with two publications, and the African region with one publication. The dominance of European contributions suggests a strong academic interest and research infrastructure supporting studies in this area, while the presence of studies from Asia-Pacific and Africa indicates emerging engagement with the topic in diverse global contexts. This regional distribution may reflect differences in digital adoption, academic focus, and funding opportunities related to virtual knowledge-sharing practices.

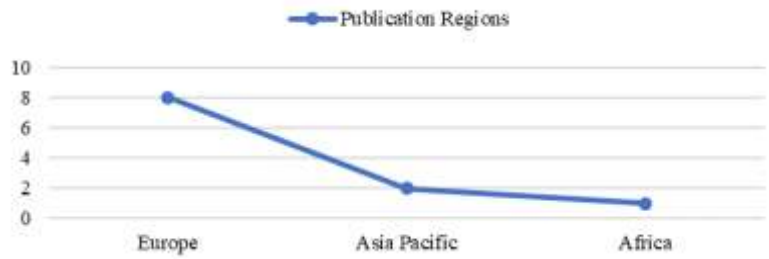

Diagram 6. Publication by regions
Source: Data processing, 2024

RQ1: What are the key factors that contribute to the success of KS in VCoP?

Knowledge is widely recognized as a strategic asset essential for achieving sustained success in competitive environments. Consequently, knowledge sharing is regarded as a vital process within organizations, facilitating the dissemination and application of critical information and expertise across all levels (Bagnoli et al. 2021). Effective knowledge sharing enables meaningful interactions that support the preservation, transfer, and collective utilization of knowledge from individual members to broader organizational groups (Mosha, N. F & Holmner 2019; Omotayo 2015). Within the context of this systematic literature review, several key factors influencing the success of knowledge sharing have been identified and synthesized from the 11 primary studies selected. These factors are systematically presented in Table 3 to provide a comprehensive overview of the determinants that shape knowledge-sharing practices in virtual communities of practice.

Tabel 2. Key factors that success of KS

Context	References	N
Effective Facilitator	Li-Ying, Zhang and Long (2018), Rossignoli et al. (2024), Hafeez et al. (2019), Stanca, Dabija, and Păcurar (2022)	4
Adequate Technological Support	Jørgensen et al. (2019). van der Graaf et al. (2024)	2
Strong Trust Among Community Members	Nxumalo and Mnkandla, (2019), Romero-Mas et al. (2024), Oliveira and Cardoso (2022), Matsuo and Aihara (2022), (Romero-Mas et al. 2024)	5

Source: Data processing, 2024

Diagram 7. Key factors that success of KS
Source: Data processing, 2024

Effective Facilitator

Facilitators play a crucial role in ensuring the success of KS in VCoP and virtual communities. As key drivers, facilitators are responsible for building a solid membership

base, maintaining community activities and energy, and creating a conducive atmosphere for productive interactions (Rossignoli et al. 2024). They carefully manage discussions and relationships among members to ensure that each individual can contribute optimally. Additionally, facilitators act as liaisons between the community and sponsors, addressing various barriers to knowledge sharing and strengthening essential elements such as organizational culture and trust, which serve as the foundation for effective collaboration (Li-Ying, Zhang, and Long 2018).

In the context of virtual learning, the role of facilitators becomes increasingly complex. They act as moderators guiding discussions, providing metacognitive support, and creating a learning environment tailored to the participants' styles and needs (Hafeez et al. 2019). The facilitators' expertise in managing these interactions helps overcome unique challenges often encountered in digital spaces. With an adaptive and inclusive approach, facilitators not only streamline the knowledge-sharing process but also enhance learning outcomes and strengthen collaboration among community members. This role is key to creating a sustainable learning community where every member has the opportunity to grow collectively (Stanca, Dabija, and Păcurar 2022).

