

Project Communication Management: A Model For Evaluating Effectiveness

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Agenda

- Research Goals
- Theoretical Background
- Project Communication Management Model
- Research Findings
- Future Research

Why Communications ?

Effective communication is a necessity for project success



Project managers act as "Communicators"



Research Goals

- ✿ Develop a generic model for evaluating the communication effectiveness in project environment
- ✿ Implement the model on an array of organizations from various industries
- ✿ Investigate several hypotheses derived from the literature survey

Theoretical Background Project Management

Project
Communications
Management

Communications
Planning

Information
Distribution

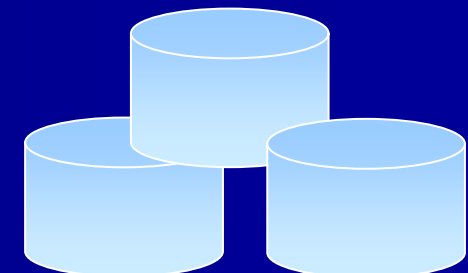
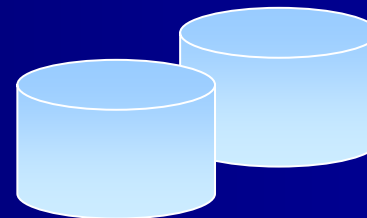
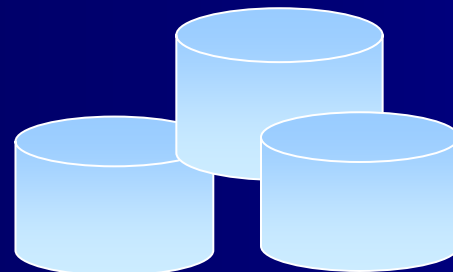
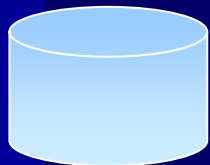
Performance
Reporting

