Project Management Professional (PMP) Role Delineation Study

Project Management Institute

Library of Congress Cataloging-in-Publication Data

Project Management Institute.
Project management professional (PMP) role delineation study.
p. cm.
ISBN: 1-880410-29-X (alk. paper)
1. Industrial project management. I. Project Management Institute.

HD69.P75 P7617 2000
658-4'04--dc21

00-062734

ISBN: 1-880410-29-X

Published by: Project Management Institute, Inc.
Four Campus Boulevard
Newtown Square, Pennsylvania 19073-3299 USA
Phone: 610-356-4600 or Visit our website: www.pmi.org

10 9 8 7 6 5 4 3 2

Contents

Preface

The Project Management Institute (PMI®) retained Columbia Assessment Services, Inc. (CAS), of Research Triangle Park, North Carolina, to develop its certification examination for the Project Management Professional (PMP®). CAS is a professional testing company that specializes in the development and administration of licensure and certification examinations.

The major steps of examination development include:

1. Analyzing the responsibilities of PMPs
2. Specifying a plan for the test
3. Writing, reviewing, referencing, and validating questions
4. Assembling the examination
5. Deciding the score required for passing the test.

A role delineation study addresses the first two steps of examination development, and is the foundation of a fair and defensible certification examination.

Because of the high-stakes nature of the PMI certification examination, and because of PMI's goal to provide protection for consumers, it is imperative that the PMP examination be a fair examination. A fair examination is one in which the test content actually reflects what happens in Project Management, with all of the questions on the examination having been extensively reviewed by qualified PMPs, and with the passing point of the examination having been determined by a defensible process involving the professional judgment of qualified PMPs.

Analyzing the Responsibilities of Project Management Professionals

The first step in developing a certification examination is to define the profession. It must be known what PMPs actually do on the job before a test can be developed that is fair or, in more technical terms, content-valid. A content-valid examination draws questions from every important domain of the profession, while specifying that those domains of the profession that are more important, critical, and relevant should be represented by more questions on the examination.

Defining the profession of PMPs involved two major phases, one in which technical advisers defined the responsibilities of PMPs, and another in which individuals working in the Project Management field validated the responsibilities identified by the technical advisers.

Defining the responsibilities of Project Management Professionals. In 1999, in a series of meetings sponsored by PMI, technical advisers who were recognized as experts in the field of Project Management developed a comprehensive description of the work that PMPs perform. The technical advisers, working under the direction of CAS, reached consensus on the performance domains that define the profession. A performance domain is a broad category of performance, and the technical

advisers identified six domains that are important for competent performance as a PMP: Initiating the Project, Planning the Project, Executing the Project, Controlling the Project, Closing the Project, and Professional Responsibility.

Next, technical advisers defined the tasks that are important for each domain, along with statements about the knowledge and skills that are important for performing each task competently. For example, the first task identified under Initiating the Project was: Determine project goals by identifying and working with project stakeholders in order to meet their requirements, specifications, and/or expectations. These domains, tasks, and knowledge and skill statements define the profession and form the content outline for the examination.

Validating the responsibilities identified by the technical advisers. In order to ensure the validity of the study and content outline developed by the panel of technical advisers, a survey requesting feedback on the panel's work was sent to individuals working as PMPs. Surveys were distributed in the United States (U.S.)and internationally. Nine hundred and seventy-two surveys were sent to PMPs in the U.S., and 548 were returned, for a response rate of 56.4 percent. Three hundred and sixty-five surveys were sent internationally, and 278 were returned, for a response rate of 76.2 percent. These numbers represent an extremely high return rate for a survey of this type.

These 826 survey respondents evaluated the domains and tasks identified by the technical experts by evaluating their importance, criticality, and frequency on a five-point Likert-type scale. Importance was defined as the degree to which it is essential for PMPs to be competent in the domain or task in order to provide competent service. Criticality was the degree to which incompetence in the domain or task could bring about harm. Frequency was defined as the percent of projects on which PMPs would perform duties associated with each domain.

Specifying a plan for the test. Based on the ratings of the 826 survey respondents, a test blueprint was developed. A test blueprint specifies exactly how many questions from each domain and task should be on the certification examination. Naturally, those domains and tasks that were rated as most important, critical, and relevant by survey respondents would have the most questions devoted to them on the examination.

Results of the study indicated that the 200 questions on the test should be distributed among the following domains.

Domains	The number of items for each domain is:
I. Initiating the Project	17
II. Planning the Project	47
III. Executing the Project	47
IV. Controlling the Project	46
V. Closing the Project	14
VI. Professional Responsibility	29

Differences in the *Role Delineation Study* and the *PMBOK® Guide*

A Guide to the Project Management Body of Knowledge (PMBOK® Guide) is recognized as a global standard by the Project Management community. As a standard, it identifies and describes Project Management knowledge or practices that are applicable to projects. The *PMBOK® Guide* is the recognized reference source for anyone interested in the Project Management profession, and should be used to gain an understanding of Project Management knowledge that is needed to perform the tasks described in the *Role Delineation Study*.

The *Role Delineation Study* defines the profession of Project Management in terms of performance domains, tasks that are performed within the performance domains, and the knowledge and skills

needed to perform the tasks. The *PMBOK® Guide* covers the profession of Project Management, and provides specific content that could be helpful in answering specific questions on the certification examination.

While the *Role Delineation Study* and the *PMBOK® Guide* necessarily overlap, it is important to note that the PMPs involved in the creation of the *Role Delineation Study* were not bound by the *PMBOK® Guide*. They were charged with defining the profession of Project Management, and to use their experience and pertinent resources to help in their task. Therefore, many of the domains, tasks, knowledge, and skills outlined by the *Role Delineation Study* are also covered by the *PMBOK® Guide*, but some are unique to the *Role Delineation Study*.

For example, the six domains defined in the *Role Delineation Study* are very similar to the five process groups that are defined in the *PMBOK® Guide*, with one notable difference. The five process groups in the *PMBOK® Guide* are: Initiating Processes, Planning Processes, Executing Processes, Controlling Processes, and Closing Processes. Since the PMPs involved in the *Role Delineation Study* were not bound by the *PMBOK® Guide* in developing the performance domains, the similarities in the performance domains of the *Role Delineation Study* and the process groups of the *PMBOK® Guide* may be seen as further validation as to the value of the *PMBOK® Guide* in defining the profession.

The notable difference in the *Role Delineation Study* and the *PMBOK® Guide* is the addition of the performance domain, "Professional Responsibility," in the *Study*. Professional Responsibility is a domain that covers such aspects of the profession as legal, ethical, and professional behavior. This is a domain that is common to many role delineation studies of differing professions, and the technical advisers to the *Role Delineation Study*, with advice and guidance from CAS, decided to include this domain in the *Study*. The *PMBOK® Guide* addresses these issues throughout the guide, of course, but not as a separate process group.

The candidate studying for the certification examination may use the *PMBOK® Guide* as a basis for his or her studies, but would be well advised to read other resources and seek professional experience before attempting to pass the certification examination.

