Examining the Benefits of Project Management Professional (PMP) Certification for IS Project Managers and Organizations

Robert C. Mahaney
Northern Kentucky University

Bertie M. Greer
Northern Kentucky University

Recommended Citation

Examining the Benefits of Project Management Professional (PMP) Certification for IS Project Managers and Organizations

Robert C. Mahaney
Bertie M. Greer
Northern Kentucky University

ABSTRACT

The project management professional (PMP) certification has gained a positive reputation among project managers as well as with HR managers and recruiters. However, the organizational benefits are untested. This paper examines the business value of PMP certification. The three questions this study investigates are, "What value does certification give project managers?" "What value does certification give organizations?" and "How can organizations encourage project managers to pursue certification?" Content analysis of transcripts from twenty-five structured interviews identified several reasons businesses should encourage their project managers to pursue PMP certification, but many of the benefits are not easily quantified.

INTRODUCTION

Project teams have become an essential element for information systems (IS) departments. IS departments rely on project teams to develop new systems and to implement new technologies (Martinez, 1994). As a result, the role of the project manager is increasingly important (Stewart, 1995). More and more companies rely on skilled project managers to meet schedules, budgets, and quality goals. 'Project Manager' has become a recognized job title within the IS field, with a defined career path in many organizations (Fried, 1992; Marken, 1998; Petterscn, 1991).

Project managers enjoy a strong and growing profession (Posner, 1987). Since its founding in 1969, the Project Management Institute (www.pmi.org) has grown to become the leading professional organization for project managers. With over 100,000 members worldwide in 2003, the nonprofit PMI is the leading professional association in the area of project management. The PMI establishes project management standards, provides seminars, educational programs and professional certification that more and more organizations desire for their project leaders.

Project management is the application of knowledge, tools, and techniques to a broad range of activities in order to meet the requirements of a particular project (Duncan, 1996). Project management helps organizations meet their customers' needs by standardizing routine tasks and reducing the number of tasks that could potentially be forgotten.

In 1984, the PMI began a certification program in project management. PMI's Project Management Professional (PMP) credential is the project management profession's most globally recognized and respected certification. In 1999, the PMI became the first organization in the world to have its certification program attain International Organization for Standardization (ISO) 9001 recognition. To obtain PMP certification, an individual must satisfy education and experience requirements, agree to and adhere to a code of professional conduct, and pass the PMP certification examination (Duncan, et al. 1994). In 2003, there were over 50,000 PMPs who provided project management services in 120 countries. This research investigates the benefits, both to the individual and to the organization, of PMP certification.

Many corporations encourage their project managers to pursue PMP certification. They offer rewards for employees who successfully complete the PMP exam and incentives for those who are considering it. Project managers see certification as a way to get ahead, to stand out, to earn higher salaries, or to improve their job security (Pierson, et al. 2001). Corporations see certification as a means of achieving higher rates of project success. Many corporations strongly encourage project managers to become PMP certified; some actually require project managers to have the PMP credential for employment or for advancement within the corporation. However, passing the PMP exam is not easy (Craig, 2002). It is a difficult test, requiring many hours of studying. Thus, project managers may

263

1

need encouragement to pursue certification. This research investigates how organizations can encourage their project managers to pursue PMP certification.

BACKGROUND

Many professions certify their practitioners (White and Cook, 2003). Doctors, lawyers, engineers, teachers, nurses, accountants, pharmacists, actuaries, architects, beauticians, electricians, and welders must be licensed to work legally in the United States and other countries. Certification requires practitioners to demonstrate they possess a minimum body of knowledge. It may also require a pledge to follow an ethical code of conduct (Linderman and Schiano, 2001). PMP certification serves this purpose (Duncan, et al. 1994).

Company-subsidized training and certification for an organization's IS staff are not just perks (Gilhooly, 2001). When implemented properly, they can be valuable tools for hiring and retaining IS professionals (Pierson, et al. 2001). An IS department and a company's overall business performance can reap such benefits as increased productivity and improved information system performance (Earls, 1998; Gaspar, 2003; Gottschalk, 2002). Benefits of IS certification include greater knowledge and increased productivity; expertise and skill; improved support quality; reduced training costs; and higher morale and commitment (Ray and McCoy, 2000). On the other hand, not providing employees with training could result in an IS staff that is poorly skilled and unmotivated which could lead to ongoing system disruptions.

