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Knowledge sharing in online communities: Incentives and barriers

Fotios Zygouris, Sofia Papadopoulou*

Abstract

With the development of information and communication technology (ICT), online environments have enabled users to establish online communities, where they can congregate and engage in various social interactions (such as discussion groups, bulletin board systems, etc.), both synchronously and asynchronously. Apart from purely social online communities, such as Facebook or MySpace, some communities evolve to share knowledge, forming online communities that often resemble communities of practice found in workplaces and educational institutions, where a common interest, identity, and a set of communication norms and structures are cultivated through interaction. These communities are also known as electronic knowledge networks. The success and proliferation of these networks compel organizations to establish and manage such communities to facilitate intra-organizational knowledge exchange. In this context, this paper endeavors, through a review of Greek and foreign-language literature and articles, to investigate the factors that motivate or inhibit knowledge-sharing behavior (explicit or implicit) in online communities. The resulting findings can assist developers and managers of online knowledge-based communities in effectively promoting online knowledge-sharing behaviors and enhancing their longevity.

Keywords: knowledge sharing, online communities, electronic knowledge networks.

Introduction

The development of Information and Communication Technology (ICT) and the prevalence of the Internet have diversified how people communicate, provide, and receive information (Li, 2015:171; Rajabion, Wakil, Badfar, Mojtabavi Naeini & Zareie, 2019). Internet users, free from the constraints of space and time, can browse the Internet, meet other people randomly or intentionally, and share knowledge, information, ideas, and experiences (DeLaat, Lally, Lipponen & Simons, 2006; Shallen, Yusof, Mohammed, Zahari & Hamzah, 2020).

One of the technological developments that has altered communication patterns is the emergence of social media (Bala, 2014:2; Edwards, 2015). Social media serves as a valuable platform for facilitating knowledge sharing and communication, not only at the personal/individual level but also within organizations (Ahmed, Ahmad, Ahmad & Zakaria, 2018:1).

The utilization of social media for knowledge sharing has garnered considerable scholarly attention. While there has been extensive literature exploring the use of social media for

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knowledge sharing (Ihsaniyati, Sarwoprasodjo, Muljono & Gandasari, 2023:2283-1), further investigation is warranted into the factors that motivate or hinder knowledge sharing behavior within online communities. This study aims to conduct a literature review of research on the utilization of social media for knowledge sharing, particularly focusing on the factors influencing knowledge sharing behavior (explicit or implicit) within online communities.

Online communities represent one of the most prominent facets of social media, playing a pivotal role in the dissemination of data and information (Maharani & Hendriyani, 2017; Souri, Rahmani, Navimipour & Rezaei, 2019). As new tools for knowledge management, they are rapidly expanding (Yue & Zhang, 2016:491). These platforms provide individuals, groups, and organizations with a convenient way to share and seek information and knowledge on topics of interest (Hilverda & Kuttschreuter, 2018:1904; Jacobsen, Tudoran & Lähteenmäki, 2017:10), delivering this information promptly, accurately, and effectively (Kuttschreuter, Rutsaert, Hilverda, Regan, Barnett & Verbeke, 2014:11). Online communities transcend the boundaries of traditional communities, enhance the efficiency of online communication, and foster innovative methods for generating and disseminating organizational knowledge (Rajabion, Nazari, Bandarchi, Farashiani & Haddad, 2019). Furthermore, online communities promote interaction and the sharing of knowledge and experiences, serving as a key pillar for the sense of security among participants within organizations. With increasing numbers of individuals viewing online communities as effective communication channels and primary sources of information and knowledge, understanding the factors that can facilitate or impede knowledge sharing becomes imperative.

This paper is organized as follows: The first section explores the concepts of knowledge and knowledge management. The second section introduces online communities. The third section describes the process of knowledge sharing within these communities. The fourth section examines the motivations and barriers that influence participation in online communities. The paper concludes with a discussion and final conclusions.

Knowledge - Knowledge exchange

In today's "knowledge economy" era, knowledge is recognized as a crucial organizational asset that requires appropriate management and communication to uphold the organization's competitiveness and enhance its efficiency (Colnar & Dimovski, 2017:147). Knowledge is an intangible asset (Bashir, Usoro & Khan, 2015:12) that can reside within individuals, organizational documents, knowledge management systems, processes, and activities, embodying rules, routines, and behaviors acquired through years of work experience (Filieri, 2010:15). The value of knowledge manifests when it is accessible, developed, and applied (North & Scharle, 2020:10) and can be enhanced when shared with others (Shallen et al., 2020:2).

Arntzen-Bechina and Leguy (2007:154) define knowledge as "a fluid combination of experiences, values, contextual information, expertise, and grounded intuition that provides a framework for evaluating and integrating new experiences and information." According to Mihindu, Fernando, and Khosrowshahi (2008), processes related to knowledge—such as creation, recognition, storage, evaluation, exchange, transfer, acquisition, community learning, distribution, and dissemination—are highly interdependent knowledge management processes in which individuals or groups engage daily.

