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The Role of Information Technology and Trust Culture in Knowledge Transfer to Local Employees: A Systematic Literature Review

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ABSTRACT

Knowledge transfer is a crucial process for foreign construction companies operating in diverse cultural and operational environments. Effective knowledge transfer to local employees enhances productivity, innovation, and long-term project success. This study explores the role of Information Technology (IT) and Trust Culture in facilitating knowledge transfer to local employees through a Systematic Literature Review (SLR) approach. Relevant studies from reputable databases (e.g., Scopus, Web of Science, and ScienceDirect) were analyzed systematically. Findings reveal that IT plays a significant role in streamlining communication, documentation, and knowledge sharing, while trust culture fosters collaboration and reduces resistance to knowledge absorption. The interplay between IT and trust culture creates an environment conducive to seamless knowledge transfer. This study contributes to the understanding of how organizations can optimize IT infrastructure and build trust culture to enhance knowledge-sharing processes. Future research directions and practical recommendations are also discussed.

Keywords: Knowledge Transfer, Information Technology, Trust Culture, Local Employees, Systematic Literature Review, Foreign Construction Companies

1. INTRODUCTION

Knowledge transfer has become a pivotal process in globalized industries, particularly in the construction sector, where foreign companies often collaborate with local employees. Effective knowledge sharing ensures operational efficiency, reduces project risks, and enhances workforce competence. However, knowledge transfer is often hindered by cultural barriers, inadequate trust, and ineffective use of technology (Mehmood et al., 2022). These challenges not only slow down the integration of local employees into global workflows but also limit the overall effectiveness of knowledge dissemination within the organization. Information Technology (IT) has transformed knowledge transfer by enabling instant communication, remote collaboration, and data storage (1). Tools such as cloud platforms, project management software, and collaborative systems have streamlined the flow of knowledge within and across teams (2). IT serves as a critical enabler in overcoming geographical and temporal barriers, allowing employees to access, share, and apply organizational knowledge efficiently. Additionally, emerging technologies such as Artificial Intelligence (AI) and Big Data analytics are further

enhancing knowledge management processes by automating data analysis and facilitating real-time decision-making. However, technology alone cannot guarantee successful knowledge transfer; trust culture also plays an essential role. Trust culture, defined as the shared belief in the reliability, openness, and integrity of team members, serves as the social foundation for effective knowledge exchange (3). A high level of trust fosters openness, reduces resistance to change, and encourages employees to share and adopt knowledge effectively (4). Trust culture also reduces the fear of knowledge loss, where employees may hesitate to share critical information due to concerns about job security or competitive disadvantages (5). Moreover, trust acts as a mediator between IT adoption and knowledge-sharing behavior, where employees are more likely to leverage technology tools in a supportive and trust-based organizational environment.

Despite the importance of these two factors, studies examining their combined impact on knowledge transfer in foreign construction companies remain fragmented. Much of the existing literature focuses on either the technological aspects of knowledge management or the socio-cultural dimensions, leaving a gap in understanding their interplay in real-world organizational contexts (Inkpen & Tsang, 2005). For example, while IT provides the infrastructure for knowledge dissemination, the willingness of employees to engage with these systems is heavily influenced by trust dynamics within teams. This interplay is particularly significant in foreign construction firms, where employees from diverse cultural backgrounds must navigate both technological interfaces and social trust networks to ensure seamless knowledge flow.

This Systematic Literature Review (SLR) aims to synthesize existing research to provide a comprehensive understanding of how IT and trust culture contribute to knowledge transfer to local employees. By analyzing studies from multiple regions and cultural contexts, this review seeks to identify best practices, key challenges, and actionable strategies for enhancing knowledge transfer effectiveness. The findings of this study will offer theoretical insights and practical recommendations for managers and policymakers in the construction industry, helping them align technological investments with trust-building initiatives to create an optimal environment for knowledge sharing and collaboration (6).