Introduction

In May 1999, a panel of eleven experts assembled by the Project Management Institute (PMI) met with representatives from Columbia Assessment Services, Inc. (CAS) to delineate the field of Project Management.

The major function of the PMI credentialing program is to promote professionalism in the field of Project Management. It provides a measure of assurance that the Project Management Professional (PMP) has an acceptable level of knowledge to provide Project Management services to clients.

The development of a quality credentialing or licensing program must follow certain logically sound and legally defensible procedures for developing examinations. These principles and procedures are outlined in federal regulation, such as *Uniform Guidelines on Employee Selection Procedures,* and manuals, such as *Standards for Educational and Psychological Testing* (1999). CAS adheres to these standards in developing examinations for credentialing programs, including the PMI certification program.

Before a content-valid certification examination is developed, the knowledge and skills needed to provide services must be determined. The process for identifying these areas is a role delineation, or job analysis, which serves as a blueprint for examination development. The job analysis also helps to determine the type of examination, such as written or practical, to be developed in order to assess level of knowledge and application.

The critical reason for conducting a role delineation study is to ensure that an examination is content-valid. Content validity is the most commonly applied and accepted validation strategy utilized in establishing certification programs today. In psychometric terms, validation is the way a test developer documents that the level of knowledge and application to be inferred from a test score is actually measured by the examination. A content-valid examination, then, appropriately evaluates knowledge or skills required to function as a practitioner in the field. A content-valid examination contains a representative sample of items that measure the knowledge or skills contained in the profession being tested.

Thus, a role delineation study is an integral part of ensuring that an examination is content-valid, that the aspects of the profession covered on the examination reflect the tasks performed in practice settings. For both broad content areas and tasks, the study identified their importance, criticality, and frequency. These ratings played an important role in determining the content of the examination.

The role delineation study for PMI consisted of the following four phases, which are the focus of this *Study:*

1. *Initial Development and Validation.* The thirteen-member Role Delineation Panel identified the domains, tasks, knowledge, and skills essential to the performance of a PMP.

2. *Pilot Study.* Two pilot role delineation studies were conducted during June and July 1999 in preparation for the full-scale study.

3. *Validation Study. A* representative sample of professionals in the field of Project Management reviewed and validated the work of the Role Delineation Panel.

4. Development of Test Specifications. Based on the ratings gathered from the representative sample of professionals, the test specifications for the certification examination were developed.

The following Project Management Professionals served as the Role Delineation Panel: MaryGrace T. Allenchey, Alan L. Brumagim, Gloria S. Gleave, Eric Glover, Susan M. Hardesty, A. C. Hollins, John W. Pearson, Murielle Piche, John E. St. Lawrence, Sunder S. Thakur, and Ronald P. C. Waller.

Phase I:
Initial Development and Evaluation

The first steps in analyzing the profession of the Project Management Professional (PMP) were the identification of the major content areas or domains, the listing of tasks performed under each domain, and the identification of the knowledge and skills associated with each task.

In May 1999, the Project Management Institute assembled a thirteen-member panel of subject-matter experts in the Project Management field to discuss the role of the PMP. The panel members represented a variety of practice settings, geographic regions, and both genders. The following steps were undertaken to complete Phase I:

1. The panel determined that the profession could be divided into six major content areas, or performance domains. These performance domains are:

- Initiating the Project
- Planning the Project
- Executing the Project
- Controlling the Project
- Closing the Project
- Professional Responsibility.

2. Next, the panel delineated the tasks in each of the six domains. The panel subsequently generated a list of knowledge and skills required to perform each task.

3. The panel members then evaluated each performance domain and task, rating each on importance and criticality to the PMP and the frequency with which the activities associated with each domain and task are performed.

Based on the work of the Role Delineation Panel, a pilot survey was developed and sent to professionals in the field of Project Management. The results of the pilot survey are the focus of Phase II.

Phase II: Pilot Study

In conducting the first pilot study, Columbia Assessment Services, Inc. (CAS) received a sample of 218 names of individuals from the Project Management profession. The Project Management Institute supplied these names. CAS sent surveys to each of these individuals and received thirty-two usable responses, a return rate of 14.7 percent. In order to improve the response rate and further clarify the survey, a second study was conducted in July 1999. From a group of 107 Project Management Professionals, CAS received twenty-eight usable responses, a 26.2 percent return rate.

All of the domains and task statements were validated during the pilot studies, with almost all of the ratings falling above the scale midpoint. This indicated that no changes needed to be made to the domains or task statements. Many survey respondents offered various comments about the survey, and these were considered when the final survey was assembled. The results of the final survey are the focus of Phase III.

Phase III: Validation Study

Questionnaire Design and Distribution

Using the domains and tasks identified by the Role Delineation Panel, Columbia Assessment Services, Inc. (CAS) developed an eleven-page questionnaire to be completed by a nationwide sample of professionals in the field of Project Management. CAS distributed the questionnaire to 1,337 professionals to evaluate, validate, and provide feedback on the Role Delineation Panel's domain and task lists. The questionnaire also solicited biographical information from the respondents in order to ensure a representative response and completion by appropriately qualified individuals.

Of the 1,337 questionnaires distributed, 826 usable responses were returned to CAS, for a return rate of 61.8 percent. Questionnaires were distributed in the United States (U.S.) and internationally. Nine hundred and seventy-two surveys were sent to Project Management Professionals (PMPs) in the U.S., and 548 were returned, for a response rate of 56.4 percent. Three hundred and sixty-five questionnaires were sent internationally, and 278 were returned, for a response rate of 76.2 percent.

Who Responded to the Survey?

As reflected in the demographic data and graphs on the following pages, the survey respondents represent a diverse population from around the world. As shown in the charts, over 73 percent of the respondents are between the ages of thirty-one and fifty, and a majority of the respondents hold advanced degrees. In addition, while a majority of the respondents are from the U.S., respondents from six continents and twenty-nine countries also participated in the survey.

Note: A few of the categories were either combined with other categories or deleted from consideration because of the small number of respondents who endorsed those categories. In addition, since not every respondent answered every demographic question, the total number of responses listed in some of the charts for some of the demographic questions is less than 826.

AGE		
	Frequency	**Percent**
21–30	30	3.6%
31–40	232	28.1%
41–50	373	45.2%
51–60	180	21.8%
61+	11	1.3%
Total	**826**	**100.0%**

HIGHEST EDUCATION LEVEL COMPLETED*		
	Frequency	**Percent**
High School	5	0.5%
Some College/University	70	8.5%
Bachelor's Degree	304	36.8%
Master's Certificate	75	9.1%
Master's Degree	359	43.5%
Doctorate	13	1.6%
Total	**826**	**100.0%**

"Included in the totals are the equivalent degrees from countries other than the United States.