Knowledge management can be perceived as the process through which individuals create, transfer, and embrace knowledge across different levels of interactions or networks (Nair & Munusami, 2019:175). Knowledge management tools encompass policies, know-how, practices, and technologies that facilitate the exchange and transfer of knowledge. The primary organizational benefits include fostering connections among individual members to enhance, expand, and share their knowledge (Bashir et al., 2015:12).

In organizations, knowledge management is described as "an organizational process of creating a central source of knowledge that facilitates the acquisition, assimilation, distribution, integration, sharing, retrieval and reuse of internal and external, explicit and tacit knowledge to promote innovation in the organization" (Kaira & Priri, 2022:543).

Knowledge creation and sharing within organizations are fundamental components of knowledge management, contributing to the development of organizational value. Particularly, knowledge sharing—where individuals voluntarily and consciously exchange their knowledge, experiences, and skills (Abker, Mohamed, Ibrahim & Eltayeb, 2019:34), collaboratively generating new knowledge within organizations or departments—is among the foundational functions of any knowledge management initiative within specific organizations (Zheng, 2017:52; Zygouris & Papadopoulou, 2022:3799). This collaborative process facilitates cooperation, knowledge dissemination, acquisition, and the collective ownership of knowledge by multiple parties (Zhang, Ma & Lyu, 2021:1511). Furthermore, it is crucial for translating individual knowledge into organizational knowledge (van den Hooff & de Ridde, 2004). Individuals engaging in knowledge exchange must understand the conditions under which knowledge exchange occurs and the potential benefits they stand to gain. Additionally, they must possess the appropriate motivation to transfer knowledge (von Krogh, Nonaka & Aben, 2001). Incentives encourage stakeholders to share their knowledge and experiences, thereby enhancing organizational innovation and excellence.

Knowledge, whether tacit or explicit, constitutes a critical organizational asset. The sustainability of an organization relies on its ability to acquire, store, and utilize knowledge effectively. To gain a competitive edge, every organization must focus not only on selecting and recruiting employees with the requisite knowledge but also on implementing procedures and practices to leverage the existing knowledge within the organization (Jusoh & Alfawareh, 2019:1). Moreover, fostering a culture of knowledge sharing is essential. This can be achieved

by acknowledging and rewarding employees who actively share their knowledge and by providing the necessary resources to facilitate their involvement. Additionally, cultivating a culture of knowledge sharing entails creating a collaborative environment where employees feel empowered to contribute their knowledge, leading to enhanced organizational performance and competitiveness (Budrytė & Vainauskienė, 2023:25-26). Often, employees possess knowledge and experiences that remain unexpressed. However, when incentives are provided and tacit knowledge is captured, the potential to enhance organizational learning increases. A crucial element is transforming individual learning into organizational learning.

In the first generation, knowledge sharing tools were primarily designed to address challenges associated with temporal and geographical distances among workers. In the second generation, knowledge exchange tools take on a "socio-technical" nature, aiming to diminish social distance within the workplace (Lee, Wang, Yeoh, Ikasari, 2020:1).

Online communities

According to Aristotle, humans are inherently social beings. Throughout history, individuals have formed small or large groups to fulfill common needs and pursue shared objectives. The defining characteristic of these groups or communities is social interaction (Hatzis, Grivopoulou & Robolas, 2020:78).

In the first definition, these groups live in the same geographical area, are self-sufficient in economic, religious, social and other aspects, and are strictly separated from other groups. Contemporary authors emphasize the importance of belonging, emotional bonds and mutual support among members and the common culture they share, while ignoring the strictly territorial aspect (Cărtărescu, 2010: 81).

A community can exist in virtual or physical spaces, or a combination of both, where individuals with similar interests, objectives, and experiences gather to share, connect, exchange ideas, and collaborate towards common goals. Groups with specific interests also communicate in cyberspace through email, forums or bulletin boards, newsgroups, and chat rooms (Abuhamdieh, 2006:23). Social media platforms can facilitate the emergence of such communities and provide ongoing support to sustain them (Faraj, von Krogh, Monteiro & Lakhani, 2016:4).

Online communities represent a form of electronic structure enabling Internet users to connect, communicate and collaborate. Similar to offline communities, online communities consist of individuals who share common backgrounds, values, or interests and engage in regular interactions. Each participant can be a sender and receiver of information from different cultural backgrounds. Online communities enable global knowledge exchange (Bashir et al., 2015:12).

Faraj, Jarvenpaa, and Majchrzak (2011:1224) define online communities as "open collectives of dispersed individuals whose members are not necessarily known or identifiable but have common interests and care about their individual and collective well-being".