Adequate Technological Support

Adequate technological support is one of the key factors for the success of KS in VCoP. ICT provides platforms that enable participants to interact, share information, and build relationships despite physical limitations such as geographical distances, time zone differences, or diverse work schedules. With the appropriate use of technology, such as email, social media, discussion forums, and other online collaboration tools, communities can manage knowledge effectively. This technology also helps organizations store and implement improvement suggestions into their knowledge repositories, ensuring the sustainability of learning and continuous reflection (Jørgensen et al. 2019).

Moreover, the use of technology in VCoP offers broader access to various tools and strategies that support knowledge transfer. Approaches such as wikis, blogs, and conferencing technologies not only facilitate participant interactions but also serve as pragmatic tools for data and knowledge management. These strategies enable the selective and timely transfer of information to various stakeholders, including policymakers, healthcare providers, and the general public, addressing existing knowledge gaps. By integrating technology aligned with user preferences and needs, organizations can create effective learning ecosystems, accelerate competency development, and enhance individual integration into the job market (van der Graaf et al. 2024; Stanca, Dabija, and Păcurar 2022).

Strong Trust Among Community Members

Adequate technological support is one of the key factors for the success of KS in VCoP. ICT provides platforms that enable participants to interact, share information, and build relationships despite physical limitations such as geographical distances, time zone differences, or diverse work schedules. With the appropriate use of technology, such as email, social media, discussion forums, and other online collaboration tools, communities can manage knowledge effectively. This technology also helps organizations store and implement improvement suggestions into their knowledge repositories, ensuring the sustainability of learning and continuous reflection (Jørgensen et al. 2019).

Strong trust among community members is one of the foundational elements for the success of KS in VCoP. Trust creates a supportive environment where members feel safe sharing knowledge without fear of criticism or manipulation (Li-Ying, Zhang, and Long 2018; Rossignoli et al. 2024). This mutual trust also strengthens a sense of belonging within the community, which in turn increases members' motivation to actively participate in the knowledge-sharing process (Oliveira and Cardoso 2022). With trust, community members are more open to sharing new ideas and engaging in constructive discussions, fostering broader knowledge exploration (Stanca, Dabija, and Păcurar 2022).

Furthermore, trust encourages the establishment of shared behavioral norms, such as respect, reciprocity, and positive interactions, which are key elements in the success of KS (Romero-Mas et al. 2024). Community members who believe that sharing knowledge can provide personal benefits, such as career advancement or opportunities to gain new insights, are more likely to be motivated to contribute (Nxumalo and Mnkandla 2019). Trust also plays a critical role in bridging boundaries between units within the community, enabling members to share knowledge across borders through shared learning objectives (Matsuo and Aihara 2022). Participants used the virtual community primarily to socialize and feel heard, indicating a high level of trust that enabled them to share personal experiences and provide mutual support (Romero-Mas et al. 2024).Thus, trust not only creates a conducive environment but also serves as a catalyst for building a sustainable culture of knowledge sharing.

RQ2: How Does KS in VCoP Enhance Individual Learning?

VCoP play a crucial role in enriching individual understanding through interactive discussions. By leveraging diverse perspectives, community members are encouraged to engage in both divergent and convergent thinking, deepening their learning. High-quality KS contributions also reduce the time spent searching for information, lower learning costs, and improve efficiency (Matsuo and Aihara 2022). Furthermore, the success of VCoP in problem-solving and building members' confidence increases their active participation in the community (Li-Ying, Zhang, and Long 2018; Rossignoli et al. 2024). In this context, VCoP serves not only as a medium for individual learning but also creates an environment conducive to productive collaboration.

Through VCoP, students have the opportunity to learn from hands-on experiences in workshops involving experts. This process bridges theory and practice, developing professional skills such as critical thinking, problem-solving, and adaptability to dynamic job markets. Additionally, VCoP facilitates the transfer of knowledge from practitioners to students, accelerating their integration into the workforce and fostering lifelong learning. Collaboration within these communities also supports the development of social and emotional skills essential for professional success (Metzger et al. 2019; Stanca, Dabija, and Păcurar 2022).