PLACE OF RESIDENCE		
	Frequency	**Percent**
Asia and the Pacific Region	78	10.2%
Central and South America	13	1.7%
Europe	41	5.3%
Middle East and Africa	10	1.3%
United States and Canada	626	81.5%
Total	**768**	**100.0%**

Survey respondents were also asked about their work experiences. While the majority of respondents have been certified as PMPs for less than three years, their actual years of experience as PMPs vary widely. The majority of respondents identified their current position as Project Manager (57.2 percent), and a majority of respondents indicated that their primary industry affiliation is Information Technology (66.3 percent). In addition, a majority of survey respondents indicated that they received between $70,000 and $109,999 (U.S. dollars) as annual income from Project Management activities.

Survey respondents were also asked if the majority of their projects were for one business/organization, or whether the majority of their projects were for multiple businesseslorganizations.Forty-eight percent of respondents indicated that they worked primarily for one business or organization, while 52 percent of the respondents indicated that they worked for multiple businesses or organizations.

YEARS OF EXPERIENCE IN PROJECT MANAGEMENT		
	Frequency	**Percent**
0–5	97	11.8%
6–9	178	21.6%
10–14	238	28.8%
15–19	171	20.7%
20–24	78	9.5%
25+	63	7.6%
Total	**825**	**100.0%**

YEARS CERTIFIED AS A PMP		
	Frequency	**Percent**
0–2	575	70.0%
3–5	207	25.2%
6–9	35	4.3%
10–14	4	0.5%
Total	**821**	**100.0%**

PRIMARY INDUSTRY AFFILIATION		
	Frequency	**Percent**
Construction	42	5.1%
Manufacturing	13	1.6%
Natural Resources	4	0.5%
Engineering	81	9.8%
Management	15	1.8%
Information Technology	547	66.3%
Training/Consulting	33	4.0%
Finance/Banking	10	1.2%
Telecommunications	51	6.2%
Other	29	3.5%
Total	**825**	**100.0%**

CURRENT POSITION WITHIN ORGANIZATION		
	Frequency	**Percent**
Senior Management1 Program Officer	196	23.8%
Project Manager	471	57.2%
Project Team Member/Leader/ Scheduler, etc.	70	8.5%
Consultant1 Trainer: College1 University Faculty	72	8.7%
Other	15	1.8%
Total	**824**	**100.0%**

ANNUAL INCOME FROM PROJECT MANAGEMENT		
	Frequency	**Percent**
Less than $30,000	20	2.5%
$30,000–$49,999	25	3.1%
$50,000–$69,999	110	13.7%
$70,000–$89,999	246	30.6%
$90,000–$109,999	230	28.6%
$110,000–$129,999	98	12.2%
$130,000+	75	9.3%
Total	**804**	**100.0%**

Evaluation of Performance Domains

Survey respondents' evaluations. The survey respondents were asked to evaluate each performance domain and task, rating each on importance, criticality, and frequency. A five-point scale was used for the importance and criticality ratings, with a "5" representing the highest rating. The scale anchors for importance and criticality are listed here as a reference. For the frequency ratings, survey respondents were asked to estimate the percentage of projects on which a Project Management Professional (PMP) would perform the activities associated with the particular domain being rated.

Importance Ratings

1. *Not Important.* Performance of tasks in this domain is not essential to the job performance of the PMP.

2. *Of Little Importance.* Performance of tasks in this domain is minimally essential to the job performance of the PMP.

3. *Important.* Performance of tasks in this domain is moderately essential to the job performance of the PMP.

4. *Very Important.* Performance of tasks in this domain is clearly essential to the job performance of the PMP.

5. *Extremely Important.* Performance of tasks in this domain is absolutely essential to the job performance of the PMP.

As depicted in the following charts, survey respondents indicated that Domain II (Planning the Project) is the most important of the three domains. Domain IV (Controlling the Project) was considered the second-most important, followed by Domain III (Executing the Project).

Domain	IMPORTANCE				
	Sample Size (N)	Mean	Range of Response	Standard Error of Mean	Standard Deviation
I. Initiating the Project	813	3.61	1–5	.03	.99
II. Planning the Project	813	4.62	1–5	.02	.62
III. Executing the Project	813	4.16	1–5	.03	.74
IV. Controlling the Project	813	4.37	1–5	.02	.67
V. Closing the Project	813	3.29	1–5	.03	.79
VI. Professional Responsibility	811	3.84	1–5	.03	.93

Criticality Ratings

1. *No Harm.* Inability to perform tasks in this domain would have no adverse consequences.

2. *Minimal Harm.* Inability to perform tasks in this domain would lead to error with minimal adverse consequences.

3. *Moderate Harm.* Inability to perform tasks in this domain would lead to error with moderate adverse consequences.

4. *Significant Harm.* Inability to perform tasks in this domain would lead to error with major adverse consequences.

5. *Extreme Harm.* Inability to perform tasks in this domain would lead to error with severe adverse consequences.

The respondents answered in the same pattern as they had for the importance ratings, with Domain II rated as the most critical domain, followed by Domain IV and Domain III. In addition, survey respondents rated Domain V (Closing the Project) below the scale midpoint of 3 (Moderate Harm). However, further analysis indicates that 57.0 percent of respondents gave it a rating of 3, 4, or 5, indicating that a majority of respondents felt that the inability to perform tasks in this domain would lead to at least moderate adverse consequences.

Domain	CRITICALITY				
	Sample Size (N)	Mean	Range of Response	Standard Error of Mean	Standard Deviation
I. Initiating the Project	807	3.24	1–5	.04	1.09
II. Planning the Project	807	4.30	1–5	.03	.77
III. Executing the Project	807	4.15	1–5	.03	.75
IV. Controlling the Project	807	4.24	1–5	.03	.75
V. Closing the Project	807	2.74	1–5	.03	.88
VI. Professional Responsibility	805	3.45	1–5	.03	.98

Frequency Ratings

Respondents were also asked to estimate the percent of projects on which PMPs would perform duties associated with each domain. Again, Domains II, III, and IV received the highest ratings, though in a different pattern than the ratings for importance and criticality. For the frequency ratings, Domain III received the highest ratings, followed by Domains IV and II.

Domain	FREQUENCY				
	Sample Size (N)	Mean	Range of Response	Standard Error of Mean	Standard Deviation
I. Initiating the Project	790	32.19	1-5	1.11	31.32
II. Planning the Project	789	53.13	1-5	1.20	33.79
III. Executing the Project	792	61.09	1-5	1.18	33.24
IV. Controlling the Project	791	56.08	1-5	1.22	34.45
V. Closing the Project	788	35.23	1-5	1.16	32.59
VI. Professional Responsibility	784	50.02	1-5	1.41	39.60

Panel Members' Evaluation versus Respondents' Evaluations. The evaluations of domains by the panel members were compared to the evaluations by the survey respondents to ensure that the results were similar. As depicted in the following graph, both groups rated the importance of the domains similarly. While there were minor variations between the two groups, both the panel and the respondents rated Domains II, III, and IV as the most important domains.

Domain	IMPORTANCE		
	Survey	Panel	Difference
I. Initiating the Project	3.61	3.69	-0.08
II. Planning the Project	4.62	4.54	0.12
III. Executing the Project	4.16	4.69	-0.53
IV. Controlling the Project	4.37	4.69	-0.32
V. Closing the Project	3.29	3.62	-0.33
VI. Professional Responsibility	3.84	3.38	0.46

The two groups ranked the criticality of the domains similarly as well. Again, Domains II, III, and IV were rated as the most critical by both groups.

