



Strategic Knowledge Management in the Digital Age

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ABSTRACT

This Special Issue is dedicated to current issues in strategic knowledge management in the Era of digital. Despite all the research around knowledge management the main theoretical and practical importance of this special issue is the focus on research oriented to the identification, achievement and management of critical issues related with strategic knowledge management implementation within a holistic approach to business strategy, where different components impact the long term competitive advantage for the organisations.

1. Strategic Knowledge Management in the Digital Age Framework

Strategic knowledge management offers a distinct approach to the management of people and systems and a response to the changes occurring in a turbulent environment, a means of improving organizations performance (Kianto et al., 2016; Joyce and Slocum, 2012) and achieving sustainable competitive advantage (Hajir, Obeidat, Al-dalahmeh & Masa'deh, 2015).

Knowledge management emerged in the area of management as an interdisciplinary field in the core of which articulate a large number of both formal and informal knowledge from diverse fields (Nonaka, 1994), among them: - economics, management sciences, computer systems, sociology of knowledge, biological systems, complexity theory, and others. The growing interest of these organizations to manage information in the direction of efficient use of resources was what mostly determined the creation Knowledge Management systems and today industry 4.0 organizations, is leading us to intelligent organizations and Knowledge Revolution.

Technological infrastructure like social media, forums, blogs and virtual networks are the most common infrastructures, but knowledge portals also play an important role in strategic knowledge management. Through these portals, people can access, create, organize, share and use knowledge. Knowledge portals can be an effective way to provide open access to all relevant information. Organisations can also extend their knowledge of access to their business partners and customers, even if specific areas will have to be restricted. This can play an important role in collaborative product development, service delivery, and project accomplishment. Technology can significantly promote a knowledge culture by changing employees habits regarding communication, collaboration, information sharing, learning, and decision-making.

In this context, top management can have an essential role in the promotion of knowledge management systems, creating conditions whereby people are willing to apply their knowledge, share it and exchange it with each other. Developed knowledge can be continually

documented through reports, images or even metaphors, and made available to everyone in the organization (Sousa & González, 2016). Informal contacts, internal lectures, conferences, problem-solving and project review meetings, dialogue sessions, internal reports, and memos are essential means to share knowledge. Organisations can also use some mechanisms that facilitate knowledge sharing: the Internet, the Intranets, the library, the meeting rooms, an auditorium, a digital archive and even a digital documentation system (Sousa & González, 2016). The organization can also create networks of knowledge with workers with different backgrounds for developing new knowledge using several processes to develop and share knowledge like using images, metaphors, and intuitions. Not only the internal actors perform a relevant role in the process of organizational innovation and change, but also external actors, like universities, consultant companies, trade unions and others. As innovation agents, their knowledge can be necessary for the organizational development itself (Sousa & González, 2016). In some organizations, knowledge is continually being implemented and incorporated into new products, services, and processes (Inkinen, 2016; Costa and Monteiro, 2016). For instance, processes like benchmarking are done systematically to gain new knowledge and develop new practices or new business models. In Fig. 1 it is possible to identify for workers, processes and organisation various processes of use and re-use of knowledge:

This model shows that the use and re-use of strategic knowledge can bring benefits for workers, processes, and organizations. The benefits for workers derived from the more efficient processing of information and knowledge by, for example, eliminating the duplication of efforts or saving valuable time. The benefits of processes could be translated into benefits that can be expressed concerning efficiency or effectiveness (Joo et al., 2016; Iazzolino and Laise, 2016; Drucker, 1999). Databases are a typical example since they help eliminate less efficient operations by reusing knowledge. The impacts on organizations affect some of the organization's key goals, such as productivity, performance, and innovation.

Moreover, strategic knowledge sharing can also be viewed as organizational innovation (Ahmad, Lodhi, Zaman & Naseem, 2017) with

