Idealogy Journal Vol. 10 No. 2, 2025, pp 647-656
DOI: https://doi.org/10.24191/idealogy.v10i2.894
Section: Original Article

The Art of Knowledge Sharing Towards Construction Project Success

***Muhammad Redza Rosman[1], Nurul Shima Taharuddin[2], Muhamad Abdul Aziz Ab Gani[3], Nor Idayu Ibrahim[4], Haslinda Md Nazri[5], Nizar Nazrin[6], Anwar Fikri Abdullah[7]**

[1]Faculty of Built Environment, Universiti Teknologi MARA, Perak Branch, 32610 Seri Iskandar, Perak, Malaysia

[2,3,4,5,6,7]Faculty of Arts and Design, Universiti Teknologi MARA, Perak Branch, 32610 Seri Iskandar, Perak, Malaysia

redza508@uitm.edu.my[1], nurul026@uitm.edu.my[2], aziz354@uitm.edu.my[3,] idayuibrahim@uitm.edu.my[4], hasli550@uitm.edu.my[5], nizarnazrin@uitm.edu.my[6,] anwar575@uitm.edu.my[7]

***Corresponding author**

Received: 1 June 2025; Accepted: 31 August 2025; Published: 1 September 2025

ABSTRACT

The construction industry plays a central role in Malaysia's development but continues to face persistent challenges such as delays, cost overruns, and inefficiencies, many of which are linked to fragmented knowledge management. This study addresses the first objective of a broader research project: to identify the knowledge sharing (KS) practices employed in construction projects, with a focus on Grade 7 contractors in Selangor. Drawing on literature and empirical evidence, eight KS practices were examined, including face-to-face interaction, formal practices, meetings, learning support, project briefings, phone calls, lessons learnt from previous projects, and ICT tools. A quantitative survey design was applied, yielding 270 valid responses from project managers, engineers, and site personnel. Data were analysed using descriptive statistics, with reliability and normality testing confirming robustness. The findings reveal that meetings, face-to-face interactions, and lessons learnt from past projects are the most dominant KS practices, while learning support and phone calls are less frequently utilised. ICT tools were moderately adopted, reflecting gradual digitalisation within the sector. Overall, the results demonstrate that KS in Malaysian construction is predominantly interpersonal and experiential, with digital mechanisms serving as complementary supports. These insights provide empirical confirmation of the hybrid nature of KS, blending formal and informal practices to sustain collaboration in complex project environments. The study concludes that institutionalising a balanced mix of these approaches is critical for improving project outcomes and enhancing the overall competitiveness of the Malaysian construction industry.

Keywords: *Knowledge sharing, Construction industry, Project management, Malaysia, contractors*

1 INTRODUCTION

The construction industry is a vital contributor to national development, generating employment, infrastructure, and economic growth. However, it is also characterised by fragmentation, temporary project arrangements, and the participation of multiple stakeholders with different goals. These complexities frequently result in recurring issues such as cost overruns, delays, and poor quality (Chan et al., 2004). Such persistent challenges highlight the need for more effective use and sharing of

knowledge across project environments.

Knowledge sharing (KS), as a process within knowledge management (KM), plays a critical role in improving project outcomes. Through KS, individuals and organisations exchange experiences, insights, and expertise, which helps to reduce duplication of work, minimise errors, and improve coordination among project teams (Nonaka & Takeuchi, 1995; Carrillo et al., 2001). In construction projects, where tacit knowledge is often underutilised, the ability to share knowledge effectively can directly influence project success in terms of cost, time, and quality.

Despite its importance, KS practices in construction remain underdeveloped. Project-based structures, cultural barriers, and reluctance among individuals to share expertise limit the adoption of effective KS approaches (Egbu, 2004).

In Malaysia, the importance of strengthening knowledge flows in construction has been emphasised under initiatives such as the Construction Industry Transformation Programme (CITP) 2016–2020. However, industry reports continue to highlight project failures associated with weak knowledge documentation, inadequate use of lessons learned, and limited transfer of knowledge across projects (CIDB, 2024). These problems are particularly evident among Grade 7 (G7) contractors, who are responsible for delivering the largest and most complex projects in the country.

Existing research on knowledge management in construction has largely concentrated on systems and organisational strategies, while less attention has been given to the actual KS practices adopted by contractors in their daily project operations. This creates a gap in understanding how knowledge is currently shared, what challenges are encountered, and how practices might be improved to enhance project performance.