2. LITERATURE REVIEW

2.1 Knowledge Transfer in Foreign Construction Companies

Knowledge transfer refers to the process of sharing, disseminating, and applying knowledge between individuals, teams, or organizations (3). In the context of foreign construction companies, knowledge transfer is not merely about transferring explicit knowledge, such as documented processes, but also implicit knowledge, including skills, experiences, and tacit insights (7). Effective knowledge transfer is crucial for aligning local workforce practices with international standards, ensuring project efficiency, and fostering innovation (8).

However, knowledge transfer in foreign construction projects often faces significant challenges, including cultural differences, language barriers, and hierarchical organizational structures (9). Additionally, geographical dispersion and temporary project teams add another layer of complexity to the knowledge-sharing process. A study by (10) highlights that knowledge transfer is most effective when supported by structured frameworks, enabling cross-cultural collaboration and continuous communication. The role of leadership in promoting a knowledge-sharing culture cannot be underestimated. Leaders must establish an open environment where employees feel encouraged and valued when sharing insights and experiences. Therefore, understanding the dynamics of knowledge transfer in foreign construction companies requires attention to

both structural and cultural factors influencing knowledge flow across organizational boundaries.

2.2 The Role of Information Technology in Knowledge Transfer

Information Technology (IT) has become an indispensable tool in facilitating knowledge transfer within construction companies operating across borders. IT systems enable efficient communication, documentation, and sharing of knowledge, even across geographically dispersed teams (11). Communication Platforms: Instant messaging tools (e.g., Microsoft Teams, Slack) and video conferencing software (e.g., Zoom, Skype) have enabled real-time collaboration and reduced delays in decision-making.

1. Knowledge Repositories; Digital libraries and cloud storage systems provide centralized access to organizational documents, project plans, and best practices.
2. Project Management Tools; Software like Building Information Modeling (BIM) and Primavera has enhanced collaborative project execution by integrating design, scheduling, and cost management.

However, the successful deployment of IT systems in knowledge transfer heavily depends on employee acceptance and usage. Resistance to adopting new technologies, lack of adequate training, and poor system usability can hinder the effectiveness of IT-enabled knowledge transfer. Furthermore, a study by (12) emphasizes that technology must be complemented by a supportive organizational culture to maximize its potential. The integration of advanced technologies, such as Artificial Intelligence (AI) and Big Data analytics, is also gaining momentum. These tools can predict project risks, optimize resource allocation, and facilitate better decision-making processes in knowledge transfer.

2.3 The Role of Trust Culture in Knowledge Transfer

Trust culture plays a pivotal role in knowledge transfer by fostering openness, transparency, and mutual respect among employees and management (3). Trust serves as an essential enabler for knowledge-sharing behavior, especially in multinational teams where cultural and language differences may pose barriers (7). In organizations with high levels of trust, employees are more likely to share their knowledge without fear of exploitation or job insecurity (13). Trust also reduces concerns about the misuse or misinterpretation of shared knowledge and encourages employees to actively participate in collaborative problem-solving processes (12).

1. Relational Trust: Built through long-term working relationships and consistent behavior among team members.
2. Cognitive Trust: Developed through shared understanding and expectations regarding work-related tasks.

Research by (14) shows that trust not only reduces knowledge-sharing barriers but also promotes efficient communication channels within teams. Similarly, (15) emphasize that knowledge transfer initiatives in construction companies often fail when trust between team members and management is absent. Trust culture becomes particularly critical in environments where employees rely heavily on digital platforms for communication. In such cases, trust compensates for the lack of face-to-face interactions and minimizes misunderstandings. Therefore, building and maintaining trust should be a strategic priority for organizations aiming to optimize knowledge transfer.

