

Project Leadership and the *PMBOK*[®] *Guide*

By

Paul Alexander Toth

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Dr. S. Raftery, Ph.D.

Dr. J. Spangenburg, Ph.D.

Dr. L. Pogue, Ph.D.

Frank Polack, PMP

Dr. Richard Thompson

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School of Business
Jones International University



Jones International University

Approval of the Dissertation

This dissertation, “Project Leadership and the PMBOK® Guide ,” has been approved by the faculty and the administration of Jones International University in partial fulfillment of the requirements for the degree of Doctor of Business Administration.

__Sue Raftery, Ph.D. //ss// March 29, 2011__
Committee Chair (electronic signature)

__Dr. Laura Pogue //ss// March 31, 2011__
Committee Member (electronic signature)

__Dr. Janice Spangenburg //ss//April 1, 2011__
Committee Member (electronic signature)

__Frank Polack, PMP //ss// April 1, 2011__
Committee Member (electronic signature)

Dr. Richard Thompson //ss//April 2, 2011_____
Richard Thompson, Dean, School of Business (electronic signature)

Abstract

The career model for the future of project management is leadership. Portfolio managers, program managers, project managers, and project co-coordinators need to evolve from managing projects to leading them. These project practitioners need a firm grounding in project leadership concepts and techniques to evolve in project leadership maturity, and to drive successful projects. Project leadership maturity originates from an understanding of these concepts and practicing. These techniques, known as good practices, once identified, and utilized will drive project success. A mature project leader, using good practices, imparts the project vision to the project team members, insuring that the human element of the project is fruitful. In effect, the project practitioner is the project leader - a guidepost for project success rather than just a gatekeeper for project plan details. However, project managers need both elements of leadership and management, if they intend to guide projects to successful fruition. This research reviewed various project leadership theories, and identified potential good practices, as defined in the *PMBOK® Guide*. Further, this research did not look for gaining new project leadership knowledge, nor was the study objectives to prove or disprove any project or general leadership theories. The research gathered information from PMI members to identify if project leadership good practices existed, and if they do exist, if they should be part of a future *PMBOK® Guide*. Of the 703 requests sent out on LinkedIn, 201 PMI members responded (28.6% response rate). The sample found: that 92.6% agreed project leadership knowledge led to project leadership competency, that 76.6% agreed project leadership good practices should be part of the *PMBOK® Guide*, 90.5% agreed project sponsors felt that the project manager was the project leader, and that 94.0% agreed project leadership knowledge was essential for project success. Based on the study findings, the researcher recommends that PMI consider adding project leadership knowledge into the *PMBOK® Guide*.

Dedication

I dedicate this work to my dearest wife, Suzanne, whom I now ask to retire the whip that she had to crack so often to get me into the dungeon to continue with my studies. I can never express my appreciation for her help that has allowed me to reach this life dream and fulfilling my bucket list. To our three children, Roxanne, Trevor, and Shannon, I appreciate your understanding of my not always being available, as I needed to complete this dream before the grim reaper knocked. To my grandchildren, Zachary, Nicholas, Erik, Laisa, Elizabeth, and Alex, I hope that my example will usher in the next generation of ‘Dr. Toths and Dr. Rissanens. To each I offer the greatest thing I learned during this time – never give up on your dreams. Alex; thanks for the encouragement in your get-well card, which read, “I am glad you didn’t die” – this put everything into perspective. Nick, your turn-around to wanting to earn your doctorate also kept me motivated when things got tough. It is now time to move on to herd cats, and administer to the flowers.

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Preface

This work is the capstone of a lifetime dream of the author to earn a Doctoral degree. At age 16, the author was one of 25 finalists from Canada at the International Science Fair in Albuquerque New Mexico. At that memorable event, he received a banner by Robert Browning (1812-1889) that read: "*Ah, but a man's reach should exceed his grasp, or what's a heaven for.*" This quotation is still just as powerful today, and the hope is that future family generations will understand its significance.

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Project Management Definitions (PMI, 2008)

Projects

- “A temporary endeavor undertaken to create a unique product, service, or result” (p. 434).

Project Leadership

- This term describes the good practices of leadership, as they apply in the project environment. Although, leadership in the project environment has been researched extensively, project leadership per say has not been introduced into the *PMBOK® Guide* (Toth, 2011).

Project Management

- “Is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements” (p. 435).

Project Management Body of Knowledge

- “An inclusive term that describes the sum of knowledge within the profession of project management. As with other professions, such as law, medicine, and accounting, the body of knowledge rests with the practitioners and academics that apply and advance it. The complete project management body of knowledge includes proven traditional practices that are widely applied and innovative practices that are emerging in the profession. The body of knowledge includes both published and unpublished materials. This body of knowledge is constantly evolving. PMI’s *PMBOK® Guide* identifies that subset of the project management body of knowledge that is generally recognized as good practice” (p. 435).

Project Manager (PM)

- “The person assigned by the performing organization to achieve the project objectives” (p. 436).

Project Life Cycle

- “A collection of generally sequential, non-overlapping product phases whose name and number are determined by the manufacturing and control needs of the organization. The last product life cycle phase for a product is generally that product’s retirement. Generally, a project life cycle is contained within one or more product life cycles” (p, 434).

Project Phases

- “A collection of logically related project activities, usually culminating in the completion of a major deliverable. Project phases are mainly completed sequentially, but can overlap in some project situations. A project phase is a component of a project life cycle. A project phase is not a project management process group” (p. 436).

Project Team Members

- “The persons who report either directly or indirectly to the project manager, and who are responsible for performing project work as a regular part of their assigned duties” (p. 436).

Survey Definitions

Social Exchange

- “At the most basic level, social exchange posits that people’s voluntary actions are motivated by the return these actions are expected to, and often do, bring from others” (Dillman, 2009, p. 22)

Sponsor

- The person or group that provides the financial resources for the project (PMI, 2008)

Transformational leadership

- These leaders work to change the framework or structure (often charismatic) (Bass & Stogdill's *Handbook on leadership*, 1990)

Situational leadership

- These leaders integrate tasks and relationships depending on the project situation (Bass & Stogdill's *Handbook on leadership*, 1990)

Transactional leadership

- These leaders work within the framework of the structure (generally bargainers or bureaucrats) from Bass & Stogdill's *Handbook on leadership* (1990)

Chapter I – Research Introduction

Background of the Study

The researcher undertook this study to see if there was significant justification to ask the Project Management Institute (PMI) to consider adding *project leadership knowledge* into the Project Management Body of Knowledge, also known as the *PMBOK® Guide*.

This research did not look for gaining new leadership knowledge, nor was the study objectives to prove or disprove any project or leadership related theories. This endeavor was an applied research project seeking the opinions from a sample of PMI members to see if project leadership should be included into the *PMBOK® Guide*.

The study had three objectives:

- The first objective was to advance project management knowledge
- The second objective was to increase the visibility of project leadership knowledge within the project management community.
- The third objective was for personal growth

Background of the Project Management Institute

Most professional organizations have standards that their practitioners follow. For the project management community, one standard body is the Project Management Institute (PMI). This organization is a premier global standard and accrediting organization for project managers, and consisted of 425,000 members and credential holders in nearly 200 countries as of 2008 (PMI, 2010). Further, PMI is a not-for-profit association, and offers full service products and services to their global membership. These products and services contribute to more organizations accepting project

management as a methodology to promote successful projects in governments, organizations, academia, and industries (PMI, 2010).

Two such services are an extensive research program, and project leadership developmental opportunities. Both these two programs offer opportunities for professional growth, and ways to increase individual project competencies. In addition, PMI offer certification services such as:

- Certified Associates in Project Manager (CAPM[®])
- Project Management Professional (PMP[®])
- Program Management Professional (PgMP[®])
- PMI Risk Management Professional (PMI-RMPSM)
- PMI's Scheduling Professional (PMI-SPSM)
- Organizational Project Management Maturity Model (OPM3[®])

However, a unique aspect of PMI is that it gathers and publishes industry standards. According to PMI (2010), they rely on a volunteer body of global experts to develop these standards, and “ensure that a basic project management framework is applied consistently worldwide” (p. inside back cover). A core global standard that PMI produces is *A Guide to the Project Management Body of Knowledge*, or also commonly known as the *PMBOK[®] Guide*.

This foundational project management standard is currently broken down into nine knowledge areas and five process groups. The nine knowledge areas are Integration, Scope, Time, Cost, Quality, Human Resources, Communications, Risk, and Procurement. The five process groups are Initiating, Planning, Executing & Monitoring, Controlling, and Closing. The 14 elements, from the nine knowledge areas and the five process

groups, is the basis for the project management good practices. PMI does not use the term best practices, since not every project type or sector uses every practice on each project. However, when these good practices are used, PMI (2011) claims that these practices increase the potential of project success over a wide range of projects.

The PMI, through its standards committee, has included the thirty-nine processes from the five process groups to interlock with the nine knowledge areas. The *PMBOK*[®] *Guide* (PMI, 2008) maps project knowledge areas to the project process areas. These links create the foundation for the project good practices, and if they practiced as needed, they lead to project success factors.

Background of the problem

Leadership is essential for project success. According to Balestrero (2009), teams led by project leaders tend to be more successful, since they tend to “adopt the right strategies and techniques” (p. 3). Leadership, guided by the correct strategies and good practices, create an environment where projects succeed. It appears when projects include a leadership element, they tend to conclude more successfully (Arnold (2008), Fielder (1967), Krahn (2005), Pinto et al. (1998), Reilly (2007), Turner & Müller (2006), Shenhar et al. (2007b), Shi & Chen (2006), Slevin & Pinto (1991), Williams (1989). Thus, if project managers take on the role as the project leader, they should gain more project team commitment, and successful projects.

The project management element alone makes it far more likely that project tasks complete on time. Project leadership, on the other hand, influence teams to get the correct things done. This influence applies, in what Kerzner, (2010) calls the “critical differentiating factors between a project’s success and [its] failure. . . [and] include the

right framework to guide project stakeholders through the myriad of decisions” (p. 579), by encouraging the team to develop desirable project behaviors. Successful projects can trace their accomplishment to the efforts of a unified team influenced by a strong project leader.

Within PMI, selected volunteers receive project leadership training, but that knowledge is not available to the membership population at large, only to ones who volunteer with PMI. In addition, PMI publishes the annual *Leadership through Project Management* publication to membership (PMI, 2010), yet there are no good practices in the *PMBOK® Guide* covering project leadership theory. For project managers to become project leaders, they need focused access to project leadership good practices.

Finally, project managers now are increasingly starting to manage agile projects. These types of projects use an iterative and incremental project approach. In effect, agile projects are a series of mini projects, incremental in nature, and consist of limited scope. Typically, the agile elements are a series of 1-2 week work packages, called sprints. These types of projects require that the leader become a servant, and consider the team as their highest priority (Slinger & Broderick, 2008). Since agile projects are new to most project managers, they necessitate a different leadership paradigm. Agile projects rely on leadership skills and traits rather than a command and control style to guide project to a successful completion. However, this type of project leadership research is not readily available to all PMI membership in the *PMBOK® Guide*.

Problem description

The *PMBOK[®] Guide* is a central repository of project management good practices. Note that PMI does not use the term Best Practices - according to the *PMBOK[®] Guide* (2008), good practices are “generally recognized” to apply “to most projects most of the time, and there is a consensus about their value and usefulness” (p. 4). One such set of good practices is project leadership. Whereas, general leadership deals with ongoing operational activities, project leadership deals with a temporary endeavor undertaken to create a unique product, service, or result (PMI, 2010).

Because of the short-lived nature of projects, these types of leaders must concentrate on developing and leading project teams in a short time span. Project leadership good practices applies uniquely to the project environment thus, should be included in the *PMBOK[®] Guide*. Yet today, this type of time sensitive project leadership knowledge is not readily available to project managers. One avenue in overcoming this shortcoming is to include project leadership knowledge in the *PMBOK[®] Guide*.

If project managers are the project leaders, the good practices associated with both roles are industry good practices. The management role good practices are currently in the *PMBOK[®] Guide* whereas; project leadership good practices are not in the *PMBOK[®] Guide*. Project leadership knowledge is at least as important as project management good practices, possibly even more so. According to Kerzner (2010) “today, project managers are more managers of people than they are managers of technology” (p. 379). Thus, the people aspect of projects that requires building trust, respect, and effective communications along with a serving mindset, rest in the leadership domain.

Project leadership knowledge added into the *PMBOK® Guide*, would benefit project managers by allowing them to gain an understanding of project leadership good practices, gaining leadership competencies, and increasing project success. Turner and Muller (2006) agree that “leadership style influences [project] success, and that different leadership styles are appropriate in different contexts” (p. 23). Thus, knowledge of these different types of project leadership good practices should contribute to a higher project success rate.

Successful projects need a combination of both effective management and leadership. The management knowledge is readily available as good practices in the *PMBOK® Guide* but leadership knowledge is not. Even the extensive seminal project leadership researches sanctioned by PMI, is not reference in the *PMBOK® Guide*. Although project managers have a good grasp of general leadership, the same is not true about project leadership.

The problem that this research is attempting to solve is convincing the *PMBOK® Guide* Standards Committee to include project leadership good practices in a future *PMBOK® Guide*. PMI should consider incorporating project leadership knowledge into their foundational global standard, the *PMBOK® Guide*. Inclusion of project leadership good practices into the *PMBOK® Guide* would further fuse the knowledge areas with process groups creating greater project success. This study attempts to show that project leadership good practices should be a part of the *PMBOK® Guide*, a global project management standard.

Research Questions and Hypotheses

The researcher developed four research questions and corresponding hypotheses to test each question. The reason the researcher collected the data was to see if there was any substantial difference in opinions by the respondents as it relates to their personal characteristics. The questions and hypothesis seek to find meaning from project manager's responses to the areas of project manager competency, the *PMBOK® Guide*, the project sponsors, and project success; these will serve as the Dependent Variables in the research. The researcher has also identified the possibility that specific characteristics of the respondents may result in substantial differences of opinions on the dependent variables. These characteristics, the Independent Variables in the research, are Project Experience, Project Certification, Industry, Gender, and Education. The research questions (RQ) and hypotheses (H) are:

The first Research Question was regarding competency

- RQ1 – Is project leadership knowledge essential for project managers to become competent project leaders?
 - H₁– If project leadership knowledge is essential, then it will lead to leadership competency

The effects of the independent variables are:

- H_{1a} – Project experience will effect respondent's perception that project leadership knowledge leads to leadership competency
- H_{1b} – Project Certification will effect respondent's perception that project leadership knowledge leads to leadership competency

- H_{1c} – Industry will effect respondent’s perception that project leadership knowledge leads to leadership competency
- H_{1d} – Gender will effect respondent’s perception that project leadership knowledge leads to leadership competency
- H_{1e} – Education level will effect respondent’s perception that project leadership knowledge leads to leadership competency

The second Research Question was regarding the *PMBOK® Guide*:

- RQ₂ – Is project leadership knowledge required in the *PMBOK® Guide*?
- H₂ – If project leadership knowledge is important, then it belongs in the *PMBOK® Guide*

The effects of the independent variables are:

- H_{2a} – Project experience will effect respondent’s perception that project leadership knowledge belongs in the *PMBOK® Guide*
- H_{2b} – Project Certification will effect respondent’s perception that project leadership knowledge belongs in the *PMBOK® Guide*
- H_{2c} – Industry will effect respondent’s perception that project leadership knowledge belongs in the *PMBOK® Guide*
- H_{2d} – Gender will effect respondent’s perception that project leadership knowledge belongs in the *PMBOK® Guide*
- H_{2e} – Education level will effect respondent’s perception that project leadership knowledge belongs in the *PMBOK® Guide*

The third Research Question was regarding the sponsor:

- RQ₃ – Do sponsors expect the project manager to be the project leader?

- H3 – If project leadership is important, then the sponsors will expect the project manager to be the project leader

The effects of the independent variables are:

- H_{3a} – Project experience will effect respondent's perception that the sponsor believes that the project manager is the project leader
- H_{3b} – Project Certification will effect respondent's perception that the sponsor believes that the project manager is the project leader
- H_{3c} – Industry will effect respondent's perception that the sponsor believes that the project manager is the project leader
- H_{3d} – Gender will effect respondent's perception that the sponsor believes that the project manager is the project leader
- H_{3e} – Education level will effect respondent's perception that the sponsor believes that the project manager is the project leader

The fourth Research Question was regarding project success:

- RQ1 - Do project managers who provide leadership for their project team, have successful projects?
- H₄ – If project leadership is important then it will lead to project success

The effects of the independent variables are:

- H_{4a} – Project experience will effect respondent's perception that project leadership will lead to project success
- H_{4b} – Project Certification will effect respondent's perception that project leadership will lead to project success

- H_{4c} – Industry will effect respondent’s perception that project leadership knowledge will lead to project success
- H_{4d} – Gender will effect respondent’s perception that project leadership knowledge will lead to project success
- H_{4e} – Education level will effect respondent’s perception that project leadership knowledge will lead to project success

Limitations

Since the *PMBOK® Guide* contains good practices as they pertain to increasing the probability of successful projects, this study is limited to leadership knowledge as it applies to the project environment, and sponsored by PMI. In addition, since only leadership traits, styles or competencies that contribute to successful projects are candidates for addition to the *PMBOK® Guide* as good practices, the study focused on project leadership knowledge rather than general leadership knowledge.

The use of LinkedIn to gather data did not appear to mirror the population demographics of corporate PMI or the Local Atlanta Chapter PMI membership. Comparisons by certification types between PMI corporate, PMI Atlanta Chapter, and this study showed discrepancies as seen in Table 1.

Table 1 - Demographic comparisons by certificate type

Certification	PMI Global Population size 318,421	PMI Atlanta Chapter size 4,400 members	This study Sample size 201
CAPM	3.7%	0.8%	4.5%
PMP	122.4%	65.9%	76.6%
Other	0.7%	0.3%	7.0%
No PM Certificate	(no info captured by PMI)	33.1%	11.9%

PMI - Source: PMI Today, Aug 2010; PMI Fact File page 16
PMI Atlanta Chapter - Source: Cathy Robinson PMI Atlanta Chapter Aug 19, 2010

Summary

Successful projects need a combination of both effective management and leadership. The difference between managers and leaders as it applies to projects is that project managers efficiently execute tasks or do things right; whereas, project leaders concentrate on the people side of the project and on doing the right things. In addition, leadership in the project environment is unique. Projects, in contrast to operations, deal with a temporary endeavor undertaken to create a unique product, service, or result. Thus, project leadership knowledge should join project management good practices in the foundational *PMBOK® Guide*.

Further, projects depend on leaders who create a circle of influence to foster successful projects. Within that circle, unique leadership skills are required to ensure successful project completion. For example, agile project leaders need to switch to a servant style of leadership rather than the command and control style to guide projects to a successful completion.

If the *PMBOK® Guide* included project leadership knowledge, PMI members could benefit by having a centralized source for both management and leadership good practices. This research, using the research questions and hypothesis to create a survey to find out if PMI's members agree that project leadership is a good practice and added to the *PMBOK® Guide*. This study shows project leadership good practices that are candidates for inclusion in *A Guide to the Project Management Body of Knowledge*, or commonly known as the *PMBOK® Guide*.

Chapter II – Review of the literature

In recent years, leadership has become more prominent than ever in the project management profession. For example, in 2005 the Project Management Institute (PMI) established the PMI Leadership Institute to offer leadership training to PMI volunteers. These volunteers are PMI members who volunteer their time and effort to serve the others. Some volunteers serve as moderators for project management special interest groups (SIGs), while others serve as editors of PMI publications, newsletters or Knowledge Shelf articles. Other PMI members work with non-profit organizations by providing them free, or low cost project management services. PMI fosters a volunteer mindset throughout their organization. For example on PMI's website, they state:

Project management is not just about projects—it is about people, too, which is why it is important to get involved with PMI. Join a chapter or community of practice, or volunteer your time at a PMI event, and increase your opportunities for leadership, collaboration, and networking. Break away from your project and reap the personal and professional rewards that come when you get involved. (PMI, 2010)

Yet, currently for non-PMI volunteers, PMI does not offer leadership training, nor are these good practices available in any PMI standards, resulting in many PMI members never gaining exposure to project leadership good practices.

In addition, PMI annually publishes a *Leadership in Project Management* publication for its members, and sponsors project leadership research via its Research Department (PMI, 2010). Examples of several seminal project leadership authors that were sponsored and published by PMI are Arnold (2008), Fielder (1967), Krahn (2005), Pinto et al. (1998a), Pinto & Trailer (1998b), Reilly (2007), Turner & Müller (2006), Shenhar et al. (2007b), Shi & Chen (2006), Slevin & Pinto (1991), and Williams (1989).

This researcher was unable to find a central repository, or clearing-house for project leadership good practices. Thus, this chapter identifies the research on leadership traits and styles that PMI sponsored, and recommend that PMI consider the *PMBOK*[®] Guide as that central repository. Later in chapter 5, the researcher shows how PMI might consider adding project leadership knowledge into the *PMBOK*[®] Guide.

Why project leadership is needed

Ironically, PMI sponsors numerous studies on leadership, as it applies in the project environment, yet there has been no research conducted on project leadership per se. In addition, there is no consensus within the project management community on what aspects of general leadership apply in the project environment. In addition, this research found that project managers are not necessarily aware of project leadership good practices. Thus, having project leadership good practice published in the *PMBOK*[®] Guide, has the benefit of reaching all PMI members. One objective of this study is to elevate project leadership knowledge as a foundational knowledge element, and intends to show that PMI's membership support having project-leadership good practices in the *PMBOK*[®] Guide.

In the past, project managers typically dealt with the management aspect of managing the triple constraints – cost, time, and scope/quality. More so today, there is a leadership element added, and it is beginning to take hold at the portfolio and program levels. However, as the field of project management evolves, that leadership element will filter down to the project manager level, and project managers will need to understand good project leadership practices to become competent project leaders. The *PMBOK*[®]

Guide, which contains other good project management practices, is the ideal place to include project leadership good practices.

In reviewing the literature regarding *project leadership knowledge*, this researcher found that project leadership knowledge originated from at least four different sources. The first source was from PMI, a global project standards-setting organization. The second source was from organizations that researched general leadership knowledge such as universities and large businesses. The third source of project leadership knowledge was from student dissertations. The fourth source of project leadership knowledge was from Subject Matter Experts (SMEs).

