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# Key Issues in IS Project Management: The Executive Perspective

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### ABSTRACT

Industry practitioners and academicians seek to understand the discipline of project management to reduce the frequency of information systems (IS) project failure. The exploration of this discipline can provide valuable knowledge concerning the Project Management Body of Knowledge (PMBOK) areas, with emphasis on the important topics and priorities of the executives. This knowledge can then be used to build a research stream that will align the needs of practitioners with the academic research environment. The dissemination of this PM knowledge will provide insights for project management offices and researchers. Specifically, this study seeks to identify industry practitioners' views of priority and important topics within the PMBOK knowledge areas.

### KEYWORDS

Project Management, Information Systems, nominal group technique, Project Communications, Project Cost, Project Integration, Project Procurement, Project Quality, Project Risk, Project Schedule, Project Scope, Project Team

### RESEARCH OBJECTIVES AND QUESTIONS

Project management is an extensive and complex field as illustrated by the Project Management Institute's Project Management Body of Knowledge (PMBOK) (IEEE 2004). Much research has been done in the area of project management as illustrated by the number of articles that mention or are directed at the PMBOK knowledge areas (Woolridge and McManus 2006). This study seeks to understand the highest priority project management issues, from the perspective of the CIO. This study will also identify gaps between the executive priorities and the existing focus of academic research, for the purpose of defining a future research agenda that aligns with the needs of industry leaders.

Gaps between existing research emphasis and CIO priorities will be identified using the knowledge structure provided by the PMBOK knowledge areas. Emphasis of existing research is measured by the number of journal articles found directed at each of the nine PMBOK knowledge areas. Priority is defined by industry leader ranking of PMBOK knowledge areas, and PM topics within each knowledge areas, both developed using a nominal group technique.

The future research agenda to be proposed by this study will seek to close the identified gaps between existing research and CIO priority. The research agenda will propose research streams to address key CIO priority areas (knowledge areas and PM topics within them) that have been comparatively ignored by researchers to date.

### THEORETICAL FOUNDATION OF THE STUDY

Evidence reveals a shockingly low software projects success rate. Some of this evidence can be found in The Standish Group's Chaos Reports. In 1994, the Chaos Report gave evidence of IS project outcomes at: 16% were successful, 31% were failed, and 53% were challenged (Group 1994) and in the 2001 Chaos Report, while improved, the evidence still showed problems with IS project outcomes at: 29% were successful, 18% were failed and 53% were challenged (Group 2001). The literature identifies a number of commonly reported causes of project failure (Hartman and Ashrafi 2002) that are shown below:

- Misunderstood requirements (business, technical, and social) (King 1995, Lane, Palko, and Cronan 1994, Lavence 1996)

- Optimistic schedules and budgets (Martin 1994)
- Inadequate risk assessment and management (Johnston 1995)
- Inconsistent standards and lack of training in project management (Jones 1994, O’Conner and Reinsborough 1992, Phan, Vogel, and Nunamaker 1995)
- Management of resources (people more than hardware and technology) (Johnston 1995, Martin 1994, Ward 1994)
- Unclear charter for project (Lavence 1996)
- Lack of communication (Demery 1995, Gioia 1996, Hartman 2000, Walsh and Kantor 1988)

Many of the above identified causes of project failure are covered by the PMBOK knowledge areas defined below (Society 2004) which provides some validation in the use of PMBOK knowledge areas as a focus of project management research as a means to increase project success:

- Project communications – “Project Communications Management includes the processes required to ensure timely and appropriate generation, collection, dissemination, storage, and ultimate disposition of project information.”
- Project cost – “Project Cost Management includes the processes required to ensure that the project is completed within the approved budget.”
- Project integration – “Project Integration Management includes the processes required to ensure that the various elements of the project are properly coordinated.”
- Project procurement – “Project Procurement Management includes the processes required to acquire goods and services, to attain project scope, from outside the performing organization.
- Project quality – “Project Quality Management includes the processes required to ensure that the project will satisfy the needs for which it was undertaken.”
- Project risk - “Risk management is the systematic process of identifying, analyzing, and responding to project risk.”
- Project schedule – “Project Time Management includes the processes required to ensure timely completion of the project.”
- Project scope – “Project Scope Management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully”
- Project team – “Project Human Resource Management includes the processes required to make the most effective use of the people involved with the project.”