2.4 Interaction Between IT and Trust Culture

While IT provides the necessary infrastructure for knowledge transfer, trust culture determines how effectively employees utilize these tools (16). The

integration of IT and trust culture creates a synergistic environment where knowledge flows seamlessly across organizational boundaries (13). Research by (17) highlights that IT enhances knowledge accessibility and sharing, but trust ensures employees are willing to engage with these tools transparently. In contrast, a lack of trust may result in employees withholding valuable knowledge despite the availability of advanced IT systems. Trust culture acts as a moderator in the relationship between IT and knowledge transfer effectiveness. A high-trust environment motivates employees to share both explicit and tacit knowledge through IT platforms without hesitation (7). Conversely, in a low-trust environment, employees may perceive IT tools as surveillance mechanisms rather than enablers of collaboration. Furthermore, emphasizes that organizations should not rely solely on IT investments for knowledge transfer success but should also invest in building trust through leadership initiatives, team-building exercises, and transparent communication policies. In conclusion, IT and trust culture are not standalone factors but interdependent elements in knowledge transfer processes. Their integration offers a holistic approach to overcoming barriers and creating a sustainable knowledge-sharing culture in foreign construction companies.

MATERIALS & METHODS

3. Research Methodology

3.1 Research Design

This study employs a Systematic Literature Review (SLR) methodology, a structured approach used to identify, evaluate, and synthesize existing research on a specific topic. The SLR method ensures a comprehensive and unbiased analysis of the available literature, making it an essential tool for understanding complex phenomena such as the role of Information Technology (IT) and Trust Culture in knowledge transfer to local employees in foreign construction companies. SLR is chosen because it offers several advantages:

1. Comprehensive Coverage: Ensures that all relevant studies from multiple databases are included, minimizing publication bias.
2. Reproducibility: The systematic approach allows future researchers to replicate the study under similar conditions.
3. Transparency: Every stage, from data search to analysis, is explicitly documented, ensuring clarity and accountability.
4. Evidence Synthesis: Helps identify trends, gaps, and patterns in existing literature to provide theoretical insights and practical recommendations.
5. PRISMA Guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)
6. This study follows the PRISMA framework to ensure rigor and transparency in the review process. The PRISMA guidelines provide a structured checklist and flow diagram to document every stage of the review systematically.

The PRISMA process in this study includes the following stages:

1. Identification: Relevant studies are identified using predefined keywords across reputable databases such as Scopus, Web of Science, and ScienceDirect.
2. Screening: Duplicate records are removed, and abstracts are screened for relevance based on predefined inclusion and exclusion criteria.
3. Eligibility: Full-text articles are reviewed to ensure they meet the research objectives and methodological quality standards.
4. Inclusion: Selected studies are synthesized and analyzed to extract meaningful insights.
5. Inclusion and Exclusion Criteria
6. Inclusion Criteria: Peer-reviewed journal articles and published between 2013–2023.

Relevant to the topics of Information Technology, Trust Culture, and Knowledge Transfer in construction contexts.

1. Focus on foreign construction companies.
2. Exclusion Criteria:
3. Non-English publications.
4. Conference papers and unpublished theses.
5. Studies with insufficient methodological clarity.
6. Data Extraction and Analysis

Key information from the selected articles is systematically extracted, including:

1. Title and Author(s).
2. Year of Publication.
3. Research Objectives.
4. Methodology.
5. Key Findings.
6. Limitations.

The extracted data are then categorized thematically to identify common patterns, gaps, and insights that contribute to a deeper understanding of how Information Technology and Trust Culture influence knowledge transfer and outcome of the Research Design

The SLR approach in this study aims to Synthesize existing knowledge on IT and trust culture in knowledge transfer. Highlight critical success factors and barriers. Provide evidence-based recommendations for improving knowledge transfer practices in foreign construction companies. This design ensures the reliability, validity, and depth of findings, offering both theoretical contributions and practical implications for future research and industry practices.