VCoP enables its members to share different approaches to work practices, creating innovative solutions that improve effectiveness. Ongoing discussions help participants refine work procedures, enhance competencies, and create new guidelines applicable across organizations (Jørgensen et al. 2019). In VCoP, collaborative platforms demonstrate the effectiveness of knowledge sharing in building research partnerships and fostering innovation through distributed leadership and integrated knowledge-sharing strategies (van

der Graaf et al. 2024). This process strengthens collective learning and evidence-based responses to challenges.

Active member participation in VCoP, such as through reciprocal discussions and contributions from senior members, fosters successful knowledge sharing. These interactions enrich participants' insights, broaden their experiences, and create personal benefits that enhance organizational performance (Hafeez et al. 2019; Nxumalo and Mnkandla 2019). In other contexts, such as communities of caregivers for Alzheimer's patients, VCoP provides social support while facilitating the transfer of relevant information, improving members' skills and understanding (Romero-Mas et al. 2024). Through the exchange of tacit and explicit knowledge, VCoP builds competitive advantages through effective collaboration strategies (Oliveira and Cardoso 2022).

Tabel 4. Categorization enhanced individual learning

Context	References	N
Learning and Interaction	Matsuo and Aihara (2022), Li-Ying, Zhang and Long (2018), Rossignoli et al. (2024)	3
Enhancing Skills and Professionalism	Metzger et al. (2019), Stanca, Dabija and Păcurar (2022)	2
Knowledge Sharing and Innovation	Jørgensen et al. (2019). van der Graaf et al. (2024)	2
Social Factors and Member Engagement	Hafeez et al. (2019), Nxumalo and Mnkandla, (2019), Romero-Mas et al. (2024). Oliveira and Cardoso (2022)	4

Source: Data processing, 2024

Diagram 8. Tendency towards individual learning

Source: Data processing, 2024

KS within VCoP constitutes a critical mechanism for enhancing individual learning through sustained interaction, collective problem-solving, and the integration of diverse experiential insights. By facilitating the bidirectional flow of tacit and explicit knowledge, VCoP cultivates a robust learning environment that supports the development of cognitive, professional, and socio-emotional competencies (Berraies, Hamza, and Chtioui 2021; Ganguly, Talukdar, and Chatterjee 2019). These communities not only bridge the gap between theoretical knowledge and practical application but also accelerate the acquisition of industry-relevant skills, thereby fostering employability and lifelong learning. Moreover, the participatory dynamics within VCoP, characterized by mentorship, collaborative engagement, and distributed leadership, that contribute to the formation of knowledge-intensive networks that underpin organizational innovation and resilience. As such, VCoP emerge as essential infrastructures for cultivating individual and collective capacities in knowledge-driven environments.

RQ3: How does KS in VCoP contribute to the creation of new knowledge among its members?

KS in VCoP plays a significant role in creating new knowledge through intensive discussions in small groups. With a closed knowledge-sharing method, members can more freely express ideas, share experiences, and discuss solutions to organizational problems without feeling constrained by the influence of hierarchical authority. This environment allows for the exploration of new ideas and the development of more relevant policies and procedures for the organization. As a result, a collaborative atmosphere is created, fostering collective innovation (Li-Ying, Zhang, and Long 2018; Matsuo and Aihara 2022).

KS also serves as a bridge to reduce gaps among members by providing space for sharing opinions and experiences. In this process, new members often utilize KS sessions to gain knowledge and skills from more experienced members, broadening their insights into best practices in their field. This interaction not only enriches the understanding of new members but also encourages experienced members to reflect on and reinforce their own knowledge. Occasionally, members from outside the organization are invited to offer more expert perspectives and skills, enriching the community dynamics and accelerating the learning process (Nxumalo and Mnkandla 2019; Rossignoli et al. 2024; Stanca, Dabija, and Păcurar 2022).