Domain	CRITICALITY		
	Survey	Panel	Difference
I. Initiating the Project	3.24	3.69	–0.45
II. Planning the Project	4.30	4.31	–0.01
III. Executing the Project	4.15	4.46	–0.31
IV. Controlling the Project	4.24	4.08	0.16
V. Closing the Project	2.74	3.08	–0.34
VI. Professional Responsibility	3.45	3.00	0.45

Survey Respondent Subgroups' Evaluations. When using a survey to collect information regarding a profession, the possibility that individuals in various settings may have differing views of the profession is to be expected. Finding differences in domain or task ratings among the various subgroups would indicate that one should not generalize the survey results from one subgroup to another. With this in mind, the responses of specific subgroups were compared. These comparisons found that the responses of the various subgroups did not vary significantly.

The following charts reflect the similarities in responses of the specific subgroups of respondents. Only minor variations occurred between the ratings of the different domains. The most significant variations in ratings occurred with the frequency ratings. However, further examination of these results indicates that the pattern of responses tended to be the same. For example, when comparing the responses of individuals from different continents, the same pattern of results held. Groups of individuals from Asia and the Pacific Region, Europe, and North America gave the highest frequency ratings to Domain III, followed by Domain IV, Domain II, Domain VI, Domain V, and Domain I. The similarity in the ratings provides support for generalizing from the survey results to the general population of PMPs.

AGE

Domain	IMPORTANCE				
	21–30	31–40	41–50	51–60	61+
I. Initiating the Project	3.3	3.6	3.6	3.7	4.1
II. Planning the Project	4.7	4.6	4.7	4.6	4.6
III. Executing the Project	4.0	4.2	4.2	4.1	4.1
IV. Controlling the Project	4.3	4.3	4.4	4.4	4.5
V. Closing the Project	3.1	3.3	3.3	3.3	3.3
VI. Professional Responsibility	3.8	3.9	3.8	3.9	4.1

Domain	CRITICALITY				
	21–30	31–40	41–50	51–60	61+
I. Initiating the Project	3.1	3.2	3.3	3.3	3.5
II. Planning the Project	4.5	4.2	4.3	4.3	4.3
III. Executing the Project	4.0	4.2	4.2	4.1	3.8
IV. Controlling the Project	4.3	4.2	4.3	4.2	4.5
V. Closing the Project	2.4	2.7	2.8	2.7	2.9
VI. Professional Responsibility	3.4	3.4	3.4	3.5	3.7

Domain	FREQUENCY				
	21–30	31–40	41–50	51–60	61+
I. Initiating the Project	26.0	33.8	32.9	29.8	28.3
II. Planning the Project	47.7	52.1	55.6	50.3	53.3
III. Executing the Project	50.5	59.1	63.1	60.8	65.5
IV. Controlling the Project	43.8	55.6	57.0	56.6	59.5
V. Closing the Project	31.1	32.9	37.4	33.8	43.9
VI. Professional Responsibility	47.1	48.5	51.1	49.7	55.6

EDUCATION

Domain	IMPORTANCE		
	Less than Bachelor's	Bachelor's	Advanced
I. Initiating the Project	3.6	3.6	3.6
II. Planning the Project	4.6	4.6	4.6
III. Executing the Project	4.2	4.1	4.2
IV. Controlling the Project	4.4	4.3	4.4
V. Closing the Project	3.3	3.3	3.3
VI. Professional Responsibility	4.0	3.8	3.9

Domain	CRITICALITY		
	Less than Bachelor's	Bachelor's	Advanced
I. Initiating the Project	3.3	3.3	3.3
II. Planning the Project	4.2	4.3	4.3
III. Executing the Project	4.1	4.1	4.2
IV. Controlling the Project	4.2	4.2	4.3
V. Closing the Project	2.7	2.7	2.8
VI. Professional Responsibility	3.5	3.4	3.5

Domain	FREQUENCY		
	Less than Bachelor's	Bachelor's	Advanced
I. Initiating the Project	23.5	30.2	35.0
II. Planning the Project	**44.9**	51.5	55.9
III. Executing the Project	51.6	57.5	65.1
IV. Controlling the Project	48.8	53.3	59.2
V. Closing the Project	26.3	34.8	37.0
VI. Professional Responsibility	40.1	47.5	53.4

PLACE OF RESIDENCE

Domain	IMPORTANCE		
	Asia and the Pacific Region	Europe	North America
I. Initiating the Project	3.7	3.7	3.6
II. Planning the Project	4.7	4.6	4.6
III. Executing the Project	3.9	4.1	4.2
IV. Controlling the Project	4.2	4.5	4.4
V. Closing the Project	3.3	3.2	3.3
VI. Professional Responsibility	3.7	3.7	3.8

Domain	CRITICALITY		
	Asia and the Pacific Region	Europe	North America
I. Initiating the Project	3.5	3.6	3.2
II. Planning the Project	4.4	4.4	4.3
III. Executing the Project	4.1	4.0	4.2
IV. Controlling the Project	4.2	4.4	4.2
V. Closing the Project	2.9	2.8	2.7
VI. Professional Responsibility	3.4	3.5	3.4

Domain	FREQUENCY		
	Asia and the Pacific Region	Europe	North America
I. Initiating the Project	27.7	25.6	32.9
II. Planning the Project	47.2	50.0	53.8
III. Executing the Project	51.0	55.6	62.7
IV. Controlling the Project	47.9	52.2	57.2
V. Closing the Project	30.9	30.9	35.9
VI. Professional Responsibility	41.0	44.8	52.3

YEARS OF EXPERIENCE IN THE FIELD OF PROJECT MANAGEMENT

Domain	IMPORTANCE					
	0–5	6–9	10–14	15–19	20–24	25+
I. Initiating the Project	3.5	3.5	3.7	3.6	3.9	3.7
II. Planning the Project	4.7	4.6	4.6	4.7	4.6	4.7
III. Executing the Project	4.1	4.3	4.1	4.2	4.1	4.0
IV. Controlling the Project	4.2	4.4	4.4	4.4	4.4	4.4
V. Closing the Project	3.2	3.3	3.3	3.3	3.4	3.2
VI. Professional Responsibility	3.9	3.8	3.8	3.8	3.9	3.9

Domain	CRITICALITY					
	0–5	6–9	10–14	15–19	20–24	25+
I. Initiating the Project	3.3	3.1	3.3	3.3	3.4	3.2
II. Planning the Project	4.4	4.2	4.3	4.3	4.5	4.2
III. Executing the Project	4.1	4.2	4.2	4.2	4.0	4.0
IV. Controlling the Project	4.2	4.3	4.3	4.3	4.1	4.4
V. Closing the Project	2.6	2.8	2.8	2.8	2.8	2.5
VI. Professional Responsibility	3.5	3.4	3.4	3.5	3.5	3.5