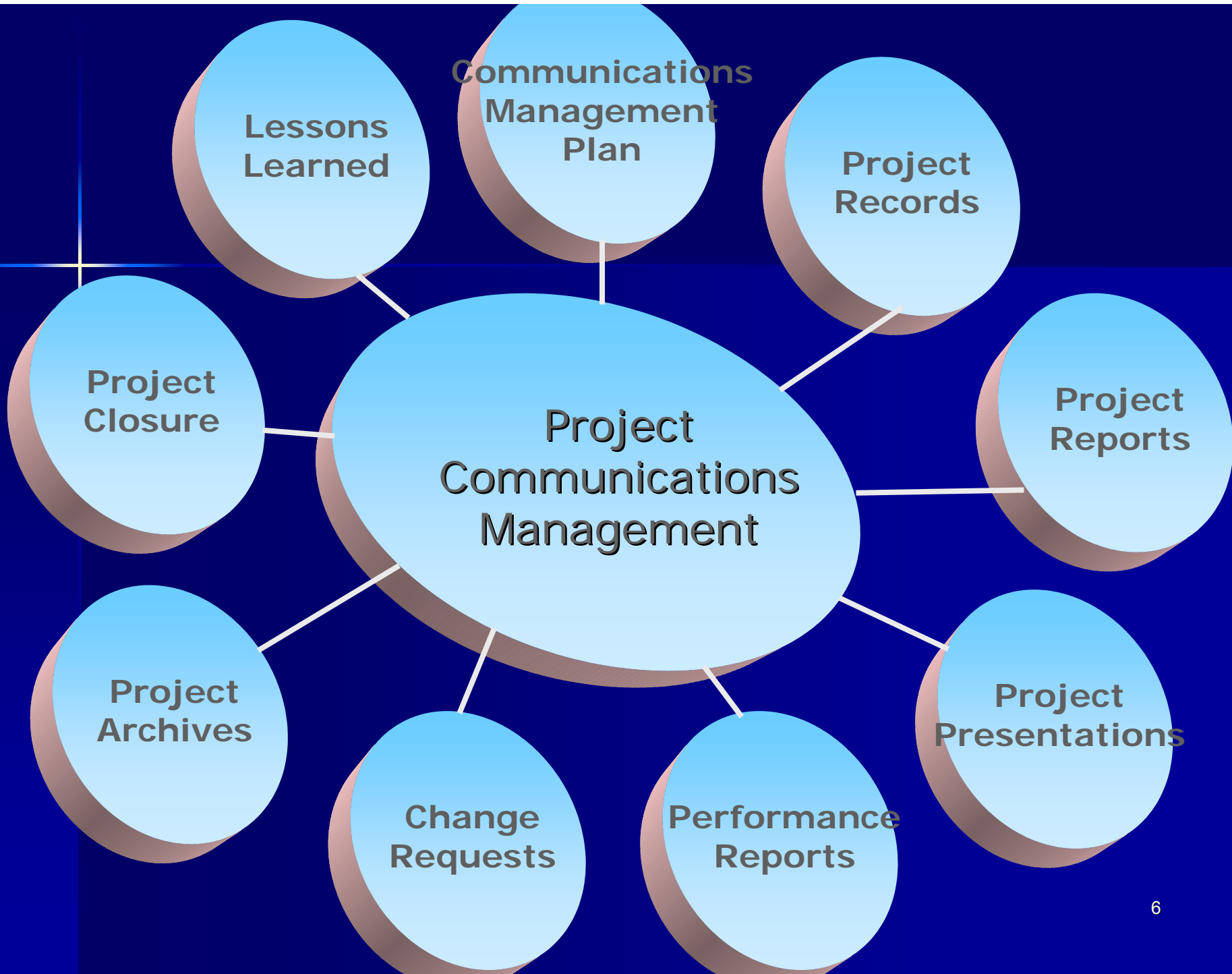
Administrative
Closure

Input

Tools & Techniques

Outputs

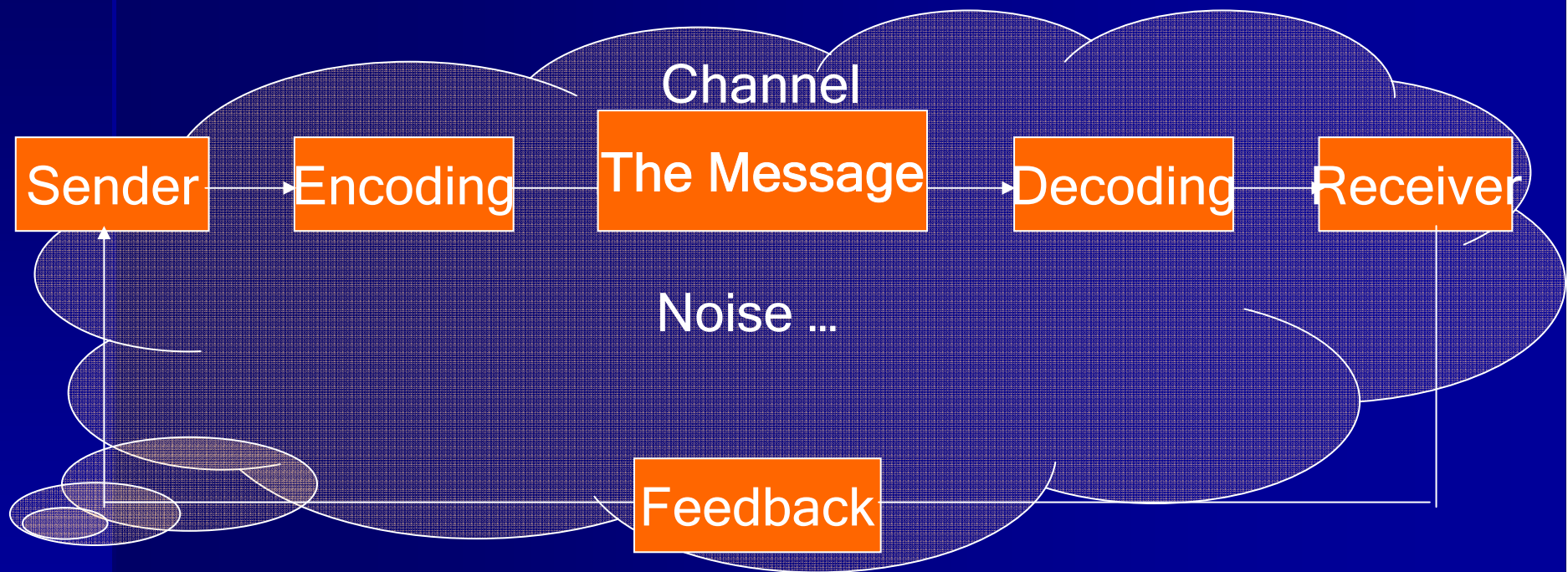




Theoretical Background

Organizational Communication

The Communication Model



Theoretical Background Organizational Communication

Data – Information – Knowledge

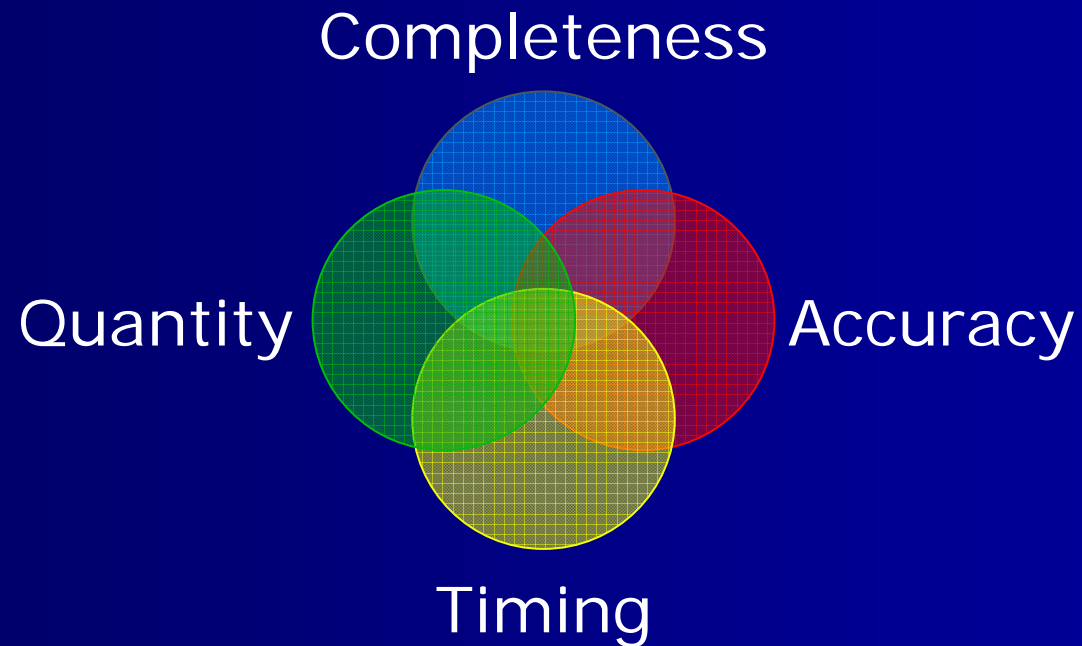
Communication Skills

Communication Blocks

Formal & Informal Communication

Information Flow

Communication Dimensions




Research Assumptions

- The PMBOK is the main body of knowledge for project management
- PMBOK Communications Management section is complete and comprehensive
- Communication effectiveness can be evaluated using communication outputs
- Communication in project environment is unique, although adhering to the general rules of communication
- A generic evaluating model can be applied to analyze any project communication

The Project Communications Management Index

Communication Output	Completeness	Accuracy	Timing	Quantity	Average
Comm. Mgt. Plan					
Project Records					
Project Reports					
Project Presentations					
Performance Reports					
Change Requests					
Project Archives					
Project Closure					
Lessons Learned					
Average					