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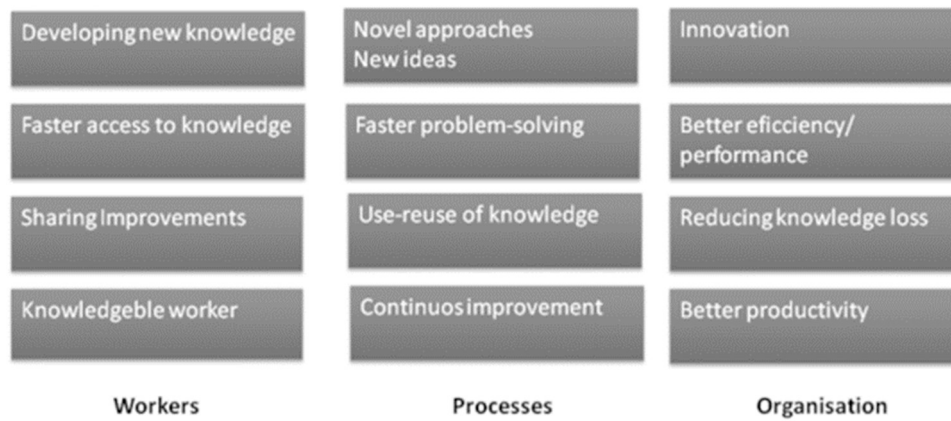


Fig. 1. Model of Use and Re-use of Strategic Knowledge in the Digital Age.

the potential to generate new ideas, develop workers to be knowledge workers (Iazzolino et al., 2017), and create advantages for the organizations.

2. Development of the Special Issue

This particular issue of Journal of Business Research features twenty-one new studies of conceptualization of knowledge management, global knowledge management systems, methodologies for digital knowledge management, perceptions of knowledge processes efficiency to end user, and empirical studies on knowledge management and digital technologies. These articles forge a strong connection to theory and also promote the transfer of research results to real-world management practices.

Knowledge management in the digital age has gained tremendous importance due to the increasing significance of internationally qualified talent in a time where digital assumes more and more magnitude. This not only applies to multinational enterprises but also to small and medium-sized enterprises, as managers are challenged to manage the knowledge of their employees.

The organizational perspective of the special issue comprises various dimensions, including the most important practices in knowledge management related to new organizational models, and strategic digital transformation.

Some of the main research questions proposed to the authors were related to the study of conceptualization of knowledge management, global knowledge management systems, and various types of assignments (traditional, self-initiated assignments, and others) under the following topics:

- Strategic knowledge management
- Global knowledge management systems
- Methodologies for digital knowledge management
- Evaluation techniques and tools
- Perceptions of knowledge processes efficiency to end user
- Digital knowledge systems best practices
- Case Studies: empirical studies and knowledge management and digital technologies
- Any additional theoretical, empirical, review or model-building contributions in knowledge management development

Finally, the objective of this Special Issue was to draw together scholars who are working at the forefront of this research domain. This includes strong theoretical, conceptual and empirical papers using quantitative or qualitative approaches to knowledge management in the digital age.

3. Strategic Knowledge Management in the Digital Age Research Trends

A summary of the research presented in each paper is provided below:

The research made for the paper **Creating knowledge and entrepreneurial capacity for HE students with digital education methodologies: Differences in the perceptions of students and entrepreneurs**, Sousa, Carmo, Gonçalves, Cruz, and Martins (2018), proposes a model of digital education methodologies and tools to develop knowledge and entrepreneurial capacity in Higher Education (HE) students. The paper makes a literature review on e-education, start-up stages and e-education methodologies and tools to develop the entrepreneurial capacity and uses the quantitative methodology to identify differences in their perceptions regarding the stages of the start-up process and also the most relevant methodologies to develop the entrepreneurial capacity of a potential entrepreneur.

The paper **The advent of customer experiential knowledge management approach (CEKM): The integration of offline & online experiential knowledge**, Jaziri (2018) discusses a conceptual reflection leading to the proposition of the customer experiential knowledge management (CEKM) approach. The goal is to analyze how to connect the customer knowledge management to the customer lived service experience.

In the paper **Skills for disruptive digital business**, Sousa and Rocha (2018a, 2018b) analyses the concept of skills and also investigates the skills needed to create and manage a disruptive digital business which is emerging from the IT evolution. The primary purpose is to identify skills which need to be developed to manage a disruptive digital business. The result of this research are the lessons uncovered and the proposal made for a model of skills development for disruptive business managers, which identifies three types/categories of skills needing development – innovation, leadership, and management.

The research of Nisar, Prabhakar and Strakova (2018), **Social media information benefits, knowledge management and smart organizations**, explore the potentialities of social technologies providing means for organizations to manage their information flows and thus induce changes in their knowledge management (KM) systems, which can then be linked to performance improvements.

In the paper **Online recruitment in Portugal: Theories and candidate profiles**, Brandão et al. (2018) study the context of online recruitment in exploratory research which aims to describe perceptions of this tool, gathering data from potential job candidates and other stakeholders.