The implementation of KS in VCoP leads to the creation of new knowledge by combining members' insights, experiences, and competencies to address complex problems. This process encourages members to enhance their skills through new information relevant to their areas of expertise, while also providing innovative solutions to organizational challenges. KS serves as a key factor in integrating knowledge among members and fostering deeper collaboration, ensuring that the organization remains adaptive to changes and competitive in its environment (van der Graaf et al. 2024; Jørgensen et al. 2019; Oliveira and Cardoso 2022).

Tabel 5. Context of new knowledge creation

Context	References	N
Human Resource	Li-Ying, Zhang, and Long (2018), Matsuo and Aihara (2022), Hafeez et al. (2019), Oliveira and Cardoso (2022)	4
Business Management	Rossignoli et al. (2024), Metzger et al. (2019)	2
Information and Technology	Stanca, Dabija, and Păcurar (2022), Nxumalo and Mnkandla (2019)	2
Healthcare	Jørgensen et al. (2019), van der Graaf et al. (2024), Romero-Mas et al. (2024)	3

Source: Data processing, 2024

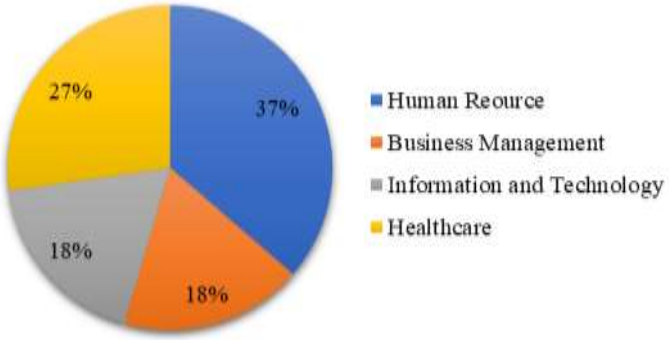

Diagram 9. Context of new knowledge creation
Source: Data processing, 2024

10.20473/pjil.v16i1.65880

KS within VCoP acts as a catalyst for the creation of new knowledge by facilitating the integration of diverse perspectives, experiences, and expertise in a collaborative and psychologically safe environment (Hu et al. 2018). Through structured and informal interactions, members engage in co-constructive dialogues that transcend hierarchical boundaries, fostering critical reflection and the generation of contextually relevant solutions. This dynamic not only nurtures individual growth but also drives collective intelligence, enabling the community to address complex challenges with innovative and evidence-informed approaches (Bilgihan et al. 2016; Jamshed and Majeed 2019; Masa'deh, Obeidat, and Tarhini 2016). Furthermore, the reciprocal exchange between novice and expert members, as well as the incorporation of external insights, strengthens the community's knowledge base and adaptive capacity. Thus, KS in VCoP plays a vital role in sustaining organizational learning, advancing professional practice, and supporting continuous knowledge innovation.

Conclusion

This systematic literature review, which synthesized findings from 11 primary studies, confirms that KS within VCoP plays a pivotal role in advancing both individual learning and organizational development. The review underscores that KS in VCoP not only facilitates the exchange of tacit and explicit knowledge but also fosters a dynamic environment conducive to innovation, collaborative problem-solving, and continuous professional development. Three key factors consistently emerged across the studies as critical to the success of KS in VCoP: the presence of effective facilitators, adequate technological support, and the establishment of strong mutual trust among community members. Facilitators are essential in managing the community's dynamics, moderating discussions, and fostering a collaborative culture that supports meaningful engagement (see articles S3, S9). Technological infrastructures, including collaborative platforms and knowledge repositories, enable asynchronous communication and information exchange across geographical boundaries (see articles S2, S11). Meanwhile, trust underpins the psychological safety required for members to engage in open, honest knowledge exchange, which, in turn, supports the sustainability of the community (see articles S6, S8). Beyond facilitating knowledge dissemination, VCoP significantly enhances individual learning by providing interactive, context-rich environments where members can reflect, co-construct knowledge, and bridge theory and practice. Learning outcomes include improved critical thinking, professional competencies, and adaptability to changing work environments (see articles S5, S10). VCoPs also function as learning ecosystems that promote peer support and accelerate the professional integration of new members (see article S4). Moreover, KS in VCoP contributes meaningfully to the creation of new knowledge. Through active engagement, members integrate diverse experiences, disciplinary perspectives, and contextual knowledge to co-develop innovative solutions and organizational strategies. This process occurs across various domains including human resource development, business management, healthcare, and information technology (see articles S1, S7). The participatory nature of VCoP enables continuous refinement of practices, generation of new insights, and diffusion of knowledge across organizational and professional boundaries.

