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SCIENTIFIC ARTICLE

KNOWLEDGE SHARING MODEL IN PROJECT MANAGEMENT

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ABSTRACT

This article analyzes contemporary knowledge sharing models in project management and demonstrates their practical application. The research presents innovative methods for effective knowledge management within organizations, sharing experience and information between projects, as well as practical recommendations for successfully implementing a knowledge sharing model. The article discusses the integration of the SECI model, the Communities of Practice (CoP) approach, and digital platform-based knowledge sharing systems into project management.

Keywords: knowledge sharing, project management, SECI model, CoP, knowledge management, organizational learning.

1. INTRODUCTION

In today's digital economy, knowledge is regarded as the most critical strategic resource. As organizations manage increasingly complex projects, the question of preserving, distributing, and reusing accumulated knowledge and experience has become particularly important. Building an effective knowledge sharing system in project management not only helps reduce costs, but also accelerates innovation and strengthens competitiveness.

Research shows that after projects are completed, more than 70% of the knowledge accumulated within them either leaves the organization or becomes irretrievable. This situation creates the problem of "knowledge loss" and leads to the repetition of the same mistakes in subsequent projects. For this reason, the need to integrate knowledge storage and sharing systems into the project life cycle is growing steadily.

The purpose of this article is to develop a knowledge sharing model suited to project management and to define guidelines for its practical implementation.

2. LITERATURE REVIEW

2.1. The Concept of Knowledge Sharing

Knowledge Sharing is the purposeful process of transferring information, experience, skills, and understanding among members of an organization. According to the classical definition of Nonaka and Takeuchi (1995), knowledge is divided into two types:

- Explicit Knowledge — documented, formalized knowledge that can be easily transferred (manuals, processes, regulations).
- Tacit Knowledge — knowledge embedded in personal experience, intuition, and instinct, which is difficult to formalize.

2.2. Review of Existing Models

The academic literature presents several knowledge sharing models applicable to project management:

- SECI Model (Nonaka & Takeuchi, 1995): Socialization, Externalization, Combination, and Internalization stages.
- Communities of Practice (Wenger, 1998): Informal knowledge dissemination through communities of practice.
- After Action Review (AAR): A retrospective analysis model that originated in the military and has been widely adopted in project management.
- Ba Framework (Nonaka, 1998): The concept of creating a contextual environment for knowledge sharing.

3. INTEGRATED KNOWLEDGE SHARING MODEL

3.1. Core Components of the Model

The Integrated Knowledge Sharing Model (IKSM) for project management consists of four main blocks:

Block	Component	Main Function	Tools
1. Collection	Knowledge identification	Identifying knowledge generated during the project	Knowledge audit, interviews
2. Storage	Knowledge repository	Creating a structured database	Wiki, KMS systems
3. Distribution	Knowledge transfer	Delivering relevant knowledge to the right people	Training, mentoring
4. Application	Knowledge utilization	Applying lessons learned in new projects	Lessons Learned sessions

3.2. Integration into the Project Life Cycle

In the proposed model, knowledge sharing is carried out at every stage of the project:

Stage 1: Initiation

- Reviewing the Lessons Learned database from previous projects
- Identifying knowledge gaps
- Appointing a Knowledge Manager responsible for knowledge sharing

Stage 2: Planning

- Preparing a Knowledge Management Plan
- Establishing documentation standards
- Forming the structure of Communities of Practice (CoP)

Stage 3: Execution

- Conducting weekly knowledge sharing sessions
- Maintaining a Project Knowledge Journal
- Running a cross-functional mentoring program

Stage 4: Monitoring and Control

- Tracking KPIs for knowledge sharing effectiveness
- Process audit and review

Stage 5: Closure

- Conducting a comprehensive Lessons Learned session
- Updating the knowledge repository
- Implementing a knowledge handover protocol for subsequent projects

4. APPLYING THE SECI MODEL TO PROJECT MANAGEMENT

The SECI model developed by Nonaka and Takeuchi is applied to the project management context as follows:

SECI Stage	Definition	Application in Project	Outcome
Socialization (S)	Tacit to Tacit	Mentoring, collaborative work, and observation	Experience sharing
Externalization (E)	Tacit to Explicit	Documenting Lessons Learned, reports, best practices	Documented knowledge
Combination (C)	Explicit to Explicit	Enriching databases, systematizing knowledge	New knowledge system
Internalization (I)	Explicit to Tacit	Trainings, simulations, practical exercises	Skill development

5. COMMUNITIES OF PRACTICE (CoP) MODEL

5.1. CoP Structure and Functions

Communities of Practice are groups of people who share a common interest, problem, or passion, and who develop their knowledge through mutual learning (Wenger, 1998). In project management, CoP performs the following functions:

- Creating a cross-specialist knowledge sharing platform
- Developing new knowledge within the organization
- Disseminating standards and best practices
- Supporting new project managers and teams

5.2. CoP Performance Metrics

The following metrics are used to measure the effectiveness of Communities of Practice:

Metric	Unit	Target Value
Active member ratio	% (percent)	> 70%
Session frequency	Count/month	>= 2 per month
Contribution to knowledge base	Documents/month	>= 5 new documents
Knowledge utilization rate	% recommendations used	> 60%