The Project Communications Management Index

Communication Output 	Completeness	Accuracy	Timing	Quantity	Average
Comm. Mgt. Plan	2	3	2	1	2.00
Project Records	3	2	4	5	3.5
Project Reports	4	3	3	4	3.5
Project Presentations	3	3	3	4	3.25
Performance Reports	4	4	2	4	3.5
Change Requests	3	3	4	5	3.75
Project Archives	2	2	3	4	2.75
Project Closure	2	3	3	4	3.00
Lessons Learned	1	3	3	2	2.25
Average					3.05

Guidelines for Establishing Communication Attributes Effectiveness

	1	2	3	4	5
Completeness	All transfers of information completed successfully.	Insignificant information is missing. Data can be used without corrective measures.	Some information is missing. Can be repaired relatively fast with limited resources.	Important information is missing. Substantial resources required for completion.	Serious information shortage. Data should be rearranged and resubmitted.
Timing	Information arrives always on time.	Information arrives mostly on time and does not need updating.	Information is sometimes late and needs minimal updating.	Usually the information arrives late and requires major update procedures.	Often the information transferred is very late and obsolete.
Accuracy	Information always clear, accurate and includes proper feedback.	Information slightly unclear and needs minor clarifications.	Information occasionally inaccurate and can be easily updated.	Information is inaccurate and unclear but can be updated, needs substantial time and resources.	Information is mostly erroneous and unclear. Data cannot be corrected.
Quantity	No excessive information. All information is relevant and necessary.	Minor excessive information. Does not impair the quality of the information.	Excessive information. Requires minor identification work to reject the irrelevant information.	Some excessive information. Requires major work to identify relevant information.	Serious excessive information. Impossible to extract the relevant information.

Research Questionnaire Validity

- Content Validity
 - Literature survey
 - Examination by professionals
- Criterion Validity
 - Correlation coefficient between subjective evaluations of the overall communications effectiveness and the PCMI = 0.33
- Construct Validity
 - Multi-trait Multi-method Matrix (MMM)

Research Questionnaire Reliability

- Reliability Coefficient
 - Cronbach's $\alpha = (36 * 0.30) / (1 + (36-1) * 0.30) = 0.94$
- Split-test Reliability
 - $r_{tt} = (2 * 0.85) / (1 + 0.85) = 0.92$
- Inter-Judge Reliability
 - Multi source correlation coefficient = 0.61

Hypotheses

- Of all nine Communication Outputs, the Communications Management Plan Maintains the Lowest Effectiveness Values
- Organizational Blocks Sustain the Highest Effect on Project Communications Effectiveness
- Project Communication Effectiveness Is Negatively Related To the Number of Participants in the Project

Hypotheses (Cont.)

- Project Communication Effectiveness Is Negatively Related To the Number of Participants in the Organization
- Formal communications intensity is directly related to the age of the organization
- Projects Performed by Organizations from Different Industries Maintain Different Values of Effective Communications