Accordingly, this study focuses on identifying the KS practices used in construction projects in Malaysia, with specific emphasis on G7 contractors in Selangor. By examining these practices, the research provides insights into current approaches to KS in the Malaysian construction industry and highlights areas for improvement that can contribute to project success.

2 LITERATURE REVIEW

2.1 Distinguishing Knowledge Transfer and Knowledge Sharing

Knowledge management (KM) offers the overarching framework for generating, storing, and utilising knowledge within organisations, yet it is necessary to distinguish between knowledge transfer (KT) and knowledge sharing (KS). Prior studies often conflate these concepts, thereby obscuring their unique roles (Tangaraja et al., 2016; Martín Cruz et al., 2009; Hsu & Wang, 2008; Ismail Al-Alawi et al., 2007). KT is typically a structured and hierarchical process, guided by formal incentives and objectives, often occurring across organisations or functional units (Roux et al., 2006; Tangaraja et al., 2016). By contrast, KS is less rigid: it thrives within social interactions, where reciprocity, trust, and collaboration govern the flow of knowledge (Roux et al., 2006; Tangaraja et al., 2016).

This distinction may be interpreted through two artistic lenses of knowledge. On the one hand, knowledge as an object (K-O) is akin to a script, where procedures are replicated across settings to maintain uniformity (Sveiby, 2007). On the other hand, knowledge as a subjective, contextual construction (K-SCC) resembles an improvisational performance, shaped by lived experience, interpretation, and adaptation (Polanyi, 1958; Nonaka & Takeuchi, 1995). From this perspective, KS embodies an art form: participants negotiate meaning much like actors on stage, bringing personal expression and collective interpretation to bear on shared challenges.

In the construction industry, where teams are temporary and projects transient, KS is not merely a managerial mechanism but a performative act, enabling diverse stakeholders to co-create understanding. This performative dimension positions KS as a critical tool for improving time, cost,

and quality outcomes, and as a creative process through which contractors innovate and adapt within the complex theatre of project delivery. A summary of the difference between KT and KS is summarised in Table 1.

Table 1 Differences between KT and KS

Dimension	Knowledge Transfer (KT)	Knowledge Sharing (KS)
Nature	Structured, formal, and hierarchical process (Roux et al., 2006; Tangaraja et al., 2016)	Interactive, social, and collaborative process (Roux et al., 2006; Tangaraja et al., 2016)
Direction	Often top-down, from expert to user	Multidirectional, between individuals or groups
Mechanism	Driven by codification, replication of established procedures	Relies on personalisation, dialogue, and negotiation of meaning
Focus	Emphasises efficiency, accuracy, and standardisation	Emphasises trust, reciprocity, and contextual understanding
Knowledge Type	Treats knowledge as an object (K-O), tangible and transferable (Sveiby, 2007)	Treats knowledge as subjective, contextual, and constructed (K-SCC) (Polanyi, 1958; Nonaka & Takeuchi, 1995)
Outcome	Reproduction of knowledge in different settings	Creation of shared understanding and adaptive solutions
Role in KM	Broader mechanism encompassing dissemination and formal exchange	Constituent element that enriches collaboration and innovation (Paulin & Suneson, 2012)

2.2 Knowledge Sharing as a Creative Process

KS is widely recognised as central to knowledge management and fundamental to construction project success. It involves not just the exchange of information but the deliberate interaction of individuals and teams in ways that foster innovation, problem-solving, and learning (Abdul Manaf & Harvey, 2020; Abdullah & Alqarni, 2022; Baporikar, 2020). It is an inherently reciprocal act: the provider and the receiver participate in a dialogue where meaning is jointly constructed (Kim, 2019; Nazim & Mukherjee, 2016). Nonaka and Takeuchi's (1995) work on knowledge creation underscores how KS contributes to the generation of new insights, much like the creative process of an artist transforming inspiration into tangible expression (Raza Abidi, 2007).

