

EVOLVING TRENDS IN KNOWLEDGE MANAGEMENT INNOVATION: AN INDEX-KEYWORD ANALYSIS (2000–2024)

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Article history

Received date : 15-8-2024
Revised date : 16-8-2024
Accepted date : 7-9-2024
Published date : 15-10-2024

To cite this document:

Omar, M. A. & Nosheen, A. (2024). Evolving trends in Knowledge Management Innovation: An index-keyword analysis (2000–2024). *Journal of Islamic, Social, Economics and Development (JISED)*, 9 (66), 795 – 803.

Abstract: *Over the past few decades, there has been a notable growth in knowledge management (KM) innovation due to shifting organisational needs and advancements in research. This study thoroughly reviews the current developments in KM innovation, emphasising organisational implementations and progressions. Effective KM innovation is significant because it can improve modernization, organizational learning, and strategic decision-making. This article employed bibliometric keyword analysis to focus on trend index keyword analysis, using a sample of 1,287 Scopus-indexed journals in English, specifically examining computer science articles published from 2000 to 2024. The analysis reveals a wide range of keywords associated with KM innovation. Yet, advancements in KM innovation will continue to be important and central in 2024, underscoring their continued significance in modern organizational environments. To help organisations leverage knowledge as a strategic asset, the findings offer insightful information on the opportunities and obstacles of adopting successful KM innovation initiatives. This study adds to the current conversation on KM innovation in modern businesses by providing a thorough summary of these advancements, highlighting important topics of interest and potential future research areas.*

Keywords: *Knowledge Management, Innovation, Trend Index Analysis.*

Introduction

Knowledge management (KM) has gained recognition as a crucial tool for enhancing organizational performance and effectiveness in recent years (Chatterjee et al., 2023). Furthermore, increased globalization, accelerating technological change, and the desire to exchange best innovation have all contributed to the remarkable increase in the relevance of KM within businesses (Gonçalves et al., 2024). Since some forms of complex knowledge, like capabilities or routines, can be valuable, scarce, and difficult to imitate, knowledge is seen as the most important strategic resource for ensuring an organization's long-term survival and success, according to the knowledge-based view of the firm (Abu-Alsondos, 2023; Bresciani et al., 2023; Samaden et al., 2021). This study addresses the impact of KM innovation, with the understanding that having these instruments (i.e., Innovation) in place is a necessary but not sufficient condition for achieving the best possible results from KM initiatives. From this vantage point, the authors will attempt to examine the function of a few moderating variables that might affect how organizational members use KM innovation—both in terms of quantity and quality—to further knowledge exploration and exploitation (Iaia et al., 2024).

Activities related to KM innovation can be broadly categorized into categories including discovery, knowledge generation, and exploitation, knowledge application (Ghani Al-Saffar & Obeidat, 2020). According to Zatsman (2024), exploitation innovations are those that make use of already-existing information to generate new processes or products, whereas exploration activities are those that are concerned with acquiring new knowledge for the same purposes. The consideration of these two components, exploration and exploitation, as mutually exclusive or complementary, depending on factors like the company's technological trajectory, environmental conditions, or others, has been a concern for many strategic and organizational theorists (Schiuma et al., 2023). The present investigation will treat knowledge exploration and exploitation as distinct constructs, acknowledging that companies may implement ambidexterity tactics in KM innovation.

The Introduction section provides an overview of KM innovation and outlines the purpose, constraints, and structure of the study. The next section, on Theoretical Frameworks in KM innovation, examines historical perspectives and provides an overview of key theories, including more contemporary theoretical developments that have influenced the field. The KM innovation Current Trend Index Keywords Analysis looks at current trends, identifying new topics and reoccurring themes in the industry. The section labelled "Conclusion and Future Directions and Implications" provides a final summary of the study's key findings and a discussion of their implications for organizations. It also suggests avenues for future research and provides practical advice on how to effectively apply KM innovation in a technologically sophisticated and globalized environment. The principal objective of this research is to examine novel theoretical developments and present trends in the field of KM innovation. It aims to provide an in-depth keyword analysis of theoretical frameworks by showcasing the most recent developments that are shaping the course of KM innovation. By doing this, the study seeks to offer relevant data to professionals, academics, and decision-makers who are interested in understanding and applying KM innovation to enhance organizational effectiveness.