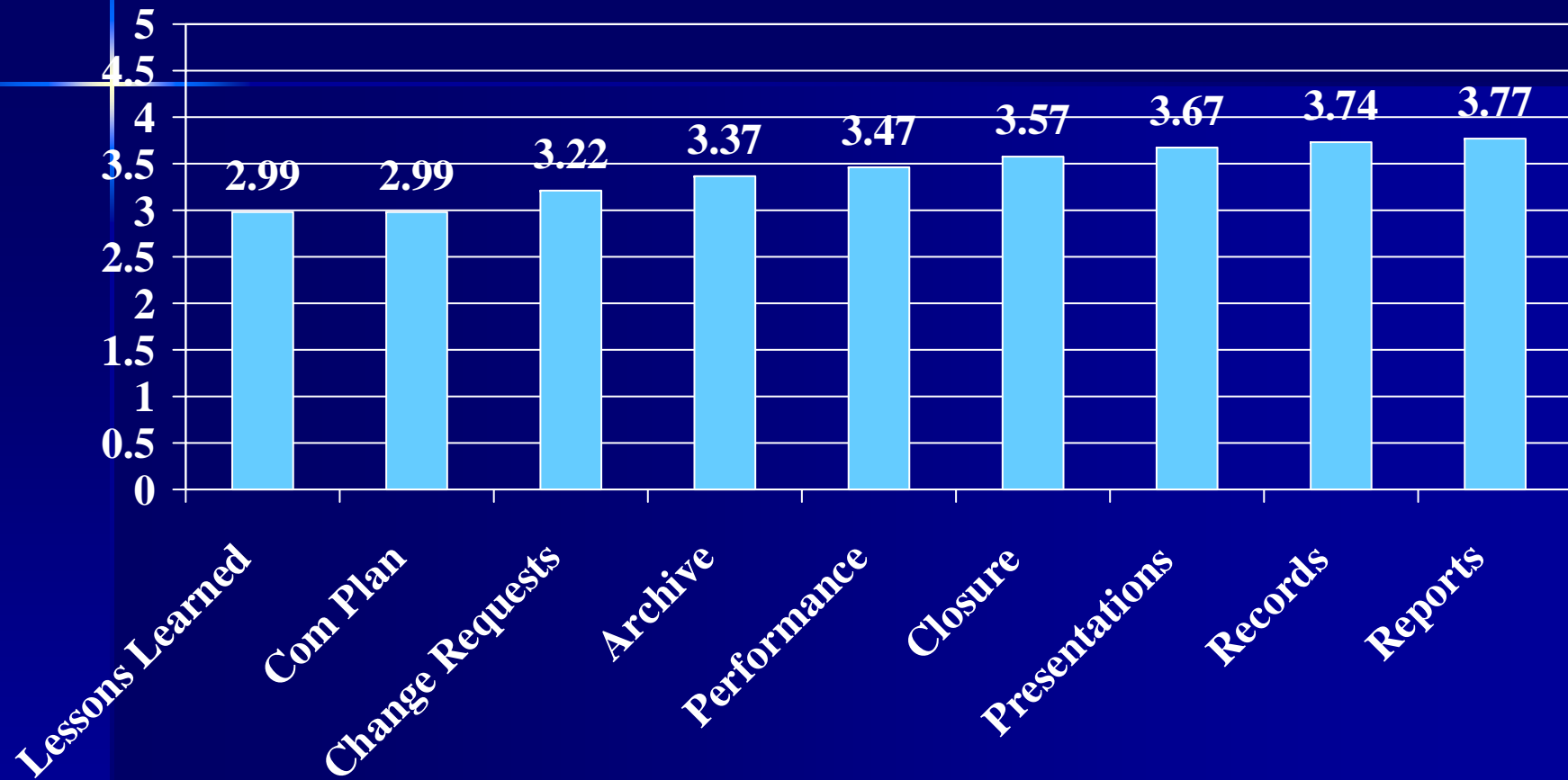
Research Data

- 201 complete Questionnaires
- 11 Organizations + 3 MBA Groups
- Various industries
- Various sizes of organizations
- Private, Public, and Governmental Organizations
- Functional, Matrix, and Project-Oriented Structure