Members of these communities nurture and sustain their relationships through computer-mediated communication (Gruzd, 2018), guided by their own set of norms and requirements, including engagement, moderation, and management (Bond, 2020). The growth and effectiveness of online communities hinge on the number of active members and their level of participation (Hjelm & Stålbom, 2023:3). For sustainable development, a major challenge is to ensure that participants voluntarily contribute and share knowledge. To achieve this goal, many online communities provide anonymity services to encourage members to participate more in knowledge sharing activities (Lee, 2021:1).

Rheingold (1993, as cited in Papadhmhtriou & Lionarakis, 2009:41) coined an additional term "virtual communities" to describe groups of individuals engaging in public discussions over an extended period, gradually forming emotional connections and establishing networks of human relations.

Online communities have existed on the Internet for more than two decades. Existing literature shows that members of online communities communicate, exchange information and share knowledge through the Internet (Akhavan, Nabizadeh, & Rajabion, 2017), and the main reasons that motivate people to join the community are seeking social support and the exchange of information and experience (Al-Khasawneh et al., 2023:2; Sari & Othman, 2018:378). These communities extend beyond the confines of traditional settings and enhance the efficacy of online communication interactions (Rajabion et al., 2019:366). Interaction within online communities can take various forms, including face-to-face meetings with an online group or a combination of both (Ford, Korjonen, Keswani & Hughes, 2015:2). This versatility suggests that online communities offer added value by virtue of their ubiquity, enabling users to share knowledge anytime, leveraging internet technology and connectivity (Ogbamichael & Warden, 2018). Consequently, they are perceived as informal tools for enhancing knowledge sharing (Tang & Yang, 2005:500).

The success of online communities depends largely on the willingness of participants to share and exchange knowledge with others. Therefore, one of the challenges of online communities is to retain and motivate members to contribute knowledge. Many online communities fail because members are unwilling to participate in the knowledge sharing process (Sari & Othman, 2018:378).

As user-members increasingly utilize complex new web services (Web 2.0) for real-time communication, content creation, and file exchange, the online communities they form are evolving into second-generation communities (community 2.0). Within Web 2.0 environments, individuals have access to various communication channels such as forums, social networks, blogs, and communities, enabling them to contribute their knowledge and skills while also learning from others (Al-Qadhi, Md Nor, Ologbo & Knight, 2015; Lai, Huang & Hung, 2018).

It is important to highlight the advantages of online communities.

Factors such as time saved when searching for information on the Internet, collaborative problem solving during economic crises, available support systems, and user-employee satisfaction and loyalty significantly contribute to the healthy development of both the community and the organization (Richmond, 2020).

Knowledge sharing in online communities

Knowledge sharing entails the deliberate behavior and choice of individuals to voluntarily externalize or disseminate knowledge, as well as the capacity of knowledge recipients to internalize or assimilate this knowledge (Zhang et al., 2021:1510-1511). Within organizations, the primary objective of knowledge sharing is to leverage accessible knowledge to enhance employee performance, effectiveness, and the coordination of organizational procedures (Lenart-Gansiniec, 2019:220). Abkers et al. (2019:34) note that knowledge sharing among employees facilitates the absorbtion, comprehension, and applicability of knowledge by others within the organization.

Online communities facilitate a novel approach to knowledge sharing, significantly broadening the scope of traditional communities (Li, 2015:171). They provide platforms for collaboration by facilitating the exchange of both implicit and explicit knowledge (Faraj & Shimigu, 2018:1593), thereby enhancing the efficacy of online communication interactions (Li, 2015:171; Rajabion et al., 2019:366).

In these communities, the creation and dissemination of knowledge are entrusted to the users. Every registered user has the ability to share information and knowledge, fostering the productive flow of knowledge within the community (Shalleh et al., 2020:2). The process of knowledge sharing entails the knowledge source utilizing the online community as a mechanism to effectively transfer their knowledge. This process enables the recipient to develop the necessary understanding, facilitating the generation of solutions to problems (Sharratt & Usoro, 2003:189).

Participation in online communities is voluntary and characterized by a high degree of freedom, with individuals themselves determining the content and type of knowledge shared within them (De Laat, 2006). The more active the members, the more frequent the knowledge exchange between users (Zhang, Ma & Lyu, 2021:1510). Many organizations recognize online communities as crucial for knowledge management and actively support their development to achieve business goals (Hsu, Ju, Yen & Chang, 2007:153). The use of online communities for knowledge sharing in large organizations is increasing (Bashir et al., 2015:12). The increase in their use is particularly evident when they operate in highly uncertain or ambiguous environments (Zhang et al., 2021:1511). Furthermore, organizations create online communities to facilitate the knowledge sharing process among their employees (Hwang, Singh & Argote, 2015:1593). Many authors point out that large organizations consciously recruit members from

different societies, countries, and cultures who bring different ideas and cultural values to the workplace (Bashir et al., 2015:12).