In construction projects, where clients, designers, contractors, and subcontractors bring diverse skills and perspectives, KS allows knowledge to move fluidly across disciplines, as shown in Figure 1 below. This is especially vital in an environment marked by fragmentation and temporality. Tacit knowledge, embodied in the intuition of engineers and the craftsmanship of site managers, parallels the unspoken techniques of an artist's brushstroke or a musician's improvisation—difficult to codify, yet invaluable to practice (Hobday, 2000; Kumaraswamy & Dulaimi, 2001; Nonaka & Takeuchi, 1995). Explicit knowledge, meanwhile, functions like the score or blueprint: manuals, drawings, and models that provide structure and continuity across teams. Together, tacit and explicit knowledge form a creative interplay that underpins effective project delivery.

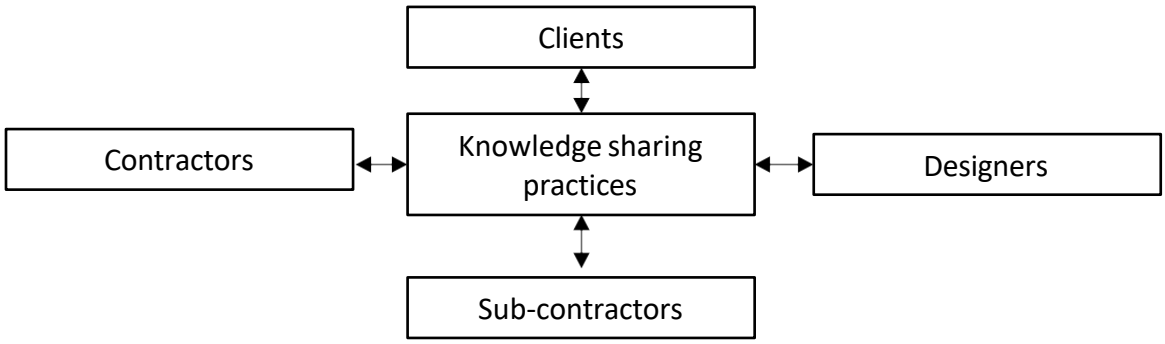

Figure 1 Movement of knowledge across disciplines

Research confirms that KS enhances absorptive capacity, enabling firms to learn collectively and to apply accumulated expertise for better outcomes (Ali et al., 2016; Hsu, 2008; Law & Ngai, 2008; Ribeiro, 2009). It depends on roles, trust, and commitment (Bucher et al., 2020; Dulaimi, 2004; Hernstig & Zafar, 2021), much like a collaborative artistic ensemble, where the quality of the final performance relies on the willingness of each participant to contribute openly and meaningfully.

2.3 Knowledge Sharing in Construction Projects as an Art of Collaboration

Within construction projects, KS emerges as a determinant of success, reducing errors, mitigating uncertainties, and enhancing coordination (Dulaimi, 2004; Hernstig & Zafar, 2021; Kumaraswamy & Dulaimi, 2001). Here, tacit knowledge acts as the intuition and instinct of experienced practitioners, while explicit knowledge offers structured guidelines. The ability to weave the tacit and explicit into a coherent whole mirror the artistic blending of improvisation and structure, producing new solutions that transcend technical boundaries (Bucher et al., 2020; Xue et al., 2020).

Yet, in Malaysia, empirical evidence highlights persistent inconsistencies in KS practices. Organisational culture, rigid hierarchies, and limited incentives often lead to knowledge hoarding rather than dissemination (Negara et al., 2021; Olanrewaju & Lee, 2022). This echoes the silence in an unfinished composition, where the absence of shared notes diminishes the harmony of the collective effort. As a result, project outcomes are compromised, with inefficiencies recurring across projects.

At its best, KS is more than efficiency—it is a catalyst for innovation and continuous improvement. Through the sharing of lessons and experiences, project teams refine methodologies and develop context-specific solutions that influence project outcomes (Ali et al., 2016; Navimipour & Charband, 2016). It is, in essence, an art of collaboration where multiple voices create a symphony of knowledge. This artistic framing reveals KS not only as a technical necessity but also as a creative force, enabling Malaysian contractors to sustain competitiveness while enriching the collective performance of the construction industry.

3 METHODOLOGIES

3.1 Research design

This study adopted a quantitative research design to identify the knowledge sharing (KS) practices employed in Malaysian construction projects. A positivist philosophy underpinned the design, privileging observable and measurable evidence of KS activities within contracting organisations. A cross-sectional survey strategy was selected as it allowed the collection of quantifiable data from a large number of respondents, thereby providing a representative snapshot of prevailing practices across the industry.