Literature Review

KM innovation should make it easier to create new knowledge, according to several academics and professionals, to increase an organization's capacity for innovation and competitiveness (Marques Júnior et al., 2020; Schiuma et al., 2023). Consequently, learning about KM innovation has a favourable impact on the organization and its operations. These days, the focus

of company objectives is on diversifying capital to acquire new information and sustain competitive advantages. Despite this, a growing number of studies concluded that KM innovation may play a significant role in enhancing innovation (Abu-Mahfouz et al., 2023). As such, to get new information, businesses concentrate on pursuing capital to maintain a competitive edge. KM innovation is now seen as a crucial issue in modern business administration (Ghani Al-Saffar & Obeidat, 2020). KM innovation and knowledge are complex concepts, as evidenced by a study of related literature (Schiuma et al., 2023). Bougoulia and Glykas (2023) looked into the relationships between innovation, OL, and KM innovation. The findings demonstrated how association learning functions as a mediating factor between KM innovation. Furthermore, they assumed that similar to a system, KM innovation is a crucial input, OL is the primary process, and innovational changes are a crucial output.

According to Shea et al. (2023), KM innovation is widely acknowledged as a key precondition for revolution. In the earlier research, effective KM innovation was covered as a strategy for fostering creativity and productivity. Even while several studies have reported that KM innovation is sometimes referred to as the "background of modernization,". As a result, KM innovation would encourage modernization (Vuong et al., 2022; Islam & Widen, 2023). Knowledge management, or KM innovation, has grown significantly over the last three decades and gained significant interest from academics, researchers, and practitioners. KM innovation has been extensively adopted by numerous corporate and non-profit organizations, especially within the last 20 years (Granados et al., 2017 ; Ghani Al-Saffar & Obeidat, 2020; Abu-Mahfouz et al., 2023).

Though KM innovation has been the subject of much research, there is still a significant void in the long-term tracking of keyword trends in this field. While KM innovation techniques and the role of innovation have been the subject of several studies, little attention has been paid to how these ideas have changed over time. In particular, there is a dearth of literature that methodically investigates the evolution of keywords associated with knowledge management over a wide timeframe, such as 2000–2024. By performing a thorough index-keyword analysis of KM innovation patterns across the 24 years from 2000 to 2024, this study fills the highlighted gap. Through the examination of keyword data from a wide range of academic publications, this study offers insightful information on how knowledge management techniques are developing. The report provides a thorough index-keyword analysis of the most significant keywords in the industry, showing how their importance has evolved and what these changes mean for KM innovation going forward. By concentrating on longitudinal index-keyword analysis, this study adds to the body of knowledge already in existence by providing a more profound comprehension of the dynamic patterns in KM innovation, thus enhancing the conversation about how businesses can successfully utilize KM innovation methods in a setting that is changing quickly.

Method & Material

This research is based on bibliometric research methodology and a specific focus on trend index keyword analysis, and according to Schmeisser (2013), there is one of the procedures for processes that the overall research framework applied was proposed Unit of Analysis, Sample frame and content analysis with trend index keyword analysis. 1287 focused numbers of research publications were examined overall from a Scopus database article using content analysis number 1289, of which two were eliminated for duplication. The unit of analysis is the keywords from journal articles that are indexed in Scopus. This article uses bibliometric analysis and solely concentrates on the trend index keywords analysis section. The Scopus

index was employed in the initial phase of the search for literature on KM innovation due to its excellent reputation. The study's nomenclature was developed by combining ideas from KM and KM innovation. During the search, titles, abstracts, and keywords from 2000 to 2024 were looked through. The second part of our study uses the bibliometrics analysis of the trend index keyword, concentrating only on the analysis of the trend index keyword. This ScientoPy program is a unique open-source application that provides a variety of devices for quantitative bibliometric research and allows for comprehensive scientific mapping keyword trend index analysis. The content analysis stage was built using a sample of 1287 Scopus index journals containing the kind of journal articles used for keyword analysis in the English language on the subject of computer science from 2000 to 2024. The purpose of these operations is to locate relevant keyword data and collect processed data that may be utilized for further research. The following figure 1 and 2 displays the findings of keyword trend index analysis results.