In the paper **Employment background influence social media usage in the field of European project management and communication**, Pivec and Maček (2018) argue that Social Media is playing an important role in project work. Social Media Tools enable

communication to and with stakeholders and support dissemination, thus adding to the sustainability of the project's results. The presented study was conducted with the aim to analyze the personal social media preferences and opinions, as well as social media features and their usage within projects.

Amin, Al-Obeidat, Shah, Adnan, Loo, and Anwar (2018) in the paper **Customer churn prediction in telecommunication industry using data certainty**, analyses the importance of Customer Churn Prediction (CCP) as a challenging activity for decision makers and machine learning community. The research shows that different experiments on customer churn and related data.

The paper **Exploring the influence of common game elements on ideation output and motivation**, from Zimmerling, Höllig, Sandner, and Welpé (2018) presents a proposal to investigate the incentive effect of gamification elements on the output of online idea contests in a field experiment, across five treatment groups. The results of the research show that game elements can increase quantitative performance but not the motivation of participants or the quality of ideas.

In the paper **How cultural impact on knowledge sharing contributes to organizational performance: Using the fsQCA approach**, Oyemomi, Liu., Neaga, Chen, and Nakpodia (2018) present the analysis of the organizational culture that supports knowledge sharing activities for organizational performance, innovation, and strategy.

Mahdi et al. (2018) in the paper **Knowledge management processes and sustainable competitive advantage: An empirical examination in private universities**, highlights the private universities complex challenges in attaining their objectives as well as achieving sustainable competitive advantages, because the changes in the internal and external environment and the limited resources compare to its public counterparts.

The paper **Educational Data Mining: Predictive Analysis of Academic Performance of Public Schools Students in the Capital of Brazil**, of Fernandes, Holanda, Victorino, Borges, Carvalho, and Van Erven (2018), presents a predictive analysis of the academic performance of students in public schools of the Federal District of Brazil during the school terms of 2015 and 2016. They created a classification model based on the Gradient Boosting Machine (GBM) to predict academic outcomes of student performance at the end of the school year.

In the paper **Aligning knowledge sharing interventions with the promotion of firm success: The need for SHRM to balance tensions and challenges**, Donnelly (2018), examines the roles of knowledge management interventions, recognition, and reward in influencing knowledge-sharing views and behaviors. The authors develop a framework for enhancing and sustaining knowledge-based success, which can contribute to the refinement of the knowledge-based view and strategic HRM.

In the paper **Strategic knowledge management a digital environment: Tacit and explicit knowledge in Fab Labs**, Maravilhas and Martins (2018) highlight how users learn with others in Fab Labs, which are laboratories of digital fabrication, serving as prototyping platforms of physical objects, with broad educational, social and economic advantages. It also shows that Fab Labs users can leverage their imagination and develop sustainable, social, local, economic innovative solutions to solve real problems, supported by tacit and explicit knowledge transfer.

The paper **Leadership styles and skills developed through game-based learning** of Sousa and Rocha (2018a, 2018b) examines recent literature regarding game-based learning influence in leadership skills development and if new leadership styles can emerge during a collaborative gaming process. The findings suggest that a game-based learning approach is an effective approach to leadership skills development and the primary skills developed were: motivation, facilitation, coaching, mindset changing, and communication. The significant originality of the research is the analogy process between games situations and organizational life situations.

Vlajčić, Caputo, Giacomo, and Dabić (2018) in the research

Expatriates managers' cultural intelligence as a promoter of knowledge transfer in multinational companies, analyses the role of the Cultural Intelligence of expatriate managers in the processes of Conventional and Reverse Knowledge Transfer in Multinational Companies. The study reveals how Cultural Intelligence, in all of its four dimensions (metacognitive, cognitive, behavioral, and motivational), acts as a knowledge de-codification and codification filter, assisting managers in the Knowledge Transfer process.

Martins, Costa, Oliveira, Gonçalves, and Branco (2018) discuss the factors that motivate consumers to interact with smartphone advertisements and therefore what stimulates their decision to purchase in the paper **How smartphone advertising influences consumers' purchase intention**. To achieve this goal, the authors proposed a conceptual model that combines Ducoffe's web advertising model and flow experience theory.

In the paper **Maturity model for hospital information systems**, Carvalho, Rocha, van de Wetering, and Abreu (2018) describe a research project focused on the development of a comprehensive maturity model applied in the HIS context. The outcome of this research is the HIS maturity model (hereafter referred to as HISMM), which includes six stages of HIS growth and maturity progression.