Project Good practices found

One of the areas, that can benefit from project leadership good practices, is in team building. Project leaders must assess each team member's capability, and create efficient project teams from a group of individuals in a relatively short time. Often team-members have never worked together have limited project experience, and most work in different functional areas. Many times, these new team members understand the management side of project management, but have little understanding of the project's strategic goals.

One such PMI sponsored research, was on Strategic Project Leadership (SPL). This research by Shenhar (2007) re-enforces the strategic aspect of project leadership. Shenhar (2007) confirms that for project managers to grow as project leaders, that they must become competent in different "aspects of project leadership – strategic, operational, and human" (p. 21). This strategic aspect of leading projects includes

defining the project, the product and competitive advantage the organization expects at the end of the project.

Further, Shenhar (2007) identifies seven elements of project strategy as,

Business Perspective:

Why do we do the project? Define the market, the customer, the needs, the business opportunity, and how will this opportunity be addressed.

Objective:

The major long-term objective that we want to achieve with the project

Project Definition:

What is the product? What will it do?

Competitive Advantage/Value:

Why will customers buy this product?

Success and failure Criteria:

The expected results on several success dimensions, including expected business results and meeting business plan goals [Shenhar et al. 2001], which also includes the major possible failures and risks.

Project Definition:

This includes the traditional project scope. In addition, the specific product type, the designation of the project manager and team, and the major resources expected in terms of time and budget.

Strategic Focus:

The policy, behavior, and the desired process that when followed, will create the best competitive advantage.

These seven elements comprise the basis for project leaders to create a strategy to help their projects gain a competitive advantage for their organization. In addition, these are examples of the type of best practices that the *PMBOK® Guide* might include under a project leadership area. For small projects, the project leader might just utilize a sub-set of these good practices, and for larger projects, additional strategic elements might need consideration.

Further, sponsors look for project managers who are project leaders. The sponsor looks for project managers who possess unique skills, knowledge, and experience in areas that match the perceived demands of the project. Turner & Müller (2006) state that

sponsors should “choose the appropriate project manager for a given situation” (p. xi). However, project leadership traits, skills, experience, and knowledge transcend the need for area specific elements of a good project manager, but project leaders need to be flexible in their styles depending on the type of projects they lead. Turner & Müller (2006) state that “the project is dependent on the leadership style of the project manager, and different types of products require different leadership styles” (p. 2). This is an example of a good practice consolidated in the *PMBOK® Guide*.

Vision

Another leadership good practice is vision. The leader’s vision focuses the project elements toward successful project completion rather than merely having followers meet dates on a Gantt chart. These charts only provide a visual schedule of deadline information for elements within the project, rather than what the project looks like once completed. According to Bennis & Goldsmith (2003), vision shows the “noble purpose” and demonstrates that the project is “grander than your personal advancement” (p. 27). Thus, project leadership is more than following dates on a Gantt chart; leaders provide vision based on the overarching organization’s strategy. Thus, the project leader attempts to bring the team together using a shared vision of the end state of the project.

In addition, a successful project leader creates the shared vision to show how the project integrates into the organization’s overall strategy. According to Aronson, et al. (2007), a project leader’s “vision illuminates the core values and principles that will guide the team in the future” (p. 78). Finally, a shared vision evokes a sense of a future direction, and more often than not fits into the organization’s project strategies.

However, even though leadership vision guides the project team, other leadership elements come into play. Bennis & Goldsmith (2003) support the contention that “leadership style and emotional intelligence, does make a contribution to project success” (p. 77). Thus, access to project leadership knowledge is the first step to becoming an effective and competent project leader. This knowledge includes access to research sponsored by PMI that helps project managers to gain competency in project leadership. These competencies as researched by Turner & Muller (2006) include, “knowledge, skills, including personal characteristics such as cognitive, emotional, behavioral, motivational, intellectual, managerial, and emotional” (p, 11).

In addition to vision, style, and emotional intelligence are other leadership factors that contribute to project success. Posner & Kouzes (2010), in their latest book, *The truth about leadership: The no-fads, heart of the matter*, identify four key factors as significant traits of leaders. These four traits are honesty, the ability to look-forward, spreading inspiration, and competence (Posner & Kouzes, 2010). The *PMBOK® Guide* is an ideal place to highlight these project leadership good practices for project managers. By centralizing project leadership knowledge in the *PMBOK® Guide*, project managers gain access to leadership styles and technique good practices to help them become competent project leaders.

Research by Turner & Muller (2006) showed that leadership style contributes to project success. Thus, this study highlights certain unique project leadership subsets styles from general leadership styles, and explains when project managers should consider using these styles or traits. In addition, the researcher offers a unified theory on when project managers should consider using the style or trait in various phases of the

project life cycle. The following provides a frame of reference for types of good practices pertaining to project leadership.

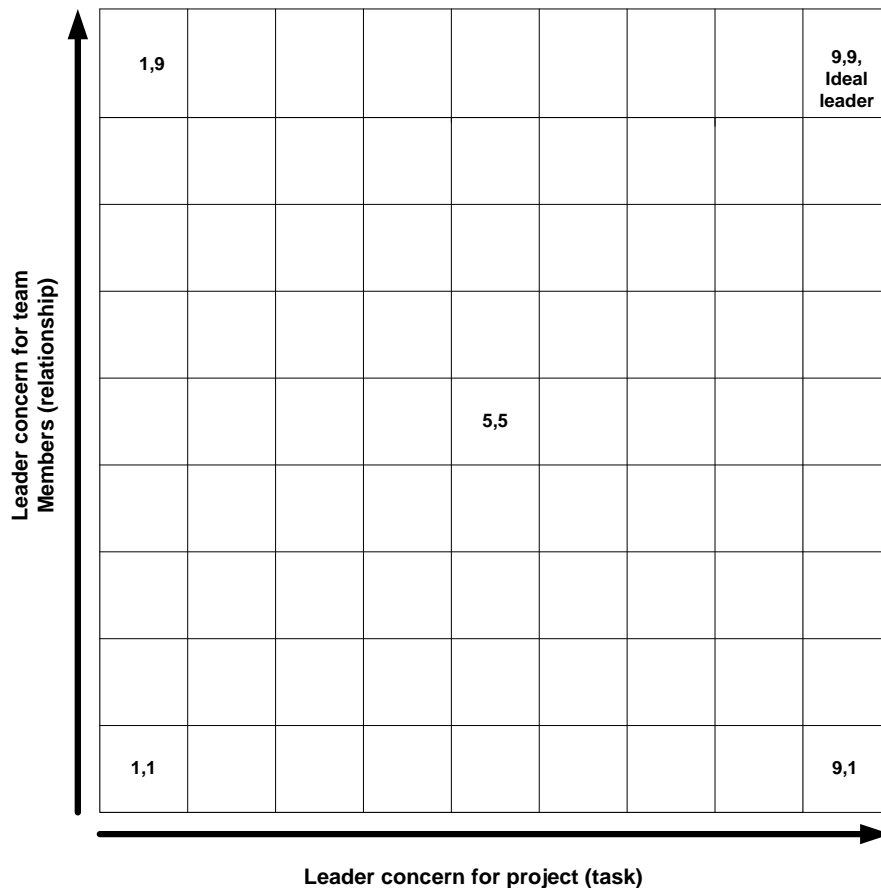
Types of project leaders – Task or Relationship

Numerous factors can improve the chances of project success, but high on the list is leadership. Prabhakar (2005) agrees when he states, “effective project manager leadership is an important success factor on projects” (p. 53). Management of projects only ensures that the tasks are completed and the immediate problems eliminated. Thus, project managers focus on how to do things. Whereas, according to Shenhar (2007), leaders “create vision and meaning, and develop fresh approaches to long-standing problems” (p. 25). Thus, project leaders focus on making sure the project managers do the right things. Since identifying this type of research leads to the foundation of project leadership good practices, PMI should consider including these in the *PMBOK® Guide*. The first thing a project manager should consider is the type of leadership to use. Project managers need to decide if they want to focus on tasks or on relationships. Blake & Mouton (1968) introduced a Managerial Grid, which showed the importance of each tasks and relationships in operations management.

For this study, the researcher adapted the Managerial Grid to show how Blake & Mouton’s concept works for leadership in the project environment. Figure 1 shows that the ideal project leader focuses both fully on the task and fully on the relationship (9, 9), rather than only partly on one or the other (1, 9 or 9, 1), or half-heartedly on both (5, 5). Effective project leaders are fully committed to both the task, and to the relationships of the project team, and must balance both for successful projects.

Figure 1 - Leadership Type Grid - two types of leadership
Task versus Relationship,

Based on Blake & Mouton (1968)



Leadership in the project environment is not a static or simple undertaking. There is ample seminal research surrounding project leadership, and it was not the intent of this researcher to identify all the seminal project leadership knowledge. The research's intent was to highlight the need to include project leadership in the PMI global standard, the *PMBOK® Guide*.

The following information does not imply that these are the only leadership traits or styles project leaders should consider. They are merely examples of the types of project leadership knowledge sponsored by PMI that could potentially help project managers increase their project leadership competencies, if they were included in the

PMBOK[®] *Guide*. The following identifies project leadership orientations and styles found by PMI sponsored research, yet not a part of the *PMBOK*[®] *Guide*.

Task-oriented leadership

Since the *PMBOK*[®] *Guide* identifies thirty-nine processes it makes sense that projects are tasking centric. Thus, some project managers favor a leadership orientation that leads teams in the execution of tasks. Task-oriented project leaders use expectancy-reinforcement theory, which explains the choices a worker makes based on their expectancies for rewards. Within the project environment, Turner & Muller (2006) state that task-oriented project leaders have a “degree of clearness of a task and its instruction” (p. 13). In addition, Turner & Muller (2006) found from a 2004 study by Makilouko that “most project managers adopt task-oriented styles” (p.13). Thus, these project leaders must understand that team members complete tasks based on an expectancy of adequate rewards for the task done well. This theory, developed by Stogdill in the late 1950s, is only effective if the project leader has the potential to provide the team members the rewards they seek and expect for completing the tasks (Bass, 1990)

Tasks are the life-blood of projects, and finding ways to get the right tasks done efficiently is what project leadership is all about. Bass, (1990) indicates that team members will continue to interact and engage on tasks at a given performance level as long as their expectations do not change. This implies that task-oriented leaders will get things done efficiently, but possibly the tasks might not be the correct ones, or team relationships might suffer in the process. It also implies that if the project leader is not capable of delivering the expected rewards, that team performance may suffer.

Three things need to be in place for work motivation to succeed in projects that have task-oriented leaders. Pinto et al. (1998a), describes these three as the “team members need to have the necessary skills to complete their tasks within the project,” secondly, “these leaders need to ensure that their team members receive rewards for completing the project successfully,” and third, “the reward should be meaningful to the team member” (p. 17). Once these three criteria are in place, team members will concentrate on project tasks rather than their personal needs. This type of research would be helpful for project managers seeking to become competent project leaders. Turner & Muller (2006) define competency as the “knowledge, skills, and personal characteristics to achieve desired performance standards” (p. xi). Leadership good practices, as mentioned above, included in the *PMBOK® Guide* would be a starting point for project managers to start their journey towards becoming project leaders.

The benefits of task-oriented leaders, is that these types of leaders appear more productive than the relationship type leaders. In a 1963 study by Dunteman & Bass the authors found that, task-oriented leaders are more efficient than relationship-oriented leaders (Bass, 1990). On the other hand, task-oriented leaders often attend to day-to-day tasks to the detriment of relationships needed to keep teams functioning at a high level. Finally, task oriented leaders need to ensure they understand the team member expectations and are prepared to meet those expectations at the conclusion of the project or tasks (Bass, 1990). Even though task-orientation leadership is efficient, project managers might consider an alternative – a relationship-oriented type of leadership.

Relationship-oriented leadership

A relation-oriented project leader covers several theoretical areas, namely the Most Preferred Co-worker (MOC) theory, the Least Preferred Co-worker (LPC) theory, and Hersey & Blanchard's relationship/participative behavior theories (Bass, 1990). Of importance to project leaders is the LPC theory, which measures 16 different attributes of a person that leaders work with. Bass (1990) claim that "a number of studies have supported that a high LPC score is connected with relations orientation and a low LPC score is connected with task orientation" (p. 497). In addition, Bass (1990) indicates that high LPC leaders are most satisfied when they have successful interpersonal interactions with team members. This implies that project leaders should modify their relationship or leadership styles uniquely with individual team members.

In practice, focusing only on tasks or only on relationships may not provide the best project leadership approach, especially if the project leader cannot guarantee the rewards expected by the team members. Bass (1990) agrees when he states, "the effectiveness of leadership is greatest when the leaders are both task-oriented and relations-oriented in attitudes and behavior" (p. 481). It appears that by combining both approaches (9, 9), as identified in Figure 2.1, produces good project practices and increases project success factors. Thus, project leaders should consider adopting a combination of both task and the relationship leadership attributes. Closely related to project leadership types are project leadership styles that form good practices and are candidates for entry into the *PMBOK® Guide*.

Project leader styles – Transformational, Situational & Transactional

There are three major styles, which form the basis for good project leadership practices. In addition, there is a plethora of other general leadership styles, but not all of them fit well in the project environment. Projects by nature deal with a temporary endeavor undertaken to create a unique product, service, or result (PMI, 2010). To become an effective project leader require project managers to take time and reflect on their understanding, of different leadership styles. Finally, good practices in the project environment include transformational, situational, and transactional leadership styles.

Transformational leadership style

Often, the beginning of the project is not well defined or understood by the project team, since not all team members are involved in creating the project charter, or possibly even the project plan. However, the beginning of the project is an ideal place to get the team's "buy-in," by establishing a project vision. A transformational leadership style is more apt to inspire and motivate their team at this stage. Kouzes & Posner (2007) indicate that transformational leadership occurs when the leader raises the team member's motivation to a point where they internalize the vision set out by the leader. The effects of working for a transformational leadership make the team members reach higher, and feel like they are part of something special (Kouzes & Posner, 2007).

Successful projects require transformational leaders. Pinto et al. (1998a) agree where their research showed "a Transformational leadership model is very appropriate for successful project managers" (p. 6). These project leaders take a chaotic and disorganized state, and create an orderly one by transforming areas within their organization. In addition, they have a positive futuristic orientation, and tend to transfer

their vision to the team. Transformative project leaders generally possess charismatic qualities, an asset at the beginning of projects.

An example of a charismatic leader was John Kennedy in his transformational leadership of the U. S. space program in the early 1960s (Barnes, 2005). Kennedy took on the role of a charismatic leader and served the good of the project rather than for his or his party's benefit. Kennedy's transformational leadership style made him respected by members of both political parties.

The disadvantage to transformational project leaders is that they often are, removed from the project tasks. Thoms & Pinto (1999) agree when they state that transformational leaders must be aware not to "get caught in the trap of adopting [only] a strategic outlook and ignore essential tactical operations [like] dealing with the myriad [of] daily problems and issues that can slowly sink a project through inefficiencies and delays" (para. 3). A transformational leadership style is not appropriate for all phases of a project, but coupled with the detail orientation of the project manager, the beginning phase of projects, appears appropriate.

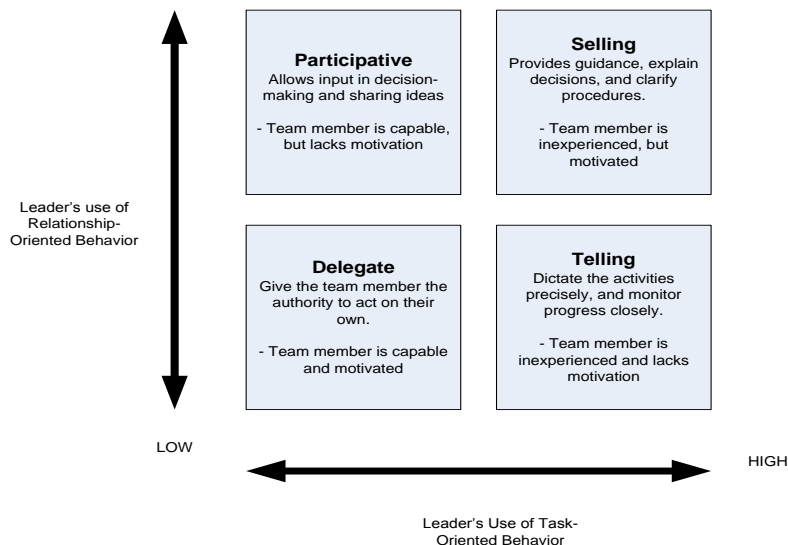
Situational leadership style

Situational project leadership adapts to the ever-changing project situations, and is best suited for short-term project turmoil in the middle phases of the project. Pinto et al. (1998a) agrees that project leaders must be "willing and able consciously to choose a leadership style to fit the situation" (p. 19). This type of leadership style needs to meet the dynamic nature of this phase of the project lifecycle. These leaders need to understand that the project requires shifts between a participative, selling, telling, or delegating style, depending on individual team member requirements.

Further, situational project leaders require awareness of individual team members to meet their unique needs. According to DiMarco, Goodson and Houser (1998b) project leaders face very complex team decisions, even on small projects. Figure 2.2 summarizes the task-relationship model. Pinto et al. (1998a) show that the project leaders shift their focus depending on the situation between a participative, selling, telling, and delegating style when they state that:

- Participative leadership is required when “team members with strong ability, who lack the motivation to perform, do not require instruction on the task but require intervention by the project leader to increase their confidence or willingness to perform” (p. 16-17).
- Selling leadership is required when “team members, who lack required abilities, yet are motivated to perform, require instruction as to how to effectively perform and will likely accept coaching. Thus, the optimal leadership style includes high levels of task and relationship oriented behavior” (p. 16).
- Telling leadership is required when encountering “Team members, who lack required abilities and confidence or motivation to perform, require intervention by the project leader. The team member requires instruction on how effectively to perform but is unlikely to accept coaching. Thus, the optimal project leadership style involves only high levels of task-oriented behavior” (p. 16)
- Delegating leadership is required when encountering “Team members with strong ability and strong motivation to perform, and do not require extensive intervention by the [project] leader. The team member may find such intervention an insult, as it implies that she is not capable or motivated when, in fact, she is. Thus, one optimal project leadership style is to avoid interfering with the team members by delegating the task” (p.17).

Figure 2 – Situational Leadership Model relating to Task and Relationship



Pinto et al., 1998a, p. 16

However, one thing that is not situational for project leaders is ethics. The Project Management Institute developed a Code of Ethics and Professional Conduct guidelines for project practitioners. The *PMBOK*[®] *Guide* states that these guidelines are “specific about the basic obligation of responsibility, respect, fairness, and honesty (p. 4). The PMI (2010) website highlights the full Code of Ethics and Professional Conduct under the Professional Responsibility section. The Project Management Professional (PMP)[®] certification requires acceptance of this ethics code.

The project leader should never revert to a form of ethical relativism. Ethics, values, and principles must remain a guiding light to all project leaders regardless of the project-imposed situation (Bennis 2003, Covey 1989 & Pinto et al.1998). The biggest difficulty of the situational project leadership approach is presenting a predictable pattern to the project team. It can be counter-productive if the project team does not understand why project leaders shift styles.

Transactional leadership style

Transactional leadership provides structure and consideration that apply directly to project leadership during the closing phase of projects. This phase of the project requires leaders who can negotiate to bring projects to a closure. Bass (1990) agrees when he indicates that transactional leaders are bargainers and willing to listen to opposing points of view. This leadership style works well with the detail of designing tasks and reward structures.

In addition, transactional project leaders tend to be more conservative, working within existing frameworks to complete projects. However, there is a misconception of transactional project leaders, that they appear to contribute less to the organization than their transformational counterparts; yet according to Bass (1990), “transformational leadership does not replace transactional leadership; it adds to it” (p. 652). Although transactional leaders appear to be less effective than transformational leaders, for the closing phases of the project, this style produces the expected results.

Flexibility in project leadership

Successful project managers must show a great deal of flexibility in their leadership styles. Research indicates that successful project managers show a great deal of flexibility in their leadership styles, especially mapped to the changing phases of the project life cycle. Thoms & Pinto (1999) agree, that at the beginning phase of the project, it is “appropriate to operate in a future-time-oriented planning mode” (para. 26) - this implies a transformation style of leadership. During the execution phase, (Thoms & Pinto, 1999) suggest, “To engage in more present-orientation activities” (para. 26) – this implies the project leader shift to a situational style. Then as the project moves into the

closure phase, Thoms & Pinto (1999) found that “project leaders must assume the role of analyst and evaluator” (para. 26) – this suggests a transactional project leadership style. The ability to be flexible in leadership styles enhances the potential for projects to succeed.

Finally, flexibility in project leadership styles offers the project manager opportunities to deal with individual team members and the uncertainties that arise during the project life cycle. Slevin & Pinto (2004) agree when they imply that project leaders who are able to embrace all three leadership styles enjoy a greater flexibility in their leadership approaches within the various project life cycle phases. This flexibility ensures that team relationships remain positive and the project is successful in the eyes of the sponsor.

Ways that project leaders can improve project success

The project manager is the project leader, not the sponsor or program manager. The project manager needs to develop, inspire, and lead the team. Kendra & Taplin (2004) confirm this assertion when they contend that project managers are the de-facto project leaders, and that effective project leaders must inspire confidence to create high performance teams. To inspire confidence in their followers, leaders first need to understand their dominant leadership style.