Organizations can derive significant benefits from knowledge sharing through online communities. As individuals share their expertise and experiences, new knowledge is generated, which can enhance organizational processes, clarify goals, and lead to more effective decision-making. The resulting new organizational knowledge can then be leveraged to foster innovation, improve performance, and enhance competitiveness (Budrytė & Vainauskienė, 2023:19-20). Knowledge sharing within online communities enables organizations to identify innovative solutions and practices, thereby improving the effectiveness and efficiency of human resources.

Motivations and barriers to participation in online communities

In online environments, knowledge sharing is intricately connected to the values and norms upheld within online communities. Individuals contribute to these values by adhering to community rules (Keating & Straub, 2020:2). The extent of knowledge sharing within online communities is influenced by the motivations driving individuals to participate, as well as the barriers hindering their engagement. Motivations and barriers to knowledge sharing in online communities arise concurrently within people's actions (Hew & Hara, 2007:2311). In this study, motivations refer to the factors that activate and guide individuals' behavior towards sharing knowledge.

Motivations for knowledge sharing in the online context can generally be categorized into six main groups: reciprocity, personal gain, altruism, team commitment, familiarity with technology use, and extrinsic goals (Hew & Hara, 2007:2311). In communities where knowledge sharing is central, encouraging individuals to share knowledge and increasing their motivation to do so, as well as enhancing the frequency of knowledge sharing, are key considerations in the online knowledge exchange process (Yilmaz, 2016:374). When employees perceive that a community meets their interests and needs, provides a pleasant experience, and offers rich and high-quality knowledge or resources, they are more likely to be satisfied with the community and inclined to participate actively. Consequently, the more active the members of an online community, the greater the frequency of knowledge flow among its users (Zhang et al., 2021:1510). Therefore, it is essential to identify the factors that either encourage or hinder individuals' behaviors in the knowledge sharing process (Yilmaz, 2016:374).

Antikainen and Väätäjä (2010:445-446), categorized motivations for participating in online communities into three categories: a) intrinsic motivations, such as ideology, joy, fun, entertainment, interest in the subject of the community, learning, sharing knowledge, improving skills, b) extrinsic motivation, such as a sense of efficacy, technology-related user needs, rewards, organizational recognition, reputation, increased professional status, and c) social

motives, such as altruism, reciprocity, care for the community, friendship and recognition from other members.

Barriers to knowledge sharing can be defined as factors that limit an individual's behavioral intention to share knowledge (Hew & Hara, 2007:2312). Recently, Hjelm and Stålbom (2023:12) after an overview of the relevant literature listed schematically the possible obstacles to the exchange of knowledge. First, they listed all the barriers to knowledge sharing. Then, they categorized the barriers into four categories of factors: individual, organizational, cultural and technical factors. In the end, they noted the broadest category that summarizes all thirteen barriers they came up with in their study (Figure 1).

Figure 1: Model summarizing individual, organizational, cultural & technical barriers to knowledge sharing.

Kacperska and Łukasiewicz (2020:11) categorized knowledge sharing barriers into three categories:

Organizational barriers include the absence of a transparent incentive system that rewards knowledge sharing, an "outdated" organizational culture, the lack of positive examples from organizational leadership, insufficient evidence of benefits from knowledge sharing, rigid organizational hierarchies, and inadequate processes or an unsupportive work climate.

Individual barriers encompass differences in knowledge level and experience, time constraints, perceived risks associated with knowledge sharing, personal biases or interpersonal conflicts, as well as gender, age, and cultural disparities.

Technological barriers may involve a lack of training in utilizing modern technologies for knowledge sharing or a misalignment between expectations and technical capabilities.

Rajabion et al. (2019:337) have identified and categorized the factors influencing knowledge sharing in online communities. These factors included satisfaction, motivation, usefulness, ease of use, social capital, member attachment, e-loyalty, culture, online learning, willingness, self-efficacy, commitment, psychological safety, altruism, reciprocity, fairness, social support,

rewards, reputation, pleasure in helping others, social interaction, identification and shared vision.

Hew and Hara (2007:2312) also identified six general categories of barriers that can inhibit knowledge sharing in online communication environments: technology, lack of knowledge to share knowledge, competition, factors relating to the community itself, their personal attitude and confidentiality issues. Employees, as noted by Ardichvili, Page, and Wentling (2003:64), may be reluctant to contribute knowledge to the organization due to fears of potential criticism or concerns about inadvertently providing trivial, imprecise, or irrelevant contributions that could mislead other community members, to the detriment of the organization.