Domain	FREQUENCY					
	0–5	6–9	10–14	15–19	20–24	25+
I. Initiating the Project	34.4	29.4	34.3	32.2	32.5	27.7
II. Planning the Project	53.3	52.7	52.9	55.3	52.8	48.8
III. Executing the Project	58.0	61.2	63.4	62.6	59.37	56.7
IV. Controlling the Project	52.5	56.2	56.9	58.3	53.2	55.2
V. Closing the Project	36.5	34.2	35.9	34.4	37.7	32.2
VI. Professional Responsibility	50.7	48.4	49.2	50.6	58.8	44.5

YEARS CERTIFIED AS A PMP

Domain	IMPORTANCE		
	0–2	*3–5*	*6–9*
I. Initiating the Project	3.6	3.7	3.6
II. Planning the Project	4.6	4.6	4.7
III. Executing the Project	4.2	4.2	4.1
IV. Controlling the Project	4.4	4.3	4.3
V. Closing the Project	3.3	3.3	3.6
VI. Professional Responsibility	3.8	3.9	3.9

Domain	CRITICALITY		
	0–2	*3–5*	*6–9*
I. Initiating the Project	3.3	3.2	3.4
II. Planning the Project	4.3	4.2	4.3
III. Executing the Project	4.2	4.1	4.2
IV. Controlling the Project	4.2	4.2	4.3
V. Closing the Project	2.7	2.7	3.2
VI. Professional Responsibility	3.4	3.5	3.5

Domain	FREQUENCY		
	0–2	*3–5*	*6–9*
I. Initiating the Project	30.4	36.4	36.3
II. Planning the Project	51.7	57.0	54.7
III. Executing the Project	59.4	66.4	59.1
IV. Controlling the Project	55.2	59.9	50.9
V. Closing the Project	33.1	41.5	34.4
VI. Professional Responsibility	48.3	54.9	50.3

PRIMARY INDUSTRY AFFILIATION

Domain	IMPORTANCE			
	Construction	Engineering	Information Technology	Finance/ Banking
I. Initiating the Project	3.3	3.8	3.6	3.5
II. Planning the Project	4.6	4.7	4.6	4.7
III. Executing the Project	4.0	4.1	4.2	4.1
IV. Controlling the Project	4.1	4.3	4.4	4.4
V. Closing the Project	3.0	3.3	3.3	3.2
VI. Professional Responsibility	3.7	3.8	3.8	4.1

Domain	CRITICALITY			
	Construction	Engineering	Information Technology	Finance1 Banking
I. Initiating the Project	3.1	3.5	3.3	3.2
II. Planning the Project	4.2	4.2	4.3	4.3
III. Executing the Project	4.0	4.1	4.2	4.0
IV. Controlling the Project	4.1	4.0	4.3	4.3
V. Closing the Project	2.7	2.7	2.8	2.7
VI. Professional Responsibility	3.2	3.4	3.4	3.5

Domain	FREQUENCY			
	Construction	Engineering	Information Technology	Finance1 Banking
I. Initiating the Project	19.8	41.4	32.6	29.1
II. Planning the Project	53.0	57.0	53.4	55.1
III. Executing the Project	57.0	68.6	61.3	59.8
IV. Controlling the Project	56.2	59.0	57.0	56.2
V. Closing the Project	30.6	41.1	35.3	36.7
VI. Professional Responsibility	46.8	56.9	48.9	50.3

CURRENT POSITION WITHIN ORGANIZATION

Domain	IMPORTANCE			
	Senior Management	Project Manager	Project Team Member	Consultant/ Trainer
I. Initiating the Project	3.6	3.6	3.7	3.7
II. Planning the Project	4.6	4.6	4.6	4.7
III. Executing the Project	4.2	4.2	4.0	4.1
IV. Controlling the Project	4.3	4.4	4.1	4.4
V. Closing the Project	3.3	3.3	3.2	3.2
VI. Professional Responsibility	3.8	3.8	4.2	3.9

Domain	CRITICALITY			
	Senior Management	Project Manager	Project Team Member	Consultant/ Trainer
I. Initiating the Project	3.2	3.2	3.3	3.4
II. Planning the Project	4.3	4.3	4.3	4.4
III. Executing the Project	4.1	4.1	4.1	4.2
IV. Controlling the Project	4.2	4.3	4.0	4.3
V. Closing the Project	2.7	2.8	2.9	2.8
VI. Professional Responsibility	3.4	3.5	3.5	3.6

Domain	FREQUENCY			
	Senior Management	Project Manager	Project Team Member	Consultant1 Trainer
I. Initiating the Project	28.2	33.3	27.1	37.1
II. Planning the Project	48.9	54.4	43.9	59.6
III. Executing the Project	59.8	61.2	49.5	69.1
IV. Controlling the Project	53.2	57.2	44.6	64.2
V. Closing the Project	32.6	35.6	31.4	40.6
VI. Professional Responsibility	45.9	50.6	46.9	58.1

ANNUAL INCOME FROM PROJECT MANAGEMENT

Domain	IMPORTANCE					
	0–49,999	50,000–69,999	70,000–89,999	90,000–109,999	110,000–129,999	130,000+
I. Initiating the Project	3.6	3.5	3.7	3.5	3.7	3.8
II. Planning the Project	4.6	4.6	4.7	4.5	4.5	4.6
III. Executing the Project	4.1	4.1	4.2	4.2	4.2	4.0
IV. Controlling the Project	4.4	4.3	4.4	4.4	4.3	4.3
V. Closing the Project	3.4	3.2	3.3	3.3	3.2	3.5
VI. Professional Responsibility	4.0	3.9	3.8	3.8	3.9	3.8

Domain	CRITICALITY					
	0–49,999	50,000–69,999	70,000–89,999	90,000–109,999	110,000–129,999	130,000+
I. Initiating the Project	3.3	3.2	3.3	3.2	3.3	3.4
II. Planning the Project	4.3	4.3	4.3	4.2	4.3	4.4
III. Executing the Project	4.3	4.0	4.1	4.2	4.3	4.1
IV. Controlling the Project	4.3	4.1	4.3	4.2	4.3	4.2
V. Closing the Project	2.9	2.6	2.7	2.8	2.7	2.8
VI. Professional Responsibility	3.7	3.5	3.5	3.4	3.4	3.3

Domain	FREQUENCY					
	0–49,999	*50,000–69,999*	*70,000–89,999*	*90,000–109,999*	*110,000–129,999*	130,000+
I. Initiating the Project	26.4	29.5	32.3	35.4	34.7	26.9
II. Planning the Project	47.4	53.5	52.7	57.8	52.7	44.4
III. Executing the Project	57.3	55.6	59.6	67.4	65.3	53.0
IV. Controlling the Project	48.3	55.2	55.8	61.0	60.0	45.3
V. Closing the Project	34.9	32.6	34.1	40.8	36.9	25.6
VI. Professional Responsibility	49.5	50.0	48.4	55.1	51.6	38.9