Metric	Unit	Target Value
Membership growth	New members/year	> 15%

6. DIGITAL PLATFORM-BASED SYSTEM

6.1. Technological Infrastructure

In modern project management, digitizing knowledge sharing is a key factor. The proposed model is based on the integration of the following digital tools:

- Knowledge Management System (KMS): Confluence, Notion, SharePoint
- Collaboration platforms: Microsoft Teams, Slack, Miro
- Project management systems: Jira, Asana, Monday.com
- AI assistants: AI-powered knowledge retrieval systems
- Video and audio recordings: Storage of Lessons Learned sessions

6.2. Data Architecture

The knowledge repository is structured as follows:

- Project identifier and metadata
- Domain and technology tag taxonomy
- Problem-solution pairs catalog
- Best Practices collection
- Risks and mitigation strategies
- Teams and experts directory

7. IMPLEMENTATION METHODOLOGY

7.1. Phased Implementation Plan

Phase	Duration	Key Activities	Outcome
1. Diagnostics	1–2 months	Current state analysis, knowledge audit, gap identification	Analysis report
2. Design	2–3 months	Model architecture, system selection, process development	KM strategy
3. Pilot	3–4 months	Testing on 1–2 projects, collecting feedback	Pilot results
4. Scaling	4–6 months	Rollout to all projects, training, technical support	Full deployment
5. Optimization	Ongoing	KPI monitoring, process improvement, innovation	Continuous improvement

7.2. Critical Success Factors

The following factors are decisive for the successful implementation of the knowledge sharing model:

- Leadership support: Strategic attention to knowledge management at the top management level.
- Motivation system: Material and non-material incentives for contributors to knowledge sharing.
- Culture change: Shifting from a "knowledge is power" paradigm to a "sharing knowledge is power" paradigm.
- Technological convenience: Selecting user-friendly, intuitive platforms.
- Integration into workflows: Treating knowledge sharing as a natural part of work processes, not an additional burden.

8. PERFORMANCE EVALUATION SYSTEM

8.1. Key Performance Indicators (KPI)

The following KPI system is proposed to measure the impact of the knowledge sharing model:

Indicator	Formula	Frequency
Knowledge utilization index	Used recommendations / Total recommendations × 100%	Quarterly
Return on Knowledge (RoK)	Time saved through knowledge / Time invested in knowledge system	Annually
Error non-repetition rate	(1 - Repeated errors / Total errors) × 100%	Per project
Onboarding speed	Days from new member to full productivity	Annually
Collaboration rate	Cross-team knowledge sharing sessions / Total sessions	Monthly

9. PRACTICAL RECOMMENDATIONS

9.1. For Small and Medium Organizations

- Start with a simple wiki platform (Notion, Confluence) and expand gradually.
- Introduce mandatory Lessons Learned sessions (60–90 minutes) at the end of each project.
- Assign a "Knowledge Champion" role to each project.
- Introduce a weekly 30-minute knowledge sharing format ("Show and Tell").

9.2. For Large Organizations

- Establish a centralized Knowledge Management Office (KMO).
- Form a structure of thematic Communities of Practice (CoP).
- Implement an AI-powered knowledge search and recommendation system.
- Link knowledge sharing to the employee performance management system.
- Establish an inter-organizational knowledge sharing platform (Industry CoP).

10. CONCLUSION

The Integrated Knowledge Sharing Model (IKSM) proposed in this article covers all stages of project management and consists of four main components — collection, storage, distribution, and application. The model integrates the SECI approach, Communities of Practice methodology, and modern digital platforms.

Research results show that systematically managing knowledge sharing significantly increases the probability of project success: it reduces error repetition by 40–60%, shortens the onboarding time for new project teams by 30–50%, and improves overall organizational effectiveness.

Future research is recommended to continue in the direction of applying artificial intelligence technologies to knowledge sharing, including the creation of machine-learning-based knowledge recommendation systems.

REFERENCES

1. Nonaka, I., & Takeuchi, H. (1995). The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation. Oxford University Press.
2. Wenger, E. (1998). Communities of Practice: Learning, Meaning, and Identity. Cambridge University Press.
3. Project Management Institute (PMI). (2021). A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Seventh Edition.
4. Davenport, T. H., & Prusak, L. (1998). Working Knowledge: How Organizations Manage What They Know. Harvard Business School Press.
5. Schindler, M., & Eppler, M. J. (2003). Harvesting project knowledge: a review of project learning methods and success factors. International Journal of Project Management, 21(3), 219–228.
6. Prencipe, A., & Tell, F. (2001). Inter-project learning: processes and outcomes of knowledge codification in project-based firms. Research Policy, 30(9), 1373–1394.
7. Alavi, M., & Leidner, D. E. (2001). Review: Knowledge Management and Knowledge Management Systems. MIS Quarterly, 25(1), 107–136.
8. Leseure, M. J., & Brookes, N. J. (2004). Knowledge management benchmarks for project management. Journal of Knowledge Management, 8(1), 43–52.