Certification in the IS field is expensive and can become out of date very quickly (Rothke, 2000). Vendor-specific certification of specific technologies are only valuable as long as those technologies are in use. Examples of vendor-specific certification are Microsoft Certified Systems Engineer (MCSE), Certified NetWare Engineer (CNE) from Novell, and Cisco Certified Network Professional (CCNP). PMP certification is vendor-neutral. It requires documented work experience and professional development units. Thus, when compared to other IS certificates, PMP certification has much longer value (Brookshire, 2000).

PMP certification is becoming more widely recognized in the IS field. Still, many IS project managers question whether certification is really worth the effort. After all, the time and cost required to become certified is high. What are the benefits, both to the individual and to the organization? Are PMP certified project managers better? Are their projects more successful? Does a project management office (PMO) perform better if it is staffed by PMP certified project managers? A review of the literature found no studies that provided answers to these questions. Thus, this exploratory research begins to fill this gap. One of the central research questions asked in this study is, "What is the value of PMP certification?" This is answered from the perspectives of both the individual project manager and the organization.

Another question this study answers is, "Considering the value of PMP certification, how can organizations encourage their project managers to pursue PMP certification?" In other words, what incentives can be offered to make the process worthwhile? What will motivate project managers to undertake the PMP certification process?

Not much has been written about this subject. Researchers have not tackled these questions in relation to certifications in other fields. A review of the literature uncovered no theoretical model that seemed to predict answers to these questions. Content analysis is a research tool used to determine the presence of certain words or concepts within texts or sets of texts. It "is a systematic technique for analyzing message content" (Kassarjian, 1997, p. 9) and is used to establish the existence and frequency of concepts. Analysis of structured interviews is appropriate in new areas where theories are not well developed (Eisenhardt, 1989). Thus, an exploratory research approach using content analysis was chosen to discover an underlying theory that may be tested by future research.

METHODOLOGY

The authors sent a "call for volunteers" to all members of a PMI chapter located in a major city in the USA. The authors also contacted businesses and asked for IS project managers to volunteer to participate in this study. Twenty five structured interviews were conducted by telephone. The conversations were tape recorded and transcribed.

264

The interviews averaged 48 minutes in duration. Nineteen of the stubjects were members of the Project Management Institute (PMI). Of the other six, one had been a member previously, but was not at the time of this study. The nineteen subjects who were members had an average of 3.7 years of membership with the PMI. Nine of the subjects were female. Subjects' job titles and industries are listed in Table 1.

Table 1: Subjects

Title	Industry	Years in IS	Years in project management	PMP Certified
PMO Project Manager	Business Services	7	4	Yes
Project Manager II	Business Services	23	15	Yes
IT Project Manager	Business Services	7	5	Yes
Corporate Project Office	Business Services	25	8	Yes
Project Manager	Construction	-	15	Yes
IT Consultant	Consulting	6	4	Yes
Project Manager	Consulting	15	6	Yes
Operations Manager	Energy	12	17	Yes
Manager of PMO	Energy	4	8	No
Business Manager	Energy	29	15	No
IT Project Manager	Financial Services	8	8	Yes
QA Consultant	Information Services	17	4	Yes
Divisional Assistant Vice President	Insurance	20	12	Yes
Business Development Manager (IT Recruiter)	IT Consulting	18	4	Yes
IT Consultant	IT Consulting	2	1	No
PMO Specialist	IT Services	17	3	Yes
Senior Project Manager	Manufacturing	6	6	Yes
IT Project Manager	Manufacturing	23	10	No
IT Project Manager	Petrochemicals	10	6	Yes
IT Project Manager	Petrochemicals	4	4	No
IT Manager	Petrochemicals	13	8	Yes
Account Executive	Software Sales and Service	25	20	Yes
IT Consultant	Telecommunications	15	7	Yes
Project Manager	Telecommunications	10	6	No
MIS Project Manager	Transportation	16	16	Yes

The subjects were asked open-ended questions about their experiences with the PMI and the PMP certification process. Two researchers independently reviewed the transcripts for common themes (Kolbe and Burnett, 1991; Kassarjian, 1997). The results of the content analysis coding were then compared. Items found by both reviewers were retained. Similar items were combined and reworded. Items found by only one reviewer were discussed and agreement was reached on retaining or discarding them (Aladwani and Palvia, 2002). The structured interview questions are shown in the Appendix.