Major Research Findings



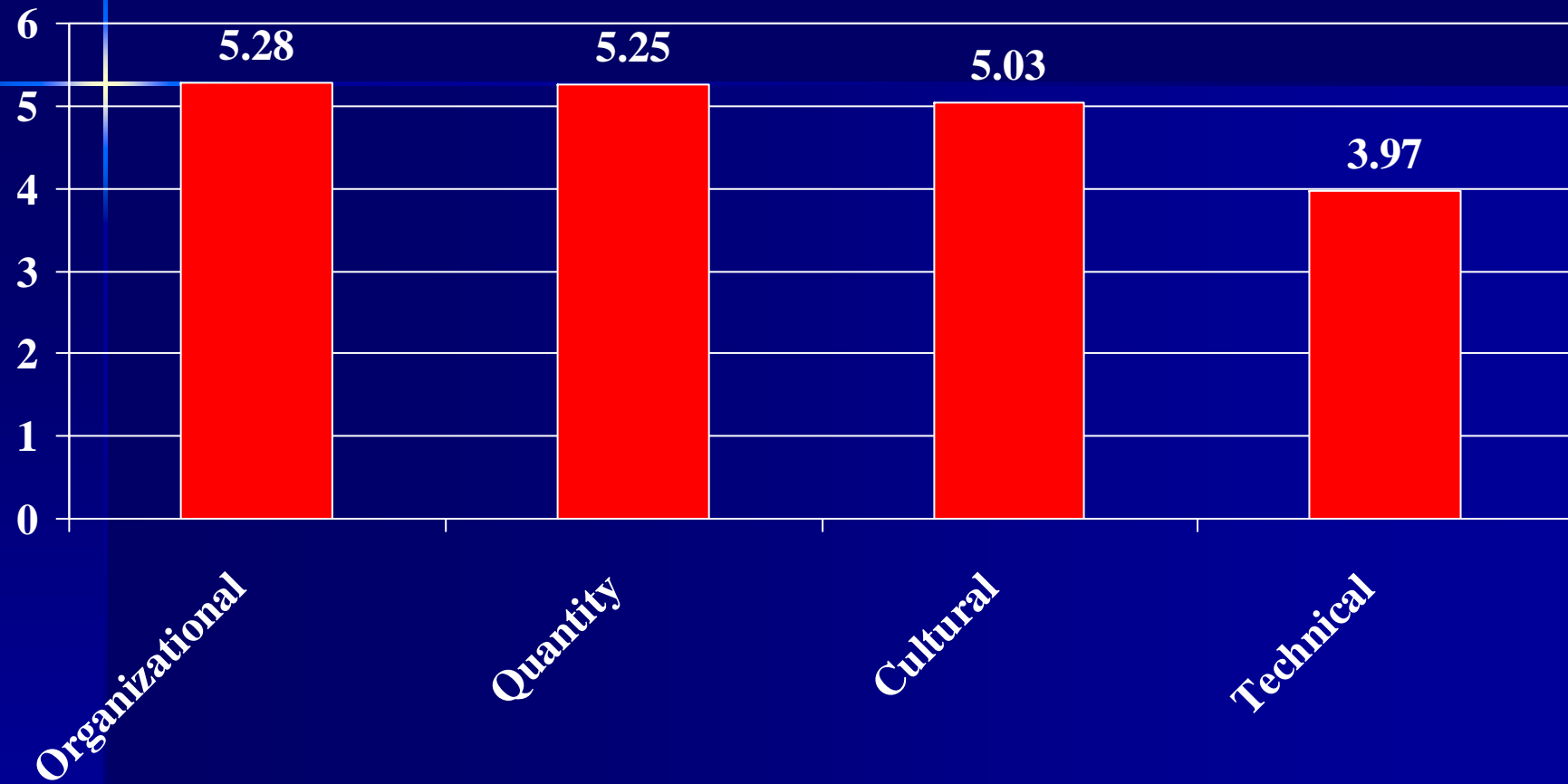
Communication Outputs Effectiveness



Analysis of Results

- The weakest links are “Lessons Learned” and “Communications Management Plan”
- Communication planning is ignored since managers perceive communication as self evident
- The field of knowledge management is in its infancy and lacks operating tools