Current trend index analysis on Knowledge Management Innovation

The report offers a comprehensive description of Trends index-keyword analysis in KM Innovation from 2000–2024. This study looked at index keywords to give a comprehensive picture of how the KM innovation landscape is changing. This study uses the Scopus database, the primary source for academic journal article types on the subject of computer science in the English language, to identify the top 10 keywords that have continuously influenced the field over the past 20 years. The graphical representation of the trends seeks to highlight the dynamic changes in keyword rankings and highlight their importance and impact in the KM Innovation space. Figure 1 provides a detailed examination of the prevalence and significance of several phrases related to KM Innovation from 2000 to 2024.

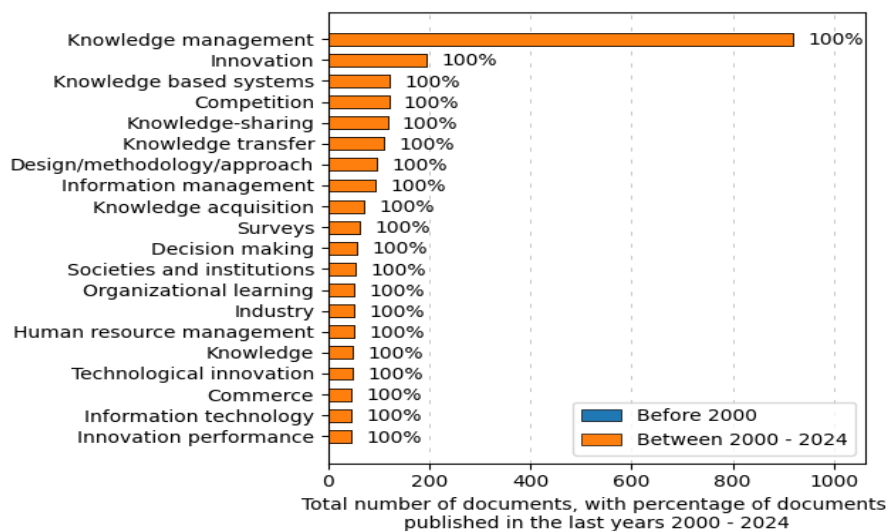


Figure 1: Comprehensive Keywords-Analysis of Trend Indices in KM Innovation (2000–2024)

The graph highlights the historical and contemporary significance of these terms by displaying the total number of 1287 documents that utilized them. The percentages demonstrate the frequency with which these keywords appeared in the literature during this time, demonstrating their ongoing significance in KM Innovation research. An excellent representation of the evolution of KM Innovation research can be found in Figure 2.