Trust emerges as the most critical factor for knowledge sharing within online communities, as emphasized by Al-Qadhi, Md Nor, Ologbo, and Knight (2015:154) and Fullwood, Rowley, and McLean (2018:1). Individuals are more inclined to share knowledge when they perceive others as trustworthy, as they are less apprehensive about the misuse or exploitation of shared knowledge. Studies by Chang and Chuang (2011), Lee and Hyun (2018), and Kumi and Sabherwal (2019) have demonstrated that trust and reputation motivations significantly promote knowledge sharing among users in online communities. Trust, reputation, and reciprocity motivations positively influence both the quantity and quality of knowledge sharing. A higher level of trust among community members, coupled with a strong pursuit of status and reputation within the community, and a robust sense of reciprocity, correlates with increased frequency of knowledge sharing within the community. Moreover, an emphasis on integrity, accuracy, and professionalism in shared knowledge further enhances knowledge sharing (Zhang et al., 2021:1519).

Conclusions

This study aimed to identify the factors influencing knowledge sharing in online communities, which are widely adopted by organizations for knowledge management purposes. Online communities offer environments where individuals within organizations can converge based on common roles, expertise, or shared interests, facilitating interactions. They play a crucial role in fostering social networks among individuals, enhancing both individual employee performance and organizational effectiveness. ICT serves as a supportive factor for knowledge, information, and experience exchange within online communities, offering numerous advantages. Existing online platforms facilitate and enhance knowledge sharing by overcoming time and space constraints, thus improving access to information and knowledge among individuals who possess it. However, barriers to knowledge exchange exist, stemming from factors that inhibit an individual's intention to share knowledge. These barriers manifest at individual, organizational, cultural, and technological levels.

The efficiency of online communities yields positive outcomes, such as time savings and collaborative problem-solving. Furthermore, increased activity among members within an

online community fosters a more frequent flow of knowledge among its participants, enhancing interaction, externalization of tacit knowledge, and organizational innovation. However, individuals may refrain from contributing knowledge due to various reasons, often rooted in self-interest. Therefore, organizations must cultivate a culture of knowledge sharing. This can be achieved by acknowledging and rewarding individuals who actively share their knowledge, providing appropriate resources, and encouraging participation. Additionally, the implementation of training programs can significantly raise awareness among employees regarding the importance of participating in knowledge-sharing communities, while also enhancing their knowledge and skills at a specific level. When organizations create conditions for optimal exchange, storage and transfer of human resource knowledge and experience, their competitiveness and efficiency increase. Without the development of knowledge management and online communities, organizations have a large amount of knowledge and experience that remains untapped.

Through online communities, the parties involved share their know-how and experiences, improve the organizational processes in the organization, resulting in more effective achievement of goals. In order to reduce barriers to knowledge sharing in online communities, it is necessary to develop trust and a positive and supportive framework for human resources to externalize tacit knowledge. Then there are chances that the tacit knowledge will turn into explicit and this in turn into organizational knowledge. An organization's organizational culture when functioning positively increases the prospects for knowledge sharing through online communities and creates conditions for promoting organizational innovation and effectiveness. Incentives from the leadership of organizations to human resources will promote more effective sharing of knowledge and experience and drive it to achieve the goals of organizations.

References

Abker, A. Y., Mohamed, A. T., Ibrahim, S. B., & Eltayeb, T. K. (2019). Knowledge Acquisition and Knowledge Sharing as Determines of Organizational Competitive Advantage. *American Journal of Business, Economics and Management, 7*(1), 32-39.

Abuhamdieh, A. (2006). Knowledge Transfer In Virtual Communities. *Review of Business Information Systems, 10*(4), 23-37.

Ahmed, Y. A., Ahmad, M. N., Ahmad, N., & Zakaria, N. H. (2018). Social media for knowledge-sharing: a systematic literature review. *Telematics and Informatics,* 37, 72-112.

Akhavan, P., Nabizadeh, M., & Rajabion, L. (2017). Introducing knowledge management pattern at national level applying grounded theory method and fuzzy dematel. *VINE Journal of Information and Knowledge Management Systems, 47*(3), 372-394. https://doi.org/10.1108/VJIKMS-05-2016-0022

Al-Khasawneh, M., Al-Haddad, S., Sharabati, A.-A.A., Al Khalili, H. H., Azar, L. L., Ghabayen, F. W., Jaber, L. M., Ali, M. H., & Masa'deh, R. (2023). How Online Communities Affect Online Community Engagement and Word-of-Mouth Intention. *Sustainability,* 15, 11920. https://doi.org/10.3390/ su151511920

Al-Qadhi, Y. H, Md Nor, K., Ologbo, A. C., & Knight, M. B. (2015). Knowledge sharing in a multi-nationality workforce: Examining the factors that influence knowledge sharing among employees of diverse nationalities. *Human Systems Management, 34*(3), 149-165. doi:10.3233/HSM-150844

Arntzen-Bechina, A.A., & Leguy, C. A. D. (2007). An insight into knowledge flow in biomedical engineering science. *The Electronic Journal of Knowledge Management, 5*(2), 153–160.