Benefits of PMP certification for a project manager

Nineteen of the subjects had passed the PMP certification exam. One other was planning to take the exam in the near future. The remaining project managers were non-members and did not seem interested in the PMP designation.

<u>Easier job search</u> The subjects identified numerous individual benefits of PMP certification. The most commonly mention benefit was that having PMP certification made the job search easier. Subjects indicated that more and more job advertisements are listing PMP as recommended or even required for project management jobs. According

to one subject, "It was a good thing to have on your resume." Another stated, "It built a stronger resume." And, "The main reason was that I wanted certification is so when I began my job search, I would be prepared. A lot of job postings list PMP certification as a requirement."

Additional comments supported the notion that PMP made for an easier job search. According to one subject, "We recently had some people laid off and those who were not PMP certified have not found employment. Those who were laid off and were PMP certified have found employment. So I think it is definitely a leg up." Another said, "I got my job, in great part, because I have PMP after my name." Another subject commented, "The certification process I did because I thought it would open doors for me." And finally, "It is very helpful for those looking to change jobs and a resume enhancer." Thus, a primary benefit for individuals is that PMP can improve ones job search process.

Requirement Similarly, many stated that PMP was required in today's job market. More and more organizations are requesting the certification. For the project manager who may move from one assignment to another, PMP is becoming mandatory. One subject stated, "I am starting to see job ads that are referring to it." According to another, "It has become more of a requirement in certain industries." And, "If you are going to do any kind of project management contract work with state government, if you don't have a PMP then they don't even want to talk to you."

Others also indicated that PMP is becoming a requirement in the job market. According to one subject, "When I got my certification, more and more companies were beginning to put in their job ads that they preferred PMP or that it was a requirement. A couple of job ads that I have seen recently have said that PMP is required." Another said, "It was almost then a mandate for me to attain my PMP." And, "I really see it building and becoming something larger than it is today." One subject replied, "I, personally, and two other people in the project office were required to get our certification. This was a requirement of being part of the project office. And it just made sense. That is what we are supporting, it is what we do, we support project managers, and it just made sense for us to become PMP Certified. So, PMP was listed on our objectives for this year." Finally, one other subject indicated, "I know someone in our company at my level of years and experience but he was turned down because he didn't get the certification." Thus, one of the main benefits of the PMP is that it is becoming required in today's job market.

Affirmation of knowledge Another common thought was that passing the PMP exam simply confirmed what the project manager already knew. Many believed they knew the material fairly well prior to studying for the exam. Passing the exam certified their knowledge as well as bringing some of the material into better focus for them. One subject stated, "I think it did affirm some of the stuff that I had already known. But I also think it made me better." Another stated, "I learned a few things. I think it filled in some gaps in my knowledge of what project managers ought to know." Still another commented, "I think it certifies the skills I already had. I don't think passing this exam made me a better project manager. I would say it is a validation of what you have already learned." Another stated, "I had studied a lot of different areas of project management, but it didn't really all tie together until I went through that intensive study program for the PMP."

Provided a sense of accomplishment Five subjects stated that they enjoyed the challenge and the sense of accomplishment. One stated, "I did enjoy it. At first it was hard to get into but then I kind of got obsessed with it." Another said, "It was rewarding when it was over." And, "I have a great deal of personal satisfaction from passing the PMP exam." Although not fun, two others also found benefit from the process being intellectually challenging. One said, "It was intellectually challenging, but it was not fun." Another said, "It was well worth it. I am glad I did it. If I had to, I would do it again." And, "I like the challenge."