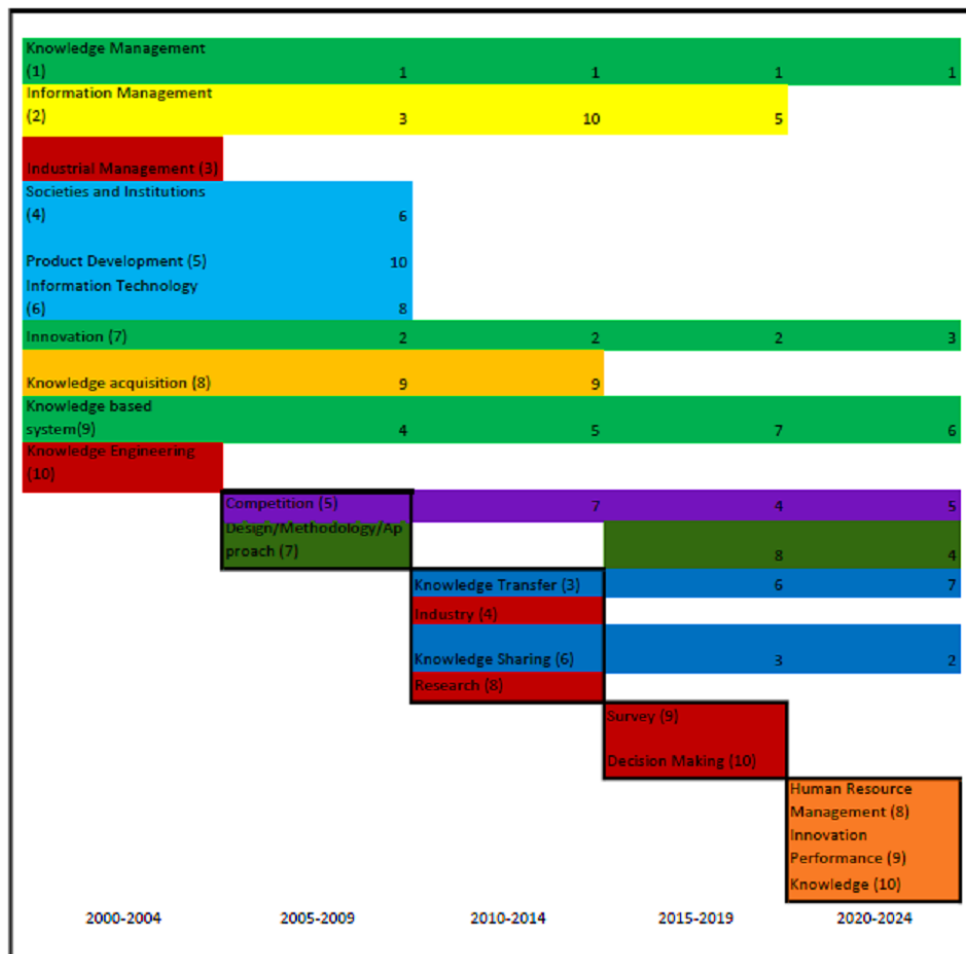


Figure 2: KM Innovation Trends Index Keywords Analysis (2000–2024)

Each segment represents a certain period, and the associated keyword rankings show how the sector is evolving as well as how keyword emphasis is shifting over different five-year intervals from 2000 to 2024. This index-keyword analysis only looks at the top 10 terms due to their close ranking and significant impact on knowledge management strategies. The term "knowledge management" has always held the top spot, indicating its fundamental importance in the industry. It always comes at the top, highlighting its continued importance in knowledge management techniques. Innovation and knowledge-based systems also frequently surface over time, underscoring their crucial impact. These terms highlight how crucial it is becoming to use technology and creative thinking in knowledge management. Product development, information technology, and industrial management played important roles in the early years (2000–2004), demonstrating a focus on combining technological and industrial elements with knowledge management. Competition and Design/Methodology/Approach gained prominence between 2005 and 2009, indicating a shift in strategy toward utilizing KM innovation for methodological rigour and competitive advantage.

From 2010 to 2014, the emphasis was on knowledge sharing, industry, and transfer, emphasizing the value of efficiently transferring and using information across industries. A greater emphasis on survey and decision-making was observed between 2015 and 2019, suggesting that KM innovation is emphasizing empirical research and well-informed decision-making. Terms like "human resource management," "innovation," "performance," and "knowledge" have become more popular in the most recent time (2020–2024), indicating an

emphasis on these three areas within knowledge management: human capital, innovation, and performance outcomes. The figure shows how different keywords have overlapped and interacted with one another over time. For instance, over the 24 years, Knowledge Management routinely crossed paths with other crucial buzzwords like Innovation and Knowledge-Based Systems, highlighting how these concepts are interrelated and influence knowledge management techniques. Later periods saw the emergence of new terms like sustainable development and human resource management, indicating that KM innovation techniques are evolving to meet new demands and goals in the global setting. The dynamic evolution of knowledge management as a field is demonstrated by this trend index keywords analysis, where keywords such as knowledge management, innovation, and knowledge-based systems have remained important throughout time. As KM innovational processes have evolved and goals have changed over time, certain terms have become more popular or less prominent.

Findings and Discussion

The average growth rate (AGR), average number of documents annually (ADY), and h-index for important phrases associated with KM innovation are shown in this table. With the greatest AGR of 2.7, ADY of 36.8, and a remarkable h-index of 75, the keyword "knowledge management" sticks out in the field and is dominant. "Innovation" comes next, showing its noteworthy influence despite slower development with a modest AGR of 0.3, a good h-index of 41, and a respectable ADY of 7.8. With h-indexes of 30 and 33, respectively, "Knowledge-Based Systems" and "Competition" both exhibit comparable AGRs of 0.2 and ADYs of 4.8, demonstrating their consistent contributions to KM innovation research. With AGRs of 0.5 and 0.4 and ADYs of approximately 4.7 and 4.4, "Knowledge Sharing" and "Knowledge Transfer" also exhibit noteworthy presence, indicating their significance in KM innovation. But terms like "Decision Making," "Societies and Institutions," and "Surveys" show little to no AGRs and lower ADYs, indicating more specialized or stable fields of KM innovation study. The phrases "Knowledge Management" and "Innovation" are the most influential, while terms like "Surveys" and "Organizational Learning" play more specialized but relevant roles in the area. The h-index values indicate the overall influence and citation impact of these keywords. Overall, the data indicates that additional or more focused keywords gradually add to the diversity and depth of KM innovation research, even as basic KM innovation terms continue to expand and change.