Antikainen, J. M., & Väätäjä, H. K. (2010). Rewarding in open innovation communities - how to motivate members. *International Journal of Entrepreneurship and Innovation Management, 11*, 440-456. https://doi.org/10.1504/IJEIM.2010.032267

Ardichvili, A., Page, V., & Wentling, T. (2003). Motivation and barriers to participation in virtual knowledge-sharing communities of practice. *Journal of Knowledge Management, 7*(1), 64–77. https://doi.org/10.1108/13673270310463626

Bala, K. (2014). Social media and changing communication patterns. *Global Media Journal-Indian Edition, 5*(1), 1-6.

Bashir, S., Usoro, A., & Khan, I. (2015). Knowledge sharing in virtual communities: a comparison of three different cultures. *International Journal of E-Business Development, 5*(1), 12-20. Article 2. http://www.academicpub.org/ijed/paperInfo.aspx?paperid=16433#Abstract [accessed 20 August 2024].

Bond, M. (2020, December 16). What is an Online Community? The Basics & Benefits. *higher logic.* https://www.higherlogic.com/blog/what-is-an-online-community/ [αccessed 20 April 2024].

Budrytė, M., & Vainauskienė, V. (2023). Virtual Communities of Practice as a Knowledge Sharing Tool: Recommendations for International Business. *Management of Organizations: Systematic Research, 89*(1), 15-30. https://doi.org/10.2478/mosr-2023-0002

Cărtărescu, I. (2010). Utility of Online Communities – Ways One Can Benefit From One's Online Life. *Journal of Comparative Research in Anthropology and Sociology, 1*(2), 79-91.

Chang, H. H., & Chuang, S. S. (2011). Social capital and individual motivations on knowledge sharing: participant involvement as a moderator. *Information & Management, 48*(1), 9-18. doi:10.1016/j.im.2010.11.001

Colnar, S., & Dimovski, V. (2017). Knowledge management initiatives benefits for the Slovenian public sector. *Management: journal of contemporary management issues*, *22*(Special Issue), 145-161.

Cristofaro, C. L., Reina, R., Ventura, M., Melina, A-M., & Vesperi, W. (2022). Knowledge management in virtual community: some implications in COVID-19 pandemic. ITAIS 2022 Proceedings. 24. https://aisel.aisnet.org/itais2022/24 [accessed 25 August 2024].

De Laat, M. (2006). *Networked learning.* Apeldoorn, Netherlands: Politie academie.

De Laat, M., Lally, V., Lipponen, L., & Simons, R-J. (2006). Analyzing student engagement with learning and tutoring activities in networked learning communities: a multi-method approach. *International Journal of Web Based Communities, 2*(4), 394-412.

Edwards, M. (2015). How Social Media Has Changed How We Communicate. https://fowmedia.com/social-media-changed-communicate/ [accessed 20 April 2024].

Faraj, S., Jarvenpaa, S. L., & Majchrzak, A. (2011). Knowledge collaboration in online communities. *Organization Science, 22*(5), 1224–1239. https://doi.org/10.1287/orsc.1100.0614

Faraj, S., & Shimizu, T. (2018). Online Communities and Knowledge Collaborations. In R. Aldag (Eds.), *Oxford Research Encyclopedia of Business and Management (pp.1-20).* Oxford University Press.

Faraj, S., von Krogh, G., Monteiro, E., & Lakhani, K. R. (2016). Online Community as Space for Knowledge Flows. *Information Systems Research, Articles in Advance, 27*(4), 1–17. doi:10.1287/isre.2016.0682

Filieri, R. (2010). *Overcoming Knowledge Sharing Barriers through Communities of Practice: Empirical Evidence from a Big Automotive Supplier*. U.K.: Cambridge Scholars Publishing.

Ford, J., Korjonen, H., Keswani, A., & Hughes, E. (2015).Virtual communities of practice: can they support the prevention agenda in public health?. *Online Journal of Public Health Information, 7*(2), e222. doi: 10.5210/ojphi.v7i2.6031

Fullwood, R., Rowley, J., & McLean, J. (2018). Exploring the Factors That Influence Knowledge Sharing between Academics. *Journal of Further and Higher Education,* 9486, 1–13.

Gruzd, A. (2018). Online Communities. In Alhajj, R., Rokne, J. (Eds.), *Encyclopedia of Social Network Analysis and Mining* (pp.1171-1181). Springer. doi:10.1007/978-1-4614-6170-8_81

Hatzis, I., Grivopoulou, A., & Robolas, P. (2020). The role of learning communities in teacher education Vocational Training Institutes: Empirical field research. *International Journal of Educational Innovation, 2*(6), 76-87.

Hew, K. F., & Hara, N. (2007). Knowledge Sharing in Online Environments: A Qualitative Case Study. *Journal of the American Society for Information Science and Technology, 58*(14), 2310-2324. http://dx.doi.org/10.1002/asi.20698

Hilverda, F., & Kuttschreuter, M. (2018). Online information sharing about risks: The case of organic food. *Risk Analysis, 38*(9), 1904–1920.