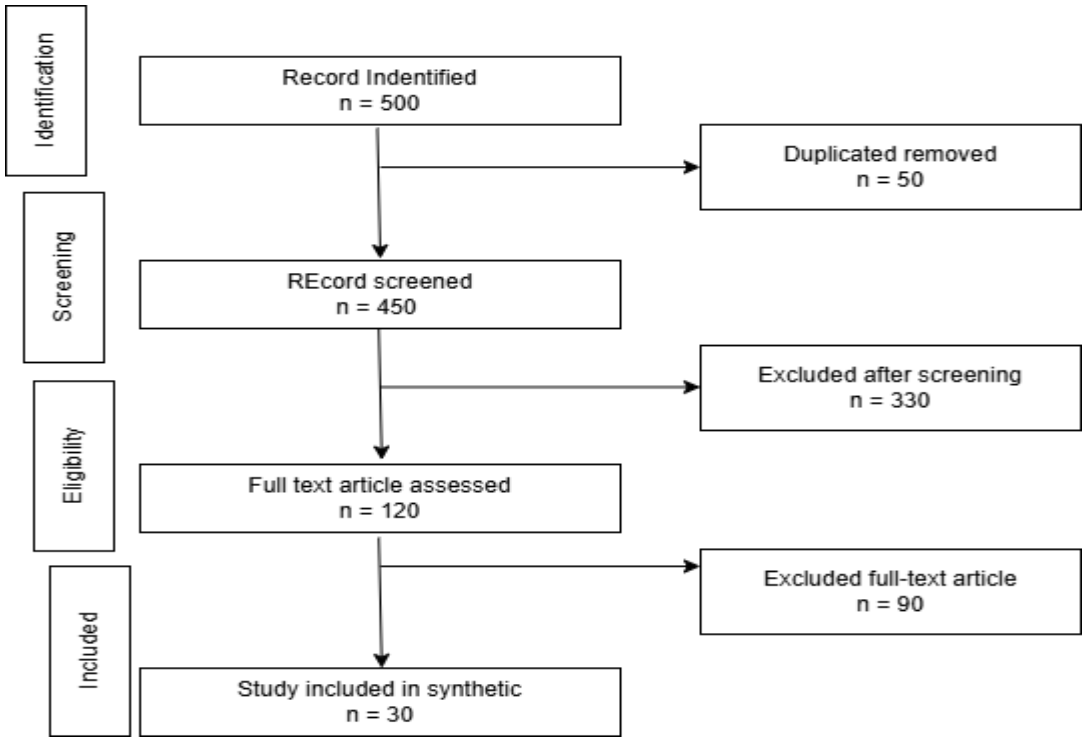

Figure 1. PRISMA flow chart

FINDING AND DISCUSSION

1. Key Findings

a. Information Technology (IT)

Information Technology plays a pivotal role in enhancing knowledge transfer by providing tools and platforms that streamline communication, collaboration, and information management. Collaborative tools such as instant messaging applications, video conferencing platforms, and cloud-based knowledge repositories facilitate seamless information exchange, even across geographically dispersed teams (Alshamsi et al., 2021). Additionally, project management

software like Building Information Modeling (BIM) and Primavera enables effective planning, execution, and knowledge dissemination in large-scale construction projects (Ma et al., 2020). These technologies not only reduce physical and temporal barriers but also ensure that critical knowledge is captured, stored, and made accessible to all stakeholders.

b. Trust Culture

Trust culture is identified as a critical enabler of knowledge transfer, particularly in multicultural environments such as foreign construction companies. A high level of trust among employees reduces the fear of knowledge loss, eliminates reluctance in sharing critical insights, and enhances openness in communication (Inkpen & Tsang, 2005). Trust fosters an environment where employees feel confident in sharing both tacit knowledge (skills and experiences) and explicit knowledge (documented processes and procedures). In multicultural teams, trust mitigates cultural barriers, improves team cohesion, and builds long-term working relationships (Lee et al., 2022).

c. Interaction Effect

The synergy between Information Technology and Trust Culture creates an optimal environment for effective knowledge transfer. Trust acts as a catalyst in maximizing the benefits of IT systems by encouraging employees to fully utilize technological tools for knowledge sharing (Han & An, 2021). Without trust, even advanced IT systems may face resistance or underutilization by employees. Conversely, a strong trust culture can compensate for technological limitations by enhancing interpersonal communication, creating informal knowledge-sharing networks, and encouraging collaborative problem-solving.