SOURCE OF MAJORITY OF PROJECTS

Domain	IMPORTANCE	
	One Business1 Organization	Multiple Businesses1 Organizations
I. Initiating the Project	3.5	4.7
II. Planning the Project	4.6	4.6
III. Executing the Project	4.2	4.1
IV. Controlling the Project	4.4	4.4
V. Closing the Project	3.3	3.3
VI. Professional Responsibility	3.8	3.9

Domain	CRITICALITY	
	One Business/ Organization	Multiple Businesses/ Organizations
I. Initiating the Project	3.2	3.3
II. Planning the Project	4.2	4.4
III. Executing the Project	4.2	4.1
IV. Controlling the Project	4.3	4.2
V. Closing the Project	2.7	2.8
VI. Professional Responsibility	3.4	3.5

Domain	FREQUENCY	
	One Business1 Organization	Multiple Businesses1 Organizations
I. Initiating the Project	30.8	33.8
II. Planning the Project	52.0	54.6
III. Executing the Project	60.3	62.0
IV. Controlling the Project	55.8	56.4
V. Closing the Project	35.1	35.7
VI. Professional Responsibility	49.6	50.5

Summary of Results

As shown in the charts on the preceding pages, the survey respondents indicated that all domains are important. On a scale of 1 to 5, three of the domains had average importance ratings above the scale midpoint of 3, and three of the domains had average importance ratings above 4 (Very Important).

Similarly, the respondents considered all the domains to be critical. Again, three of the domains had average criticality ratings above 4, which means that incompetent performance of tasks in those domains could result in Significant to Extreme Harm to the client, the PMP, the public, and so on. Two of the domains had average criticality ratings above the scale midpoint of **3.** One domain, Closing the Project, had a criticality rating below the scale midpoint. However, over 50 percent of the survey respondents gave that domain a criticality rating above the midpoint of the scale, indicating that a majority of the survey respondents felt that lack of knowledge of the tasks in that domain could lead to at least Moderate Harm. In addition, the survey respondents indicated that the tasks of each domain were performed in at least 30 percent of their projects.

The order in which the domains were ranked was similar for importance and criticality. Domain II (Planning the Project) received the highest ratings, followed by Domain IV (Controlling the Project), Domain III (Executing the Project), and Domain VI (Professional Responsibility). The order in which the domains were ranked for frequency was slightly different, with Domain III (Executing the Project) receiving the highest ratings. However, the top three domains, as ranked by frequency ratings, were the same as the top three domains when ranked by importance or criticality ratings.

Conclusion

The results of the survey validate the results of the Role Delineation Panel. This conclusion means that the domains, tasks, knowledge, and skills developed by the Role Delineation Panel constitute an accurate definition of the work of a credentialed PMP.

Based on a psychometric analysis of the tasks, knowledge, and skills identified by the Role Delineation *Study*, level of knowledge and application in Project Management can best be assessed by a written examination.

Phase IV: Test Specifications

The final phase of a role delineation study is the development of test specifications that identify the proportion of questions from each domain and task that will appear on the certification examination. Test specifications are developed by combining the overall evaluations of importance, criticality, and frequency and by converting the results into percentages. These percentages are used to determine the number of questions related to each domain and task that should appear on the multiple-choice format examination.

Domain	TEST BLUEPRINT	
	% of Test	# of Items on Test
I. Initiating the Project	8.5%	17
II. Planning the Project	23.5%	47
III. Executing the Project	23.5%	47
IV. Controlling the Project	23.0%	46
V. Closing the Project	7.0%	14
VI. Professional Responsibility	14.5%	29
Total	100.0%	200

Domains, Tasks, and Knowledge and Skill Statements

This section of the report contains the domains, tasks, and knowledge and skill statements as delineated by the Role Delineation Panel.

Domain I: Initiating the Project

Domain II: Planning the Project

Domain III: Executing the Project

Domain IV: Controlling the Project

Domain V: Closing the Project

Domain VI: Professional Responsibility

Performance Domain I: Initiating the Project

Evaluation and Allocation of Questions for Domain I.

Task	RATINGS				
	Importance	Criticality	Frequency	% of Items on Test	# of Items on Test
1	4.5	4.1	3.8	1.0%	2
2	4.4	4.2	3.8	1.0%	2
3	3.6	3.4	3.5	0.5%	1
4	3.8	3.5	3.4	0.5%	1
5	3.8	3.6	3.5	1.0%	2
6	3.6	3.3	3.2	0.5%	1
7	3.7	3.6	3.4	1.0%	2
8	4.0	3.8	3.7	1.0%	2
9	4.3	4.1	3.9	1.0%	2
10	4.0	3.6	3.5	1.0%	2
			Total	8.5%	17

Tasks and Knowledge and Skill Statements for Domain I

1. Determine project goals by identifying and working with project stakeholders in order to meet their requirements, specifications, and/or expectations.

Knowledge of:

a. Effective communication techniques
b. Interviewing techniques
c. Facilitation techniques
d. Analysis techniques
e. Stakeholders
f. Available requirements (Input)
g. Available specifications
h. Available expectations

Skill in:
i. Interviewing
j. Facilitating meetings
k. Communicating effectively
I. Gathering, assessing, and integrating information

2. Determine product or service deliverables by reviewing or generating the scope of work, requirements, and/or specifications to meet stakeholder expectations.

Knowledge of:
a. Effective communication techniques
b. Interviewing techniques
c. Facilitation techniques
d. Analysis techniques
e. Stakeholders
f. Scope of work
g. Available requirements
h. Available specifications
i. Stakeholder expectations

Skill in:
j. Interviewing
k. Facilitating meetings
l. Communicating effectively
m. Gathering, assessing, and integrating information

3. Determine project management process outputs by applying appropriate practices, tools, and methodologies to ensure required productlservice delivery.

Knowledge of:
a. Project management processes
b. Project management practices
c. Project management outputs
d. Project management methodologies
e. Project management tools
f. Required productlservice delivery

Skill in:
g. Interviewing
h. Facilitating meetings
i. Communicating effectively
j. Gathering, assessing, and integrating information
k. Using selected tools
l. Applying appropriate practices and methodologies

4. Document project constraints through coordination with stakeholders and review of policies and procedures to ensure compliance.

Knowledge of:
a. Client policies and procedures
b. Effective communication techniques
c. Interview techniques
d. Facilitation techniques
e. Analysis techniques

Skill in:
f. Interviewing
g. Facilitating meetings

h. Communicating effectively
i. Gathering, assessing, and integrating information
j. Writing effectively

5. Document assumptions by determining information that must be validated, or situations to be controlled during the project in order to facilitate the project planning process.

Knowledge of:
a. Effective communication techniques
b. Interview techniques
c. Facilitation techniques
d. Analysis techniques
e. Negotiation techniques
f. Project planning process
g. Available information

Skill in:
h. Interviewing
i. Facilitating meetings
j. Communicating effectively
k. Negotiating
l. Gathering, assessing, and integrating information
m. Writing effectively
n. Recognizing information gaps

6. Define the project strategy by evaluating alternative approaches to meet stakeholder requirements, specifications, and/or expectations.