3.2 Population and Sampling

The study targeted Grade 7 contractors registered with the Construction Industry Development Board (CIDB) in Selangor. These firms were deliberately chosen because they represent the highest classification of contractors in Malaysia, consistently engaged in large-scale projects where KS is most critical. Selangor was selected as the geographical scope given its concentration of Grade 7 contractors and its position as the state with the most active construction sector nationally.

From a total of 3,670 Grade 7 contractors in Selangor, a probability-based random sampling technique was applied to enhance representativeness and reduce selection bias. Based on Krejcie and Morgan's (1970) table and power analysis for Structural Equation Modelling (SEM), a minimum of 371 responses was required at the 95% confidence level. To mitigate non-response, a larger distribution was carried out, resulting in 270 valid responses, a rate that comfortably exceeded the minimum required for analysis.

The unit of analysis was individual project personnel within contracting organisations, such as project managers, engineers, site supervisors, and quantity surveyors. These respondents were considered best positioned to provide insights into the actual KS practices occurring in daily project operations.

3.3 Research Instrument

The instrument was a structured questionnaire, specifically designed to capture the types of KS practices utilised in Malaysian construction projects. Items were adapted from established studies to ensure validity but were contextually refined for the Malaysian industry setting. Respondents were asked to report the frequency and extent to which different KS mechanisms were applied within their organisations. By focusing on both structured and unstructured forms of KS, the instrument captured the breadth of KS practices employed across Grade 7 contracting firms.

3.4 Data Collection

Data were collected through both physical distribution and online surveys. For physical administration, appointments were arranged with contracting firms in Selangor, enabling direct engagement with respondents and ensuring that questionnaires were distributed only to relevant personnel. In parallel, an online version was circulated via email using Google Forms, extending the reach of the survey and improving participation rates. This dual approach yielded a total of 270 valid responses, representing a response rate of 72.8%.

3.5 Data Analysis

The analysis of KS practices was conducted using SPSS to generate descriptive statistics, including frequencies, means, and standard deviations. This allowed the study to profile the types of KS practices most commonly applied and to establish patterns across organisations. Reliability of the KS construct was first assessed using Cronbach's Alpha, ensuring internal consistency of the items. The descriptive results provided empirical evidence of the range and prominence of KS practices currently adopted by Grade 7 contractors in Malaysia.

4 RESULTS AND DISCUSSIONS

4.1 Introduction

This section presents the results of the analysis and discusses them in relation to the first research objective: to identify the knowledge sharing (KS) practices used in construction projects in Malaysia.

The findings are organised into demographic information, reliability testing, normality assessment, and descriptive analysis of KS practices.

4.2 Demographic Profile of Respondents

A total of 270 responses were collected, providing a sufficiently large dataset for analysis. The demographic breakdown is shown in Table 1.

Table 1 Demographic Profile of Respondents

Variable	Category	Frequency	Percentage (%)
Age	Less than 30 years old	92	35.2
	31–40 years old	113	43.3
	More than 41 years old	56	21.5
Current Job Position	Executive Management	5	1.9
	Director	5	1.9
	Manager	53	20.0
	Operation	202	76.2
Years of Experience	Less than 5 years	82	31.2
	6–10 years	83	31.6
	11–15 years	51	19.4
	More than 15 years	47	17.9

The majority of respondents were between 31–40 years old (43.3%), indicating mid-career professionals. A large share (76.2%) was involved in operational roles, reflecting the perspectives of those engaged in project execution. Respondents were fairly balanced across experience levels, with 31.6% having 6–10 years of experience and 31.2% having less than 5 years. This distribution ensures that both junior and senior voices are represented.

4.3 Reliability Analysis

The internal consistency of constructs was evaluated using Cronbach's Alpha. As presented in Table 2, all constructs recorded values above the minimum threshold of 0.70, demonstrating strong reliability. KS practices scored 0.868, indicating robust measurement, while the dependent variable, project success, achieved 0.959, reflecting excellent consistency.