Nonetheless, challenges persist. Differences in members' backgrounds and organizational cultures can hinder effective communication if not managed proactively. Trust, though essential, is not instantly attainable; it must be cultivated over time through

consistent interaction and shared values. Furthermore, while ICTs are indispensable enablers, they must be tailored to the preferences and needs of users to maximize participation and usability. In conclusion, KS within VCoPs represents a strategic mechanism for fostering innovation, organizational learning, and competitive advantage in increasingly complex and dynamic environments. Organizations aiming to leverage the full potential of VCoP must adopt a crucial knowledge sharing approach, one that integrates technological investment, facilitative leadership, and trust-building strategies. The findings of this review reaffirm the necessity of aligning community design and facilitation with the cognitive, social, and technological dimensions that underpin successful knowledge sharing practices.

References

Ahmed, Y. A, Ahmad, M. N., Ahmad, N., Zakaria, N. H., 2019. Social Media for Knowledge-Sharing: A Systematic Literature Review. Telematics and Informatics. 37, 71-112. https://doi.org/10.1016/j.tele.2018.01.015

Akhavan, P., Hosseini, S. M., Abbasi, M., Manteghi, M., 2015. Knowledge-Sharing Determinants, Behaviors, and Innovative Work Behaviors: An Integrated Theoretical View and Empirical Examination. Aslib Journal of Information Management. 67(5), 562-591. https://doi.org/10.1108/AJIM-02-2015-0018

Bagnoli, C., Mas, F. D., Lombardi, R., Nucciarelli, A., 2021. Translating knowledge through business model tensions: a case study. International Journal of Management and Decision Making. 20(2), 182-197. https://doi.org/10.1504/IJMDM.2021.114456

Berraies, S., Hamza, K. A., Chtioui, R., 2021. Distributed leadership and exploratory and exploitative innovations: mediating roles of tacit and explicit knowledge sharing and organizational trust. Journal of Knowledge Management. 25(5), 1287-1318. https://doi.org/10.1108/JKM-04-2020-0311

Bilgihan, A., Barreda, A., Okumus, F., Nusair, K., 2016. Consumer perception of knowledge-sharing in travel-related online social networks. Tourism Management. 52, 287-296. https://doi.org/10.1016/j.tourman.2015.07.002

Botelho, C., 2020. The Influence of Organizational Culture and HRM on Building Innovative Capability. International Journal of Productivity and Performance Management. 69(7), 1373-1393. https://doi.org/10.1108/IJPPM-05-2019-0228

Charband, Y., Navimipour, N. J., 2016. Online knowledge sharing mechanisms: a systematic review of the state of the art literature and recommendations for future research. Information Systems Frontiers. 18, 1131-1151. https://doi.org/10.1007/s10796-016-9628-z

Chuang, C. H., Jackson, S. E., Jiang, Y., 2016. Can Knowledge-Intensive Teamwork Be Managed? Examining the Roles of HRM Systems, Leadership, and Tacit Knowledge. Journal of Management. 42(2), 524-554. https://doi.org/10.1177/0149206313478189

Dong, Y., Bartol, K. M., Zhang, Z. X., Li, C., 2017. Enhancing employee creativity via individual skill development and team knowledge sharing: Influences of dual-focused transformational leadership. Journal of organizational behavior. 38(3), 439-458. https://doi.org/10.1002/job.2134

Ellison, N. B., Gibbs, J. L., Weber, M. S., 2015. The use of enterprise social network sites for knowledge sharing in distributed organizations: The role of organizational

affordances. American Behavioral Scientist. 59(1), 103-123. https://doi.org/10.1177/0002764214540510

Etienne, Wenger-Trayner, B., 2015. Introduction to Communities of Practice. https://www.wenger-trayner.com/introduction-to-communities-of-practice/ Wenger-Trayner.