Credibility Several subjects stated that having the PMP credential provided instant credentials. By passing the exam, one can show that an independent group has certified his or her knowledge of project management. The prestige of the certification quickly extends to those who have passed the exam. As one subject said, "More and more people are saying that they are project managers. But having certification is the difference between the haves and the wannabees." Another stated, "It provides almost instant credentials. People see those letters and they say, 'Oh, she is certified. She has gone through that process. I believe she knows what she is doing.' " And, "It lends credibility to the things we are doing." Another stated, "I see the opportunity to differentiate ourselves by indicating that we are PMPs. It builds credibility." Also, "Having the PMP credential to put behind my name gives me a little more weight to say I know what I am talking about." Finally, "I can use that little initial PMP to throw my weight

around a little." Therefore, many project managers may find that a significant benefit of passing the PMP certification is that it provides instant credibility of their project management knowledge.

Affirmation of abilities Several subjects stated that passing the PMP certification exam provided affirmation of his abilities. One said it gave him confidence in his skills. He said, "When you get fired it affects you personally and you begin to question your own abilities. It had been a while since I had been in school. So I thought I needed something to make myself more valuable. That was one reason for pursuing PMP Certification." Another stated, "If they know the person managing the project is PMP certified it gives them confidence and they will listen to you better." Thus, having PMP certification publicly affirms your project management abilities.

Job security Three subjects suggested that resume building and job security were benefits of PMP certification. One said, "It's something I can put on my resume which carries some weight." Another said, "Having the PMP on my resume is valuable." Related to the benefits during a job search, one project manager indicated that having the certification provided some additional job security. He said, "It's kind of a job security. It's becoming more critical and more of a necessity. It's no longer a luxury."

Self assessment tool Three subjects indicated that studying for the PMP exam forced them to assess their own skills and knowledge levels. Often, they found weaknesses in certain knowledge areas and were forced to studied those topics in greater detail. According to one, "No matter where you work, there are things you do not do. By taking the class and studying for it, you have to look at the whole picture. Techniques and practices that are not used in your particular corporation are covered in the class. So I really learned a lot from studying for the test." These benefits are summarized in Table 2.

Table 2: Benefits of PMP certification for a project manager

Item	Frequency
Easier Job Search	13
Requirement	10
Affirmation of Knowledge	7
Provided a Sense of Accomplishment	5
Credibility	4
Affirmation of Abilities	4
Job Security	3
Self Assessment Tool	3

Benefits of PMP certification for the organization

Project managers can enhance their own careers by attaining the PMP designation. There are also benefits to organizations when their employees are PMP certified. We asked the subjects how their companies benefited from their certification. We heard a variety of responses to this question.

Better project managers The most common response was that the organizations benefited from having improved project managers. According to one, "Being immersed in project management, formal project management methodologies, has made me a better project manager. Studying for the PMP certainly reinforced our own methodology. It forced me to sit down and learn the PMBOK, which probably I wouldn't have done." Another echoed this by saying, "Yes, I am a better project manager because of the process of studying for the exam." And, "It made me better. It also made me more frustrated. Trying to do it the right way is very hard." Another response was, "We differentiate ourselves from some of the other consulting organizations by indicating that we have both the expertise and the motivation to have attained the PMP credential." One stated, "Having PMP certification is

267

something that would be valuable to the employer and to the consulting company that I would be working with. They could say, 'Look, this guy is a certified project manager.' And I think that has value." Thus, companies benefit from the PMP process by having better project managers.

Employee skills assessment Subjects responded that organizations benefited from certification because the process forced the project managers to assess their own weaknesses. One subject stated, "It gives you an awareness of how things should be. It's frustrating because you see where we are and you see where we should be. We've got a long way to go to get there." Several subjects made comments about companies using PMP certification as screening criteria for job searches. As one project manager stated, "They are using it as a filter to filter out job applicants who are not certified. This reduces their pool of applicants and makes it easier for them to make a hiring decision." Another echoed this, "With so many IT professionals out of work right now, even though the positions list PMP as preferred, it seems that the first thing they do is to pick the PMPs." Another stated, "It is easy for an employer to see those letters and know that a person has attained those skills." Although from the perspective employee, this may not always be viewed as a positive; from the perspective of the company the PMP designation can be used as criteria for screening job candidates to reduce the pool of candidates. This is especially true in a tight job market.