Table 1: KM Innovation Index keywords Average Growth Rate

Index Keywords	AGR	ADY	h-Index
Knowledge management	2.7	36.8	75
Innovation	0.3	7.8	41
Knowledge-based systems	0.2	4.8	30
Competition	0.2	4.8	33
Knowledge-sharing	0.5	4.7	27
Knowledge transfer	0.4	4.4	20
Design/methodology/approach	0.2	3.8	26
Information management	0	3.8	34
Knowledge acquisition	0.1	2.8	25
Surveys	0	2.5	19
Decision making	0.2	2.3	21
Societies and institutions	0	2.1	26
Organizational learning	0.2	2.1	19

AGR= Average Growth Rate, ADY= Average Document Per-Year

While other terms like "Innovation" and "Knowledge-Based Systems" gradually contribute to the field of KM innovation, the chart shows that "Knowledge Management" leads with the biggest growth and impact. A thorough examination of trend keyword analysis and index keyword research in knowledge management innovation was conducted. The primary objective of this work was to find the bibliometric keyword analysis throughout 24 years of approach with a focus on keyword trend index. The application of a primary unit of analysis in theoretically grounded knowledge management was the main focus of these keywords. fields of innovation. Data was taken from 1287 journal article documents altogether that were obtained from the Scopus database of computer science journal-type papers. The major purpose was to determine the top ten terms that consistently impact the disciplines of "knowledge management" and "knowledge management Innovation". In computers English language speculation science disciplines, "Knowledge Management Innovation" and "Knowledge Management" were focussed on business operations as well as permanent organizational levels.

Conclusion

This paper has provided a comprehensive keyword analysis of the evolving trends and continued significance of KM innovation from 2000 to 2024. The findings demonstrate how modern development theories have a significant impact on KM innovation and how they support modernization, organizational learning, and strategic decision-making. By employing a keyword trend analysis from the Scopus database, the research identifies new themes, emerging topics, and significant areas of long-term importance in the field of KM innovation. The research highlights the critical importance of KM innovation, which will continue to be at the forefront of the field in 2024 despite the large number of concepts that are related to it. This prominence demonstrates the continued relevance and adaptability of KM innovation in the face of changing organizational needs and conditions. It reiterates the essential role that KM innovation plays in facilitating information exchange and efficient usage as a tactical business asset. The importance of having robust KM innovation processes that can adapt to the complex and dynamic organizational environments of today is another point this study makes. Businesses can increase their operational effectiveness and competitive advantage by better utilising knowledge by identifying these trends. In the future, KM innovation performance, design, methodology, and approach research are expected to increase in popularity. The involvement of elements such as machine learning, sustainable development, environment, and social responsibility may increase.

In summary, this study advances the existing discourse on KM innovation by offering a comprehensive overview of significant subjects and developments in keyword trend index analysis. It highlights how important it is to continue exploring novel subjects and possible research directions because doing so will promote the advancement of KM innovation approaches. To be able to fully leverage information as a strategic advantage in today's rapidly changing world, organizations are required to stay vigilant and aggressive in refining their KM innovation initiatives.