One way to assess their dominant leadership style is by taking the Multifactor Leadership Questionnaire (MLQ). Davis (2008) was one of few studies using the MLQ in a “project management environment” (p. 30). This research focused mostly on transformational and transactional project leader styles. However, the researcher found that the MLQ was an effective tool for leaders to find their dominant styles. Project

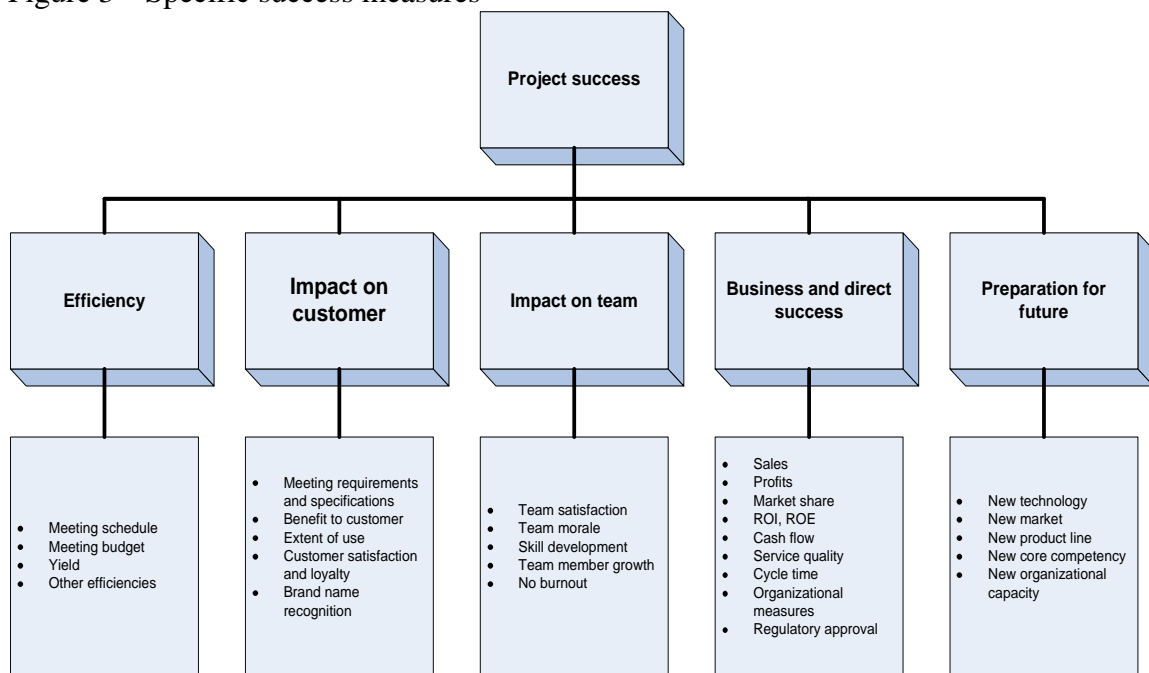
managers that want a tool for assessing their dominant leadership styles should consider the MLQ assessment tool.

Further, project success can improve by choosing credible project leaders.

According to Geoghegan & Dulewicz (2008), these leadership traits include creative problem solving, tolerance of ambiguity, and effective communicators. Credibility appears to be a key aspect of effective project leadership. Even though project success has many determining factors, leadership plays a crucial role in project success.

Another approach to increase project success is to consider Shenhar & Dvir's (2007) model. They contend that project success has five main dimensions, "project efficiency, impact on the customer, impact on the team, business and direct success, and preparation for the future" (p. 26). Figure 3 expands the five groups, showing the success measures, and the detail of the areas contributing to the project success factor.

Figure 3 – Specific success measures



Source: Shenhar & Dvir (2007, p. 27)

Other researchers show how project leadership positively affects project success. For example, Pinto et al.'s (1998a) research show links between project leadership and project success. These links include leadership behaviors such as vision, strategy, ethics, team building, classical management theories, and accountability. These behavioral elements describe an effective project leader who can positively influence project teams. Finally, Pinto et al.'s (1998a) research indicates a strong relationship favoring project leadership as a good practice that should be included in the *PMBOK® Guide*.

Summary

Evidence from various researchers indicates a strong link between project leadership and project success. Although PMI sponsors most of the seminal project leadership research, they have not included the research in the *PMBOK® Guide*. This chapter summarizes the project leadership types, styles, and flexibilities that PMI needs to consider adding into the *PMBOK® Guide*.

Research identified two leader types, task-oriented and relationship-oriented. Although each leadership type has disadvantages in a project setting, they form the foundation for successful projects when used together. However, to increase the probability of successful projects, the manager needs to understand project leadership good practices. The *PMBOK® Guide* currently contains good practices for project management, but does not contain them for project leadership.

In addition to leadership types, the literature research indicates three types of leadership styles applicable to the project environment. The three styles of leadership most suited to project activities are transformational, situational, and transactional. These three styles appear best utilized in the beginning, the middle, and the ending phases of the

project life cycle, and in that order. Although this type of research is sponsored, and available from PMI, there is no mention of the significance of this flexibility in the *PMBOK® Guide*.

Chapter III – Research Design

This chapter discusses the methodology, confidentiality, overview of the research design, significance, and study characteristics that the author used to collect and analyze the data. Further, this section includes the formal hypotheses, and provides a description of why the researcher believes these hypotheses are important. The Literature Review indicated a direct link between project leadership and project success, and this research design attempts to establish if the *PMBOK® Guide* is the standard where project leadership knowledge should reside.

Methodology

This researcher conducted a Literature Review of past research by the Project Management Institute, and other area regarding project leadership. The initial intent was to capture, evaluate, and summarize project leadership research. In order to limit the search to project leadership rather than general leadership, the researcher used project leadership related key words on several other computerized databases.

He then reviewed the various editions of the *PMBOK® Guide* to determine if project leadership knowledge was included in this foundational document. Once it was determined that project leadership knowledge was a unique form of leadership knowledge, and was not found in any past addition of the *PMBOK® Guide*, the researcher created an on-line survey to poll a sample of the PMI membership.

From the Literature Review and a review of the current and past editions of the *PMBOK® Guide*, the researcher developed a list of research questions with associated hypothesis. This led the researcher to consider an applied research design based on value to PMI and its membership. In addition, the list of questions and hypothesis formed the

basis for the mixed-methods type of study with a single survey instrument that employed both open and closed-ended questions.

The data gathering part of the study consisted of a self-administered on-line survey. This instrument gathered quantitative and qualitative data from PMI members. From a Qualitative perspective, the survey included a place for the survey taker to give open-ended responses to each question in 50 words or less. From a Quantitative perspective, the survey included twenty 5-level Likert scale questions. Since the researcher could not be certain that the intervals between “strongly agree,” “agree,” “neutral”, “disagree”, and “strongly disagree” are the same, any survey questions that used these values were considered as an ordinal variable. The researcher chose this design in order to pole the PMI membership to find out if there was sufficient evidence to approach PMI, and have them consider adding project leadership knowledge (good practices) into the next edition of the *PMBOK® Guide*.

Confidentiality, informed consent, ethical concerns, and reliability

Appendix “F” shows a copy of the Instructional Review Board’s (IRB) approval for this project. This approval is required to ensure that the research design does not contain biases or any ethical deficiencies. Dillman, D., A., Smyth, J., D., & Christian, L., M. (2009) agrees when they states that, the IRB’s mandate is “insuring that the proper steps are being taken to protect the rights and well-being of human research subjects” (p.384). This research design does not conduct research on human subjects, nor does it identify individual subjects. The study participants remain anonymous by giving each respondent a unique number rather than use the respondent’s name or location.

To ensure reliability of the design, the researcher first conducted a pilot of the survey instrument to validate the intent of the design. Based on the pilot results, the researcher modified the instrument to include three questions regarding the project sponsor, and reviewed the change with his committee chair via a change request to his proposal. In addition, both the pilot and the main survey populations were PMI members or PMI certificate holders. Finally, the research did not directly address non-PMI members, since the intent was to identify the PMI foundational standard, the *PMBOK*[®] *Guide*, should include project leadership knowledge.

Overview of this research

The survey included both certified and non-certified project managers from the Project Management Institute (PMI) membership. The sampling size is in accordance with best statistical analysis practices, and consists of project managers located on the social network LinkedIn. The researcher utilized the following key words on LinkedIn to identify potential project practitioners:

- *CAPM*[®] are PMI's *Certified Associates in Project Manager* certificate holders
- *PMP*[®] are PMI's *Project Management Professionals* certificate holders
- *PgMP*[®] are PMI's *Program Management Professional* certificate holders
- *PMI-RMP*SM are PMI's *Risk Management Professional* certificate holders
- *PMI-SP*SM are PMI's *Scheduling Professional* certificate holders
- *OPM3*[®] are the Project Management Institute's *Organizational Project Management Maturity Model* certificate holders
- *Project Manager* is a generic name for someone who manages projects

Once the researcher identified potential LinkedIn candidates, the researcher sent out a second request to each to fill in the survey. The key-word “project manager,” was potentially problematic since it could include non-PMI members. However, as a rule, if non-PMI member project managers took the survey, they probably would not answer the *PMBOK® Guide* specific questions. In addition, the researcher conducted all pertinent analysis on the means of the responses to each questions. Since the number of responses to each question divided the total responses, each answer has its own mean.

Significance

This researcher intends to advance the project management body of knowledge by introducing project leadership good practice into the *PMBOK® Guide*. If PMI introduces project leadership good practices into the *PMBOK® Guide*, then PMI members have an opportunity to learn new project leadership skills and mindsets, leading to project leadership competencies. Finally, the *PMBOK® Guide* potentially becomes a more inclusive standard with the addition of project leadership good practices.

Project managers become more competent if they understand the good practices associated with project leadership. Turner & Müller (2006) agree when they conclude that project leadership competencies come from higher capabilities in an intellectual quotient (IQ), a managerial quotient (MQ), and in an emotional quotient (EQ) - these are examples of good project leadership practices. Exposure to these good practices in the *PMBOK® Guide* should help an emerging project manager speed-up their leadership competencies.

To raise the awareness of project leadership, the researcher asked the following four research questions, and proposed the following hypotheses:

Research Questions and Hypothesis

The first Research Question was regarding competency

- RQ1 – Is project leadership knowledge essential for project managers to become competent project leaders?
 - H₁– If project leadership knowledge is essential, then it will lead to leadership competency

The effects of the independent variables are:

- H_{1a} – Project experience will effect respondent’s perception that project leadership knowledge leads to leadership competency
- H_{1b} – Project Certification will effect respondent’s perception that project leadership knowledge leads to leadership competency
- H_{1c} – Industry will effect respondent’s perception that project leadership knowledge leads to leadership competency
- H_{1d} – Gender will effect respondent’s perception that project leadership knowledge leads to leadership competency
- H_{1e} – Education level will effect respondent’s perception that project leadership knowledge leads to leadership competency

The second Research Question was regarding the *PMBOK*[®] *Guide*:

- RQ₂ – Is project leadership knowledge required in the *PMBOK*[®] *Guide*?

- H₂ – If project leadership knowledge is important, then it belongs in the *PMBOK*[®] *Guide*

The effects of the independent variables are:

- H_{2a} – Project experience will effect respondent's perception that project leadership knowledge belongs in the PMBOK[®] Guide
- H_{2b} – Project Certification will effect respondent's perception that project leadership knowledge belongs in the PMBOK[®] Guide
- H_{2c} – Industry will effect respondent's perception that project leadership knowledge belongs in the PMBOK[®] Guide
- H_{2d} – Gender will effect respondent's perception that project leadership knowledge belongs in the PMBOK[®] Guide
- H_{2e} – Education level will effect respondent's perception that project leadership knowledge belongs in the PMBOK[®] Guide

The third Research Question was regarding the sponsor:

- RQ₃ – Do sponsors expect the project manager to be the project leader?
 - H₃ – If project leadership is important, then the sponsors will expect the project manager to be the project leader

The effects of the independent variables are:

- H_{3a} – Project experience will effect respondent's perception that the sponsor believes that the project manager is the project leader
- H_{3b} – Project Certification will effect respondent's perception that the sponsor believes that the project manager is the project leader

- H_{3c} – Industry will effect respondent’s perception that the sponsor believes that the project manager is the project leader
- H_{3d} – Gender will effect respondent’s perception that the sponsor believes that the project manager is the project leader
- H_{3e} – Education level will effect respondent’s perception that the sponsor believes that the project manager is the project leader

The fourth Research Question was regarding project success:

- RQ1 - Do project managers who provide leadership for their project team, have successful projects?
 - H₄ – If project leadership is important then it will lead to project success

The effects of the independent variables are:

- H_{4a} – Project experience will effect respondent’s perception that project leadership will lead to project success
- H_{4b} – Project Certification will effect respondent’s perception that project leadership will lead to project success
- H_{4c} – Industry will effect respondent’s perception that project leadership knowledge will lead to project success
- H_{4d} – Gender will effect respondent’s perception that project leadership knowledge will lead to project success
- H_{4e} – Education level will effect respondent’s perception that project leadership knowledge will lead to project success

In Chapter IV, the researcher presents a descriptive statistical analysis along with using a Factorial ANOVA test to examine the four research questions and the hypotheses.

These tests examined the relationships between independent variables of personal characteristics such as project experience, project certification, industry, gender, and education level. The dependent variables of project competency, the *PMBOK® Guide* perspective, sponsor expectations, and project success.

Variable Definition

The researcher identified five independent variables (IVs) that relate to the sample population demographics such as Project Experience, Project Certification, Industry, Gender, and Education level. The dependent variables relate to the research questions. The first research question explores if project leadership knowledge leads to project leadership competency. The second research questions explore if and how project leadership knowledge should relate to the PMBOK® Guide. The third research question explores if the sponsor expects the project manager to be the project leader. The fourth question explores if project leadership knowledge leads to project success. Table 2 shows the questions associated with the independent variables and Table 3 shows the questions associated with the dependent variables.

Table 2 - Independent Variables

Variable	Description	Related Survey Question
IV1	Project Experience	Q1
IV2	Project Certification	Q2
IV3	Industry	Q3
IV4	Gender	Q4
IV5	Education	Q5

Table 3 - Dependent Variables

Variable	Perspective	Related Survey Questions
DV1	H2 - Project Competency	Q6
DV2	H2 – <i>PMBOK® Guide</i>	Q11
DV3	H3 - Sponsor	Q15
DV4	H1 - Project success	Q20

Study Characteristics

This study utilized a pilot sample to validate and improve the survey instrument. The researcher utilized his employer and client peers in the pilot. From the initial pilot feedback, he solicited suggestions to improve the content and logic of the survey. Based on the pilot feedback, the researcher developed a process to solicit survey responses from project managers with various certifications from LinkedIn, a professional social network.

Next, the research looked at utilizing social exchange on LinkedIn to increase the response rate of the surveys. In addition, below, the researcher describes the population, the sample size, the description of the survey instrument, and finally, how he organized the data.

Pilot Sample

The researcher conducted a pilot study to test out the research questions and to gain logistical experience with administering a research survey. The pilot sample consisted of project practitioners from the author's work environment. This pilot group consisted of 40 both PMI certified and non-certified project managers. In addition, the pilot gave the researcher an opportunity to experiment with various social exchange approaches to increase the return rate as suggested by Dillman et al. (2009).

Social exchange

Social exchange appears to be an effective approach to use with research studies. Dillman first applied social exchange to surveys in the 1970s (Dillman et al., 2009), as a way to increase "the likelihood of [survey] response" (p. 22). Social exchange consists of the voluntary activities we engage in with the expectation of certain responses from the

person(s) with whom we interact. At the most basic level, according to Blau, in Dillman et al. (2009) social exchange posits that “people’s voluntary actions are motivated by the return [that] these actions are expected to, and often do, bring from others” (p. 22). Thus, if people perceive that the rewards are greater than the effort, they will more than likely engage in social exchange. Finally, based on the application of social exchange in this research survey process, it appears to be an effective way to increase survey responses.

Using LinkedIn to gather surveys

As humans, we are social animals and thus, social networking is an innate human activity. The last few years have introduced the Internet that greatly extends our social network. For example, today we can connect globally with other professionals virtually. This on-line community, called LinkedIn started operations in 2004 and now has more than 40 million members, according to Schaffer (2009). This global social networking uses an ever-evolving User Generated Content (UGC) interface to help people connect and exchange or debate ideas and thoughts. Finally, since LinkedIn allows members to connect with others in a social environment, this form of networking helps individuals reach a higher place in their professional lives, while gaining personal fulfillment.

These and other benefits, made LinkedIn appear a suitable medium for consideration for this research. However, the decision to use LinkedIn proved to be a learning experience since LinkedIn is a business-networking tool and was not set up as a survey-gathering tool. Thus, to use LinkedIn as a survey medium, it took three distinct steps.

First, the researcher had to search for potential candidates in the project management field. The researcher used the key words CAPM[®], PMP[®], PgMP[®], PMI-

RMPSM, PMI-SPSM, OPM3[®], and project managers. The second step was to establish a network connection with each potential candidate found. Since the researcher was not able to extend physical or monetary rewards, he looked at appealing to the intrinsic community affiliation of the project management group. By using social exchange techniques, the researcher encouraged other project managers to join his LinkedIn network. Once the researcher made the first network connection, he received responses that included an e-mail address. Then he could send out a second request to that e-mail address with the web link to the survey location. Both the first and second interactions contained social exchange techniques.

One social exchange technique was to send out personally addressed invitations to each individual using their first name and requesting help or advice. Dillman et al. (2009) agrees when he states that, “appealing to people’s helping tendencies or norms of social responsibility can encourage them to respond to the survey” (p. 23). Thus, based on the social exchange methodology, the researcher created scripts to send out to the potential survey takers. The following was the social exchange script sent out as the first network contact:

*Hi (first name),
I am attempting to network with other project practitioners since I am doing research on project leadership and the PMBOK^(R) Guide. I consider it an honored to have you join my LinkedIn network in case I have any questions.
Respectfully,
Paul Toth, DBA (abd), MBA, PMP[®], RCDD/NTS*

Most of the responses to the first introduction were favorable. Typical comments received back were, “Thank you for your msg” or “I am looking to know more about your research.” These types of responses showed that the social exchange techniques were an

effective tool to increase survey responses. However, to gain higher response rates requires the application of more refined social exchange techniques.

Further, using LinkedIn is a way to expand our work related social network, and extend our avocation knowledge. Schaffer (2009) compares LinkedIn to a grid, where like-minded individuals can plug into. By applying social exchange methodology to connections on the grid, it is possible to benefit from the networking experience.

For example, using social exchange techniques, the researcher increased his network connection responses from 31.8% to 67.4%. This attests to Dillman et al.'s (2009) assertion that applying social exchange methods helps increase survey response rates. By offering your network connections a benefit, you in turn can get a benefit from others on the network.

However, once a network connection was established, the researcher then had an e-mail address to continue to the next step. This step was critical because up until this point, there was no way to send a potential candidate a copy of the survey link. If the network connection met all the researcher's qualifications of being a project manager, the researcher sent a second message with the survey link to the survey candidate.

This second e-mail appealed to the candidate's unique project management credentials. For example, the researcher linked the survey completion to the advancement of the project community knowledge. The following was the social exchange script sent out as the second network contact:

As a fellow (project practitioner, CAPM[®], PMP[®], PgMP[®], PMI-RMPSM, PMI-SPSM, or OPM3[®]) please consider filling out this academic research survey regarding Project Leadership and the PMBOK[®] Guide. (If you have already filled out the survey, thank you, and I apologize for the intrusion.) I plan to present the survey results to the

PMBOK® Guide Standards Committee for their consideration, thus your participation in the survey furthers the project management profession's body of knowledge.

http://www.surveymonkey.com/s/Project_Leadership_and_the_PMBOK_Guide

This request is an attempt to ascertain if a professional social medium channel, like LinkedIn, is suitable for the academic collection of research data. Any comments received, regarding the use of LinkedIn for research gathering, will be part of the Dissertation results.

Finally, if you know of any other (project practitioner, CAPM®, PMP®, PgMP®, PMI-RMPSM, PMI-SPSM, or OPM3®), using LinkedIn, please consider passing on the survey link to them. Finally, if you would like to receive a copy of the survey results, please send a message on LinkedIn.

Respectfully,

Paul Toth DBA (abd), MBA, PMP®, RCDD/NTS

Further refinement of social exchange techniques could increase the effectiveness of the survey responses, as it appears that the building of trust through the social exchange increases the benefits to both parties. Dillman et al. (2009) concurs when he states that social exchange “increases the benefits while decreasing the cost [of the exchange]” (p. 23). Finally, the main advantage of social networks like LinkedIn is that both parties benefit in the give and take on the network connection. Social networks add value to our lives in our careers, by advancing education, and in our business dealings.

The Population

The research planned to concentrate on the PMI membership for this study. PMI’s membership size is approximately 500,000, according to the official PMI web site (PMI, 2010). Even though there are, other global project management standards bodies, this research attempted to look at only the PMI members. Thus, the survey findings captured PMI members who had more than one PMI certificates or a certificate from another project management standards body such as PRINCE2. PMI does not collect information on project managers that hold certification from other organizations. Based

on this study approximately seven percent of PMI members have certifications from other sources.

Sample size

The sampling size for this type of survey appeared to be problematic to this researcher. Because the survey was mostly opinion based, it appeared that no amount of sample size would represent the full population at multiple points in time. Thus, the researcher looked at sample size best practices, and decided on a pragmatic approach that gave a reasonable probability of meaningful results.

One approach to determine sample size is to use the formula outlined by Dillman, et al. (2009, p56):

$$N_s = \frac{(N_p)(p)(1-p)}{N_p - 1 + (B/C)^2 + (p)(1-p)}$$

Where: N_s = the complete sample size needed for the desired level of precision

N_p = the size of the population

P = the portion of the population expected to choose one of the two categories

B = margin of error (i.e., half of the desired confidence interval width): .03 = +/- 3%

C = Z score associated with the confidence level (1.95 = a 95% level)

Using the above formula for a 500,000 population, a sample size of 381 is required for the following parameters:

- Total Population = 500,000 (the estimated # of PMI members)
- Confidence Interval = 95%

- Response distribution expected = 50%

However, the researcher did not use the above sample size approach because his survey did not ask a simple “yes or no” question, and the survey respondent’s answers would not be normally distributed evenly, e.g. 50%. Since the research could not find any standards as to the differences within the responses other than percentages, he to show the distribution of the demographic groups (i.e., Experience, Certification, Industry, Gender, or Education). However, he did run an ANOVA on the independent variables to see if any variable acted as a predictor for the research question.

By using the 201 total survey responses gather in the allotted time instead of the 381 suggested by Dillman, et al. (2009), the research felt that he could reach better than a confidence level of 90% rather than 95%. Then using the 201 surveys responses, the researcher engaged in data mining, and looked for patterns within the means of the dependent and independent variables. Figures 4 through 8 show the independent variable distribution of the responses.

Instrument - Qualitative and Quantitative research methods

Since the Project Management Institute will not release any portion their membership list, the researcher ruled out direct contact phone or e-mail contact with their members as a methodology to gather data. In addition, the researcher did not have access to sufficient numbers of PMI members to conduct interviews with, nor was his research authorized by the IRB committee to do so. Thus, the researcher decided on using a survey instrument to collect data for the study.