Table 2 Reliability Statistics

ariable Type	**Constructs**	**onbach's Alpha**	**ronbach's Alpha (Standardised)**	**ımber of Items**
KS Practice	–	0.868	0.864	8
IV	Organisational Culture	0.796	0.798	4
IV	Organisational Structure	0.858	0.861	3
IV	Management Support	0.870	0.870	3
IV	Reward	0.860	0.863	4
DV	Project Success	0.959	0.959	9

4.4 Normality Testing

Normality was assessed using skewness and kurtosis values, as shown in Table 3. Skewness values ranged from –0.615 to –1.767, while kurtosis ranged from –0.335 to 4.637. These results suggest departures from perfect normality. Kolmogorov-Smirnov and Shapiro-Wilk tests confirmed significance at $p < 0.05$ for all items, further indicating non-normal distributions. However, given the large sample size ($n = 270$), the data are still considered suitable for analysis, particularly with PLS-SEM, which is robust against non-normality.

Table 3 Skewness and Kurtosis of KS Practices

KS Practice	Skewness	Kurtosis
Informal face-to-face interaction	–0.970	1.019
Formal practice	–0.981	1.718
Meeting	–1.208	1.971
Learning support	–1.514	3.206
Project briefing	–0.669	0.316
Phone calls	–0.860	0.402
Lessons learnt from previous projects	–1.767	4.637
ICT tools	–0.615	–0.335

4.5 Descriptive Analysis of Knowledge Sharing Practices

Descriptive statistics were used to identify the extent of adoption of KS practices. Table 4 presents the mean scores and standard deviations.

Table 4 Descriptive Statistics of Knowledge Sharing Practices

KS Practice	Code	N	Mean	Std. Deviation
Meeting	KS3	270	4.28	0.889
Informal face-to-face interaction	KS1	270	4.25	0.864
Lessons learnt from previous projects	KS7	270	4.25	0.877
Project briefing	KS5	270	4.09	0.851
Formal practice	KS2	270	3.97	0.956
ICT tools	KS8	270	3.96	1.061
Learning support	KS4	270	3.80	0.990
Phone calls	KS6	270	3.74	1.164

The results show that meetings ($M = 4.28$), informal face-to-face interactions ($M = 4.25$), and lessons learnt from previous projects ($M = 4.25$) are the most frequently practised forms of KS. Project briefings ($M = 4.09$) also ranked highly, while phone calls ($M = 3.74$) and learning support ($M = 3.80$) were the least emphasised practices. ICT tools ($M = 3.96$) scored moderately, reflecting gradual digital adoption.

4.6 Discussion of Findings

The findings demonstrate that knowledge sharing in construction projects is predominantly interpersonal and experiential. Meetings and face-to-face interactions were prioritised, underscoring the industry's reliance on immediate, collaborative communication to resolve project challenges. This reliance on personal interaction is consistent with the project-based nature of construction, where decisions often need to be taken rapidly and collaboratively.

The importance of lessons learnt from previous projects highlights the sector's recognition of experiential knowledge in preventing errors and enhancing efficiency. However, the lower adoption of ICT tools suggests that while digital platforms are available, they have yet to be fully integrated into knowledge management systems.

The limited emphasis on learning support and phone calls points towards gaps in structured training initiatives and formalised communication strategies. This reveals opportunities for organisations to institutionalise training and adopt more sophisticated ICT platforms to complement traditional practices.

Overall, the results reveal a hybrid approach: strong reliance on human interaction, supplemented by moderate digital usage, but with limited formal training support. This creates a valuable baseline for understanding how organisational factors (to be examined in later objectives) may influence these practices.

4.7 Summary

In summary, the demographic analysis confirmed that the respondents largely represented mid-career operational staff, providing practical insights into project-level KS practices. Reliability testing confirmed the robustness of measurement items, while normality tests indicated non-normal distributions. The descriptive analysis identified meetings, face-to-face interactions, and lessons learnt as the most dominant KS practices, with ICT tools playing a supporting role and training mechanisms receiving limited attention. These findings form a foundation for exploring the determinants of KS practices in subsequent objectives.

5 CONCLUSIONS

The objective of this study was to examine the range and extent of knowledge sharing (KS) practices currently applied in construction projects. Based on the literature review and subsequent validation through survey data, eight KS practices were identified: face-to-face interaction, formal practices, meetings, learning support, project briefings, phone calls, lessons learnt from previous projects, and ICT tools.