Ganguly, A., Talukdar, A., Chatterjee, D., 2019. Evaluating the role of social capital, tacit knowledge sharing, knowledge quality and reciprocity in determining innovation capability of an organization. Journal of knowledge management. 23(6), 1105-1135. https://doi.org/10.1108/JKM-03-2018-0190

Gupta, S., Rajiah, P., Middlebrooks, E. H., Baruah, D., Carter, B. W., Burton, K. R., Chatterjee, A. R., Miller, M. M., 2018. Systematic review of the literature: best practices. Academic Radiology. 25(11), 1481-1490. https://doi.org/10.1016/j.acra.2018.04.025

Haas, A., Abonneau, D., Borzillo, S., Guillaume, L. P., 2020. Afraid of engagement? Towards an understanding of engagement in virtual communities of practice. Knowledge Management Research & Practice. 19(2), 169–180. https://doi.org/10.1080/14778238.2020.1745704

Hafeez, K., Alghatas, F.M., Foroudi, P., Nguyen, B., Gupta, S., 2019. Knowledge sharing by entrepreneurs in a virtual community of practice (VCoP). Information Technology & People. 32(2), 405-429. https://doi.org/10.1108/ITP-09-2016-0202

Hu, J., Erdogan, B., Jiang, K., Bauer, T. N., Liu, S., 2018. Leader humility and team creativity: The role of team information sharing, psychological safety, and power distance. Journal of Applied Psychology. 103(3), 313–323. https://psycnet.apa.org/doi/10.1037/apl0000277

Jamshed, S., Majeed N., 2019. Relationship between Team Culture and Team Performance through Lens of Knowledge Sharing and Team Emotional Intelligence. Journal of Knowledge Management. 23(1), 90-109. https://doi.org/10.1108/JKM-04-2018-0265

Jørgensen, R., Scarso, E., Edwards, K., Ipsen, C., 2019. Communities of Practice in Healthcare: A Framework for Managing Knowledge Sharing in Operations. Knowledge and Process Management. 26(2), 152-162. https://doi.org/10.1002/kpm.1590

Li-Ying, J., Zhang, Z., Long, Q., 2018. An Alternative Way to Make Knowledge Sharing Work in Online Communities? The Effects of Hidden Knowledge Facilitators. Management and Organization Review. 14(4), 781-825. https://doi.org/10.1017/mor.2018.48

Masa'deh, R., Obeidat, B. Y., Tarhini, A., 2016. A Jordanian empirical study of the associations among transformational leadership, transactional leadership, knowledge sharing, job performance, and firm performance: A structural equation modelling approach. Journal of Management Development. 35(5), 681-705. https://doi.org/10.1108/JMD-09-2015-0134

Matalonga, S., Rodrigues, F., Travassos, G. H., 2017. Characterizing testing methods for context-aware software systems: Results from a quasi-systematic literature review. Journal of Systems and Software. 131, 1-21. https://doi.org/10.1016/j.jss.2017.05.048

Matsuo, M., Aihara, M., 2022. Effect of a community of practice on knowledge sharing

across boundaries: the mediating role of learning goals. Journal of Knowledge Management. 26(1), 1-16. https://doi.org/10.1108/JKM-08-2020-0604