Industry also recognizes the importance for project management as evidenced by the shift in the management of projects across the organization over the last decade. Program Management Offices (PMO) have been established within companies to implement best project management practices. The demand for project managers has increased as organizations continue to streamline and develop new processes. These demands have caused many organizations seek professionals with PM certifications (e.g.; Project Management Institute) and extensive experience managing projects” (Woolridge and McManus 2006).

Judgments are made in the information system’s (IS) community as to which issues deserve the expenditure of management, research, and education resources. Awareness of industry practitioners’ views of important topics and priorities is useful information for making decisions such as: where to spend funds, what issues to study, or what topics to teach.(Brancheau and Wetherbe 1987). Practitioners and academics use journals for acquiring information and disseminating new findings (Nord and Nord 1995) of seminal research topics, such as PM. This view of past articles provides an inventory of areas of study and issues that have already been addressed and helps define those things which need further study. The goal of this study then is to develop a research agenda that can help align academic research with practitioner needs so that new findings are relevant to the practitioner community and foster the growth of a new discipline.

### RESEARCH METHODOLOGY BEING USED

The methodology guiding this research includes the evaluation of articles published between 1985 and 2006 on the nine knowledge areas of project management. During the first quarter of 2006, a rigorous search was conducted to ascertain PM publications as reported in electronic business databases. These articles were identified by the article’s usage of the PMBOK knowledge area names, or variations on the name within the text of the article. This is accomplished by searching journals cataloged in the ISI Web of Knowledge. Additional journals included in the article count are the Project Management Journal and the International Journal of Project Management; neither of these journals is included in the ISI Web of Knowledge but these journals are important project management journals. As represented in Figure 1, a summary of this analysis identified the number of articles published by PMBOK knowledge area.

<b>PMBOK Knowledge Area</b>	<b>Record Count</b>
<b>Project Communications</b>	<b>40</b>
<b>Project Cost</b>	<b>255</b>
<b>Project Integration</b>	<b>22</b>
<b>Project Management</b>	<b>2932</b>
<b>Project Procurement</b>	<b>55</b>
<b>Project Quality</b>	<b>4143</b>
<b>Project Risk</b>	<b>1439</b>
<b>Project Schedule</b>	<b>159</b>
<b>Project Scope</b>	<b>48</b>
<b>Project Team</b>	<b>614</b>

Figure 1 – Project Management Journal Articles by Knowledge Area

The Nominal Group Technique (NGT) will be used to establish the priorities and important topics used in the study. The nominal group technique is an established and accepted means of eliciting individual knowledge, views, and opinions (Zuech 1992). NGT enables conveyance (idea generation) and convergence (consensus). NGT is performed in five steps:

1. Idea generation
2. Idea recording
3. Discussion and clarification
4. Ranking
5. Decision making

Idea generation will be performed using a survey of CIO's and this will be followed by the authors independently recording the ideas and eliminating duplication. The group will then be assembled to discuss, clarify, and rank both the PMBOK knowledge area priorities and the important topics for each knowledge area. The decision making step in the technique will be the development of the future research agenda.

### **CURRENT STATUS OF THE PROJECT**

A literature review has been conducted and a survey has been prepared and is ready for pilot testing. The executive participants have been identified and have agreed to participate.

### **DESCRIPTION OF WHAT AUTHORS PROPOSE TO PRESENT AT CONFERENCE**

The authors propose to present and discuss initial findings from the nominal group technique and to compare the priorities and important topics with the project management journal analysis. In addition, the presentation will include the purpose of the study and the survey results. Collectively, the results will report the rank, as assigned by the survey participants, by prioritizing the PMBOK knowledge areas as well as the topic importance of knowledge areas. These results will provide important information for industry executives in relationship to project management within the organization. The dissemination of this knowledge can have a potentially significant impact on the structure, activities, and success of today's Project Management Office.

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