Further, the researcher looked at a Tailored Design Method in creating the survey instrument per Dillman et al. (2009). The goals of the design were:

- 1) to take a scientific approach to managing the sample surveys by reducing error,
- 2) being aware of the communications process and finding ways to constantly improve the response rate
- 3) provide non-monetary incentives to the survey takers to encourage them to respond, by building positive social exchange

The researcher began by looking at three potential error categories in developing his survey instrument. The first potential error was coverage error. The original intent of the study was to use the survey resources directly from PMI. Gathering survey data directly from the PMI survey process would have eliminated coverage error, as all members of the population would have had the same opportunity to be included in the survey. However, this avenue was not available in the timeframe that the researcher had available to collect data.

Thus, the researcher settled on the LinkedIn social network to contact PMI members. The problem with using LinkedIn is that it is on the Internet, and potentially not all project managers have access to the Internet, or use LinkedIn - introducing coverage error. To identify the size of that potential error, the researcher searched out a group on LinkedIn that was composed of only PMP[®]'s, a certificate only available from PMI. That group had 148,757 members; whereas, PMI showed that it had issued 389,726 PMP certifications. Based on this, the researcher concedes that using LinkedIn to conduct this survey has potential coverage error.

The second form of error that the researcher considered was sampling error. Although sampling the full 500,000 PMI members would have been prohibitive, the

researcher decided to sample a large enough group to gain a margin of error of $\pm 10\%$, with 95% confidence level. According to Dillman et al., a sample size of 100 survey samples was sufficient - the researcher gathered 201. This sample size should add statistical power, and should eliminate sampling error.

The final form of error considered by the design was a nonresponse error. Since the people selected for the survey were all from one group, namely project managers, the ones who did not respond were not significantly different from the ones who responded. Based on the sample chosen, all project managers, the researcher did not expect to encounter a nonresponse error.

To reach the potential survey takers, the researcher used LinkedIn. This service is a professional social network on the Internet. However, the initial survey gathering on this media resulted in only a 10% response rate. By experimenting with social exchange techniques, the researcher was able to increase the response rate to 28.6%.

Social Exchange as outlined by Dillman (2009), are techniques used to get someone to feel that the cost of doing something, like filling out a survey, is less than not filling out the survey. In other words, the survey taker benefits by taking the survey. This social exchange approach was to understand the communications process and find ways of improving the response rate. In the case of this study, the researcher personalized the request with a first name and certificate type, and appealed for help to advance the project management body of knowledge.

The goals of the social exchange approach were to increase response rates while reducing the costs to gain more responses. In addition, the researcher wanted to build trust with the potential survey takers, so the survey takers felt that the rewards to take to

survey outweighed the cost to do so (Dillman et al., 2009). In particular, the researcher looked at applying an appreciative framework (Whitney, Trosten-Bloom & Rader, 2010.) Appendix “A” shows a full copy of the survey.

Data Collection and Organization

The researcher sent out the survey to a select group of project manager peers to validate content. He then sent the survey instrument to the IRB committee to ensure it met ethical considerations. The researcher captured the data from the surveys on a spreadsheet, and looked at the means of the responses of the five independent variables versus the four dependent variables via the 16 questions asked in the surveys. Most questions consisted of a quantitative and a qualitative component. The initial analysis of the collected data consisted of calculating the means for all the independent and dependent variable.

Data Analysis

The study looked at project managers with the *PMBOK[®] Guide*, as a common element. This body of knowledge document is the project management foundational standard. Using the *PMBOK[®] Guide* as a common element reduced the demographics or cultural bias of receiving survey input from around the globe. Kendra & Taplin (2004) agree that a common understanding helps to reduce biases.

The analysis of the data consisted of looking for patterns in the means between and amongst the dependent and independent variables. The researcher chose a pragmatic approach to the data analysis where he converted raw means to percentages to report the results. The reason that the researcher took this approach was twofold. The first reason was that this was an action research to solve a business problem, and not to advance

theory. The second reason was to ensure the largest distribution of the results to non-academic practitioners in the project management field.

In addition, LinkedIn provided networking statistics that gave meaningful data on where the survey responses originated. For example, LinkedIn provided general demographic information such as:

- Your connections are in 163 locations and in 63 industries
- The fastest growing locations in your network are the greater NYC area, Greater LA area, and Toronto Canada area
- The fastest growing industries in your network are IT, Telecommunications and retail
- Total connections = 881
 - o 2 degree connections = 145,600+; 3 degree connections = 5,758,300+

Limitations

This research did not intend to introduce new project leadership theories, as the intent was to highlight the importance of project leadership within the project management community. In addition, the researcher wanted to increase the visibility of project leadership already sponsored by PMI. Further, the research is limited to providing input for the *PMBOK*[®] *Guide* Standards Committee in order for them to decide if project leadership knowledge would benefit the project profession by adding it into the *PMBOK*[®] *Guide*.

Since the *PMBOK*[®] *Guide* contains good practices as they pertain to increasing the probability of successful projects, this study is limited to leadership knowledge as it applies to the project environment, and sponsored by PMI. In addition, since only leadership traits, styles flexibility or competencies that contribute to successful projects are candidates for addition to the *PMBOK*[®] *Guide* as good practices, the study focused on project leadership knowledge rather than general leadership knowledge.

The use of LinkedIn to gather data did not appear to mirror the population demographics of corporate PMI or the Local Atlanta Chapter PMI membership. Comparisons by certification types between PMI corporate, PMI Atlanta Chapter, and this study showed discrepancies.

Summary

The object of this research was to find out if there is significant evidence to approach the *PMBOK*[®] *Guide* Standards Committee and request that they consider adding project leadership knowledge into a future edition of the *PMBOK*[®] *Guide*. The

research design used a quantitative and qualitative methodology to gather the data, and this chapter gives an overview of that research methodology.

In particular, this chapter looks at the ethical considerations of the research, the significance of the research, the research questions, and finally, the study characteristics. Since the researcher did not conduct research on human subjects, he received a waiver from the school's Internal Review Board (IRB). In addition, the survey instrument purposely kept the survey-taker's identify and their specific locations anonymous. This approach ensured that survey-takes did not suffer any emotional, physical, financial, or psychological damage.

Concerning the significance of the research, the intent is to raise the awareness of PMI as to why the *PMBOK® Guide* should include project leadership knowledge. Since the *PMBOK® Guide* contains project management good practices the researcher set out to show that project leadership types and styles are project management good practices, and should be a part of the *PMBOK® Guide*.

To prove that project management knowledge is a good practice the researcher proposed five research questions. These research questions formed the basis for the five independent variables, and the four dependent variables. Based on the research questions, and the variables chosen, the researcher set up the research characteristics.

The design characteristics consisted of the survey pilot, the use of social exchange using LinkedIn to gather surveys, the population and associated sample size, the survey instrument, the data collection and finally, the data analysis. Although each characteristic is important, the researcher but took an extra effort to explain what social exchange was, and highlighted its importance in survey gathering.

Chapter IV – Results

The researcher collected the data was to see if there was any substantial difference in opinions by the respondents as it related to their personal characteristics, by looked at the study from four perspectives. The first was from a competency perspective, where the study looked to see if project leadership knowledge led to increase competency. The second perspective was from the PMBOK® Guide, where the study looked to see if project leadership good practices should be a part of the PMBOK® Guide. The third perspective was from the sponsor's view, where the study looked to see if project sponsors expected the project manager to be the project leader. Fourth, from a project success perspective, the study looked to see if project leadership knowledge increased the potential of project success. The independent variables categorized the participants by *project experience, project certification, by industry, by gender, and by educational level.*

Independent Variable Frequencies

The next five tables show the frequencies for the independent variables, namely *Project Experience (IV1), Project Certification (IV2), the Industry worked in (IV3), Gender (IV4), and Education level (IV5).* In addition, the researcher presents a short description of the findings that relate to the specific frequency table.

Table 4 shows the frequency of the 201 project managers who responded to survey question number #1. This study showed that 9.5% of the respondents had <5 years' experience, 69.1% had 6-19 years of experience, the largest group, and 21.4% had greater than 20 years' experience.

Table 4 – Frequency for Project Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<5 years	19	9.5	9.5	9.5
	6-10 years	68	33.8	33.8	43.3
	11-19 years	71	35.3	35.3	78.6
	>20 years	43	21.4	21.4	100.0
	Total	201	100.0	100.0	

Table 5 shows the frequency of the 201 project managers who responded to survey question number #2. It shows that 88.1% of the respondents help a PMI project management certification, with 4.5% holding a CAPM certificate, 76.6% holding a PMP certificate, 7.0% held other types of certification, and 11.9% were not certified.

Table 5 – Frequency for Project Certification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CAPM	9	4.5	4.5	4.5
	PMP	154	76.6	76.6	81.1
	Other	14	7.0	7.0	88.1
	None	24	11.9	11.9	100.0
	Total	201	100.0	100.0	

Table 6 shows the frequency of the 201 project managers who responded to survey question number #3. It shows a diverse cross section of industries represented, with 13.9% of responses from other industries, 20.9% from the Transportation industry, 12.9% from the Consulting industry, 3.5% responses from the Energy industry, 17.9% of the responses from the Manufacturing industry, 25.4% responses from the IT industry, and 5.5% responses from the Construction industry.

Table 6 – Frequency for Industry

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Other	28	13.9	13.9	13.9
Transportation	42	20.9	20.9	34.8
Consulting	26	12.9	12.9	47.8
Energy	7	3.5	3.5	51.2
Manufacturing	36	17.9	17.9	69.2
IT	51	25.4	25.4	94.5
Construction	11	5.5	5.5	100.0
Total	201	100.0	100.0	

Table 7 shows the frequency of the 201 project managers who responded to survey question number #4. This table shows that females possibly are under-represented in the project management field with only 26.9% of the sample, while 73.1% of the respondents were males. However, the researcher's personal experience in the field indicates that this disparity indeed exists.

Table 7 – Frequency for Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Female	54	26.9	26.9	26.9
Male	147	73.1	73.1	100.0
Total	201	100.0	100.0	

Table 8 shows the frequency of the 201 project managers who responded to survey question number #5. It shows that 53.7% of the respondents had either a masters or doctorate degree, 38.3% had a Bachelor's degree, 4.5% had an Associate Degree, and 3.5% had a high school education or a certificate. This indicates that education plays a substantial role in the decision to enter the project management field. For example, candidates who wish to sit for the PMP examination must have a combination of experience and educational requirements according to PMI. Without a Bachelor's degree, the candidate must have at least five years of project management experience. With a Bachelor's degree, the candidate only requires three years of project management experience.

Table 8 – Frequency for Educational Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school or certificate	7	3.5	3.5	3.5
	Associates degree	9	4.5	4.5	8.0
	Bachelor degree	77	38.3	38.3	46.3
	Masters or doctorate degree	108	53.7	53.7	100.0
	Total	201	100.0	100.0	

Descriptive Statistics

Once the researcher collected the data, he needed to validate the hypotheses. The researcher began the analysis by looking at the descriptive statistics of the data, and noticed an anomaly in the response data. Questions 12A B & C had missing data for the first 12 respondents. Upon investigation, it was evident that this anomaly was due to the survey template changed after the pilot. In retrospect, the researcher should have not

included the original pilot data in the main sample population. Thus, based on this finding, the researcher decided it prudent to take questions 12A, 12B, and 12C out of the analysis, since this data led to erroneous results.

In addition, only respondents that answered questions 1-5 were candidates for the study, resulting in 201 respondents, as shown in table 9. However, not all of the 201 survey respondents answered all the questions. For survey question 6, (DV1) only 196 responded. For survey question 11 (DV2), 195 responded; for survey question 15 (DV3), 195 responded, and for survey question 20 (DV4), 198 responded. Thus, the researcher did not code the missing data with a zero (0), as coding the missing data would have skewed the results. Table 9 shows the Descriptive statistics of the DVs (The Independent variables were not categorical variables so reporting the means of these would be meaningless):

Table 9 – Descriptive Statistics

	N	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
<u>Dependent variables</u>								
Q6 - Competency	196	1.40	.712	.507	2.343	.174	7.524	.346
Q11- PMBOK® Guide	195	1.91	1.116	1.245	1.253	.174	.783	.346
Q15 - Sponsor	195	1.52	.653	.426	1.112	.174	1.073	.346
Q20 – Project success	198	1.45	.695	.483	2.137	.173	6.827	.344
Valid N (listwise)	186							

DV Frequency Distribution

Next, the researcher looked at the frequency distribution of the dependent variables to get an idea of their frequency distribution. Tables 10-13 show the four dependent variables as *project leadership competency (DV1)*, *the PMBOK® Guide (DV2)*, *project sponsor expectations (DV3)*, and *project success (DV4)*. The first dependent variable (frequency shown in Table 10) explored how respondents felt about project leadership knowledge contributing to leadership competency.

Table 10 - Frequency for Competency (DV1)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	Strongly agree	132	65.7	67.3	67.9
	Agree	54	26.9	27.6	95.4
	Neutral	4	2.0	2.0	97.4
	Disagree	3	1.5	1.5	99.0
	Strongly disagree	2	1.0	1.0	100.0
	Total	196	97.5	100.0	
Missing	System	5	2.5		
Total		201	100.0		

The second dependent variable (frequency shown in Table 11) explored how respondents felt about adding project leadership knowledge into the *PMBOK® Guide*.

Table 11 - Frequency for *PMBOK® Guide*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	90	44.8	46.2	46.2
	Agree	64	31.8	32.8	79.0
	Neutral	17	8.5	8.7	87.7
	Disagree	16	8.0	8.2	95.9
	Strongly disagree	8	4.0	4.1	100.0
	Total	195	97.0	100.0	
Missing	System	6	3.0		
Total		201	100.0		

The third dependent variable (frequency shown in Table 12) explored how respondents felt about the project sponsor expecting the project manager to be the project leader.

Table 12 - Frequency for Sponsor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	109	54.2	55.9	55.9
	agree	73	36.3	37.4	93.3
	Neutral	11	5.5	5.6	99.0
	Disagree	2	1.0	1.0	100.0
	Total	195	97.0	100.0	
Missing	System	6	3.0		
Total		201	100.0		

The fourth dependent variable (frequency shown in Table 13) explored how respondents felt about project leadership knowledge leading to project success.

Table 13 - Frequency for Project Success

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	123	61.2	62.1	62.1
	Agree	66	32.8	33.3	95.5
	Neutral	5	2.5	2.5	98.0
	disagree	2	1.0	1.0	99.0
	strongly disagree	2	1.0	1.0	100.0
	Total	198	98.5	100.0	
Missing	System	3	1.5		
Total		201	100.0		

Results of the Data Analysis

The researcher chose ordinal values for the dependent variables since he could not be sure that the intervals between each of the five values of the five-point Likert scale used – Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree – are even. Further, to see if there were any differences in the survey taker's characteristics on how they answered the research question, the researcher chose to run a Factorial ANOVA for each of the research question (DV1, DV2, DV3, and DV4.) This test examines multiple independent variables against mean levels of the dependent variable.

In addition, the factorial ANOVA shows if there are any interactions between the independent variables, which might differ on mean levels of the dependent variables. This analysis uses each dependent variable, in turn with the independent variables, Experience (IV1), Certification (IV2), Industry (IV3), Gender (IV4), and Education (IV5).

Research Question One (DV1)

Survey Question #6 regarding competency

- RQ₁: Is project leadership knowledge essential for project managers to become competent project leaders?
- H₁– If project leadership knowledge is essential, then it will lead to leadership competency

The effects of the independent variables are:

- H_{1a} – Project experience will effect respondent’s perception that project leadership knowledge leads to leadership competency
- H_{1b} – Project Certification will effect respondent’s perception that project leadership knowledge leads to leadership competency
- H_{1c} – Industry will effect respondent’s perception that project leadership knowledge leads to leadership competency
- H_{1d} – Gender will effect respondent’s perception that project leadership knowledge leads to leadership competency
- H_{1e} – Education level will effect respondent’s perception that project leadership knowledge leads to leadership competency

For the first major hypothesis, Table 10 shows that the majority (95.4%) of respondents *Agreed* or *Strongly Agreed* that project leadership knowledge would lead to leadership competency, thus supporting the first research question. In looking at the effects of the independent variables on Table 14, the researcher found:

1. There is a main effect for the Corrected Model $F=2.616$, $p=.000$
2. Certification has a marginally significant main effect (1.527), $F=2.703$, $p=.051$.

3. There is a significant main effect for Industry (1.429), $F=3.061$, $p=.009$.
4. There is a significant main effect for Education (1.448), $F=2.887$, $p=.041$.
5. The effects for Experience, and Gender, are not significant.

Table 14 – Truncated tests Between-Subjects Effects - DV1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	75.783a	112	0.677	2.616	0.000
Intercept	103.767	1	103.767	401.137	0.000
Experience (SQ1)	0.691	3	0.230	0.891	0.450
Certification (SQ2)	2.098	3	0.699	2.703	0.051
Industry (SQ3)	4.75	6	0.792	3.061	0.009
Gender (SQ4)	0.526	1	0.526	2.034	0.158
Education (SQ 5)	2.241	3	0.747	2.887	0.041

a. R Squared=.781 (Adjusted R Square=.483)

(b) Computed using alpha=.05

The Competency DV (Q6) used five levels of a Likert scale; Strongly Agree (1), Agree (2), Neutral (3), Disagree (4), and Strongly Disagree (5). Table 15 shows the cell means of Q6 for each of the of the subgroup areas of the five independent variables.

The effect of *Certification* was marginally significant, with the main effect of (1.527), $F=2.703$, $p=.051$; at $p>.05$; H_{1b} is not supported. Examining the range of the subgroup means (Table 15) shows that respondents who indicated their certification as PMP (1.369) and ‘Other’ (1.400), most strongly agreed with Q6 that project leadership knowledge was essential and leads to leadership competency. At the other end of the range, both ‘None’ (1.650) and ‘CAPM’ (1.687) agreed with Q6, the variations, while obvious, were not enough to be significant.

The effect of *Industry* was statistically significant ($p<.05$). The significant main effect for *Industry* was (1.429), $F=3.061$, $p=.009$; H_{1e} is supported. Examining the range of the subgroup means, identified on Table 15, it shows that respondents who indicated their industry as ‘Other’ most strongly agreed with Q6, with a sub-group mean response of 1.271, followed by Construction at 1.278. The industry that was at the lowest level of

agreement was Energy; however, with a sub-group mean of 1.583, which is halfway between Agree and Strongly Agree, this group is still highly supportive of the hypothesis that project leadership knowledge leads to leadership competency.

The effect of *Education* was statistically significant ($p < .05$). The significant main effect for *Education* was (1.448), $F = 2.889$, $p = .041$; H_{1e} is supported. Examining the range of the subgroup means, identified on Table 15, it shows that respondents who indicated their education level was 'High School' or 'Certificate' most strongly agreed with H_1 with a sub-group mean response of 1.286. This group was followed by 'Masters or Doctorate' at 1.422, and 'Bachelor' at 1.459. The education group that was at the lowest level of agreement was 'Associate' at 1.625, this group is still highly supportive of the hypothesis that project leadership knowledge leads to leadership competency.

Table 15 – Competency Means

Competency		Group Mean	Sub Group Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
	Grand Mean	1.444a			1.36	1.528
	Experience	1.456				
	<5 years		1.529	0.120	1.291	1.767
	6-10 years		1.502	0.074	1.356	1.649
	11-19 years		1.345	0.073	1.201	1.49
	>20 years		1.447	0.089	1.269	1.625
	Certification	1.527				
	CAPM		1.687	0.174	1.341	2.034
	PMP		1.369	0.049	1.271	1.467
	Other		1.400	0.153	1.096	1.704
	None		1.650	0.109	1.432	1.868
	Industry	1.429				
	Other		1.271	0.109	1.053	1.488
	Transportation		1.502	0.098	1.307	1.697
	Consulting		1.300	0.112	1.076	1.524
	Energy		1.583	0.199	1.188	1.979
	Manufacturing		1.518	0.101	1.317	1.718
	IT		1.551	0.085	1.381	1.721
	Construction		1.278	0.160	0.960	1.596
	Gender	1.442				
	Female		1.433	0.074	1.286	1.580
	Male		1.450	0.051	1.349	1.552
	Education	1.448				
	HS or Cert.		1.286	0.192	0.903	1.668
	Associate		1.625	0.174	1.279	1.971
	Bachelor		1.459	0.065	1.329	1.588
	Masters or Doctorate		1.422	0.060	1.303	1.542

a. Based on modified population marginal mean.

The full means test, Appendix G, shows there are three significant 2-way interactions, two significant 3-way interactions and one significant 4-way interaction.

Table 16 shows the mean response on Q6 for the interaction of Certification and Gender.

The two highest are respondents who have:

- 1) A CAPM certification, and who are 'Female' - that sub-group mean is 1.000

2) 'Other' types of certification, and 'Females' - that sub-group mean is 1.000

The other end of the responses were CAPM males at 1.786 and None (no certification) who were females at 1.778 – these two groups did not feel as strongly that project leadership knowledge was essential to becoming a competent leader.

Table 16 - Certification * Gender for DV 'Competency'

Certification	Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
CAPM	Female	1.000 ^a	0.509	-0.012	2.012
	Male	1.786 ^a	0.185	1.417	2.154
PMP	Female	1.358 ^a	0.085	1.189	1.527
	Male	1.376 ^a	0.059	1.258	1.494
Other	Female	1.000 ^a	0.509	-0.012	2.012
	Male	1.444 ^a	0.16	1.126	1.762
None	Female	1.778 ^a	0.165	1.45	2.106
	Male	1.545 ^a	0.146	1.255	1.836

The second significant interaction found was between Certification and Education, with the highest levels of agreement exhibited by respondents who have:

- 1) For 'CAPM' certification and 'Associate' degree, the sub-group's mean was 1.000.
- 2) 'Other' types of certification and 'High school degree or certificate' education level; that sub-group's mean was 1.000.
- 3) For 'Other' and respondents who have a Bachelor degree, that sub-group's mean was 1.000. Table 17 shows these subgroup means.

The other end of the range were CAPM holders who had Masters or Doctorate degrees at 3.000, this group, with the lowest level of project management certification, and with a higher level of academic education is worthy of further study.