Metzger, M. J., Dick, J., Gardner, A., Bellamy, C., Blackstock, K., Brown, C., Chisholm, R., Cochrane, P., Drewitt, J., Gimona, A., Hester, A., Mathieson, S., Nijnik, M., McVittie, A., Petr, M., Smith, R., Smith, M. 2019). Knowledge sharing, problem solving and professional development in a Scottish Ecosystem Services Community of Practice. Regional Environmental Change. 19, 2275-2286. https://doi.org/10.1007/s10113-019-01537-0

Mosha, N. F., Holmner, M., 2019. Utilisation of Social Media Tools to Enhance Knowledge Sharing Practices among Knowledge Workers at the Nelson Mandela African Institution of Science and Technology (NM-AIST). Library Philosophy and Practice (e-journal). 3600. https://digitalcommons.unl.edu/libphilprac/3600

Nxumalo, L., Mnkandla, E.,. 2019. Individual Benefit from Knowledge Sharing in Software Development Communities of Practice. In: 2019 IEEE AFRICON. Ghana, pp. 1-5. https://doi.org/10.1109/AFRICON46755.2019.9133857

Oliveira, L., Cardoso, E. L., 2022. Psychometric Properties of a Scale to Assess Knowledge Sharing in a Community of Practice. In: 17th Iberian Conference on Information Systems and Technologies (CISTI). Madrid, pp. 1-5. https://doi.org/10.23919/CISTI54924.2022.9820362

Omotayo, F. O., 2015. Knowledge Management as an Important Tool in Organisational Management: A Review of Literature. Library Philosophy and Practice (e-journal). 1238. https://digitalcommons.unl.edu/libphilprac/1238

Pyrko, I., Dörfler, V., Eden, C., 2017. Thinking together: What makes Communities of Practice work? Human Relations. 70(4), 389-409. https://doi.org/10.1177/0018726716661040

Romero-Mas, M., Cox, A. M., Ramon-Aribau, A., Gómez-Zúñiga, B., 2024. Knowledge sharing in virtual communities of practice of family caregivers of people with Alzheimer's. BMC Geriatr. 24, 577. https://doi.org/10.1186/s12877-024-05045-7

Rossignoli, F., Lionzo, A., Henschel, T., Boers, B., 2024. Knowledge sharing in family SMEs: the role of communities of practice. Journal of Family Business Management. 14(2), 310-331. https://doi.org/10.1108/JFBM-03-2023-0038

Setini, M., Yasa, N. N. K., Gede Supartha, I. W., Ketut Giantari, I. G. A., Rajiani, I., 2020. The Passway of Women Entrepreneurship: Starting from Social Capital with Open Innovation, through to Knowledge Sharing and Innovative Performance. Journal of Open Innovation: Technology, Market, and Complexity. 6(2), 25. https://doi.org/10.3390/joitmc6020025

Snyder, H., 2019. Literature Review as a Research Methodology: An Overview and Guidelines. Journal of Business Research. 104, 333-339. https://doi.org/10.1016/j.jbusres.2019.07.039

Stanca, L., Dabija, D. C., Păcurar, E., 2022. Community of practice: Converting IT graduate students into specialists via professional knowledge sharing. Kybernetes. 51(2), 557-581. https://doi.org/10.1108/K-10-2020-0711

Tausczik, Y., Huang, X., 2020. Knowledge Generation and Sharing in Online Communities: Current Trends and Future Directions. Current Opinion in Psychology. 36, 60-64. https://doi.org/10.1016/j.copsyc.2020.04.009

Tong, C., Tak, W., Wong, A., 2015. The Impact of Knowledge Sharing on the Relationship

between Organizational culture and Job Satisfaction: The Perception of Information Communication and Technology (ICT) Practitioners in Hong Kong. International Journal of Human Resource Studies. 5(1), 19-47. http://dx.doi.org/10.5296/ijhrs.v5i1.6895

van der Graaf, P., Burrows, A., Park, H., Sowden, S., 2024. Developing an online knowledge sharing platformand community of practice for healthprofessionals: Experiences from C-WorKSdeveloped in North East England and Yorkshireduring COVID-19. Health Information & Libraries Journal. 1–13. https://doi.org/10.1111/hir.12519