Hjelm, E., & Stålbom, A. (2023). *Barriers to Knowledge sharing: An investigation of Practice Area Networks at WSP Sweden (Thesis).* Department of Business Studies, Uppsala University.

Hsu, M.-H., Ju, T. L., Yen, C.-H., & Chang, C.-M. (2007). Knowledge sharing behavior in virtual communities: The relationship between trust, self-efficacy, and outcome expectations. *International Journal of Human-Computer Studies, 65*(2), 153–169. https://doi.org/10.1016/j.ijhcs.2006.09.003

Hwang, E. H., Singh, P. V., & Argote, L. (2015). Knowledge Sharing in Online Communities: Learning to Cross Geographic and Hierarchical Boundaries. *Organization Science, INFORMS, 26*(6), 1593-1611. doi: 10.1287/orsc.2015.1009

Jacobsen, L. F., Tudoran, A. A., & Lähteenmäki, L. (2017). Consumers' motivation to interact in virtual food communities—The importance of self-presentation and learning. *Food Quality and Preference, 62*(12), 8–16.

Jusoh, S., & Alfawareh, H. (2019). Empirical study of knowledge sharing among multinational academicians. *BAU Journal - Science and Technology,* 1(1), Article 9. doi:10.54729/2959-331X.1010

Ihsaniyati, H., Sarwoprasodjo, S., Muljono, P., & Gandasari, D. (2023). The Use of Social Media for Development Communication and Social Change: A Review. *Sustainability*, 15, 2283. https://doi.org/10.3390/ su15032283

Kacperska, E., & Łukasiewicz, K. (2020). The Importance of Trust in Knowledge Sharing and the Efficiency of Doing Business on the Example of Tourism. *Information, 11*(6), 311. https://doi.org/10.3390/info11060311

Kaira, W., & Phiri, J. (2022). A Model for Improved Knowledge Management Performance in Higher Education Institutions in Developing Countries: A Case of Zambia. *Open Journal of Business and Management,* 10, 543-563. doi:10.4236/ojbm.2022.101030

Keating, B. W., & Straub, D. (2020). A taxonomy of knowledge sharing in online communities. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3725223 [αccessed 20 April 2024].

Kumi, R., & Sabherwal, R. (2019). Knowledge sharing behavior in online discussion communities: examining behavior motivation from social and individual perspectives. *Knowledge Process Management, 26*(2), 110–122. doi:10.1002/kpm.1574

Kuttschreuter, M., Rutsaert, P., Hilverda, F., Regan, Á., Barnett, J., & Verbeke, W. (2014). Seeking information about food related risks: The contribution of social media. *Food Quality & Preference,* 37, 10–18.

Lai, H-M., Huang, Y-W., & Hung, S-Y. (2018). A Meta-analysis of Knowledge Sharing in Virtual Communities: The Moderating Effect of Membership Types. In Uden, L., Hadzima, B., Ting, IH. (eds), *Knowledge Management in Organizations. KMO 2018. Communications in Computer and Information Science* (vol 877, pp.83-93), Springer, Cham. https://doi.org/10.1007/978-3-319-95204-8_8

Lee, A. R. (2021). Investigating Moderators of the Influence of Enablers on Participation in Knowledge Sharing in Virtual Communities. *Sustainability,* 13, 9883. https://doi.org/10.3390/ su13179883

Lee, K. H., & Hyun, S. S. (2018). The effects of tourists' knowledge-sharing motivation on online tourist community loyalty: the moderating role of ambient stimuli. *Current Issues in Tourism,* 21(13), 1521–1546. doi:10.1080/13683500.2016.1145197

Lee, A. S. H., Wang, S., Yeoh, W., & Ikasari, N. (2020). Understanding the Use of Knowledge Sharing Tools. *Journal of Computer Information Systems, 61*(5), 458-470. https://doi.org/10.1080/08874417.2020.1752850

Lenart-Gansiniec, R. (2019). Understanding knowledge sharing in virtual communities. In Weber, S., Truschkat, I., Schröder, C., Peters, L., Herz, A. (eds), *Organisation und Netzwerke. Organisation und Pädagogik,* 26. Wiesbaden: Springer VS. https://doi.org/10.1007/978-3-658-20372-6_20

Li, J. (2015). Knowledge sharing in virtual communities: A social exchange theory perspective. *Journal of Industrial Engineering and Management, 8*(1), 170-183. https://dx.doi.org/10.3926/jiem.1389

Maharani, R. S., & Hendriyani, H. (2017). The Influence of Motivation and Social Capital to Knowledge Sharing in Online Communities: Study on Female Daily Online Community. *In Indonesia International Graduate Conference on Communication (IndoIGCC) Proceeding, 1*(2), 500-518.