Table 17 - Certification * Education for Competency

Certification	Education	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
CAPM	High school or certificate	Not observed	.	.	.
	Associates degree	1.000 ^b	.509	-.012	2.012
	Bachelor degree	1.300 ^b	.216	.871	1.729
	Masters or doctorate degree	3.000 ^b	.360	2.285	3.715
PMP	High school or certificate	1.200 ^b	.227	.748	1.652
	Associates degree	1.750 ^b	.238	1.277	2.223
	Bachelor degree	1.499 ^b	.079	1.342	1.657
	Masters or doctorate degree	1.242 ^b	.067	1.109	1.374
Other	High school or certificate	1.000 ^b	.509	-.012	2.012
	Associates degree	Not observed	.	.	.
	Bachelor degree	1.000 ^b	.199	.605	1.395
	Masters or doctorate degree	2.333 ^b	.268	1.800	2.867
None	High school or certificate	2.000 ^b	.509	.988	3.012
	Associates degree	1.667 ^b	.294	1.083	2.251
	Bachelor degree	1.750 ^b	.174	1.404	2.096
	Masters or doctorate degree	1.500 ^b	.168	1.165	1.835

Research Question Two (DV2).

Survey Question #11 regarding the *PMBOK® Guide*

- RQ₂: Is project leadership knowledge required in the *PMBOK® Guide*?
 - H₂ – If project leadership knowledge is important, then it belongs in the *PMBOK® Guide*

The effects of the independent variables are:

- H_{2a} – Project experience will effect respondent’s perception that project leadership knowledge belongs in the PMBOK® Guide
- H_{2b} – Project Certification will effect respondent’s perception that project leadership knowledge belongs in the PMBOK® Guide
- H_{2c} – Industry will effect respondent’s perception that project leadership knowledge belongs in the PMBOK® Guide
- H_{2d} – Gender will effect respondent’s perception that project leadership knowledge belongs in the PMBOK® Guide
- H_{2e} – Education level will effect respondent’s perception that project leadership knowledge belongs in the PMBOK® Guide

For the second major hypothesis, Table 11 shows that the majority (79.0%) of respondents *Agreed* or *Strongly Agreed* that project leadership knowledge belonged in the *PMBOK® Guide*, thus supporting the second research question. In looking at the effects of the independent variables, the researcher found:

1. There is a main effect for the Corrected Model $F=1.501$, $p=.027$
2. Gender has a marginally significant main effect (1.929), $F=3.490$, $p=.065$
3. One other effect was noted between Experience and Industry

a. Experience * Industry

Table 18 shows the truncated output of the test, and Appendix H shows the full table.

Table 18 – Truncated tests Between-Subjects Effects – DV2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	164.570 ^a	114	1.444	1.501	.027
Intercept	149.023	1	149.023	154.935	.000
Experience - Q1	.296	3	.099	.103	.958
Certification - Q2	4.632	3	1.544	1.605	.195
Industry - Q3	10.402	6	1.734	1.802	.109
Gender - Q4	3.357	1	3.357	3.490	.065
Education - Q5	2.642	3	.881	.916	.437

a. R Squared=.681 (adjusted R Squared= .227)

The *PMBOK*[®] *Guide* DV (Q11) used five levels of a Likert scale; Strongly Agree (1), Agree (2), Neutral (3), Disagree (4), and Strongly Disagree (5). Table 19 shows the cell means of Q11 for each of the of the subgroup areas of the five independent variables.

The effect of *Gender* was marginally significant with the main effect of (1.929), $F=3.490$, $p=.065$; at $p>.05$ H_{2d} is not supported. Examining the range of the subgroup means (Table 19) shows that respondents who indicated their gender was ‘Female’ (1.862) and ‘Male’ (1.995), agreed with Q11 that project leadership knowledge belonged in the *PMBOK*[®] *Guide*. No other effects were statistically significant for the *PMBOK*[®] *Guide*.

Table 19 – *PMBOK*[®] Guide Means

PMBOK		Group Mean	Sub Group Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
	Grand Mean	1.942a				
	Experience	1.957				
	<5 years		1.941a	.231	1.482	2.400
	6-10 years		1.954a	.144	1.668	2.240
	11-19 years		1.844a	.141	1.563	2.124
	>20 years		2.090	.170	1.752	2.428
	Certification	1.956				
	CAPM		1.750a	.336	1.082	2.418
	PMP		1.906a	.096	1.715	2.097
	Other		2.043a	.271	1.502	2.581
	None		2.125a	.211	1.705	2.545
	Industry	1.957				
	Other		1.542a	.210	1.124	1.960
	Transportation		1.958a	.191	1.579	2.337
	Consulting		2.011a	.221	1.571	1.451
	Energy		2.167a	.383	1.404	2.930
	Manufacturing		2.289a	.194	1.903	2.676
	IT		1.899a	.163	1.574	2.2224
	Construction		1.833a	.308	1.220	2.447
	Gender	1.929				
	Female		1.862a	.144	1.575	2.149
	Male		1.995a	.098	1.800	2.190
	Education	1.908				
	HS or Cert.		1.714a	.371	.977	2.452
	Associate		2.000a	.336	1.332	2.668
	Bachelor		1.976a	.126	1.725	2.227
	Masters. or Doctorate		1.943a	.116	1.712	2.174

a. Based on modified population marginal mean.

For the second major hypothesis (H₂), the majority (79.0%) of respondents Agreed or Strongly Agreed with Q11 that *If project leadership knowledge is important, then it belongs in the PMBOK[®] Guide* – thus, supporting the second research question (see Table 11).

Research Question Three (DV3).

Survey Question #15 regarding the Sponsor

- RQ₃: Do sponsors expect the project manager to be the project leader?
 - H₃ – If project leadership is important, then the sponsors will expect the project manager to be the project leader

The effects of the independent variables are:

- H_{3a} – Project experience will effect respondent's perception that the sponsor believes that the project manager is the project leader
- H_{3b} – Project Certification will effect respondent's perception that the sponsor believes that the project manager is the project leader
- H_{3c} – Industry will effect respondent's perception that the sponsor believes that the project manager is the project leader
- H_{3d} – Gender will effect respondent's perception that the sponsor believes that the project manager is the project leader
- H_{3e} – Education level will effect respondent's perception that the sponsor believes that the project manager is the project leader

For the third major hypothesis, Table 12 shows the majority (93.3%) of respondents Agreed or Strongly Agreed that the Sponsor expects the project manager to be the project leader, thus supporting the third research question. In looking at the effects of the independent variables, the researcher found no statistically significant effects of the Independent Variables on the DV (Sponsor) in Table 20. Thus, the assumptions in H_{3a} through H_{3e} do not support that certain respondent's characteristics would result in differences of perceptions that the sponsor expects the project manager to be the project

leader. Table 20 shows the truncated output of the test, and Appendix I shows the full results of the Between-Subjects Effects test for Sponsor.

Table 20 - Truncated tests Between-Subjects Effects – DV3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	55.761 ^a	112	.498	1.516	.024
Intercept	125.034	1	125.034	380.774	.000
Experience - Q1	.704	3	.235	.715	.546
Certification - Q2	1.995	3	.665	2.025	.117
Industry - Q3	3.016	6	.503	1.531	.178
Gender - Q4	.094	1	.094	.286	.594
Education - Q5	.043	3	.014	.043	.988

a R Squared = .674 (Adjusted R Square=.230)

For the third major hypothesis (H3), the majority (93.3%) of respondents Agreed or Strongly Agreed with Q15 that *'If project leadership is important, then the sponsors will expect the project manager to be the project leader'* - thus, supporting the fourth research question (see Table 12).

Research Question Four (DV4).

Survey Question #20 regarding project success

- RQ4 – Do project managers who provide leadership for their project team, have successful projects?
 - H₄ – If project leadership is important then it will lead to project success

The effects of the independent variables are:

- H_{4a} – Project experience will effect respondent’s perception that project leadership will lead to project success
- H_{4b} – Project Certification will effect respondent’s perception that project leadership will lead to project success
- H_{4c} – Industry will effect respondent’s perception that project leadership knowledge will lead to project success
- H_{4d} – Gender will effect respondent’s perception that project leadership knowledge will lead to project success
- H_{4e} – Education level will effect respondent’s perception that project leadership knowledge will lead to project success

For the fourth major hypothesis, Table 13 shows that the majority (95.5%) of respondents Agreed or Strongly Agreed that project leadership knowledge will lead to project success, thus supporting the fourth research question. In looking at the effects of the independent variables, the researcher found that the Corrected Model is not significant ($P > .05$). However, Certification had a marginal significant main effect (1.734), $F = 2.616$, $p = .056$; at $p > .05$; H_{4b} is not supported. The researcher did not find any other statistically

significant effects of the IVs on DV4. Table 21 shows the truncated output of the Test of Between-Subjects Effects - Appendix J shows the full test results.

Table 21 - Truncated tests Between-Subjects Effects – DV4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	50.671 ^a	114	.444	.831	.822
Intercept	88.433	1	88.433	165.239	.000
Experience - Q1	.428	3	.143	.267	.849
Certification - Q2	4.200	3	1.400	2.616	.056
Industry - Q3	3.091	6	.515	.963	.456
Gender - Q4	.262	1	.262	.490	.486
Education - Q5	1.648	3	.549	1.027	.385

^a R Squared=.533 (Adjusted R Square = -.109)

The Project Success DV (Q20) as measured on the five levels of a Likert scale are Strongly Agree (1), Agree (2), Neutral (3), Disagree (4), and Strongly Disagree (5). Table 22 shows the cell means of Q15 for each of the subgroup areas of the five independent variables.

The interaction of Certification (1.502), $F=2.616$, $p=.056$, was shown to have a marginally statistically significant effect on DV4, Project Success, and in looking at Table 22, the following was noted. Respondents with ‘Other’ certifications had mean scores of 1.415, indicating that they scored midway between ‘Agree’ and ‘Strongly Agree’. The next, were the PMP group at 1.465, and then ‘None’ at 1.500. The lowest in this relatively high scoring group were the CAPMs at 1.625, which was closer to ‘Agree’ than ‘Strongly Agree’.

Table 22 – Project Success Means

Competency		Group Mean	Sub Group Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
	Grand Mean	1.477a		.060	1.358	1.597
	Experience	1.493				
	<5 years		1.618a	.172	1.275	1.960
	6-10 years		1.445a	.106	1.234	1.656
	11-19 years		1.445a	.104	1.248	1.662
	>20 years		1.462a	.127	1.210	1.713
	Certification	1.502				
	CAPM		1.625a	.250	1.127	2.123
	PMP		1.465a	.071	1.325	1.606
	Other		1.417a	.202	1.015	1.819
	None		1.500a	.157	1.187	1.813
	Industry	1.433				
	Other		1.302a	.157	.990	1.614
	Transportation		1.650a	.139	1.373	1.926
	Consulting		1.322a	.161	1.002	1.643
	Energy		1.333a	.286	.765	1.902
	Manufacturing		1.706a	.145	1.418	1.994
	IT		1.494a	.121	1.253	1.736
	Construction		1.222a	.230	.765	1.679
	Gender	1.469				
	Female		1.439	.107	1.227	1.651
	Male		1.499	.073	1.354	1.643
	Education	1.476				
	HS or Cert.		1.571a	.277	1.021	2.121
	Associate		1.375a	.250	.877	1.873
	Bachelor		1.539a	.093	1.0354	1.724
	Masters or Doctorate		1.420a	.086	1.248	1.591

a. Based on modified population marginal mean.

For the fourth major hypothesis (H_4), the majority (95.5%) of respondents ‘Agreed’ or ‘Strongly Agreed’ with Q20, that ‘*If project leadership is important then it will lead to project success*’ - thus supporting the fourth research question (see Table 13).

LinkedIn Group Discussion regarding project leadership

The researcher engaged his peers to get a better understanding of other project manager's perspective on project leadership. Appendix 'C' shows the comments from the LinkedIn Project Management In-depth study Special Interest Groups or SIGs.

The responses from the discussion gave the researcher two new insights. The first was that project leadership was not unique; however, there are aspects of general leadership that are unique to the project environment. These unique attributes of general leadership are the good project leadership good practices that the researcher feel should be in the *PMBOK[®] Guide*.

The second insight was other ways that project leadership good practices could be included in the *PMBOK[®] Guide* that the researcher did not look at in his survey. One way would be to add these good practices as inputs or outputs in the process groups. Finally, these good practices could be part of a separate guide for governance, including social responsibility, and project leadership.

Overall Results using LinkedIn

The researcher used LinkedIn as the networking medium for the study. It did not appear that other researchers had attempted to use this medium for collecting data before this study. However, the effort required a short learning curve, and the challenges turned out beneficial. A new learning, not anticipated at the start of the research, was that of social exchange. The concept and use of social exchange took a bit of refining to maximize the effect. Nevertheless, once mastered, it contributed to improve the survey response rate. Table 23 shows a snapshot of the start and end dates of the survey tracking showing the effects of using social exchange.

Table 23 - Survey tracking

Date	LinkedIn Requests Sent	Resulting LinkedIn Connections	% Connections Received per linkedIn Requests Sent	Non-Project Practitioner Connections Received	Project Practitioner Connections Received
1-Nov-09	22	7	31.8	5	2
Nov-10	1307	881	67.4	178	703

In addition, at the completion of the survey collection phase, the researcher compiled the overall results for future researches to use as a reference point. Table 24 shows the overall tracked survey responses on LinkedIn.

Table 24 - Survey responses

Initial LinkedIn requests Sent	Project Practitioners Respondents	Surveys Received	% Project Practitioners who took the survey	Average % (from full tracking sheet) who took the survey	Overall those who took the survey from initial contacts
1307	703	201	28.6%	34.6%	15.4%

The LinkedIn research experience

The first goal was to get a meaningful number of surveys returned, requiring a need to increase the researcher's network of project managers. The first step towards that goal was to create a search of suitable candidates. This search utilized key words such as project manager, CAPM[®], and PMP[®]. The intent of these three keywords was to produce a list of both certified and non-certified project managers. This initial approach proved successful, since the researcher's network grew from 47 contacts to 198. All of the new contacts met the criteria required for the research. Since only 16 took the survey using the newly created network list, the researcher began applying social exchange techniques

to increase the response rate. This new approach raised the responses to 52, a 31% overall response rate, and was the basis for the data analysis to start the process for this chapter.

At this point, it was obvious that the researcher needed to increase the number of surveys sent out. One way to expand the access to the project manager population on LinkedIn was to utilize Groups. Thus, the researcher sent out notices to several special interest groups (SIGs) on LinkedIn. He found that conducting research on LinkedIn SIGs was a novel idea without any guidelines. As a result, the researcher did not receive many returned surveys.

However, the introduction of project leadership topics spurred lively debate within several SIGs. Some participants believed that there was no distinction between general leadership and project leadership, while others felt that there was a distinction between the two. Samples of comments from these forums are available for view in Appendix C.

Characteristics of the LinkedIn Survey experience

The researcher conducted the pilot survey using e-mail to the full pilot population. Of the 40 e-mails sent out, only 14 (35%) took the survey – this met the design objective of obtaining a 30% return rate for that population, and was representative of PMI's membership population. The researcher then began using LinkedIn to contact candidates and found that the survey collection also exceeded the design objective by producing a return rate of 34.6%.

Table 25 represents the survey collection summary from July 2010 until November 2010 from LinkedIn.

Table 25 - Summary of the 4 month survey collection effort

Date	Initial Req. Sent	Initial Req. sent Cum.	Resulting LinkedIn Conn	% Connections sent	Non-Project related Conn's	Project related Conn	% eligible to take survey	Surveys Received	% returned the survey	% returned based on sent out
Nov 20, 2010	1307	1307	881	58.7%	178	703	79.8%	201	34.6%	14.2%

Summary

In this chapter, the researcher presented the results of the research effort including the qualitative and quantitative survey results, and the results of LinkedIn Special Interest Group discussions. Further, he has presented analysis and findings regarding the relationship of the survey participants regarding project leadership knowledge, and the *PMBOK® Guide*. The pilot consisted of the survey e-mailed to 40 project managers, and the main study consisted of PMI members found on LinkedIn, a professional social network, and included the pilot respondents.

The study looked at the problem of having project leadership knowledge added to the *PMBOK® Guide* from four perspectives, a *Project Leadership* perspective, the *PMBOK® Guide* perspective, the *Sponsor* perspective, and the *Project participant's personal* perspective. The researcher gathered the bulk of the surveys from the professional social network called LinkedIn. This experience was seminal in that it did not appear that other Doctoral students had attempted to use this social network to conduct their research before this research effort. However, during this research other researchers were beginning to inquire if LinkedIn groups would be receptive to answering future research questions.

Finally, the researcher presented both qualitative and quantitative findings within the chapter based on both the questions associated with the variables. Using the data from the surveys, the researcher looked for patterns based on the means of the answers. He then converted the means to percentages to show the patterns and relate the answers to the five research questions and associate hypotheses.

Chapter V - Summary and Recommendations

This chapter presents the significance, and summary, of the research findings. In addition, the chapter contains recommendations for future research. The purpose of the study was to examine if there was statistical significant evidence for the PMI Standards committee to consider adding project leadership best practices into the *Guide to the Project Management Body of Knowledge* also known as the *PMBOK® Guide*.

Further, this research examined the stated purpose from four perspectives, *Project Leadership*, the *PMBOK® Guide*, the *Sponsor*, and the project manager's *Personal* perspectives. The researcher chose these perspectives to understand the PMI membership's viewpoints about project leadership, to see if there was sufficient evidence to present to the PMI Standards Committee, to have them consider adding project leadership knowledge into the *PMBOK® Guide*.

Interpretation of Findings

Research Question #1: Is project leadership essential for project managers to become competent project leaders?

- 92.6% of survey respondents either agreed or strongly agreed that project leadership knowledge would increase their leadership competency. This result suggests that the *PMBOK® Guide* should contain project leadership knowledge as it related to the project manager's competency.

Research Question #2: Should project leadership knowledge be a part of the *PMBOK® Guide*?

- 76.6% of survey respondents either agreed or strongly agreed that project leadership knowledge needs to be in the *PMBOK® Guide*. Although this statistic is high (above 75%), it does show that there is a reservation among the PMI membership on where project leadership knowledge should reside. The lively discussions in the various LinkedIn SIGs on this subject, attest to that fact (see Appendix “C”).

Research Question #3: Do sponsors expect the project manager to be the project leader?

- 90.5% of survey respondents either agreed or strongly agreed that the project sponsor expects the project manager, to be the project leader. This result suggests that the *PMBOK® Guide* should contain project leadership knowledge as it relates to the project manager’s relationship with the sponsor.

Research Question #4: Do project managers who provide leadership for their project team, have successful projects?

- 94.0% of survey respondents either agreed or strongly agreed that project leadership knowledge was important to the success of projects. This result suggests that the *PMBOK® Guide* should contain project leadership knowledge to increase the probability of a higher project success rate.

However, there was not consensus on where project leadership knowledge should reside within the *PMBOK® Guide*. A large portion of survey respondents (76.6%) agreed that the *PMBOK® Guide* should include project leadership knowledge. However, a much lower portion of survey respondents (58.6%, 57.4%, and 59.5%) agreed, on where that knowledge needs to reside. Thus, the research concedes further research is required to look at other options for adding project leadership knowledge into the *PMBOK® Guide*.

Implications of the Study

This study should provide insight for at least two audiences. The first is the PMI community, who will benefit by becoming aware of the PMI sponsored research on project leadership. The second entity that will benefit is the stature of the *PMBOK*[®] *Guide*, which will only grow in importance as a foundational standard in the project management industry.

To the PMI Community

Based on the findings of this research effort, it appears that there is great interest by the project manager community in project leadership knowledge. Although respondents were familiar with general leadership knowledge (59.8%), they were not as conversant with project leadership knowledge (45.6%). PMI sponsored researchers such as Turner & Müller (2006), Pinto et al. (1998a); Pinto & Trailer (1998b) outline project leadership knowledge in their research, but it appears that not all project managers are familiar with these studies.

By including the key elements of PMI's sponsored research into the *PMBOK*[®] *Guide*, the project management community would benefit, and the *PMBOK*[®] *Guide* becomes a more robust foundational standard document. Finally, by keeping PMI as a forward thinking organization, it will continue to attract new members who want to be a part of a premiere standard and certification organization.

To the PMBOK[®] Guide

PMI has sponsored a plethora of research on project leadership by seminal authors such as Arnold (2008), Fielder (1967), Krahn (2005), Pinto et al. (1998), Reilly (2007), Turner & Müller (2006), Shenhar et al. (2007b), Shi & Chen (2006), Slevin & Pinto

(1991), Williams (1989), and others. Yet project leadership theoretical knowledge is not readily available in the PMI foundational standard, the *PMBOK® Guide*. It follows that the good practices from these seminal researchers should have a prominent place in the *PMBOK® Guide*.

Seminal project leadership theories constitute good practices in project management. Since good practices are vital to the continued advancement of the project management profession, these good practices should be a part of the *PMBOK® Guide*. In addition, the *PMBOK® Guide*'s value has the potential to increase as a reference work once project leadership theory good practices are included.

Thus, based on this study, the researcher has synthesized three ways that the Standards Committee can consider adding Project leadership knowledge into the *PMBOK® Guide*, is recommending a fourth option based on input from PMI members surveyed – create a new Guide that contains Social Responsibility, Governance, and Project Leadership.