Higher billable rate Several subjects pointed out that having PMP certification allows for a higher billable rate for companies that rent people out or do projects for clients. According to one, "[PMP certification] is mandatory for companies that either rent people out to do projects for their clients. It adds value to the client and the company to be able to say that this person is qualified and here is the proof." Another said, "Because we have so many people who are PMP, our billable rate is a little higher." Still another replied, "Getting PMP was required. If you wanted to be billed at the rate of a project manager, you had to have your certification." And, "Our company's billable rate is based on comparison to the market. Because we have so many people who are PMP, our billable rate is a little higher. They find it easier to place you if you are certified." Just as one might expect, this seemed to be truer for consultants and contractors than it was for direct employees.

Common language According to the subjects, another common benefit of PMP certification is that it provides a common language and standard terminology. Some of the terminology used is specific to the industry. Studying the Guide to the Project Management Body of Knowledge (PMBOK) gave projects managers a standard vocabulary. As one stated, "That is one of the things I found is of value in PMI or the PMBOK is coming to a common language. I think some of our toughest meetings as a group was coming to a common language and dialog. I think that is one of the benefits of PMI. People can have project management experience, but there is no common language. Not without PMI and the PMBOK. " Another said, "One of the things that PMI offers is a common dictionary and definitions to a lot of those things you don't find anywhere else." And, "To get them to talk about terms and common definitions was probably one of the biggest issues I had as a manager of that department." Finally, one said of the benefit of PMP and the PMBOK, "They speak in more standard terminology." Thus, one of the benefits to an organization of having PMP certified project managers is that everyone speaks a common language.

Improved confidence of project managers Finally, three subjects indicated that PMP certification benefited companies because it could improve the confidence of project managers. Certification can validate what they already know and that can improve their esteem. One subject stated, "I believe that PMP certification is at least recognized out there as something that shows some professional competence." Another said, "It kind of validated that I was on the right track when managing projects."

When asked if the certification process was worth the effort, one subject said, "Getting the PMP was probably one of the best investments I ever made." Another subject was asked whether he would do it over again? "Yes, yes, I would. Without a doubt." These benefits are summarized in Table 3.

Table 3: Benefits of PMP certification for the organization

Item	Frequency
Better Project Managers	8
Employee Skills Assessment	4

Higher Billable Rate	4
Common Language	4
Improved Confidence of Project Managers	3

Encouraging project managers to pursue PMP certification

Project managers can benefit their careers by pursuing PMP certification and companies can gain advantage by having more of their project managers with the PMP designation. So how do companies encourage their project managers to undertake the challenge of certification? We asked the subjects what their companies had done to help make the certification process easier and what companies should do. Many of the subjects mentioned financial support by their employers' as a key factor in the pursuit of PMP certification.

Pay PMP exam expenses The most common response we heard was that companies paid the costs of taking the exam. According to one project manager, "My company paid for all of this. They definitely encouraged it. They didn't even blink an eye on the costs." Another said, "The cost to take the exam was paid by the company. Unless you didn't pass. Actually, they paid for the initial exam. But if you didn't pass it and you had to retake the exam, that expense was on you." And, "[My company] paid for the cost of the exam."

Others reported similar experiences in their organizations. One said, "[My company] paid for the cost of taking the exam. I didn't have to pay it." Another said, "The company paid for all of it, they paid for the test." And, "Managers here have a corporate VISA and I put it on that. So, no, it never came out of my wallet." Another project manager indicated that even though he was between work assignments and thus had to pay the cost himself, the cost was a good investment. He said, "I spent over $1,300 of my own money to get the PMP and I think it was well worth it." Companies can pay the fees associated with taking the PMP exam. This will encourage employees to pursue PMP certification by removing a barrier. As stated above, the company will benefit from having more PMP certified project managers so paying for the exam is really just an investment in a higher quality workforce.

Provide study opportunities Many subjects indicated their organizations encouraged interested project managers to form an internal study group that met during business hours. As one subject stated, "They actually even support an internal study group that was working on getting their PMP. And, of course, they pay all of the fees for taking the exam." Another added, "We formed a study group and we met one or two times a week." Still another said, "Time was allowed for study and for taking the exam." Thus, allowing employees to meet a couple of hours each week, during work hours, can send a strong message showing support for the PMP process.