Yan, Z., Wang, T., Chen, Y., Zhang, H., 2016. Knowledge sharing in online health communities: A social exchange theory perspective. Information & management. 53(5), 643-653. https://doi.org/10.1016/j.im.2016.02.001

Zhu, Y. Q., Chiu, H., Infante Holguin-Veras, E. J., 2018. It is more blessed to give than to receive: examining the impact of knowledge sharing on sharers and recipients. Journal of Knowledge Management. 22(1), 76-91. https://doi.org/10.1108/JKM-06-2016-0218

Appendix A: Primary Studies References

SID	References
S1	Hafeez, K., Alghatas, F. M., Foroudi, P., Nguyen, B., & Gupta, S. (2019). Knowledge sharing by entrepreneurs in a virtual community of practice (VCoP). *Information Technology & People*, *32*(2), 405-429.
S2	Jørgensen, R., Scarso, E., Edwards, K., & Ipsen, C. (2019). Communities of practice in healthcare: A framework for managing knowledge sharing in operations. *Knowledge and Process Management*, *26*(2), 152-162.
S3	Li-Ying, J., Zhang, Z., & Long, Q. (2018). An alternative way to make knowledge sharing work in online communities? The effects of hidden knowledge facilitators. *Management and Organization Review*, *14*(4), 781-825.
S4	Matsuo, M., & Aihara, M. (2022). Effect of a community of practice on knowledge sharing across boundaries: the mediating role of learning goals. *Journal of Knowledge Management*, *26*(1), 1-16.
S5	Metzger, M. J., Dick, J., Gardner, A., Bellamy, C., Blackstock, K., Brown, C., ... & Smith, M. (2019). Knowledge sharing, problem solving and professional development in a Scottish Ecosystem Services Community of Practice. *Regional environmental change*, *19*, 2275-2286.
S6	Nxumalo, L., & Mnkandla, E. (2019, September). Individual benefit from knowledge sharing in software development communities of practice. In *2019 IEEE AFRICON* (pp. 1-5). IEEE.
S7	Oliveira, L., & Cardoso, E. L. (2022, June). Psychometric properties of a scale to assess knowledge sharing in a community of practice. In *2022 17th Iberian Conference on Information Systems and Technologies (CISTI)* (pp. 1-5). IEEE.
S8	Romero-Mas, M., Cox, A. M., Ramon-Aribau, A., & Gómez-Zúñiga, B. (2024). Knowledge sharing in virtual communities of practice of family caregivers of people with Alzheimer's. *BMC geriatrics*, *24*(1), 577.
S9	Rossignoli, F., Lionzo, A., Henschel, T., & Boers, B. (2024). Knowledge sharing in family SMEs: the role of communities of practice. *Journal of Family Business Management*, *14*(2), 310-331.
S10	Stanca, L., Dabija, D. C., & Păcurar, E. (2022). Community of practice: Converting IT graduate students into specialists via professional knowledge sharing. *Kybernetes*, *51*(2), 557-581.
S11	van Der Graaf, P., Burrows, A., Park, H., & Sowden, S. (2024). Developing an online knowledge sharing platform and community of practice for health professionals: Experiences from C-WorKS developed in North East England and Yorkshire during COVID-19. *Health Information & Libraries Journal*.

Appendix B: Quality Assessment Scores for Primary Studies

SID	QA1	QA2	QA3	QA4	QA5	Total Scores
S1	2	2	2	2	2	10
S2	2	1	1	1	2	7
S3	2	2	2	2	2	10
S4	2	2	2	2	2	10
S5	2	2	2	2	2	10
S6	2	2	2	2	2	10
S7	0	2	2	2	1	7
S8	2	2	2	2	2	10
S9	2	2	2	2	2	10
S10	2	2	2	2	2	10
S11	2	2	2	2	2	10