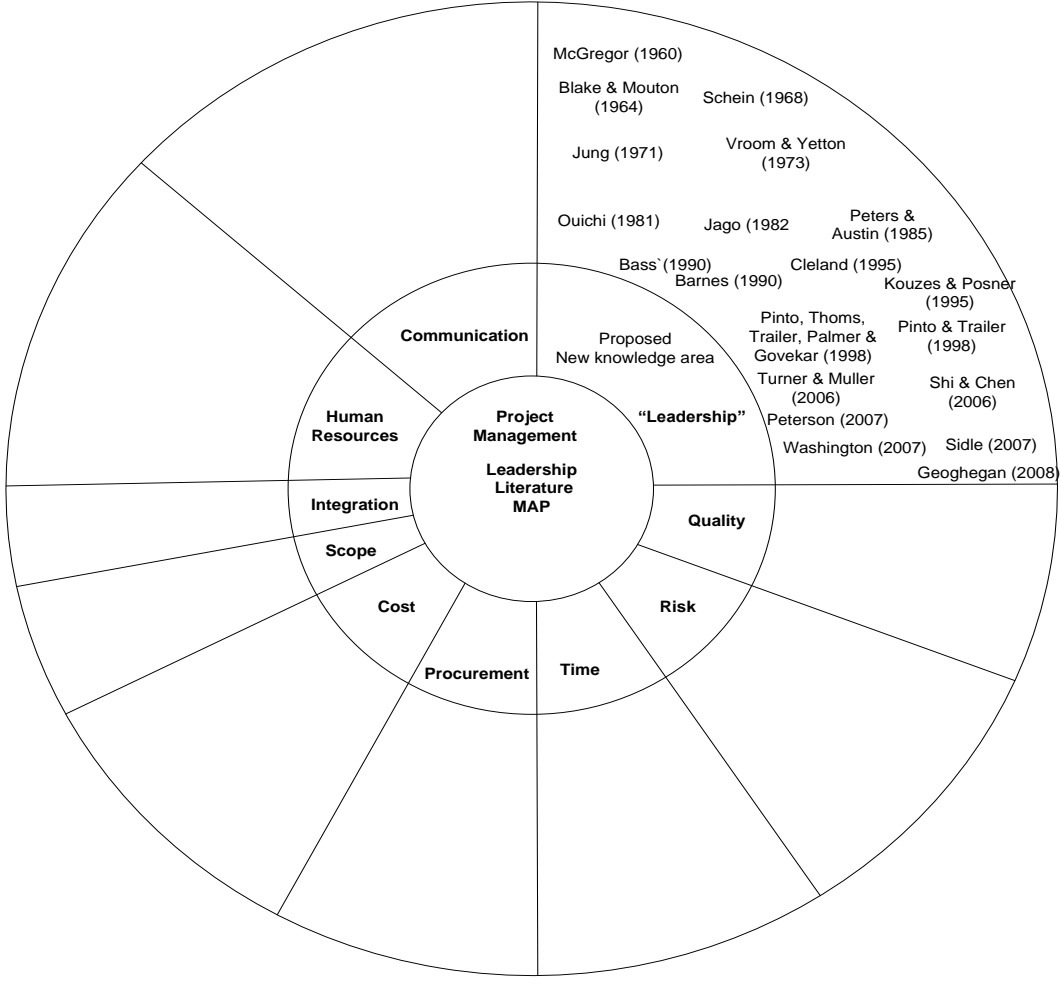
The first is by adding project leadership knowledge as a 10th Knowledge area: the second approach is by incorporating project leadership knowledge into the existing nine Knowledge areas where applicable; and the third approach is to add project leadership knowledge as a separate chapter within the *PMBOK® Guide*. Below is a brief description of each of these approaches:

I - Project leadership as the 10th Knowledge Area

The first approach is to add leadership knowledge as a 10th knowledge area. Figure 16 shows project leadership as the 10th knowledge area, and show some of the

seminal research in project leadership. The pro for this approach is that the leadership knowledge is in a separate area; the con is that it could possibly take re-work of the five process groups of the *PMBOK*[®] *Guide*.

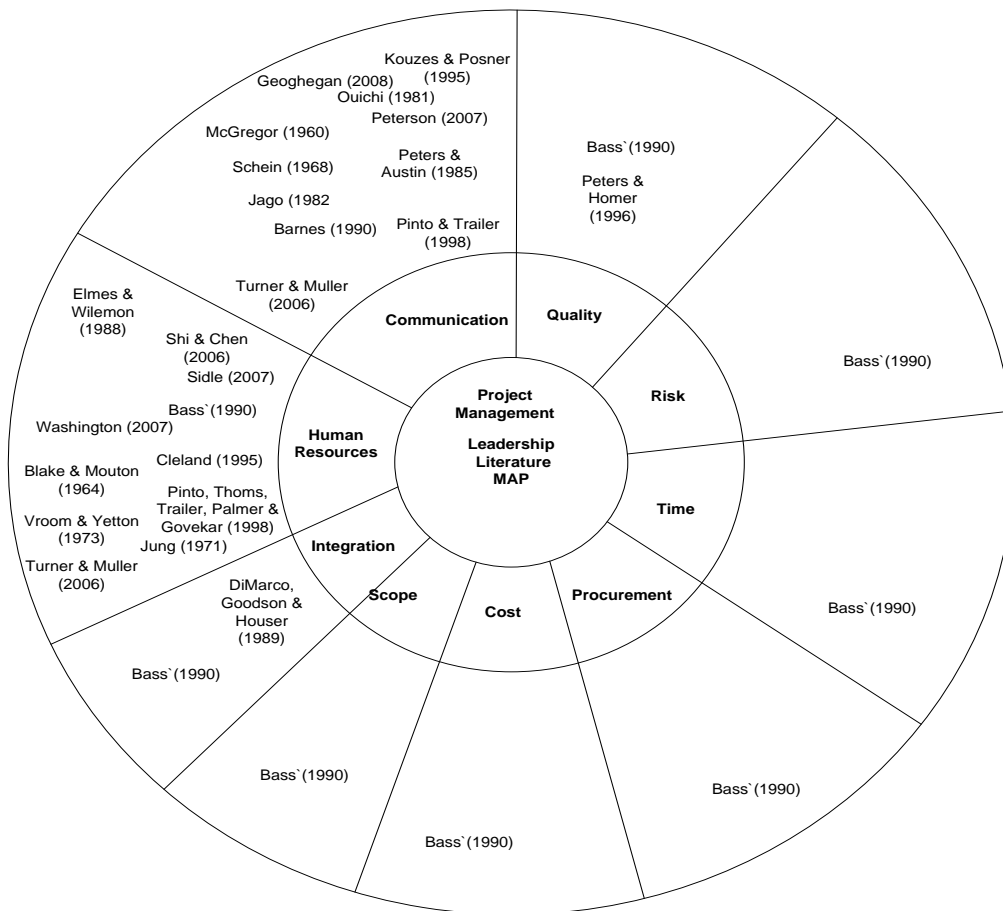
Figure 4 - Project leadership as the 10th knowledge



II - Project leadership integrated into the nine knowledge areas

A second approach is to integrate leadership knowledge into the existing nine knowledge areas. Figure 17 shows how this approach looks and distributes the appropriate project leadership knowledge into the respective nine knowledge areas. This approach requires modifying each existing chapter by integrating project leadership knowledge into part or all of the nine knowledge areas. The drawback is that nine areas potentially need work, making the scope of the next edition change more difficult and time consuming by potentially affecting the processes within the process groups.

Figure 5 - Project leadership integrated into the existing nine knowledge areas



III - Project leadership as a separate chapter of the PMBOK® Guide

The third approach is to add project leadership knowledge in the form of a separate leadership chapter. The current *PMBOK® Guide* (2008) has twelve chapters, and project leadership would constitute the thirteenth chapter. The new chapter designation would be:

Chapter 1 – Introduction

Chapter 2 – Project Life Cycle and Organization

Chapter 3 – Project Management Processes for a Project

Chapter 4 – Project Integration Management

Chapter 5 – Project Scope Management

Chapter 6 – Project Time Management

Chapter 7 – Project Cost Management

Chapter 8 – Project Quality Management

Chapter 9 – Project Human Resource Management

Chapter 10 – Project Communications Management

Chapter 11 – Project Risk Management

Chapter 12 – Project Procurement Management

Chapter 13 – Project Leadership

Using the additional paragraph approach has all project leadership knowledge is in one section. In addition, this approach shows the project leadership good practices with references to their underlying theories. Finally, this approach may also allow a student

studying for certification to find study material specific to project leadership, as currently one would find Risk or Cost management.

IV - Create a new Guide – *The PMBOKG Guide (Governance)*

An option that this researcher did not consider until the analysis of the Qualitative data was to create a new Guide that contains Social Responsibility, Governance, and Project Leadership. PMI could call this new guide the *Project Management Body of Knowledge Governance Guide* or *PMBOKG Guide*.

Potential Future Research

This study has spawned a plethora of ideas for future research that include, but not limited to the following:

- Is Appreciative leadership applicable for project managers
- Do virtual teams require a different leadership style than a co-located team
- Do projects sponsors contribute to the success of projects
- Is project management leadership unique; if so, how
- Should the PMI Standards Committee create a new standard for project leadership
- Are there project leadership good practices that are more applicable to different parts of the Project Life Cycle (PLC)
- Should there be a governance section of the *PMBOK® Guide*
- Should the *PMBOK® Guide* be published over more than one volume

Recommendations

PMI has sponsored seminal research on project leadership knowledge, but currently those authors' works are not included in the *PMBOK® Guide*. Understandably, the current *PMBOK® Guide* update cycle is only every four years, whereas research is a continuous cycle. However, the *PMBOK® Guide* should acknowledge the existing seminal research on project leadership.

Since the *PMBOK® Guide* is increasing exponentially each edition, it might be time breaking up the *PMBOK® Guide*. The Standards Committee could start looking at several different releases of Guides similar to the ones for the various certifications. A possible suggestion would be a body of knowledge publication for project leadership and governance. Regardless of where to place the knowledge, PMI should consider including project leadership good practices into PMI's body of knowledge. Alternatively, they might consider creating an additional Guide for Social Responsibility, Governance, and Project Leadership.

Summary

Project leadership is important to project success. Although most project managers know what general leadership is, there appears to be fewer PMI members who understand the concept of project leadership. Pinto et al. (1998a) state that, "the importance of leadership in project management has long been acknowledged as one of the key ingredients for project success" (p. X). However, as these authors correctly point out, it is rare to find a book on project leadership. Project leadership melds theory and practice and is the offshoot of general leadership theory. The application of leadership

traits and styles are the bases of project leadership good practices. This research is designed to elevate these good practices by having them a part of the *PMBOK® Guide*.

The uniqueness of project leadership lies with the structure of projects. The temporary nature of a project and the make-up of the team create a unique project leadership culture. For example, the *PMBOK® Guide* (2004) indicates that developed project teams improve “competencies and interaction of team members” (p. 212), thus increasing the probability of successful project completion. In addition, project leaders help develop team trust and cohesiveness, helping to make project activities more productive.

Further, project leaders must immediately instill the project vision, and develop their teams, as the team must quickly embrace that vision, and find innovation ways to meet the project goals. In addition, the project leader must respond to the constantly changing project environment while keeping the team focused on the project vision. In effect, the project leader keeps the team focused on a shared vision of the project end, encourages them to self-organize, and yet guides each individual in their personal and organizational goals.

The ever-shifting nature of projects requires that project leadership constantly keeping the team focused on the vision and project end goals. In addition, the project leader must find ways to instill that vision to the team so that they embrace it as their own. This ever-shifting aspect of projects requires that project leaders understand the flexibility of shifting leadership styles to match the project life cycle phases.

Thus, in the beginning phase of the project, the project leader needs to instill the project vision to the team members, which is a transformative leadership style. In the

middle of the project, the project leader uses a combination of participative, selling, telling, or delegating techniques, constituting a situational leadership style. In the closing phase of the project, these project leaders need to shift to a transactional approach, where they provide structure and consideration that apply directly to this phase of projects. The transactional style is most efficient when considering the team rewards.

Projects rely intensely on leadership vision to ensure project success. The project manager as the project leader creates that vision, developing the project team, and leading them to a fruitful project completion. This vision is the bases for a shared understanding of the project strategy in contrast to merely following the entries of the Gantt chart.

This research showed that project leadership knowledge is important to project success, and that easy access to project leadership knowledge helps project managers become a competent project leader. Although many project managers do not understand the good practices of project leadership, exposure by including project leadership knowledge in the *PMBOK® Guide* would be beneficial. Finally, by including project leadership good practices into a separate body of knowledge or the *PMBOK® Guide*, PMI and their bodies of knowledge value will increases as reference sources.

In conclusion, this researcher feels that it is now time to move on in life by following Robert Frost's eloquent words stated in his poem – "Stopping by woods on a snowy evening":

The woods are lovely, dark, and deep
But I have promises to keep
And miles to go before I sleep
And Miles to go before I sleep

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Appendix A – Survey Questions

“This survey is to request your opinion on the role of project leadership from a project manager's perspective. The research aims to find out your understanding of project leadership, and ascertain if project leadership knowledge is important enough to add into the next version of the *PMBOK*[®] *Guide* due out in 2012. Your anonymous answers, along with the results of approximately 200 other active PMI members are part of the research that the author intends to publish in the *Project Management Journal*.

Survey Sample

Q1 – Personal Perspective	<5 Years	6-10 years	11-19 years	>20 years
Project Management Experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2 – Personal Perspective	CAPM	PMP	OTHER	None
Project Management Certification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3 – Personal Perspective	Construction	IT	Manufacturing	Energy	Consulting	Transportation	other
The Industry I work in	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4 – Personal Perspective	Female	Male
Gender	<input type="radio"/>	<input type="radio"/>

Q5 – Personal Perspective	High school or Certificate	Associate Degree	Bachelor Degree	Masters or Doctorate
Education level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6 – Project Leadership Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe that project leadership knowledge is essential for project managers to become competent project leaders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7 – Project Leadership Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am aware of different project leadership styles, which in turn helps me become a competent project leader	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8A – Project Leadership Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am familiar with a Transformational leadership style	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8B – Project Leadership Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am familiar with a Situational leadership style	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8C – Project Leadership Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am familiar with a Transactional leadership style	○	○	○	○	○

Q9A – Project Leadership Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
On my projects I regularly use a Transformational leadership style	○	○	○	○	○

Q9B – Project Leadership Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
On my projects I regularly use a Situational leadership style	○	○	○	○	○

Q9C – Project Leadership Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
On my projects I regularly use a Transactional leadership style	○	○	○	○	○

Q10A – Project Leadership Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I change my leadership style depending on the project life cycle	○	○	○	○	○

Q10B – Project Leadership Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I change my leadership style depending on who I am dealing with – the sponsor, the project team or other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11 – <i>PMBOK</i> [®] Guide Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Project leadership knowledge should be added into the <i>PMBOK</i> [®] Guide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12A – <i>PMBOK</i> [®] Guide Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe that project leadership knowledge should be added as the 10th Knowledge area.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12B – <i>PMBOK</i> [®] Guide Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe that project leadership knowledge should be integrated into the existing 9 Knowledge areas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12C – <i>PMBOK</i> [®] Guide Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe that project leadership knowledge should be a separate chapter and not integrated into other chapters or processes.	○	○	○	○	○

Q13 – Sponsor’s Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe that understanding project leadership will allow me to be a more effective diplomat dealing with the project sponsor, leading to successful projects.	○	○	○	○	○

Q14 – Sponsor’s Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe that understanding and utilizing effective project leadership techniques (styles and types) gives the sponsor confidence in your project leadership ability to lead the project successfully.	○	○	○	○	○

Q15 – Sponsor’s Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe that sponsors expect project managers to be the project leader, and know how to lead successful projects.	0	0	0	0	0

Q16 – Personal Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe that easy access to leadership knowledge , if in the PMBOK(R) Guide, will help me become a more competent project manager	0	0	0	0	0

Q17 – Personal Perspective	4+	3	2	1	0
I have read or studied "x#" of <u>general leadership</u> articles or books in the last year	0	0	0	0	0

Q18 – Personal Perspective	4+	3	2	1	0
I have read or studied "x#" of <u>project leadership</u> articles or books in the last year	0	0	0	0	0

Q19 –Personal Perspective	Yes	No
I have had leadership training in my project career	O	O

Q20 –Personal Perspective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe project managers provide leadership for their project Team, leading to successful projects.	O	O	O	O	O

What would you change in the survey?

Please leave any additional comments or questions below.

The researcher can be reached at
- ptoth@jju.edu (e-mail);
- Snowflashdrop (Skype chat or voice)
- 678-778-0438 (cell)

Appendix B – Qualitative responses to Questions # 6-21 from the survey

Question #6:

- IMHO, Leadership is more applicable in Program management
- It is critical for project success
- Some people are 'natural' project leaders. [However,] very few [are]. Even those however eventually seek knowledge on best practices, tools, etc.
- Even though it is not part of the PMBOK® Guide 4th edition, I always include in in my training.
- I came into project management after being in functional manager roles. I believe the functional manager 'how to manage' training I acquired was very helpful. I do not see too much in the way of project manager training to be leaders.
- technical knowledge is of little value if it is not applied properly, through leadership
- Not so much the knowledge... but the actual competency / behavior / capability
- Knowledgeable leadership takes everything on right path. If leader gets it wrong, then you will be in chaos after some time.
- As a project manager, you are responsible for not only your conduct, but also the overall leadership role of the project team.
- Hi willing to working for the betterment of Project Management
- Yes, but hard, soft skills and experience are certainly the key to becoming more competent but it depends. PMs have different weakness and strengths and will have travel down their leadership path to become competent which may not be by reading chapter 10 in the PMBOK® guide.
- A combination of education and experience make for excellent project leaders.
- Leadership is one of the key traits and cuts across technical, communication, human resources, and other traits needed for successful project management
- Soft skills and Leadership skills are an absolute
- I helped develop the new US federal project management certification; it includes leadership as a knowledge area.
- I believe it is a "MUST" to be a PM
- I believe the project leadership knowledge is "Very Important" but not "Essential"
- I believe manager is not a leader and he/she needs specific skills to become one hence leadership knowledge is essential.
- Fundamentally, PMI espouses that all project management is based on knowledge and the application of tools and techniques. Secondarily, project management implies vision beyond the routine - hence projects require leadership to reach a vision beyond the routine - a unique, temporary effort - with varying degrees of "definition of done"! Without leadership knowledge, a PM simply has inherited charisma - not a learnable tool or technique!
- I led my largest and most successful projects before I had any project leadership knowledge. In addition, the people who taught me the most about leading had psychology degrees, not project leadership training.

- It is not enough in today's highly competitive, fast-moving world to rely simply on good managers. Employing great leadership skills is essential for elevating the level of effectiveness of today's PMs.
- As any profession will tell you, you need the building blocks to build on, In our case a methodology
- Project managers must have the skill and desire get team members to follow them so the work and ultimately the deliverables are completed with the quality outlined by the Sponsor.
- Project managers who serve as administrators and/or "process custodians" do fill a valuable role; they just do not provide the same potential value to an organization as a leader with broader perspective.
- Today's workplace (and tomorrow's), are more and more democratic with leaders holding positions of authority by virtue of their followers willingness. Knowing how to effectively garnering support has become more important than ever to leading others.
- A must for successful projects

Question # 7

Only 82.5% of respondents were aware of the different project leader styles to help them to become a competent project leader. The project practitioners with over 20 years of experience were the highest at 92.5% and the lowest were the project practitioners with less than 5 years of experience and ones without certification at 75% and 77.5% respectively. Below are the survey comments for this question:

- I may not know all the leadership styles. I would like to learn them all. However, the four styles I know, I use them a lot (sp) [great deal] while managing stakeholders.
- I disagree with your statement ... awareness has no bearing on competence
- While i am not overly familiar with formal classifications of leadership styles, I very much understand and respect the use of varying leadership styles to manage teams most effectively
- There are multiple theories and tools regarding behavior that will help project managers to understand more their team
- Experience, confidence, right decision making, quick decision making, problem solving, intrusive mentality in identifying future problems.
- Understanding as well as application of different leadership styles is critical to becoming a more competent project leader.
- Yes but...see other comments.
- Your answer choice gradients are out of whack. What is the difference between "somewhat" and "slightly"?
- Obviously different situations require different approaches. I use these inherently as a person with a human interface, let alone being a project manager.
- As a PM we manage people, to do this effectively we should have an understanding of the various styles
- Understanding how to lead in different situations helps to get the job done efficiently and effectively.
- Without further practice, study, and application, I forget what I have learned about project leadership. If it were somehow part of the ongoing learning requirements for accreditation, I believe that would discipline me to pursue this further.
- This survey reminded me of the various leadership styles I learned about years ago, but I have not thought about in a while.
- I studied leadership in college
- Without further practice or study and application, I forget what I have learned about project leadership. If it were somehow part of the ongoing learning requirements for accreditation, I believe that would discipline me to pursue this further.
- I am doing research on this subject

Question #8

When asked if project practitioners were familiar with Transformational, Situational, Transactional, or Servant leadership styles, they answered 70%, 77.5%, 65%, and 65% respectively. Obviously, there are many other project leadership styles than the survey mentioned, as the open-ended responses below show:

- Autocratic Functional Democratic
- The predominant leadership style I have chosen is servant leadership, but each of the above has its place depending upon the situation, personnel, etc.
- Hermann Brain Dominance thinking styles:
http://en.wikipedia.org/wiki/Herrmann_Brain_Dominance_Instrument
- Delegative, Autocratic, Democratic, Bureaucratic
- Again, I have not been exposed to the exact terms, but I know the styles well and know people who typically manage in each style.
- More about the power styles, and a bit of Belbin
- Competence school of leadership behavior: IQ, EQ, MQ
- Situational or crisis management leadership
- Participative Leadership
- Autocratic, Bureaucratic, Democratic, Laissez Faire, Charismatic, Task Oriented, People Oriented
- I frequently write and speak about project leadership - including servant leadership.
- Based on the traits, not the specific definitions.
- Your answer choice gradients are out of whack. What is the difference between "somewhat" and "slightly"?
- I can guess what some of the principles are here from the names but I have not come across this terminology before.
- #1 "Moses leadership" - hierarchical, span of control, 'follow me, one day at a time' #2 - "Lincoln leadership" - espouse values first, strategy second and let followers create tactics #3 - "Hitler leadership" - dictate results and quality metrics - let followers create means and methods to achieve results #4 - "Arthur Fiedler leadership" - turn your back on the sponsor and 'conduct' the 'performers' to make them the stars!
- Path-Goal Theory of Leadership and its five styles - Directive, Supportive, Participative, and Achievement oriented. Vroom-Jago Leader-Participation Model and the 4 styles within this model: Autocratic I, Autocratic II, Consultative I, Consultative II and Group II
- I am not sure what it is called, but the one that made most sense to me is the one that merges situational leadership with Meyers-Briggs.
- Functional leadership theory Authoritarian style Democratic style Laissez-faire style Environmental
- Dictatorship
- LBWA, Path-goal, Contingent, Vroom-Jago, Slevin/Pinto, LPCW
- There are others, but not generally associated with projects

Question #9

When asked if project practitioners used Transformational, Situational, Transactional, or Servant leadership styles, they answered 65%, 77.5%, 60%, and 60% respectively, very similar to the familiarity with these four leadership styles. Obviously, there are many other project leadership styles in use, as indicated in the open-ended responses captured below:

- People management as seen in the French series Kaamelott that is the NEC plus Ultra of the Situational and transactional styles made in one way to address problems. Not kidding, very serious thing. If you understand at proficient level French, please watch Season 2 and 3
- Leadership styles should adapt to the environment and circumstances
- While I am perceived probably to have the servant style, I typically use situational as I change up what I need to get the job done. Transformational comes in as I am a PMO manager rolling out and changing frameworks on how projects are run, as well as company processes
- Depends on the competencies of team etc. which style I use
- Culture, people, and situations will determine which style you might use. Experience will determine which style you wish use to produce the best outcome for you and your customer, your team, your stakeholders and sponsors.
- Your answer choice gradients are out of whack. What is the difference between "somewhat" and "slightly"?
- Participative and Delegative
- Having an understanding of different leadership styles makes a PM more versatile
- Servant is generally associated with agile projects
- The "styles" of leadership depends on how (and whom) classifies it. For some the styles are Charismatic, Participative, Situational, Transactional, Transformational, and Servant Leadership. For others the styles are Authoritarian (autocratic), Participative (democratic), Delegative. There are even other [styles] that classify Leadership styles [such] as Visionary, Coaching, Affiliative, Democratic, Pacesetting, and Commanding.
- Having an understanding of different leadership styles makes a PM more versatile

Question #10

When asked if project managers change or shift their leadership styles, 82.5% shift when dealing with human resources, as opposed to 70% who shift their styles during the project life cycle. The open-ended responses captured, indicate why and when project practitioners shift their leadership styles:

- Not just the audience
- Our life cycle does not change much, but I do adapt to changes when necessary
- Both the factors are relevant for a PM to change their leadership style. Further, the PM's focus intensity with a certain group of stakeholders varies according to the project life cycle.
- I change my leadership style depending on the motivation and interests of who I am dealing with.
- If you cannot lead them or rule them then join them. Here them is Team
- Leadership is already a general management trait included in the PMBOK® Guide. Are you advocating adding these different leadership styles into the PMBOK® Guide?
- Under the triple constraints model - projects are never equilateral triangles - so the "short side" should dictate the leadership style appropriate to the context of the project (I avoided saying 'situation' because that has its own connotation!). Even without the triple constraints - we now have more than three! Leadership is even more important as projects get more complex and their constraints require different leadership styles.
- Another point that needs to be considered in this question is I change my leadership style based on the needs of the individuals that I am dealing with. If the project team members need to be motivated then I will use the style that they are most responsive to.
- As stated in the comments for the previous questions, this underlines the flexibility a project leader must have to be successful; being one-dimensional leads to a lack of agility in the project and the leader.
- Life cycle phases require different leadership approaches. Dealing with sponsors requires a special leadership approach to get them release additional funds if needed.
- One style is no better or more effective than the other is. Those are just tools to reach effectiveness. Which style you use depends on the situation, on the group and on the project constraints.
- It's all about flexibility

Question #11

When asked if project leadership should be in the *PMBOK® Guide*, 77.5% of the sample population agree, that project leadership should be in the *PMBOK® Guide*. Below are the survey comments for this question:

- Despite of Program management, *PMBOK® Guide* is suitable for transactional leadership style, IMHO.
- The world scrutinizes leaders, their values, standards, lifestyles, and financial policies. The *PMBOK® Guide* would be the appropriate tool to lay the foundation of what is consensus in the project community on project leadership.
- The *PMBOK® Guide* is already a complex book and the leadership is a very extensive subject
- Leadership is a skill and depends on individual personality, it would be better include references in the HR process
- it is too subjective and too important to be dictated via academic research
- I think this is helpful, but hard to say it should be a major focus
- Yes, however add in on organizational culture too.
- It is very true that the "human perspective" is rather absent from the *PMBOK® Guide*, but I would rather see Leadership & soft sciences treated as a separate document... at least in a first path. To me it is still a very "technical" document... and it might be though to bring those two dimensions together.
- Only one appendix on interpersonal skills talking about leadership is not enough. Leadership is like communication, as project managers we spent more than 90% of our time dealing with communication and leadership skills.
- Better in a separate publication
- Project Leadership knowledge is more about experience and learning to deal with all aspects of what a project and the people involved in the project will come up with. I believe that this would be more suitable as a series of classes where the PMs could interact and work through different scenarios and learn to apply the *PMBOK® Guide* knowledge with real world people skills.
- It needs to further than just adding another theoretical item into the *PMBOK® Guide*. This is a foundational skill and needs to be treated as such.
- I believe it already exists in all the knowledge areas that deals with People: Integration, Communication, and HR
- Although I agree, it is not enough to read about it, it needs to be developed, coached and mentored
- Right now, I am ok with the nine knowledge areas of *PMBOK® Guide*. Project Leadership Knowledge can be expounded on the Competency Development Framework developed by PMI or could be a special discussion under human resource management.
- Were the topic covered in enough detail to be useful to PM's in most situations, it would be additional information for the *PMBOK® Guide*.
- Never thought about but yes I agree

- Not as an additional knowledge area, but within some of the startup information, an appendix, or HR
- The *PMBOK*[®] *Guide* purpose is not to be a compendium of all things project management. It specifically does not have a methodology, but rather a framework on which many methodologies could be built. Project Leadership as a discipline is an excellent tool, but nothing more. Just as we will never see MS Project, Rational or any other [PM] tool as part of the *PMBOK*[®] *Guide*, neither should we see Project Leadership as a new chapter.
- Although the PMBOK implies the existence of Project Leadership, it may prove helpful to bring this out clearly as part of the framework and skills needed for a project manager.
- It should be part further incorporated into the HR sections with management style
- It's a great challenge
- This is a simple place to outline some of the research that PMI has sponsored
- Today it is scattered and often tough to find. Project leadership is relatively new compared to just leadership
- This is a simple place to outline some of the research that PMI has sponsored

Question #12

When asked where project leadership should reside in the *PMBOK® Guide*, there appeared less enthusiasm for the three choices than for adding project leadership in the *PMBOK® Guide* (question #11 above - 77.5%). Only 60% suggested adding project leadership as a 10th area; 57.5% agreed that the project leadership knowledge be integrated within the existing nine knowledge areas; and only 60% agreed that project leadership knowledge have a separate chapter in the *PMBOK® Guide*. As mentioned below, potentially, project leadership should be in a foundational section of the *PMBOK® Guide*. Below are the survey comments for this question:

- I believe it will confuse a lot of "technician-style" project managers
- I disagree in creating a separate knowledge area for project leadership, as I strongly believe leadership needs to be exhibited transversally across all project phases. The existing framework is robust and adding another knowledge area will not improve the framework in a significant way.
- This is the most important aspect of driving a project through the five stages of the project life-cycle
- Leadership may be part of the Human Resource knowledge area, where it talks about the role of a project manager and the skills of the project manager.
- May be as an appendix
- I probably would answer this better spending time with *PMBOK® Guide*, but have not looked at in for some time. Nevertheless, I think a good approach is to have a chapter dedicated, but maybe not yet a formal knowledge area. It would be a good place to start.
- I think it should be a major chapter in HR
- Call it Governance 10th chapter
- The *PMBOK® Guide* is already thick enough currently!
- My response here is based on my belief that PMs should have an idea of what leadership style to adopt during the project life cycle.
- see response to Q11
- Project Leadership should be part of communication Management process. It is my opinion that the number of PMP processes should reduce from the current 42 processes.
- I do not want the *PMBOK® Guide* to be 1000 pages book. Therefore, I believe that project leadership knowledge should be discussed in detail with other project manager's skills and competences development in the PMCDF.
- It is ok to dig into the details of project leadership. I am just wondering, what are the possible sub-processes that will fall under the Project Leadership Knowledge area.
- Suggest integration to "Manage Project Team" Human Resources knowledge area

- As an appendix if not integrated throughout as needed.
- Answered positively to both A and B because it could work either way - if integrated, should call out examples that are relevant to leadership within the specific knowledge area, but that could be difficult.
- Leadership integrated within the knowledge area would help to understand the implied meaning of different leadership skills
- I believe project leadership knowledge should be integrated into Chapter 4: Integration Knowledge Area - after all is said and done - leadership makes integration possible! A few new tools and techniques would help show how the various styles are all applicable - but not all at once or on every project. That is true of all the other tools and techniques as well!
- Blending in the project leadership component will dilute the content of this very important knowledge area. As more and more organizations expect their PMs to be "managers" PMs need to be made aware of the numerous leadership styles and theories.
- Projects can be successful with good managers as well as they can with Leaders. Best practices usable by all practitioners are the focus of the *PMBOK® Guide*, but cream of the crop excellence.
- I would also submit that, as if the Professional Code and Conduct, and Social Responsibility are a separate insert, Project Leadership should be too. Reason being, the PMBOM already, in my opinion, has a lot of foundational knowledge for one to studies as a primary. Let leadership be an addition to this.
- The other areas like a stakeholder management and knowledge management should be added to the *PMBOK® Guide*
- This should include Appendix G and stakeholder management Leadership, [and] is just one aspect of soft-skills
- Leadership is part of a larger soft-skill and stakeholder management perspective that needs a KA of its own
- One could argue that project managers should focus on managing and not leading and that project leadership is a competency required more at the program and portfolio management level meaning that this discipline should be added there not to the *PMBOK® Guide*.
- This is the least disruptive for the *PMBOK® Guide* committee

Question #13

From a sponsor's perspective, 82.5% of the respondents believed that understanding project leadership would allow them to be a more effective diplomat when dealing with the sponsor, and leading to successful projects. Below are the survey comments for this question:

- A PM cannot be shy when dealing with the sponsor no matter what organizational level they are at
- Understanding project leadership is not enough. We should use project leadership
- Yes, but each PM will have to discover their own style, pick their path, and create a personal development plan. *PMBOK® Guide* with chapter 10 will not do it for them.
- Understanding is not enough
- As "Essential" was not used, I Strongly agree that the leadership knowledge is really useful bi-directionally (up and down)
- Project leadership must include a solid understanding of change management. This is something that has helped me become a better PM and project leader.
- A part of leadership requires the leader to sometimes stand up to the sponsor and diplomatically tell her or him that the project will succeed without following a specific sponsor suggestion or requirement. Sponsors sometimes become negative stakeholders and a strong leader - PM can 'save the sponsor from its own worst enemy'!
- Sponsors and stakeholders will always hold the project leader (manager) accountable for the success or failure. Hence, educating them on the expectations of a project leader would add more assistance to their understanding.
- Successful leaders know how to deal like effective diplomat's
- Being more flexible, I will be able to lead the project more effectively
- Understanding project leadership helps me understand the business reasons and the sponsor's perspective.
- Please do not mix leadership with negotiations. Being a diplomat is related to your negotiation abilities then your leadership abilities.
- Being more flexible, I will be able to lead the project more effectively

Question #14

In addition, 82.5% of the respondents believed that understanding project leadership gives the sponsor confidence in the project manager's leadership ability, and leads to successful projects. Below are the survey comments for this question:

- Most sponsors need guidance on effective project management
- If leadership styles are applied correctly, it is undetectable to the customer.
- anytime you can show maturity in leadership knowledge and skills, boosts confidence
- Yes, but understanding, utilizing in the right situation under the right conditions. Practice, lessons learned reflection...
- Sponsor confidence is significantly dependent upon the belief he/she has in the leader of the project.
- Most Sponsors are more focused on result
- Additionally, relationship building is also the key in the sponsor having confidence in the project leader/manager. Firsthand experience tells be the first order of business is building/establishing the relationship. This puts the sponsor and stakeholder at ease; those knowing you are also interested in their personal and professional position in the effort being undertaken. Not doing this creates an unmanageable atmosphere and can cause unnecessary politics to surface; pulling the project leader into areas, which could have been avoided by using this principle.
- It does matter as an effective leader we manage up and down.
- Helps manage-up
- It lets the sponsor know he is dealing with a professional
- My personal experience confirms this
- Strong leadership means lower risk on the project. Lower risk is something that the sponsor (the person that finances the project) will like.
- It lets the sponsor know he is dealing with a professional

Question #15

Finally, from a sponsor's perspective, 85% of the respondents believe that the project sponsors expect the project manager to be the project leader. Below are the survey comments for this question:

- In fact, the most projects are programs in which sponsors expect what you are talking about.
- a common assumption from my experience
- neutral because I make a distinction on PMs who have no authority at all on resources? and PMs who by the nature of their work (highly skilled engineers i.e. in IT) are appointed PM and hence can have a certain level of authority; sponsors will react completely differently based on my experience in a WW company shipping 80 million units/year
- This is true whether a not a project manager knows how to lead. They assume, many times, this should be innate.
- It very much depends on the Project Sponsor's maturity...
- The unfortunate component of this is that many sponsors are not leaders and do not have the capacity to recognize good/great leaders.
- Sponsors should expect project managers to be leaders, but I'm not sure they do
- Yes, assumed, expected, required by contract.
- Most Sponsors are more focused on result
- Terminology may change - In our company; there is a "project lead" who is not the PM. In our case, the lead acts as voice of the project sponsor, while the PM is still expected to lead the project.
- Sponsors want to get the job done. They need success. The project team members prefer a leader vs a manager. Sponsor typically does not care so long as they get results.
- Not all sponsors expect this. Some are so removed from the project, their position is "just get it done; I don't care how and by whom." On the other hand, there are sponsors who are very selective in whom they want to operate the lead on an effort, due to the importance and chances of success vs. experience of failure.
- As a PM, We lead, We guide and We develop people and We make decision's
- Sponsors expect the PM to deliver the project and overcome problems, not change the organization, or question the mandate of the project.
- I believe this to be true in many cases. However, a sponsor's expectations are based on the leadership style and characteristics (maturity and personality) of the sponsor. It is important to adapt your style based on quiet psychological assessment of the sponsor.
- It takes a load off of them, and in most cases, they are not project managers
- The sponsor is the project sales person, leaving the PM to create an environment of success
- Better leadership --> lower probability of deviation --> lower risk --> lower cost of capital to finance the projects

Question #16

Of the project practitioners, responding to the survey, 70% felt that easy access to project leadership in the *PMBOK® Guide* helps with project leadership competency.

Below are the survey comments for this question:

- I don't think it's possible to cover leadership knowledge in *PMBOK® Guide*
- I agree that project leadership is required for successful PM. However strongly believe that PMBOK is not a resource for leadership knowledge. The subject of leadership is so vast that it can be mentioned in the book as a part of skills or competencies required. PS: In my humble opinion. Since 2002 when I wrote my PMP®, we have progressively made the book richer in content but overly complicated the knowledge base. The objective should be more towards maintaining and building a robust framework but not assume PMBOK to be the knowledgebase for everything required for a successful PM. Regards
- Yes. However, having the knowledge of the leadership styles are NOT enough to be a good leader. It is part of interpersonal skills that need to be developed over time.
- As a PMP, it is assumed that leadership knowledge is part of your tool kit.
- Leadership has been learned over time. It may not make a PM a better leader just to read about it in the *PMBOK® Guide*.
- There is so much literature on Leadership, that I do not believe it is needed and I also think that it does not belong in the *PMBOK® Guide*
- It helps in giving awareness, but any knowledge, and specifically PM and Leadership without individual experience and maturity in implementation is in my opinion wasted.
- Now it depends on the PM's maturity! :-)
- However, I do not want the *PMBOK® Guide* to be 1000 pages book. Therefore, I believe that project leadership knowledge should be discussed in detail with other project manager's skills and competences development in the PMCDF.
- Leadership cannot be taught. It is not a science but an art. *The PMBOK® Guide* can only emphasis on its importance. Building Leadership skills and competences remains the responsibility of the PM
- Hard and Soft Skills are required for PM to become more competent along with stretch goals and mentoring. Leadership is learned one day at a time.
- ...stress 'will help'...
- Easy access to leadership knowledge does not produce more effective leaders or PMs. Leadership growth is seen only in those who recognize such growth as integral to their success - whether as a PM or any lead role in a business or social environment.
- As "Essential" was not used, I Strongly agree that the leadership knowledge is really useful bi-directionally (up and down)
- The PMBOK guide is not easy access. Unless you are a member of PMI, its contents are for sale at a moderate price compared to comparable books. Ease of access would be via a blog, wiki or similar that is in the public domain.
- I disagree. I believe those that house the understanding of leadership will perform in this without the *PMBOK® Guide*. However, adding additions measures and perspectives cannot hurt.

- Will help PM's further develop in their chosen career
- It will help less experienced people - I write training and courses in this area
- It will help other less experienced people
- I would be more inclined to look up leadership as its own topic, specifically business leadership rather than ask the *PMBOK[®] Guide* to expand its already-broad scope.
- As other Best practices it should be in the *PMBOK[®] Guide*

Question #17

On an average, of the 201 project practitioners sampled, 49.9% read more than 4 leadership articles or books in the past year; 13.9% read at least three leadership articles or books in the last year; 18.6% read at least two leadership articles or books within the past year; 14.4 read at least one leadership articles or books within the past year, and 7.2% did not read any leadership articles or books within the last year. Below are the survey comments for this question:

- Clearly more articles than entire books
- Leadership in PMI structure is very important, so due to my volunteer role I have to develop leadership skills that also are very important in my day-to-day job as project manager.
- I do a weekly radio show specifically addressing this issue
- Read about leadership daily.
- Fastcompany is an outstanding publication
- Not easy to remember when including all magazines, books, etc.
- Again, leadership principles can be found in many different artifacts. Reading material, these days, speak about leadership in visible and less visible format. You just need to be able to read between the lines.
- Every magazine or text will have Management\ Leadership style's but normally refer to the 4 below: Functional leadership theory Autocratic or authoritarian style Participative or democratic style Laissez-faire free rein style
- I have a leadership principles bible and the book on audiotape to go with it. I am studying those two this year and next.

Question #18

On an average, of the 201 project practitioners sampled, 34.2% read more than 4 *project* leadership articles or books in the past year; 11.4% read at least three *project* leadership articles or books in the last year; 20.7% read at least two *project* leadership articles or books within the past year; 19.7% read at least one *project* leadership articles or books within the past year, and 14.0% did not read any *project* leadership articles or books within the last year. Below are the survey comments for this question:

Below are the survey comments for this question:

- I have read or studied project leadership knowledge
- Is this a duplicate question?
- Clearly more articles than entire books
- I do a weekly radio show specifically addressing this issue
- Lots; ready daily
- I can highly recommend The lazy project manager by Peter Taylor
- These are tougher to come by
- What is the different between leadership and project leadership? should be the same traits\values a person displays
- Not easy to remember when including all magazines, books, etc.
- The definition of a "Project" is what being asked here and I believe that premise would not allow the right perspective to be communicated. Therefore, vision is something pursued by all. It just a matter of where a person, people or organization is trying to go, that will define what one reads or studies.
- refer to comment 17

Question #19

Of the 201 survey respondents, 82.7% have received some leadership training or coaching in their project career whereas, 17.3% have not received any leadership training in their project career. Below are the survey comments for this question:

- I have been through multiple trainings consisting of EQ, MBTI assessments, etc. through my professional career.
- Of course, it was some time ago and cannot recall specifics, but it was done.
- I have learned through experience only and watching other leaders.
- PMI Leadership Institute Master Class is amazing.
- Currently attending the 2011 LIMC
- Retired military; 'next-generation' leadership graduate with IBM, CVS, Apollo...
- I believe that the strong leadership training I've had in the military and in industry has been a key success factor in my career
- GE - Foundation of Leadership, ...
- This should be ongoing to account for the ever-changing dynamics of organizations, markets, economies, regions, people, standards, trends, etc. One should NEVER feel they have reached the pinnacle of their pursuit.
- Not as yet, my training has all been self-directed
- I think having 1st hand viewing of the different styles in practice would be better as not everyone grasps concepts by just reading about them
- Easy access to project leadership will help PM become more competent

Question #20

General comments:

- You ought to consider taking the PgMP into perspective, and possibly the IAPM credentials.
- What can be done to enhance the Project Leadership skills for long and short terms?
- Dr. John Maxwell (<http://www.johnmaxwell.com/>) and Dr. Rick Warren, and Stephen Covey's work on leadership are non-PMI sources of the market demand for information and research on leadership. The introduction of Project Leadership in the *PMBOK® Guide* is very important and I am hoping that these individuals will be willing to lend an ear and hand to allow you to accomplish this goal of enhancement to the *PMBOK® Guide*.
- Information on Project leadership can also have a motivational impact and touch on areas of integrity and single eye in dedication to the project and stakeholders.
- This research can help any project manager in defining that leadership is not option when running a project
- I personally find too bad that an intermediate level between CAPM® and PMP® does not exist, as other organizations be in the PM, IT, EDU or languages sector offer, especially for person who do not have a final University degree (this criterion is very discriminatory in my eyes and makes it very difficult for rank and field employees to match the PMP specs in terms of hours and years of experience for non-University persons : in my own field, my VP told me to give up PM tasks to be more focused on my team and our/their results, being more a FM [Functional Manager] and resulting in a loss of hours and years that cannot be recovered now.
- An overlooked area in the *PMBOK® Guide*.
- Project Leadership is a critical area of project management. I believe without great leadership from the project manager projects flounder.
- Project leadership skill is an important skill needed by PMs but the maturity of the organization and culture in terms of carrying out projects has a much bigger impact and influence in project success
- This survey will definitely help to articulate general leadership skills required in project management. I would request to conduct a more specific survey something like asking all project managers across the globe about the required leadership skills while working on each knowledge area. There could be four choices (all tick able) with a comment space for additional comments/skills that they might have exercised while managing the projects.
- Other questions you might consider asking: # what books or articles have you read that you felt were helpful? # (Under personal data) Do your projects have an: (a) external sponsor, or (b) internal sponsor? # or an alternative for the above: What percentage of your projects has been for external sponsors? ____% and for internal sponsors? ____percentage # over your career as a PM - have your project teams remained constant in team staffing? (a) very low turnover, (b) mostly same team within similar projects, (c) nearly always new team for almost every project # My typical team profile: (a) collocated 90%+ of the time, (b) collocated 75%+ and rest in same time zone, (c) collocated about 50% and rest in same time zone, (d) some collocation and mostly virtual in same time zone, (e) little collocation and mostly same time zone, (f) little collocation and multiple

time zones with working hours overlap, (g) little collocation with multiple time zones and little to no overlap in working hours

- I believe that this knowledge is important - thank you for doing the due diligence on this and soliciting feedback.
- Project leadership is an excellent area in which to provide research. Attempting to get it in the *PMBOK® Guide* is the wrong approach. You will be forced to sign over copyright to all of the content if it goes in and then it will be a part of the every four years review cycle that all of their standards go through. Seek a direct publisher or a low cost web site to host a blog on the topic.
- It is not enough in today's highly competitive, fast-moving world to rely simply on good managers. Employing great leadership skills is essential for elevating the level of effectiveness of today's PMs.
- I firmly believe Leadership styles also need to be driven and supported by the leaders within the organisation. Leadership for each PM will vary with the experiences that each person has had and the level of management each person has dealt with. We also need to consider the maturity of the PMO within ones organisation otherwise self-learning need to be driven by each individual
- I agree it is an important area that needs more attention in *PMBOK® Guide*. I too have read many books on leadership and managing staff, as additional references to help me be a better project manager and get a better project outcome. The other issue is that it is hard to be a good project leader if you are not given the support required with the budget to make discretionary decisions e.g., have full responsibility up to 10% of the contingency amount to determine to approve or disapprove CR's without having to go to change review boards.
- It is important to include information on 'how to adapt to the correct leadership style' (or combination of styles) for each project situation. Different leadership styles may be necessary within the same project, and could be influenced by the environment and other methodology/governance requirements.
- The project succeeds or fails by its leadership

Question #21

General comments received:

- Leadership styles are about motivating project team members. The use of Transactional Leadership processes will definitely push this idea; therefore, should not the survey focus on this single type of leadership since it goes to the heart of encouraging motivation aspects?
- It is important to include information on 'how to adapt to the correct leadership style' (or combination of styles) for each project situation. Different leadership styles may be necessary within the same project, and could be influenced by the environment and other methodology/governance requirements.