Intensity of Communication Blocks



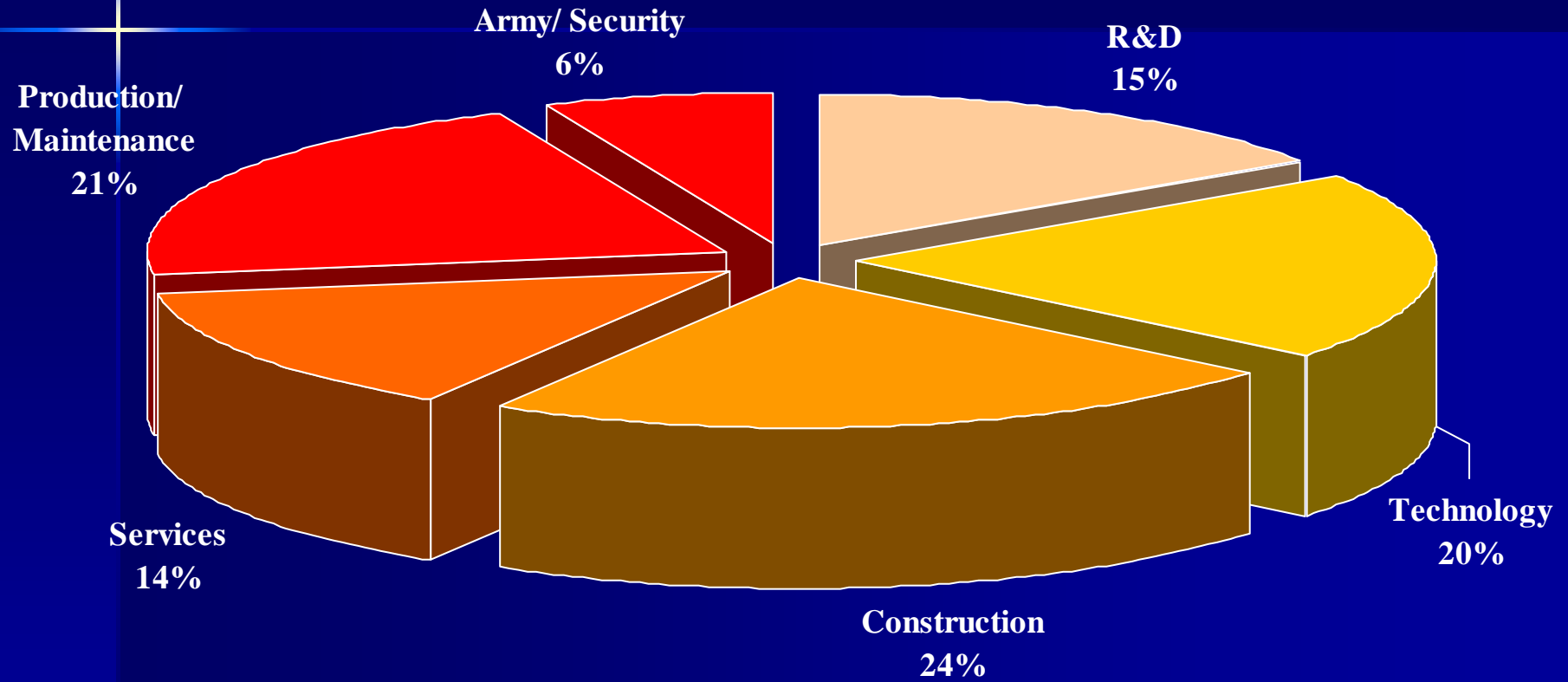
The Correlation between PCMI and Communication Blocks

- Cultural Blocks $r_p = -0.19$ ($p < 0.01$)
- Organizational Blocks $r_p = -0.17$ ($p < 0.05$)
- Quantity Blocks $r_p = -0.13$
- Technical Blocks $r_p = 0.06$