Not all companies allowed studying during work hours. Some project managers had to use personal time to learn the material. One said, "We started meeting once a week, sometimes on Saturday or Sunday in the public library, just to discuss what are the different topics that we were not clear on. But not during work. This was during off hours." Another expressed frustration with the lack of study time. She said, "You had to study for it on your own time and it's hard to do when you are already working a 60-hour week just doing your job."

In addition to allowing employees to study for the exam in groups, some companies conducted training classes for interested project managers. Other companies pay the fees for their employees to attend external training classes. One subject reported, "When I asked them to pay for the review class, they agreed to." Some companies actually sponsor educational programs. These ongoing sessions allow project managers to discuss topics that are interesting to them and to learn from one another. According to one subject, "We do monthly program where we have a lunch-and-learn session." Another said, "My manager has authorized funds for PMI chapter training classes."

Two other companies also followed this approach. One subject replied, "PMI was probably suggested by one of the consultants we worked with at the time since project management kept coming up as one of our areas of improvement." And, "The project office brought in an outside consultant. He taught a class." This approach underscores the company's commitment to quality project management and encourages project managers to continue to learn.

Provide study materials Companies can help project managers pursue certification by providing study materials (i.e., books, sample exams, and flash cards). Several project managers indicated that receiving study materials from colleagues helped motivate them to pursue certification. One said, "I received information internally from our project office, information about PMI and that it could be a valuable resource." Another said, "We borrowed a couple of books. We used Rita Mulcahy's book and a book of practice tests and flash cards." Companies can set up a project office to help "get the word out" about PMP certification. Even those companies that do not have a project office can provide a small library of reading materials about PMP certification for the interested project manager. Such an initiative would require a very modest investment and could provide great dividends.

Pay PMI dues Another common response we heard was that companies should pay for PMI membership dues for employees who are interested in learning more about project management. As one stated, "My company did not in any way encourage in any way, shape, or form. They did not pay for my dues or for the dinner meetings. I think they should have. I approached them about it, but was turned down." Another added, "They help with chapter meetings and that sort of thing. They encourage us to be involved." Still another said, "[My company] pays my dues to PMI. They also cover the cost of attending the local chapter meetings." And, "[My company] paid for our membership and reimbursed for the dinner meeting." Finally, "They did pay for membership in PMI, because they wanted to encourage that type of thing." Thus, companies can provide funds for employees to join PMI.

Provide a supportive culture Another common factor is to create a culture that encourages PMP certification. According to one subject, "They really wanted PMPs and tracked who was PMP certified. The culture encouraged it." Another said, "The company has been really good about [supporting PMP certification]. They are really pushing it, especially within IT. They really are making a move toward PMP. They paid for the class and covered the cost of the exam." And, the company "would let you put PMP on your business cards."

Other comments were similar. One subject stated, "I was encouraged to participate in PMI when I became a member of the project office." Another said, "They encouraged us to join PMI and to participate in PMI activities." Still another said, "Our management does recognize and acknowledge it. But there is not any promotional package or monetary incentive." And, "It's not just paid for but it's also encouraged in the company." And finally, "Within our company, it is kind of mandatory."

Encourage peer pressure Organizations can cultivate an atmosphere where project managers want to "get on the bandwagon" and pursue PMP certification. Project managers may be encouraged by their co-workers. One subject replied, "I would do it over again. I had a pretty good sense of accomplishment when it was over. And part of that had to do with the camaraderie we had between the other folks in the study group." Another said, "My boss had her PMP and she encouraged us to do the same." When asked about the effect of peer-pressure, one project manager replied, "I am the one who is putting pressure on others around here. I definitely believe I am making progress." Another said, "I was one of the instigators in getting everyone rabble-roused." And another said, "My taking the extra effort to do that shamed some of them to the point that they very rapidly jumped on the band wagon and by the next year all of the people in the corporate project office had earned their PMP certification." And, "We have over 20 PMPs today and roughly two-thirds of them have become PMPs because I drove them to it."