Mihindu, S., Fernando, T., Khosrowshahi, F. (2008). Knowledge processing, codification and reuse model for communities of practice. In Johannesson, P., Arabnia, H.R. and Shahzad, M.K. (Ed), *Special Issue: Information & Knowledge Engineering, Ubiquitous Computing and Communication Journal,* Jan 2008

Nair, V., & Munusami, C. (2019). Knowledge management practices: An exploratory study at the Malaysian higher education institutions. *Journal of Research in Innovative Teaching & Learning, 13*(2), 174-190.

North, K., & Scharle, A. (2020). *European network of public employment services: Practitioner Toolkit on Knowledge Management.* Luxembourg: Publications Office of the European Union.

Ogbamichael, H. B., & Warden, S. (2018). Information and knowledge sharing within virtual communities of practice. *South African Journal of Information Management, 20*(1), a956. https://doi.org/10.4102/sajim.v20i1.956

Papadimitriou, S., & Lionarakis, A. (2009). The Role of the Professor-Advisor and the development of his support mechanism in Distance Education. In *Proceedings 5th International Conference in Open & Distance Learning, 5*(2A), 38-55. Athens, Greece. doi:10.12681/icodl.437

Rajabion, L., Nazari, N., Bandarchi, M., Farashiani, A., & Haddad, S. (2019). Knowledge sharing mechanisms in virtual communities: A review of the current literature and recommendations for future research. *Human Systems Management, 38*(4), 365-384. doi:10.3233/HSM-190516

Rajabion, L., Wakil, K., Badfar, A., Mojtabavi Naeini, S., & Zareie, B. (2019). A new model for assessing the impact of ICT and digital knowledge on students' thoughts and beliefs. *Journal of Engineering, Design and Technology, 17*(5), 943-959. https://doi.org/10.1108/JEDT-01-2019-0008

Richmond, S. (2020). The Importance Of Online Communities In 2020. *Forbes.* https://www.forbes.com/councils/forbestechcouncil/2020/08/26/the-importance-of-online-communities-in-2020/ [accessed 20 August 2024].

Sari, H., & Othman, M. (2018). Factors Affecting Participantsâ€™ Knowledge-Sharing Behaviors in Online Communities: a Systematic Review. *International Journal of Engineering & Technology*, *7*(4.35), 378-382. https://doi.org/10.14419/ijet.v7i4.35.22766

Shallen, M. S., Yusof, H. S. M., Mohammed, N. H., Zahari, A. S. M., & Hamzah, S. F. M. (2020). Knowledge Sharing in Online Community: A Review. *Journal of Physics: Conference Series,* 1529. doi:10.1088/1742-6596/1529/2/022052

Sharratt, M., & Usoro, A. (2003). Understanding Knowledge-Sharing in Online Communities of Practice. *Electronic Journal on Knowledge Management*, 1, 187-196.

Souri, A., Rahmani, A. M., Navimipour, N. J., & Rezaei, R. (2019). Formal modeling and verification of a service composition approach in the social customer relationship management system. *Information Technology & People, 32*(6), 1591-1607. https://doi.org/10.1108/ITP-02-2018-0109

Tang, J-H., & Yang, H-L. (2005). User role and perception of requirements in a web-based community of practice. *Online Information Review, 29*(5), 499-512.

van den Hooff, B., & de Ridder, J. A. (2004). Knowledge sharing in context: The influence of organizational commitment, communication climate and CMC use on knowledge sharing. *Journal of Knowledge Management, 8*(6), 117-130. https://doi.org/10.1108/13673270410567675

von Krogh, G., Nonaka, I., & Aben, M. (2001). Making the most of your company's knowledge: A strategic framework. *Long Range Planning: International Journal of Strategic Management, 34*(4), 421–439. https://doi.org/10.1016/S0024-6301(01)00059-0

Yilmaz, R. (2016). Knowledge sharing behaviors in e-learning community: Exploring the role of academic self-efficacy and sense of community. *Computers in Human Behavior*, 63, 373–382. doi:10.1016/j.chb.2016.05.055

Yue, D., & Zhang, H. (2016). Research on the influencing factors of knowledge sharing in online virtual community. In *Proceedings of the 2016 3rd International Conference on Materials Engineering, Manufacturing Technology and Control.* DOI:10.2991/icmemtc-16.2016.95

Zhang, J., Ma, Y., & Lyu, B. (2021). Relationships Between User Knowledge Sharing in Virtual Community with Community Loyalty and Satisfaction. *Psychology Research and Behavior Management,* 14, 1509-1523. doi: 10.2147/PRBM.S33113

Zheng, T. (2017). A Literature Review on Knowledge Sharing. *Open Journal of Social Sciences, 5*(3), 51-58. doi:10.4236/jss.2017.53006

Zygouris, F., & Papadopoulou, S. (2022). The Added Value of Knowledge Management in the Operation of Public Organizations. *International Journal of Scientific Research and Management, 10*(08), 3797-3806. doi: 10.18535/ijsrm/v10i8.em07