References

- Abu-Alsondos, I. A. (2023). An empirical study of critical success factors in implementing knowledge management systems (KMS): The moderating role of culture. *Uncertain Supply Chain Management*, 11(4), 1527–1538. <https://doi.org/10.5267/j.uscm.2023.7.016>
- Abu-Mahfouz, S., Halim, M. S. A., Bahkia, A. S., Alias, N., & Tambi, A. M. (2023). Sustainable human resource management practices in organizational performance: The mediating impacts of knowledge management and work engagement. In *Journal of Entrepreneurship, Management and Innovation* (Vol. 19, Issue 2). <https://doi.org/10.7341/20231922>
- Bougoulia, E., & Glykas, M. (2023). Knowledge management maturity assessment frameworks: A proposed holistic approach. *Knowledge and Process Management*, 30(4), 355–386. <https://doi.org/10.1002/kpm.1731>
- Bresciani, S., Rehman, S. U., Giovando, G., & Alam, G. M. (2023). The role of environmental management accounting and environmental knowledge management practices influence on environmental performance: mediated-moderated model. *Journal of Knowledge Management*, 27(4), 896–918. <https://doi.org/10.1108/JKM-12-2021-0953>
- Chatterjee, S., Chaudhuri, R., Grandhi, B., & Galati, A. (2023). Evolution of strategy for global value creation in MNEs: Role of knowledge management, technology adoption, and financial investment. *Journal of International Management*, 29(5), 101057. <https://doi.org/10.1016/j.intman.2023.101057>
- Ghani Al-Saffar, N. A., & Obeidat, A. M. (2020). The effect of total quality management practices on employee performance: The moderating role of knowledge sharing. *Management Science Letters*, 10(1), 77–90. <https://doi.org/10.5267/j.msl.2019.8.014>
- Gonçalves, T., Curado, C., & Oliveira, M. (2024). Knowledge and culture influences on quality of care: A mixed methods approach. *International Journal of Information Management*, 77(April), 102788. <https://doi.org/10.1016/j.ijinfomgt.2024.102788>
- Granados, M. L., Mohamed, S., & Hlupic, V. (2017). Knowledge management activities in social enterprises: lessons for small and non-profit firms. *Journal of Knowledge Management*, 21(2), 376–396. <https://doi.org/10.1108/JKM-01-2016-0026>
- Iaia, L., Nespoli, C., Vicentini, F., Pironti, M., & Genovino, C. (2024). Supporting the implementation of AI in business communication: the role of knowledge management. *Journal of Knowledge Management*, 28(1), 85–95. <https://doi.org/10.1108/JKM-12-2022-0944>
- Islam, M. A., & Widen, G. (2023). Bibliometric analysis of the VINE Journal of Information and Knowledge Management Systems: 2000–2020. *VINE Journal of Information and Knowledge Management Systems*, 53(3), 467–490. <https://doi.org/10.1108/VJIKMS-07-2020-0126>
- Marques Júnior, E., Gobbo, J. A., Fukunaga, F., Cerchione, R., & Centobelli, P. (2020). Use of knowledge management systems: analysis of the strategies of Brazilian small and medium enterprises. *Journal of Knowledge Management*, 24(2), 369–394. <https://doi.org/10.1108/JKM-06-2019-0334>
- Samaden, I. S., Ahmad, I., Zahri, M. E., Salam, S., & Ismail, I. (2021). The Conceptual of Educational Game Design using Augmented Reality: A Systematic Literature Review. *Researchgate.Net*, January. https://www.researchgate.net/profile/Irma-Samaden/publication/355485640_The_Conceptual_of_Educational_Game_Design_using_Augmented_Reality_A_Systematic_Literature_Review/links/6174ed6d3c987366c3d9d089/The-Conceptual-of-Educational-Game-Design-using-Augment
- Schiuma, G., Kumar, S., Sureka, R., & Joshi, R. (2023). Research constituents and authorship patterns in the Knowledge Management Research and Practice: a bibliometric analysis.

- Knowledge Management Research and Practice, 21(1), 129–145.
<https://doi.org/10.1080/14778238.2020.1848365>
- Schmeisser, B. (2013). A systematic review of literature on offshoring of value chain activities. *Journal of International Management*, 19(4), 390–406.
<https://doi.org/10.1016/j.intman.2013.03.011>
- Shea, T., Usman, S. A., Arivalagan, S., & Parayitam, S. (2023). “Knowledge management practices” as moderator in the relationship between organizational culture and performance in information technology companies in India. *VINE Journal of Information and Knowledge Management Systems*, 53(4), 719–747. <https://doi.org/10.1108/VJIKMS-12-2020-0232>
- Vuong, Q. H., Le, T. T., La, V. P., Nguyen, H. T. T., Ho, M. T., Van Khuc, Q., & Nguyen, M. H. (2022). Covid-19 vaccines production and societal immunization under the serendipity-mindsponge-3D knowledge management theory and conceptual framework. *Humanities and Social Sciences Communications*, 9(1), 1–12. <https://doi.org/10.1057/s41599-022-01034-6>
- Zatsman, I. (2024). Building Digital Spiral Models of Knowledge Generation. *Proceedings IFKAD 2024*, June, 2185–2196.