The paper **A knowledge management and sharing business model for dealing with disruption: The case of Aramex**, of Larissa et al. (2018) investigates the global logistics player Aramex and how it deals with disruptive technologies. In particular, it focuses on the unique business model that the case organization has adopted and that allows for disruption to be managed through collaborative knowledge management.

Bag, Tiwari and Chan (2018) study **Predicting the consumer's purchase intention of durable goods: An attribute-level analysis**, presents research on retail 4.0 which is progressively demanding the accurate prediction of consumer's purchase intention, developing an attribute level decision support prediction model for providing an influential e-commerce platform to the customers. In order to build the prediction model, brands' social perception score and reviews' polarity the authors used as research methodology social network mining and sentiment analysis

In the paper **An exploration into the practice of online service failure and recovery strategies in the Balkans** (Azemia, Ozuem, Howell & Lancaster, 2018), studies the balance of online service failures and recovery strategies, and how organisations are increasingly offering a variety of recovery programmes. Anecdotal reports suggest that organisations are experimenting with various recovery strategies, and particularly transitioning offline recovery strategies.

Loon (2018) in the paper **Knowledge management practice system: Theorising from an international meta-standard**, theorise Knowledge Management (KM) from the new standard, by addressing the following research questions: what are the important themes of the standard; and what are the key mechanisms and how do they explain KM practice system from a theoretical perspective? This paper adopts a sense of giving reflective insider account using practice theory as a lens and social mechanisms as a method in theorizing KM practice system.

In the paper **Translating the impact of knowledge management processes into knowledge-based innovation: The neglected and mediating role of knowledge-worker productivity**, Shujahat, Sousa, Hussain, Nawaz, Wang, and Umer (2017) propose a novel research model to investigate the neglected and pivotal mediating role of knowledge-worker productivity between knowledge management processes (knowledge generation, knowledge sharing, and knowledge application) and innovation.