The mean analysis indicated that all practices recorded values above 3.74, reflecting their widespread adoption across the industry. Furthermore, the relatively low variability (highest SD = 1.164) demonstrates a consistent pattern of use among respondents. These results align with earlier studies which emphasised the construction industry's reliance on both formal mechanisms—such as project briefings, documentation, and ICT tools—and informal channels including face-to-face interactions and phone calls, as essential vehicles for knowledge transfer (Ajmal & Koskinen, 2008; Dave & Koskela, 2009).

By providing empirical evidence of this trend, the findings extend current KS literature and highlight the significance of hybrid mechanisms that integrate structured and informal practices within project environments. For practitioners, particularly project managers, this underscores the need to institutionalise a balanced mix of formal and informal KS approaches to ensure effective knowledge flows across teams and stakeholders.

ACKNOWLEDGMENT

The authors would like to thank all those who contributed directly or indirectly in this research and towards the production of this paper.

FUNDING

This research was self-funded.

AUTHORS CONTRIBUTION

All authors played equal contributions towards the production of this paper.

CONFLICT OF INTEREST

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article

REFERENCES

Abdul Manaf, H., & Harvey, W. S. (2020). Sharing Managerial Tacit Knowledge. In *Open Government* (pp. 2318–2346). IGI Global. https://doi.org/10.4018/978-1-5225-9860-2.ch105

Abdullah, B., & Alqarni, A. (2022). Knowledge Sharing in International Business: A Literature Review Study. In *Tehnicki Glasnik* (Vol. 16, Issue 3, pp. 401–411). University North. https://doi.org/10.31803/tg-20220305124542

Ajmal, M. M., & Koskinen, K. U. (2008). Knowledge Transfer in Project-Based Organizations: An Organizational Culture Perspective. *Project Management Journal*, *39*(1), 7–15. https://doi.org/10.1002/pmj.20031

Ali, I., Musawir, A. U., & Ali, M. (2016). *Impact of Knowledge Sharing and Absorptive Capacity on Project Performance: The Moderating Role of Social Processes*. http://www.bam.ac.uk/

Baporikar, N. (2020). Learning Link in Organizational Tacit Knowledge Creation and Dissemination. *International Journal of Sociotechnology and Knowledge Development*, *12*(4), 70–88. https://doi.org/10.4018/IJSKD.2020100105

Bucher, J., Burmeister, A., Osland, J. S., & Deller, J. (2020). The influence of empowering leadership on repatriate knowledge transfer: understanding mechanisms and boundary conditions. *The International Journal of Human Resource Management*, 1–26. https://doi.org/10.1080/09585192.2020.1771400

Carrillo, P. M., Anumba, C. J., Al-Ghassani, A. M., & Robinson, H. S. (2001). *Perceptions and barriers in implementing knowledge management strategies in large construction organisations*. https://www.researchgate.net/publication/228965849

Chan, A. P. C., & Chan, A. P. L. (2004). Key performance indicators for measuring construction success. *Benchmarking: An International Journal*, *11*(2), 203–221. https://doi.org/10.1108/14635770410532624

CIDB Malaysia. (2024, December 12). *Part 2: Navigating Challenges and Embracing Opportunities in Malaysia's Construction Landscape*. CIDB Malaysia. https://www.cidb.gov.my/eng/part-2-navigating-challenges-and-embracing-opportunities-in-malaysias-construction-landscape/?utm_campaign=part-2-navigating-challenges-and-embracing-opportunities-in-malaysias-construction-landscape&utm_medium=rss&utm_source=chatgpt.com

Dave, B., & Koskela, L. (2009). Collaborative knowledge management-A construction case study. *Automation in Construction*, *18*(7), 894–902. https://doi.org/10.1016/j.autcon.2009.03.015 Dulaimi, M. F. (2004). *Case studies on knowledge sharing across cultural boundaries*. https://doi.org/10.1108/09699980710829012

Egbu, C. O. (2004). Managing knowledge and intellectual capital for improved organizational innovations in the construction industry: An examination of critical success factors. *Engineering, Construction and Architectural Management*, *11*(5), 301–315. https://doi.org/10.1108/09699980410558494

Hernstig, M., & Zafar, M. (2021). *Intra-organizational knowledge sharing in the construction industry*. Hobday, M. (2000). The project-based organisation: an ideal form for managing complex products

and systems? *Research Policy*, *29*(7–8), 871–893. https://doi.org/10.1016/S0048-7333(00)00110-4