Knowledge of:
a. Analysis techniques
b. Communication techniques
c. Project requirements and objectives
d. Stakeholder expectations
e. Interviewing techniques
f. Negotiating techniques

Skill in:
g. Decision-making
h. Gathering, assessing, and integrating information
i. Interviewing
j. Negotiating
k. Writing persuasively
l. Communicating effectively

7. Identify performance criteria by referring to product/service specifications and process standards in order to ensure and/or support the quality assurance effort.

Knowledge of:
a. Analysis techniques
b. Communication techniques
c. Project requirements and objectives
d. Stakeholder expectations
e. Interviewing techniques
f. Negotiating techniques
g. Quality assurance standards and techniques
h. Performance criteria
i. Process standards
j. Product/service specifications

Skill in:
k. Developing and writing standards
l. Gathering, assessing, and integrating information
m. Interviewing
n. Making decisions
o. Negotiating
p. Writing performance criteria
q. Developing project timelines

8. Determine key resource requirements by referring to deliverables in order to support planning and decision-making.

Knowledge of:
a. Analysis techniques
b. Communication techniques
c. Project requirements and objectives
d. Stakeholder expectations
e. Organizational and other resource pools
f. Project deliverables
g. Funding
h. Estimating techniques
i. Resource skills categories
j. Anticipated project duration

Skill in:
k. Gathering, assessing, and integrating information
l. Interviewing
m. Communicating effectively
n. Developing order of magnitude estimate
o. Estimating resource requirements
p. Presenting information

9. Define an appropriate project budget and schedule by determining time and cost estimates in order to support decision-making.

Knowledge of:
a. Estimating techniques
b. Analysis techniques
c. Budget processes
d. Project deliverables
e. Project requirements and objectives
f. Project funding
g. Stakeholder expectations
h. Scheduling techniques
i. Decision-making techniques

Skill in:
j. Making decisions
k. Gathering, assessing, and integrating information
l. Interviewing
m. Communicating effectively
n. Developing time and cost estimates
o. Presenting information
p. Negotiating

10. Provide comprehensive information by producing a formal document to obtain an approval decision from the stakeholders.

Knowledge of:

a. Analysis techniques
b. Communication techniques
c. Project requirements and objectives
d. Resource, time, and cost estimates
e. Project deliverables
f. Stakeholder expectations
g. Negotiating techniques
h. Acceptance processes
i. Decision-making processes
j. Types and administration of contracts

Skill in:

k. Gathering and summarizing information
l. Presenting information
m. Writing persuasively/technically
n. Communicating effectively
o. Negotiating
p. Making decisions
q. Selling techniques

Performance Domain II: Planning the Project

Evaluation and Allocation of Questions for Domain II.

Task	RATING?				
	Importance	Criticality	Frequency	% of Items on Test	# of Items on Test
1	4.3	4.1	4.0	4.0%	8
2	4.3	4.0	3.9	3.5%	7
3	4.1	3.9	3.7	3.0%	6
4	3.9	3.7	3.7	3.0%	6
5	4.0	3.8	3.7	3.0%	6
6	4.2	4.0	3.8	3.5%	7
7	4.3	4.0	3.8	3.5%	7
			Total	23.5%	47

Tasks and Knowledge and Skill Statements for Domain II

1. Refine project requirements, assumptions, and constraints through communication with stakeholders and/or by reviewing project documents to baseline the scope of work and enable development of the execution plan.

Knowledge of:

a. Requirement analysis methods
b. Assumption identification techniques
c. Constraint identification methods
d. Effective communication techniques
e. Stakeholder identification techniques
f. Existing project documents

Skill in:

g. Making decisions while considering legal, organizational, and stakeholder issues
h. Communicating effectively
i. Gathering, assessing, and integrating information
j. Planning projects

2. Create the Work Breakdown Structure (WBS) using the scope of work, other project documents, and decomposition techniques to facilitate detailed project planning and the executing, controlling, and closing processes.

Knowledge of:
a. WBS development and decomposition techniques
b. Effective communication techniques
c. Existing project documents

Skill in:
d. Gathering, assessing, and breaking down information into work elements
e. Communicating effectively
f. Planning projects

3. Develop the resource management plan (Human Resources, Procurement, etc.) by identifying resource requirements and obtaining commitments from internal, external, and procured sources to complete all project activities.

Knowledge of:
a. Existing project documents
b. Resource estimating techniques
c. Statistical analysis and forecasting techniques
d. Resource sources and availability
e. Resource selection criteria and techniques
f. Team-building methods and techniques
g. Procurement guidelines and regulations
h. Workload balancing techniques
i. Resource-leveling techniques
j. Communication techniques

Skill in:
k. Gathering, assessing, and integrating information
l. Communicating effectively
m. Negotiating
n. Building and motivating teams
o. Estimating, forecasting, and managing uncertainty

4. Refine project time and cost estimates by applying estimating tools and techniques to all WBS tasks in order to determine and define project baseline, schedule, and budget.

Knowledge of:
a. Existing project documents
b. Gathering, assessing, and integrating information
c. Time and cost estimation techniques
d. Statistical analysis and forecasting methods
e. Budgeting techniques
f. Schedule preparation methods
g. Communication techniques

Skill in:
h. Gathering, assessing, and integrating information
i. Communicating effectively
j. Negotiating
k. Estimating, forecasting, and managing uncertainty
l. Budgeting
m. Scheduling

5. Establish project controls by defining the required correct processes, measures, and controls to manage project change, communications, procurement, risk, quality, and human resources to facilitate project executing and controlling processes, and to ensure compliance with generally accepted industry standards.

Knowledge of:
a. Existing project documents
b. Gathering, assessing, and integrating information
c. Scope and change management concepts
d. Communication management concepts, tools, and techniques
e. Procurement management concepts, tools, and techniques
f. Risk management concepts, tools, and techniques
g. Quality management concepts, tools, and techniques
h. Human resource management techniques
i. Team-building methods

Skill in:
j. Managing change
k. Communicating effectively
l. Managing procurement
m. Negotiating
n. Managing risk
o. Managing quality
p. Managing, developing, and motivating human resources

6. Develop a formal and comprehensive project plan by integrating and documenting project deliverable~acceptance criteria, processes, procedures, risks, and tasks to facilitate project executing, controlling, and closing processes.

Knowledge of:
a. Existing project documents
b. Integrating and sequencing activities and tasks
c. Gantt, PERT, CPM, and PDM techniques
d. Negotiations
e. Risk-analysis techniques
f. Business-writing techniques
g. Industry standards
h. Accepted and/or required control processes, measures, and thresholds
i. Quality control and sampling techniques

Skill in:
j. Gathering, assessing, and integrating information
k. Analyzing and measuring statistically
l. Making decisions
m. Negotiating
n. Writing formally
o. Communicating effectively

7. Obtain project plan approval by reviewing the plan with the client and other required stakeholders to confirm project baselines prior to proceeding with project executing processes.