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References

- Ahmad, N., Lodhi, M. S., Zaman, K., & Naseem, I. (2017). Knowledge management: a gateway for organizational performance. *Journal of the Knowledge Economy*, Vol. 8(No. 3), 859–876.
- Amin, A., Al-Obeidat, F., Shah, B., Adnan, A., Loo, J., & Anwar, S. (2018). Customer churn prediction in telecommunication industry using data certainty. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.03.003> ISSN: 0148-2963.
- Azemia, Y., Ozuem, W., Howell, K., & Lancaster, G. (2018). An exploration into the practice of online service failure and recovery strategies in the Balkans. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.08.035> ISSN: 0148-2963.
- Bag, S., Tiwari, M. K., & Chan, F. T. S. (2018). Predicting the consumer's purchase intention of durable goods: An attribute-level analysis. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2017.11.031> ISSN: 0148-2963.
- Brandão, C., Silva, R., & Santos, J. V. (2018). Online recruitment in Portugal: Theories and candidate profiles. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.04.011> ISSN: 0148-2963.
- Carvalho, J. V., Rocha, A., van de Wetering, R., & Abreu, A. (2018). Maturity model for hospital information systems. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2017.12.012> ISSN: 0148-2963.
- Costa, V., & Monteiro, S. (2016). "Key knowledge management processes for innovation: a systematic literature review." *VINE Journal of Information and Knowledge Management Systems*, Vol. 46(No. 3), 386–410.
- Donnelly, R. (2018). Aligning knowledge sharing interventions with the promotion of firm success: The need for SHRM to balance tensions and challenges. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.02.007> ISSN: 0148-2963.
- Drucker, P. F. (1999). Knowledge-worker productivity: The biggest challenge. *California management review*, Vol. 41(No. 2), 79–94.
- Fernandes, E., Holanda, M., Victorino, M., Borges, V., Carvalho, R., & Van Erven, G. (2018). Educational Data Mining: Predictive Analysis of Academic Performance of Public Schools Students in the Capital of Brazil. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.02.012> ISSN: 0148-2963.
- Hajir, J. A., Obeidat, B. Y., Al-dalameh, M. A., & Masa'deh, R. (2015). "The role of knowledge management infrastructure in enhancing innovation at mobile telecommunication companies in Jordan." *European Journal of Social Sciences*, Vol. 50(No. 3), 313–330.
- Iazzolino, G., & Laise, D. (2016). Value creation and sustainability in knowledge-based strategies. *Journal of Intellectual Capital*, Vol. 17(No. 3), 457–470.
- Iazzolino, G., Laise, D., & Gabriele, R. (2017). Knowledge-based strategies and sustainability: a framework and a case study application. *Measuring Business Excellence*, Vol. 21(No. 2).
- Inkinen, H. (2016). "Review of empirical research on knowledge management practices and firm performance." *Journal of knowledge management*, Vol. 20(No. 2), 230–257.
- Jaziri, D. (2018). The advent of customer experiential knowledge management approach (CEKM): The integration of offline & online experiential knowledge. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.05.029> ISSN: 0148-2963.
- Joo, B. K., Park, J. G., & Lim, T. (2016). Structural determinants of psychological well-being for knowledge workers in South Korea. *Personnel Review*, Vol. 45(No. 5), 1069–1086.
- Joyce, W. F., & Slocum, J. W. (2012). Top management talent, strategic capabilities, and firm performance. *Organisational Dynamics*, 41(3), 183–193.
- Kianto, A., Vanhala, M., & Heilmann, P. (2016). The impact of knowledge management on job satisfaction. *Journal of Knowledge Management*, Vol. 20(No. 4), 621–636.
- Loon, M. (2018). Knowledge management practice system: Theorising from an international meta-standard. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2017.11.022> ISSN: 0148-2963.
- Mahdi, O. R., Nassar, I. A., & Almsafir, M. K. (2018). Knowledge management processes and sustainable competitive advantage: An empirical examination in private universities. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.02.013> ISSN: 0148-2963.
- Maravilhas, S., & Martins, J. (2018). Strategic knowledge management a digital environment: Tacit and explicit knowledge in Fab Labs. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.01.061> ISSN: 0148-2963.
- Martins, J., Costa, C., Oliveira, T., Gonçalves, R., & Branco, F. (2018). How smartphone advertising influences consumers' purchase intention. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2017.12.047> ISSN: 0148-2963.
- Nisar, T. M., Prabhakar, G., & Strakova, L. (2018). Social media information benefits, knowledge management, and smart organizations. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.05.005> ISSN: 0148-2963.
- Nonaka, I. (1994). "A dynamic theory of organizational knowledge creation," *Organization Science*, Vol. 5(No. 1), 14–37.
- Oyemomi, O., Liu, S., Neaga, I., Chen, H., & Nakpodia, F. (2018). How cultural impact on knowledge sharing contributes to organizational performance: Using the fsQCA approach. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.02.027> ISSN: 0148-2963.
- Pivec, M., & Maček, A. (2018). Employment background influence on social media usage in the field of European project management and communication. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.03.021> ISSN: 0148-2963.
- Shujahat, M., Sousa, M. J., Hussain, S., Nawaz, F., Wang, M., & Umer, M. (2017). Translating the impact of knowledge management processes into knowledge-based innovation: The neglected and mediating role of knowledge-worker productivity. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2017.11.001> ISSN: 0148-2963.
- Sousa, M. J., & Rocha, A. (2018a). Leadership styles and skills developed through game-based learning. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.01.057> ISSN: 0148-2963.
- Sousa, M. J., & Rocha, A. (2018b). Skills for disruptive digital business. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2017.12.051> ISSN: 0148-2963.
- Sousa, M. J., Carmo, M., Gonçalves, A. C., Cruz, R., & Martins, J. M. (2018). Creating knowledge and entrepreneurial capacity for HE students with digital education methodologies: Differences in the perceptions of students and entrepreneurs. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.02.005> ISSN: 0148-2963.
- Sousa, M. J., & González-Loureiro, M. (2016). Employee knowledge profiles – A mixed-research methods approach. 2016 *Information Systems Frontiers*, 18(6), 1103–1117. <https://doi.org/10.1007/s10796-016-9626-1>.
- Vlajčić, D., Caputo, A., Giacomo, M., & Dabić, M. (2018). Expatriates managers' cultural intelligence as promoter of knowledge transfer in multinational companies. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.01.033> ISSN: 0148-2963.
- Zimmerling, E., Höllig, C. E., Sandner, P. G., & Welpel, I. M. (2018). Exploring the influence of common game elements on ideation output and motivation. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2018.02.030> ISSN: 0148-2963.

Further Reading

- v. Alberti-Alhtaybat, L., Al-Htaybat, K., & Hutaibat, K. (2018). A knowledge management and sharing business model for dealing with disruption: The case of Aramex. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2017.11.037> ISSN: 0148-2963.

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