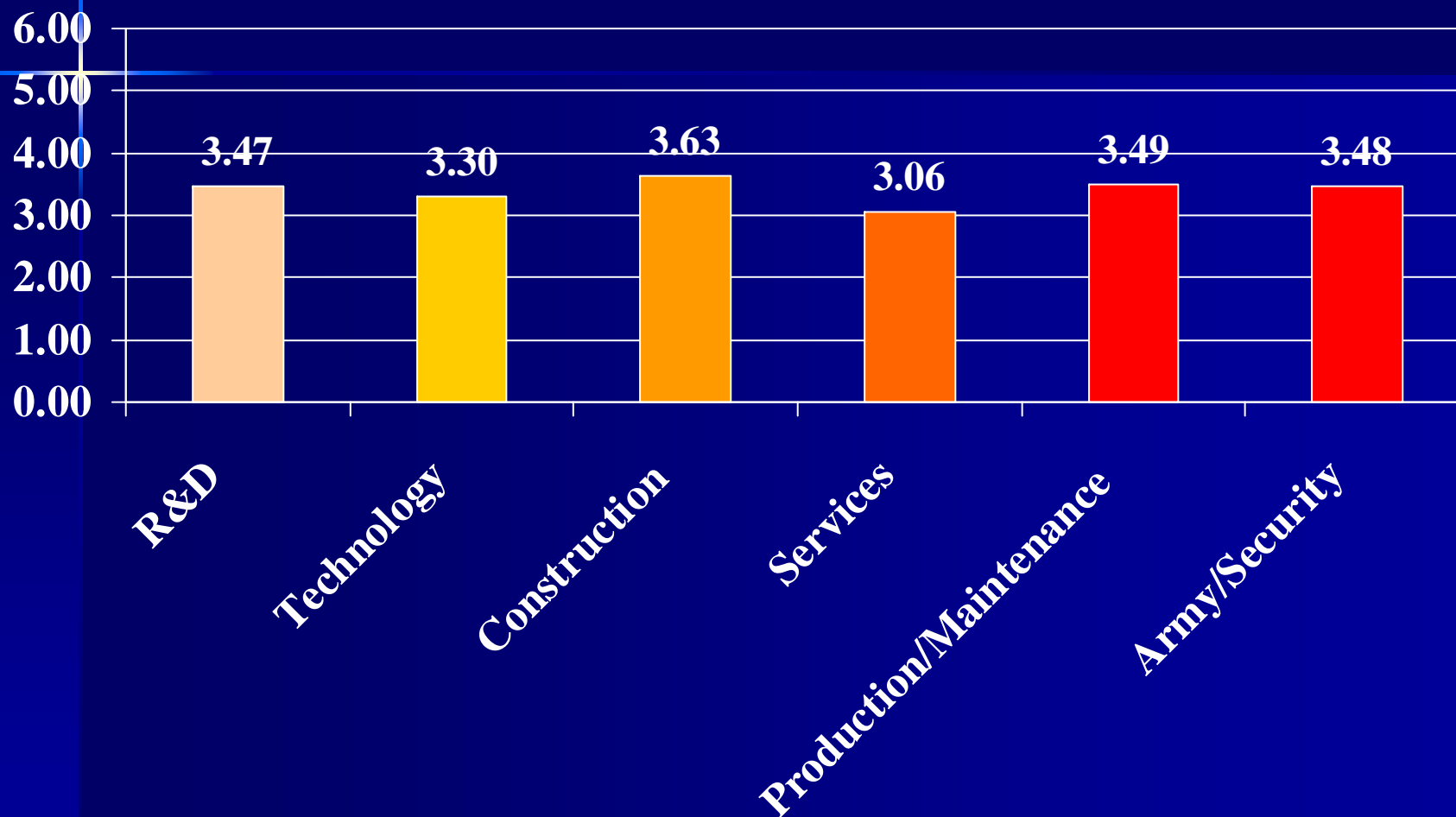
Analysis of Results

- Cultural blocks and organizational blocks are the most influential on the project communication effectiveness
- Cultural blocks and organizational blocks are interrelated
- Quantity blocks are strong but do not influence the communication effectiveness
- Technical blocks can be easily dealt with

Distribution of Projects by Industry



PCMI Mean Values by Industries



Analysis of Results

- Projects performed by organizations from different industries maintain different values of effective communication
- Low familiarity with project management methodology leads to low values of communication effectiveness
- Different environments require different communication patterns

Summary & Conclusions

- “Lessons learned” and “Communications Management Plan” are the weakest links
- Organizational and cultural barriers are the most influential
- Number of participants in a project does not influence its communication effectiveness
- Projects performed by midsize organizations obtain the most effective communication
- Formal communication contribute to effective communication
- Construction projects obtain the most effective com. while service and technology projects obtain the least effective communication

Future Research

- Compare the research findings with parallel research in different cultures
- Analyze project communication patterns deriving from various project environments and characteristics
- Investigate the impact of project communication patterns on project success