Provide incentives Finally, companies can encourage project managers to earn their PMP by providing incentives. These could be in the form of a financial bonus or some other incentive. The amount of the bonus is not as important as the act of awarding it. Even small bonuses can be rewarding and motivating. Three subjects indicated their companies valued PMP enough to provide a financial reward. One subject said, "They provide a small bonus to employees who get certified." Another stated, "You get a financial bonus in your check." And, "I received a bonus when I passed. And [my company] was able to get a higher bill-out rate." Another stated, "Our company has instituted a program where they provide a small bonus to employees who get certified in certain fields. PMP is one of those. Basically, you go through the process of getting your certification and you present your copy of the certificate to say, 'I received this.' and you get a financial bonus in your check. The amount of the bonus varies based on the specific certificate. It applies to technical certificates as well as professional. I think it is somewhere in the $500 range for PMP Certification." Finally, one subject observed, "There are companies that highly value it. They might not hire anybody without PMP. It may mean an extra percentage of money on a job." Thus, providing a small financial bonus may be an inexpensive way to encourage project managers to pursue PMP certification.

Two companies provided an incentive by including it as a goal in the employee's annual performance evaluation. As one subject said, "Because the PMI was one of my stated goals and was required for my position, I had to do it." Another said, "It was always on our objectives." These benefits are summarized in Table 4.

Table 4: Encouraging project managers to pursue PMP Certification

Item	Frequency
Pay PMP Exam Expenses	11
Provide Study Opportunities	10
Provide Study Materials	9
Pay PMI Dues	8
Provide a Supportive Culture	8
Encourage Peer Pressure	8
Provide Incentives	7

FINDINGS

This research study explored three questions. First, "What are the organizational benefits of PMP certification?" Second, "What motivates project managers to pursue PMP certification?" And, third, "How can companies encourage their project managers to pursue PMP certification?" The business value of PMP certification includes several factors. Employees become better project managers. The organization can charge a higher billable rate if its consultants are certified. There is a common language and a common vocabulary; everyone is speaking in the same terms. In summary, the business value of PMP to an organization is a higher billable rate for project managers, a common language, more confident project managers, and more successful projects.

Project managers are motivated to pursue PMP certification for various reasons. They pursue PMP because of the job market. More and more job advertisements list PMP as a requirement or as desirable. They pursue PMP because they believe it will make them more valuable and because of requirements in their jobs. They feel peer pressure and are encouraged by co-workers. They like the recognition they receive for the accomplishment and they like the challenge. In summary, the reasons they pursue PMP include, being more marketable, an easier job search, being more valuable, encouragement by co-workers, recognition, and enjoying the challenge.

LIMITATIONS

There are limitations to this study. The twenty five subjects were not selected randomly from the population of IS project managers. A randomized approach for selecting project managers may yield slightly different insights. Additionally, nineteen of the subjects had received their PMP certification. PMP certified project managers are in the best position to provide feedback on the benefits of PMP. However, they may have an overly optimistic view of the benefits. As such, these findings should be viewed with caution. This study is exploratory and lacks a theoretical framework. There is not a proven theoretical model used here. Because there was not a theoretical model, this study does not test any relationships. It provides answers to three questions, but no model is tested.

FUTURE RESEARCH

A big step forward will be the identification or the development of a theoretical model that can be used to predict the answers to these research questions. Perhaps a survey instrument can be developed to collect data and test hypotheses. Relationships that could be tested include the following: "Is PMP certification positively correlated to project manager pay?" (Koong, Liu, and Fowler, 2003) "Is PMP certification positively correlated to career

advancement?" "Is PMP certification required for career advancement?" "To what extent do companies encourage or require PMP certification?" "Are PMP certified project managers better?" And, "Are their projects more successful?"

There may be gender issues related to motivation to pursue PMP certification. This study did not find any significant differences in the comments made by female project managers compared to the male project managers. Such differences may exist and a larger sample may uncover them.

CONCLUSIONS

Twenty five structured interviews of IS project managers found answers to three central research questions, "What are the organizational benefits of PMP certification?", "What motivates project managers to pursue PMP certification?" and, " How can companies encourage their project managers to pursue PMP certification?" Content analysis of the transcripts revealed several benefits. They include an easier job search, instant credentials, providing a challenge, a higher billable rate for project managers, a common language, more satisfied and more confident project managers, and more successful projects. Factors that motivate project managers to pursue PMP certification include paying for PMI dues, paying for exam fees, encouragement by co-workers, and public recognition.

APPENDIX: Interview Script

Q: Are you a member of PMI? If so, how long have you been a member?