2. DISCUSSION

The findings from this Systematic Literature Review (SLR) emphasize the complementary roles of Information Technology (IT) and Trust Culture in facilitating knowledge transfer in foreign construction companies. While IT provides the technical infrastructure for knowledge dissemination—such as tools for real-time collaboration, centralized data storage, and project management—trust culture ensures that employees are willing to share and adopt knowledge effectively. However, the absence of trust culture often undermines the effectiveness of IT infrastructure. For example, employees may perceive collaborative tools as mechanisms for surveillance rather than enablers of efficient communication (Koohang et al., 2017). In such cases, even the most advanced IT platforms may fail to fulfill their intended purpose. On the other hand, in a high-trust environment, employees are more likely to share critical knowledge willingly, engage in constructive feedback, and contribute to organizational learning processes (Chong et al., 2018).

Moreover, trust culture compensates for some technological limitations, such as poor system usability or inadequate training on IT platforms. Employees in a trust-based organization are more likely to rely on informal communication networks and peer-to-peer knowledge sharing to bridge these gaps (Ajmal et al., 2019). This suggests that trust culture acts as both a mediator and a moderator in the relationship between IT and knowledge transfer effectiveness.

Key Insights from the Discussion:

Technological Investment Alone is Insufficient: While IT tools are essential for facilitating knowledge flow, their effectiveness depends on the willingness of employees to adopt and use them. Trust as a Catalyst: Trust culture enhances employees' motivation to share knowledge, reduces hesitation, and improves collaboration. Balanced Strategy is Crucial: Foreign construction companies must strike a balance between technological investment and cultural initiatives to build an environment conducive to knowledge transfer.

CONCLUSION

This study highlights the critical interplay between Information Technology (IT) and Trust Culture in facilitating knowledge transfer to local employees in foreign construction companies. The findings reveal that IT serves as a robust technological enabler, offering tools for real-time communication, collaborative knowledge-sharing platforms, and centralized data repositories. However, the effectiveness of these technological tools depends significantly on the presence of a strong trust culture, which fosters transparency, openness, and mutual respect among team members and management.

The interaction between IT and trust culture demonstrates a synergistic relationship, where trust acts as a catalyst for optimizing IT systems, enabling seamless knowledge flow across multicultural and geographically dispersed teams. While IT addresses structural barriers to knowledge transfer, trust culture addresses human and relational barriers, ensuring employees feel safe and motivated to share critical insights and expertise.

To maximize the benefits of knowledge transfer, foreign construction companies must balance investments in IT infrastructure with initiatives to build and sustain trust culture. This can be achieved through continuous training programs, transparent communication strategies, team-building activities, and inclusive leadership practices. Future research should explore how cultural differences influence the interaction between IT and trust culture and how these factors evolve in long-term projects. By aligning technological capabilities with trust-building efforts, organizations can create an environment conducive to effective knowledge transfer, ultimately enhancing operational efficiency, project outcomes, and workforce competence in the global construction sector. This study contributes to both theoretical understanding and practical implementation by offering actionable insights for managers, policymakers, and organizational leaders to improve knowledge transfer practices in multicultural, technology-driven environments.

Practical Implications:

Integrated Strategy: Organizations must integrate IT deployment plans with trust-building initiatives to maximize knowledge transfer effectiveness.

Training Programs: Regular training sessions on IT tools should be combined with leadership programs focused on building organizational trust.

Cultural Sensitivity: Organizations should address cultural barriers through diversity and inclusion programs to foster mutual respect and collaboration.

Theoretical Contribution:

This study contributes to the existing body of knowledge by highlighting the interdependent relationship between IT and trust culture in the context of knowledge transfer. While previous studies often examined these factors in isolation, this review provides a holistic understanding of their combined impact. In conclusion, Information Technology and Trust Culture are not standalone enablers of knowledge transfer but interdependent variables that collectively drive effective knowledge-sharing outcomes in foreign construction companies. Companies must adopt a dual-focused approach, investing equally in technology infrastructure and organizational trust-building, to create a sustainable knowledge-sharing culture that enhances project efficiency, reduces risks, and improves workforce competence.

Future Research Directions:

Explore the role of leadership in moderating the relationship between IT and trust culture.

Investigate cultural differences in knowledge transfer effectiveness in multinational construction teams.

Declaration by Authors

Conflict of Interest: The authors declare no conflict of interest.

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