Hsu, I.-C., & Wang, Y.-S. (2008). A Model of Intraorganizational Knowledge Sharing. *Journal of Global Information Management*, *16*(3), 45–73. https://doi.org/10.4018/jgim.2008070103

Ismail Al-Alawi, A., Yousif Al-Marzooqi, N., & Fraidoon Mohammed, Y. (2007). Organizational culture and knowledge sharing: critical success factors. *Journal of Knowledge Management*, *11*(2), 22–42. https://doi.org/10.1108/13673270710738898

Kim, S.-J. (2019). Knowledge Sharing and Collaboration within and across Firms. In *Management*. Oxford University Press. https://doi.org/10.1093/obo/9780199846740-0163

Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, *30*(3), 607–610. https://doi.org/10.1177/001316447003000308

Kumaraswamy, M., & Dulaimi, M. (2001). Empowering innovative improvements through creative construction procurement. *Engineering Construction and Architectural Management*, *8*(5–6), 325–334. https://doi.org/10.1046/j.1365-232X.2001.00215.x

Law, C. C. H., & Ngai, E. W. T. (2008). An empirical study of the effects of knowledge sharing and learning behaviors on firm performance. *Expert Systems with Applications*, *34*(4), 2342–2349. https://doi.org/https://doi.org/10.1016/j.eswa.2007.03.004

Martín Cruz, N., Martín Pérez, V., & Trevilla Cantero, C. (2009). The influence of employee motivation on knowledge transfer. *Journal of Knowledge Management*, *13*(6), 478–490. https://doi.org/10.1108/13673270910997132

Navimipour, N. J., & Charband, Y. (2016). Knowledge sharing mechanisms and techniques in project teams: Literature review, classification, and current trends. In *Computers in Human Behavior* (Vol. 62, pp. 730–742). Elsevier Ltd. https://doi.org/10.1016/j.chb.2016.05.003

Nazim, M., & Mukherjee, B. (2016). Factors Critical to the Success of Knowledge Management. In *Knowledge Management in Libraries* (pp. 263–286). Elsevier. https://doi.org/10.1016/b978-0-08-100564-4.00011-9

Negara, K., Suryo, E., & Wijatmiko, I. (2021). *Tacit Knowledge Acquisition and Codification in Construction Industry: Evidence from Indonesia*. https://doi.org/10.2991/aer.k.211221.005

Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford University Press.

Olanrewaju, A. L., & Lee, A. H. J. (2022). Investigation of the poor-quality practices on building construction sites in Malaysia. *Organization, Technology and Management in Construction: An International Journal*, *14*(1), 2583–2600. https://doi.org/10.2478/otmcj-2022-0008

Polanyi, M. (1958). *Personal Knowledge: Towards a Post-Critical Philosophy* (Vol. 20, Issue 3). University of Chicago Press.

Raza Abidi, S. S. (2007). *Healthcare Knowledge Sharing: Purpose, Practices, and Prospects* (pp. 67–86). https://doi.org/10.1007/978-0-387-49009-0_6

Ribeiro, F. L. (2009). Enhancing knowledge management in construction firms. *Construction Innovation*, *9*(3), 268–284. https://doi.org/10.1108/14714170910973493

Roux, D. J., Rogers, K. H., Biggs, H. C., Ashton, P. J., & Sergeant, A. (2006). *Bridging the Science-Management Divide: Moving from Unidirectional Knowledge Transfer to Knowledge Interfacing and Sharing*.

Sveiby, K. E. (2007). Disabling the context for knowledge work: The role of managers' behaviours. *Management Decision*, *45*(10), 1636–1655. https://doi.org/10.1108/00251740710838004

Tangaraja, G., Mohd Rasdi, R., Abu Samah, B., & Ismail, M. (2016). Knowledge sharing is knowledge transfer: a misconception in the literature. *Journal of Knowledge Management*, *20*(4), 653–670. https://doi.org/10.1108/JKM-11-2015-0427

Xue, J., Shen, G. Q., Yang, R. J., Wu, H., Li, X., Lin, X., & Xue, F. (2020). Mapping the knowledge domain of stakeholder perspective studies in construction projects: A bibliometric approach. *International Journal of Project Management*, *38*(6), 313–326. https://doi.org/10.1016/j.ijproman.2020.07.007