Q: Does your company encourage you to be a member of PMI? If so, how?

Q: What were the reasons you decided to pursue PMP certification?

Q: Are you required to pass the PMP certification exam in order to advance in your company? Explain.

Q: Does your company encourage you to pass the PMP certification exam? If so, how? Did your employer offer any incentives?

Q: Did you feel peer pressure from your coworkers to earn PMP certification?

Q: Do you find that having earned the PMP credential makes you a better project manager? Do you know more things now, as a result of studying for the exam, that make you better at your job?

Q: Is PMP certification worth the expense? Is it mandatory in today's business environment?

Q: Do you believe that having your PMP certification makes you more mobile?

REFERENCES

Aladwani, A. M. and P. C. Palvia (2002). "Developing and validating an instrument for measuring user-perceived web quality." *Information & Management 39 (6):* 467-476.

Brookshire, R. G. (2000). "Information technology certification: Is this your mission?" *Information Technology, Learning, and Performance Journal,* 18 *(2),* 1-2.

Craig, H. K. (2002). "Create a plan to earn PM credentials." *Contractor, 49 (10),* 42,52.

Craig, H. K. (2002). "PMP certification: Is it really worth anything?" *Contractor,* 49 *(5),* 42.

Duncan, W. R. (1996). *A guide to the project management body of knowledge.* Newtown Square, PA, Project Management Institute.

Duncan, W. R., J. D. Frame and E. Jenett (1994). "The PMP and the PMBOK: Common perceptions vs. PMI positions." *Project Management Journal, 25 (4),* 19-21.

Earls, A. R. (1998). "Certification and the bottom line." *Computerworld.* (April 13).

Eisenhardt, K. M. (1989). "Building theories from case study research." *Academy of Management Review, 14 (4),* 532-555.

Fried, L. (1992). "The rules of project management." *Information Systems Management, 9 (3),* 71-74.

Gaspar, S. (2003). "Tackling tough projects." *Network World, 20 (8),* 49.

Gilhooly, K. (2001). "Certifications: Who needs 'em?" *Computerworld.* (September 10).

Gottschalk, P. (2002), "Benefits from IT support in networked value shops," *Journal of International Technology and Information Management (JITIM), 11 (1),* 99-117.

Kassarjian, H. H. (1977). "Content analysis in consumer research." *Journal of Consumer Research,* 4, 8-18.

Kolbe, R. H. and M. S. Burnett (1991). "Content-analysis research: An examination of applications with directives for improving research reliability and objectivity." *Journal of Consumer Research, 18 (2),* 243-250.

Koong, K. S., L. C. Liu, and R. Fowler (2003), "Salaries of information technology managers: A trend analysis," *Journal of International Technology and Information Management (JITIM). 12 (1),* 93-106.

Linderman, J. L. and W. Schiano (2001). "Information ethics in a responsibility vacuum." *Database for Advances in Information Systems, 32 (1),* 70-74.

MacInnis, P. (2003). "What's in a name?" *Computing Canada,* 29(20), 26.

Marken, L. (1998). "Project managers." *InfoWorld, 20(40),* 113.

Martinez, E. V. (1994). "Avoiding large-scale information systems project failure: The importance of fundamentals." *Project Management Journal, 25 (2),* 17-25.

Pettersen, N. (1991). "Selecting project managers: An integrated list of predictors." *Project Management Journal, 22 (2),* 21-26.

Pierson, L., M. N. Frolick and L. Chen (2001). "Emerging issues in IT certification." *The Journal of Computer Information Systems, 42 (1),* 17.

Posner, B. Z. (1987). "What it takes to be a good project manager." *Project Management Journal, 18 (1),* 51-54.

Ray, C. M. and R. McCoy (2000). "Why certification in information systems?" *Information Technology, Learning, and Performance Journal, 18 (1),* 1.

Rothke, B. (2000). "The professional certification predicament." *Computer Security Journal, 16 (4),* 29-35.

Stewart, T. A. (1995). "The corporate jungle spawns a new species: the project manager." *Fortune, 132 (1),* 179-180.

White, G. and J. Cook (2003). "Vendor and professional certifications: Where is IT headed?" *Journal of International Technology and Information Management (JITIM), 12 (2),* 73 - 84.