Appendix C – LinkedIn Group Chats on Project Leadership *Group Discussion*

- It is important to define Leadership v Management here because there may be a job in some industry that is titled "project leader. In my mind, the simple difference is PM is someone who takes the project as developed and does what needs to be done to make it happen. A project leader will take the project and find ways to develop the team and find innovation and suggest improvements. Therefore, I do think it is unusual to find project leadership, but it is not unique.
- These MIT people provide a look at teamwork, beyond the leader:
<http://goo.gl/dSMi>
- In my opinion, Leadership is intuitive and comes with the persona of an individual. There would be common traits / characteristics of leaders to some extent, still the approach towards resolution of specific issues separate leaders from managers.
- Project leadership focus on the project deliverables and the project team. That means it is temporary in nature. Other leadership is generally ongoing with a consistent team of people.
- I wonder if there are other things at play that helps collective intelligence. Over the years, I have come across an OD strategy called Appreciative Inquiry by David Cooperrider, which uses a positive approach to accomplish seemingly impossible tasks. I wonder if possibly an understanding and appreciation of the collective does not play a part in Malone's study.
- I agree that the temporary nature of a project makes project leadership unique. In addition, I believe that project leaders shift their styles depending on the life cycle phases of projects.
- In the beginning, the project leader needs to instill the project vision to the team members, a transformative style. In the middle of the project, a situational leadership style would be more appropriate, where the project leader uses participative, selling, telling, or delegating techniques. In the closing phase of the project, I would expect to see more of a transactional approach, where the project leader provides structure and consideration that applies directly to during the closing phase of projects, as well as consideration for the team rewards.
- I am having trouble understanding how leadership can be "temporary." I understand the project is temporary, and that different management skills are necessary for a project manager than for a line manager managing processes. Wouldn't someone consider a "leader" someone who exhibits solid leadership qualities excel in both project and process management equally?
- A leader is a leader. The Project Leader is temporary to a project. If you are a leader, you will apply your skills to every aspect of your life. The question was about project leader.
- Thanks. So then the answer to the question is no, project leadership is not unique, because leadership is leadership. Perhaps then the question might be are there aspects of leadership which are uniquely applied to projects?
Leaders dealing with business processes, teams, military units, governments, etc. have to have vision and transmit that vision to their followers in such a way as to gain the hearts and minds of the followers and eventually achieve the vision, be it the successful

overthrow of a government, winning of championship, taking of hill in battle, or more mundanely the successful closing of the monthly books in accounting. Leaders are known for, and recognized for, their situational response to circumstances, and for the acquisition of the vision. Therefore, these elements would not be unique to a project. Let me posit this: the unique aspect of leadership in the project is the short time the project manager has to create that unified team all striving for the same goal from what may start out to be a disparate group who have no knowledge of the goal and perhaps no vested interest in achieving it other than their paycheck. Projects are typically exceptional, outside the normal process workflow of the organization, even to those who routinely engage in project work, such as software developers. (software developers - I am a recovering software developer - are typically more interested in the software they are developing than in the application to which the developed software is used in the business) As such, the assembled team for the project may have little interest in achieving the goal, little understanding as to why the goal has to be achieved, and more concern about whether being on the project will affect their normal job when the project is over. The leader is able to bring the team together, get them working as a single unit with a shared vision, and do so in a way that lets the team organize itself as much as possible. This is not only unique to projects, but it is extremely difficult, and many of those we might laud as leaders of labor unions, political parties, sports teams, and the military might not be able to perform this feat of leadership once much less on a regular basis. In addition, Paul, you are right that the close of the project is also a unique challenge to the leader. Throughout history, we have seen leaders who have achieved their goal and were unable to reform their vision to sustain the goal that was achieved. Moreover, we have probably all seen too many project managers end the project with a party, some heartfelt thanks and perhaps a reward or two, a half-hearted lessons learned session because it is in the organizational standards, and it is off to the next project. The leader not only ensures the product of the project is working in the business environment to solve the original problem, but closes the project in such a way that every member of the team would gladly step forward into the unknown and risky world of doing another project working together, but also each member would gladly volunteer to work with the leader. When projects end with the team heaving a collective sigh and wanting nothing more than to get back to their old job or to a new project with different people and different manager that is a sign that leadership was not present even if project management was.

In addition, speaking of leadership, Happy Veteran's Day to all US Veterans.

- Leadership, stakeholder management, and communications work best when viewed as a continuous personal focus with small improvements regularly. We can 'learn' fundamental ideas behind the three concepts, which are intertwined, but the daily practice is where the real success is made.
- Kaizen quality management for individuals. Improvement is constant and gradually with the individual person being responsible for the growth.
- Therefore, I do not necessarily believe that leadership needs to be an additional Knowledge area. It would be better served as an 'output' for stakeholder management and communications.

- Whether project leadership is unique or not I find difficult to answer, because I think that will lead to a yes and no discussion where for every YES we can find a NO. To my perception a project is on the first place about teamwork, including project manager or project leader whatever title you wish to give it and stakeholder(s). Then I think a team is where each one take his or her responsibility, eventually we all depend on each other, which means that we can count on each other to play his/her role agreed on in being successful. Not by controlling each other, because if we have to control each other whether we do what we should do then there is no team.
- I think it is also not that a leader is the one with the vision and all the answers that we follow and that the manager safeguards the deliveries, no at the contrary we are in it together it is a temporary joint venture where achievements and solving problems are done together. To create a team and with respect to a project a temporary team that is a hell of a job and I think there is no one best practice we can learn in the classroom, I think there will be quite some different styles depending on personality and culture.
- I am a non-IT project manager. I have a background in accounting and industrial engineering. In addition, I believe there is more to a PM than a facilitator. To get the best results you need to know more than one subject matter. You need a leader otherwise; you just have a have a person that knows how to report on the progress of the team.
- That might have sounded a little harsh, but that is the advice I have been given by upper management. My Vice President told me to name the project before someone else did, so the credit did not go to the one that named it, and I did all the work.
- The point is take control, lead, mentor, learn, and get the job done within budget and on time. That is what upper management is looking for, and that is what hits the bottom line, and your 401K.
- In my opinion, there is a unique element to project leadership. As pointed out in previous comments, leadership is different from management. Traditional hierarchical management does have individuals that may or may not exhibit quality leadership. Often, there are folks who control and direct from the basis of their position without a hint of leadership ability (you know who they are).
- Traditional organizations also have those folks who are leaders without having the position. They operate through personal power rather than position power. Each of us knows of many strong examples of this.
- Now back to my point about why I consider project leadership unique. Nearly every single project management position has absolutely no position power. Being named a project manager means there is no direct control of the project team members. Therefore, the project manager can only be successful by leading based on a strong set of leadership skills. Why is this unique? Name one other management position that is very dependent on leadership skills for success.
- I have had just the opposite experience. In every project that I have managed, and there have been a great number from a team of one to a project I ran for GSA of 105 team members, I was totally responsible for the performance of the team and accountable for the outcome - on time delivery within budget and everything delivered that was promised within that budget and schedule. I definitely had the position and the authority that went with it. Now, I am in IT so all my projects have been software development or similar

type projects so I do not know first-hand about projects outside of the IT world. I am interested in hearing that a project manager has no position power and I assume no authority that would go with it. I also assume with no power or authority there would be no accountability for the team's actions and therefore no responsibility. In addition, I agree that situation would make project leadership clearly unique.

What you describe sounds like an agile project environment with which I have also been involved, but in such an environment we don't have "project managers" so I'm not sure Paul is talking about the agile world in his question.

From what Deborah writes, it sounds like her experience is much like mine. How about the rest? Do you as project managers have positional authority?

- I would like to add to these useful discussions; more than project leader being mentor the team or individuals. Team capabilities and knowledge effect leadership with so many others factors like tasks, the time and tools available and the results desired, people deal with and environment and so on.

So what I am trying to say is success of this important practice " leadership" is situational which may be have effect on leadership unique as I understand.

- Although I am currently a program manager of an agile S/W project (boy if this different from my previous Infrastructure projects), I was referring to projects in general. I believe that it is the PM their managers or sponsors who are the project leader. Not only do they need to lead the project team to successful project fruition, but also they have to show leadership to the sponsor, rather than merely managing the sponsor's expectations.

I agree. A project manager, in general, must be as much a leader as an administrator and manager to be successful. In one company I am working with there are managers who manage many contracts, but they really function as business or, perhaps, program managers. Under them are "project leads" who "manage" one or more projects. Again, though, all software development or maintenance. The "leads" prepare estimates and budgets and have some say in the formation of the team (designating skills, etc.). The "managers" are held accountable by the business for the successful implementation of the product, and the "leads" are held accountable by IT. There does not seem to be a standard for how the authority and leadership is split between the two layers of management.

Apparently, it depends on the abilities of the players. Some will lead more than manage and others the opposite. I do not think a general conclusion can be drawn as to which approach is more successful. I think successful project management is all about making the determination for yourself - what your management/leadership comfort level is - and the situation, which includes culture, life cycle approach, team composition, etc.

Regardless of the title, whoever is responsible for the success or failure of the project, must apply leadership practices to increase chances of success.

Appendix D – Article published in the Atlanta PMI Chapter newsletter- Sept. 2010

One of life's little secrets is **project leadership**. Although most project managers know what project leadership is, (or do we?) and we know how important is to our project success. However, where do you go to find information regarding project leadership? More importantly, where can you find best practices on project leadership? Well, if you said Kerzner's (2010) latest book *Project Management Best Practices: Achieving Global Excellence*, you would not find project leadership listed (mind you don't get me wrong, I would recommend this book to any project manager wanting to become more competent.)

How about a Google search? Well, for project leadership you would find about 7.9 million hits, for project leadership best practices, you would find about 4.2 million hits, and for project leadership best practices articles that are peer reviewed, which are the best source for quality articles, you would still find around 130,000 articles.

With over 100,000 quality articles available, and based on what most of us know about leading project teams, or diplomatically leading our sponsors, would you not think that project leadership best practices would already be part of the *PMBOK® Guide*?

Now is your chance to voice your opinion, and have it presented to the 2012 *PMBOK® Guide* committee for consideration. Please consider filling out this survey regarding Project Leadership and the *PMBOK® Guide* located at

[http://www.surveymonkey.com/s/Project Leadership and the PMBOK Guide](http://www.surveymonkey.com/s/Project_Leadership_and_the_PMBOK_Guide)

References:

Kerzner, H. (2010). *Project management best practices: Achieving global excellence* (2nd ed.). Hoboken, NJ: John Wiley & Sons, Inc.

Appendix E – Researcher’s biography

Paul Toth is a practicing PMP® in the IT Aviation area, and working on his Doctorate of Business Administration. Although his expertise is in the Structured Wiring and Cabling area, he has run numerous other types of projects, including his current project, where he is working on a major product infrastructure upgrade utilizing agile software development.

Appendix F – IRB Acceptance

September 13, 201-0
Paul Toth
944 Rays Road
Stone Mountain, GA 30083

Dear Paul:

Congratulations! The JIU Institutional Review Board has approved through an Exempt review, your research, entitled "Adding Project Leadership Knowledge into the *PMBOK*[®] *Guide*." You may now defend your research proposal and begin to collect data'

You must notify the IRB of any changes you make to your current research project, including the addition/revision of survey or interview questions.

Please contact the IRB with any questions regarding this approval. Again, congratulations! Keep up the hard work! You are almost there!

Sondra M. D'Aquisto, Ms
Manager of Institutional Research and
Institutional Review Board
irb@ international.edu
Phone: 1.303.784.8378
Fax: 1.303.223.9228

Appendix G – Means test between Independent Variables for Competency

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	75.783 ^a	112	.677	2.616	.000
Intercept	103.767	1	103.767	401.137	.000
Experience - Q1	.691	3	.230	.891	.450
Certification - Q2	2.098	3	.699	2.703	.051
Industry - Q3	4.750	6	.792	3.061	.009
Gender - Q4	.526	1	.526	2.034	.158
Education - Q5	2.241	3	.747	2.887	.041
Q1 * Q2	1.438	3	.479	1.853	.144
Q1 * Q3	5.733	14	.410	1.583	.102
Q1 * Q4	1.252	2	.626	2.420	.095
Experience Q1 * Education Q5	2.593	4	.648	2.506	.048
Q2 * Q3	2.021	7	.289	1.116	.361
Certification Q2 * Gender Q4	4.083	2	2.042	7.893	.001
Certification Q2 * Education Q5	3.768	2	1.884	7.282	.001
Q3 * Q4	2.202	6	.367	1.418	.217
Q3 * Q5	1.306	5	.261	1.010	.417
Q4 * Q5	1.189	3	.396	1.532	.212
Q1 * Q2 * Q3	.000	0	.	.	.
Q1 * Q2 * Q4	.000	0	.	.	.
Q1 * Q2 * Q5	.000	0	.	.	.
Experience Q1 * Industry Q3 * Gender Q4	3.816	6	.636	2.459	.031
Experience Q1 * Industry Q3 * Education Q5	5.038	7	.720	2.782	.012
Q1 * Q4 * Q5	.622	2	.311	1.202	.306
Q2 * Q3 * Q4	.000	0	.	.	.
Q2 * Q3 * Q5	.034	1	.034	.132	.717
Q2 * Q4 * Q5	.000	0	.	.	.
Q3 * Q4 * Q5	1.395	3	.465	1.797	.154
Q1 * Q2 * Q3 * Q4	.000	0	.	.	.
Q1 * Q2 * Q3 * Q5	.000	0	.	.	.

Q1 * Q2 * Q4 * Q5	.000	0	.	.	.
Experience Q1 * Industry Q3 * Gender Q4 * Education Q5	5.255	2	2.627	10.157	.000
Q2 * Q3 * Q4 * Q5	.000	0	.	.	.
Q1 * Q2 * Q3 * Q4 * Q5	.000	0	.	.	.
Error	21.212	82	.259		
Total	482.000	195			
Corrected Total	96.995	194			

Appendix H – Means test between Independent Variables for PMBOK

Tests of Between-Subjects Effects

Dependent Variable: PMBOK Guide

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	164.570 ^a	114	1.444	1.501	.027
Intercept	149.023	1	149.023	154.935	.000
Experience Q1	.296	3	.099	.103	.958
Certification Q2	4.632	3	1.544	1.605	.195
Industry Q3	10.402	6	1.734	1.802	.109
Gender Q4	3.357	1	3.357	3.490	.065
Education Q5	2.642	3	.881	.916	.437
Q1 * Q2	1.891	4	.473	.491	.742
Experience Q1 * Industry Q3	33.036	14	2.360	2.453	.006
Q1 * Q4	3.635	2	1.818	1.890	.158
Experience Q1 * Education Q5	12.274	4	3.069	3.190	.017
Q2 * Q3	8.375	7	1.196	1.244	.289
Q2 * Q4	4.000	2	2.000	2.079	.132
Q2 * Q5	1.350	3	.450	.468	.705
Industry Q3 * Gender Q4	12.643	6	2.107	2.191	.052
Q3 * Q5	6.430	5	1.286	1.337	.257
Q4 * Q5	2.207	3	.736	.765	.517
Q1 * Q2 * Q3	.000	0	.	.	.
Q1 * Q2 * Q4	.000	0	.	.	.
Q1 * Q2 * Q5	.000	0	.	.	.
Experience Q1 * Industry Q3 * Gender Q4	16.338	6	2.723	2.831	.015
Q1 * Q3 * Q5	12.126	7	1.732	1.801	.098
Experience Q1 * Gender Q4 * Education Q5	5.687	2	2.843	2.956	.058
Q2 * Q3 * Q4	.000	0	.	.	.
Q2 * Q3 * Q5	2.296	1	2.296	2.388	.126
Q2 * Q4 * Q5	.000	0	.	.	.
Q3 * Q4 * Q5	1.325	3	.442	.459	.712

Q1 * Q2 * Q3 * Q4	.000	0	.	.	.
Q1 * Q2 * Q3 * Q5	.000	0	.	.	.
Q1 * Q2 * Q4 * Q5	.000	0	.	.	.
Q1 * Q3 * Q4 * Q5	2.218	2	1.109	1.153	.321
Q2 * Q3 * Q4 * Q5	.000	0	.	.	.
Q1 * Q2 * Q3 * Q4 * Q5	.000	0	.	.	.
Error	76.948	80	.962		
Total	955.000	195			
Corrected Total	241.518	194			

a. R Squared = .681 (Adjusted R Squared = .227)

Appendix I – Means test between Independent Variables for Sponsor

Tests of Between-Subjects Effects

Dependent Variable: Sponsor

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	55.761 ^a	112	.498	1.516	.024
Intercept	125.034	1	125.034	380.774	.000
Q1	.704	3	.235	.715	.546
Q2	1.995	3	.665	2.025	.117
Q3	3.016	6	.503	1.531	.178
Q4	.094	1	.094	.286	.594
Q5	.043	3	.014	.043	.988
Q1 * Q2	2.376	4	.594	1.809	.135
Q1 * Q3	5.092	14	.364	1.108	.364
Q1 * Q4	.013	2	.006	.019	.981
Q1 * Q5	1.656	4	.414	1.261	.292
Q2 * Q3	1.941	6	.323	.985	.441
Q2 * Q4	.583	2	.292	.888	.415
Q2 * Q5	.072	2	.036	.109	.896
Q3 * Q4	1.550	6	.258	.787	.583
Q3 * Q5	2.408	5	.482	1.467	.210
Q4 * Q5	1.702	3	.567	1.727	.168
Q1 * Q2 * Q3	.000	0	.	.	.
Q1 * Q2 * Q4	.000	0	.	.	.
Q1 * Q2 * Q5	.000	0	.	.	.
Q1 * Q3 * Q4	.623	6	.104	.316	.927
Q1 * Q3 * Q5	3.701	7	.529	1.610	.144
Q1 * Q4 * Q5	.345	2	.172	.525	.593
Q2 * Q3 * Q4	.000	0	.	.	.
Q2 * Q3 * Q5	.022	1	.022	.067	.797
Q2 * Q4 * Q5	.000	0	.	.	.
Q3 * Q4 * Q5	.191	3	.064	.194	.900

Q1 * Q2 * Q3 * Q4	.000	0	.	.	.
Q1 * Q2 * Q3 * Q5	.000	0	.	.	.
Q1 * Q2 * Q4 * Q5	.000	0	.	.	.
Q1 * Q3 * Q4 * Q5	.732	2	.366	1.115	.333
Q2 * Q3 * Q4 * Q5	.000	0	.	.	.
Q1 * Q2 * Q3 * Q4 * Q5	.000	0	.	.	.
Error	26.926	82	.328		
Total	532.000	195			
Corrected Total	82.687	194			

a. R Squared = .674 (Adjusted R Squared = .230)

Appendix J – Means test between Independent Variables for Project Success

Tests of Between-Subjects Effects

Dependent Variable: Project Success

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	50.671 ^a	114	.444	.831	.822
Intercept	88.433	1	88.433	165.239	.000
Experience Q1	.428	3	.143	.267	.849
Certification Q2	4.200	3	1.400	2.616	.056
Industry Q3	3.091	6	.515	.963	.456
Gender Q4	.262	1	.262	.490	.486
Education Q5	1.648	3	.549	1.027	.385
Q1 * Q2	.559	4	.140	.261	.902
Q1 * Q3	5.330	14	.381	.711	.757
Q1 * Q4	.960	2	.480	.897	.412
Q1 * Q5	2.871	4	.718	1.341	.262
Q2 * Q3	2.502	7	.357	.668	.699
Q2 * Q4	1.083	2	.542	1.012	.368
Q2 * Q5	.943	3	.314	.587	.625
Q3 * Q4	.888	6	.148	.276	.947
Q3 * Q5	2.270	5	.454	.848	.519
Q4 * Q5	1.550	3	.517	.965	.413
Q1 * Q2 * Q3	.000	0	.	.	.
Q1 * Q2 * Q4	.000	0	.	.	.
Q1 * Q2 * Q5	.000	0	.	.	.
Q1 * Q3 * Q4	2.168	6	.361	.675	.670
Q1 * Q3 * Q5	6.818	7	.974	1.820	.094
Q1 * Q4 * Q5	2.266	2	1.133	2.117	.127
Q2 * Q3 * Q4	.000	0	.	.	.
Q2 * Q3 * Q5	.034	1	.034	.064	.801
Q2 * Q4 * Q5	.000	0	.	.	.
Q3 * Q4 * Q5	2.233	3	.744	1.391	.251

Q1 * Q2 * Q3 * Q4	.000	0	.	.	.
Q1 * Q2 * Q3 * Q5	.000	0	.	.	.
Q1 * Q2 * Q4 * Q5	.000	0	.	.	.
Q1 * Q3 * Q4 * Q5	2.301	2	1.151	2.150	.123
Q2 * Q3 * Q4 * Q5	.000	0	.	.	.
Q1 * Q2 * Q3 * Q4 * Q5	.000	0	.	.	.
Error	44.420	83	.535		
Total	514.000	198			
Corrected Total	95.091	197			

a. R Squared = .533 (Adjusted R Squared = -.109)