Knowledge of:
a. Existing project documents
b. Required reviewers
c. Approving authorities
d. Effective communication techniques
e. Negotiation techniques
f. Authorization procedures

Skill in:

g. Negotiating
h. Presenting and explaining information
i. Communicating effectively

Performance Domain III: Executing the Project

Evaluation and Allocation of Questions for Domain III.

Task	RATINGS				
	Importance	Criticality	Frequency	% of Items on Test	# of Items on Test
1	4.2	4.0	4.0	5.0%	10
2	4.1	3.9	4.0	4.5%	9
3	4.3	4.1	4.3	5.5%	11
4	4.0	3.6	4.1	4.5%	9
5	3.8	3.7	3.7	4.0%	8
			Total	23.5%	47

Tasks and Knowledge and Skill Statements for Domain III

1. Commit project resources in accordance with the project plan to ensure that all activities are performed.

Knowledge of:

a. Facilitation techniques
b. Communication techniques
c. Management techniques
d. Contract administration (types, liabilities, terms, and conditions)
e. Budget management techniques
f. Organizational policies and procedures
g. Labor contracts
h. External and internal project environments (legal, cultural, operational, and geographic)
i. Functional business areas
j. Corporate culture
k. Existing project documents

Skill in:

l. Communicating effectively
m. Using communication equipment, tools, and programs
n. Coordinating activities
o. Orchestrating resources

p. Gathering, assessing, and integrating information
q. Facilitating meetings
r. Presenting information
s. Organizing, developing, and writing reports
t. Negotiating
u. Building, leading, and motivating teams
v. Administering contracts
w. Monitoring and tracking results
x. Resolving conflicts

2. Implement the project plan by authorizing the execution of project activities and tasks to produce project deliverables.

Knowledge of:
a. Organization policies and procedures
b. Internal and external project environment
c. Project management methodologies and tools
.d. Level of authority
e. Facilitation techniques
f. Management techniques
g. Communication techniques
h. Negotiation techniques
i. Motivational techniques
j. Existing project documents

Skill in:
k. Delegating and empowering resources
l. Gathering, assessing, and integrating information
m. Presenting information
n. Organizing, developing, and writing reports
o. Negotiating and conflict resolution
p. Building, leading, and motivating teams
q. Administering contracts
r. Monitoring and tracking outputs (results)
s. Communicating effectively
t. Orchestrating and applying resources
u. Exercising judgment

3. Manage project progress by ensuring that activities are executed as planned in order to achieve the project objectives.

Knowledge of:
a. Organization policies and procedures and labor agreements
b. Internal and external project environment
c. Performance measurement techniques (e.g., PERT, CPM, EVA)
d. Project management methodologies and tools
e. Levels of authority
f. Contract administration
g. Management leadership principles and techniques
h. Communication and negotiation techniques
i. Reporting (production and requirements)
j. Statistics
k. Tracking and monitoring techniques
l. Existing project documents

Skill in:
m. Gathering, assessing, and integrating information
n. Facilitating meetings

o. Presenting information
p. Organizing, developing, and writing reports
q. Negotiating and resolving conflicts
r. Leading, building, and motivating teams
s. Administering contracts
t. Monitoring and tracking results
u. Orchestrating resources
v. Communicating effectively
w. Using performance measurement tools

4. Communicate project progress by producing project reports to provide timely and accurate project status and decision support information to stakeholders.

Knowledge of:
a. Reporting techniques
b. Media and presentation tools
c. Project management methodologies and tools
d. Managementileadership principles and techniques
e. Reporting (production and requirements)
f. Tracking and monitoring techniques
g. Existing project documents

Skill in:
h. Gathering, assessing, and integrating information
i. Facilitating meetings
j. Presenting information
k. Organizing, developing, and writing reports
l. Negotiating and resolving conflicts
m. Leading, building, and motivating teams
n. Administering contracts
o. Communicating effectively
p. Orchestrating resources
q. Monitoring and tracking results
r. Using reporting tools, technology, techniques

5. Implement quality assurance procedures by performing project control activities to meet project objectives.

Knowledge of:
a. Project controls
b. Quality assurance procedures
c. Presentation and communication techniques
d. Industry product and services standards
e. Existing project documents

Skill in:
f. Gathering, assessing, and integrating information
g. Facilitating meetings
h. Presenting information
i. Organizing, developing, and writing reports
j. Negotiating and resolving conflicts
k. Administering contracts
l. Monitoring and tracking results
m. Orchestrating resources
n. Leading, building, and motivating teams
o. Communicating effectively
p. Identifying critical success factors
q. Exercising judgment

Performance Domain IV: Controlling the Project

Evaluation and Allocation of Questions for Domain IV.

Task	RATINGS				
	Importance	Criticality	Frequency	% of Items on Test	# of Items on Test
1	4.0	3.8	4.0	3.5%	7
2	3.4	3.3	3.2	2.0%	4
3	4.3	4.1	3.9	3.5%	7
4	3.8	3.6	3.6	2.5%	5
5	4.1	4.0	3.8	3.5%	7
6	3.5	3.3	3.4	2.0%	4
7	4.0	4.0	3.6	3.0%	6
8	3.9	3.7	3.6	3.0%	6
			Total	23.0%	46

Tasks and Knowledge and Skill Statements for Domain IV

1. Measure project performance continually by comparing results to the baseline in order to identify project trends and variances.

Knowledge of:
a. Performance measurement techniques (e.g., PERT, CPM, EVA)
b. Data collection techniques
c. Existing project documents

Skill in:
d. Gathering, assessing, and integrating information
e. Auditing

2. Refine control limits on performance measures by applying established policy in order to identify needs for corrective action.

Knowledge of:
a. Control limits
b. Statistics
c. Performance measurement techniques (e.g., PERT, CPM, EVA)
d. Established policies
e. Existing project documents

Skill in:
f. Properly applying control limits, based on project conditions
g. Properly applying established policies

3. Take timely corrective action by addressing the root causes in the problem areas in order to eliminate or minimize negative impact.

Knowledge of:
a. Root cause analysis
b. Corrective actions and their effects on project performance
c. Risk identification and quantification
d. Issues identification and resolution
e. Control limits
f. Trending and forecasting techniques
g. Existing project documents
h. Negotiation techniques

Skill in:
i. Selecting the appropriate corrective action for negative impacts
j. Extrapolating trends to the control limits (e.g., monitoring, forecasting)
k. Exercising judgment
l. Negotiating
m. Resolving conflict

4. Evaluate the effectiveness of the corrective actions by measuring subsequent performance in order to determine the need for further actions.

Knowledge of:
a. Performance measurement techniques (e.g., PERT, CPM, EVA)
b. Data collection techniques
c. Existing project documents

Skill in:
d. Gathering, assessing, and integrating information
e. Auditing

5. Ensure compliance with the change management plan by monitoring response to change initiatives in order to manage scope.

Knowledge of:
a. Change management plan
b. Change initiatives
c. Work sampling and observations
d. Process standards
e. Existing project documents

Skill in:
f. Gathering, assessing, and integrating information
g. Applying the rules fairly but rigorously
h. Exercising judgment to determine what variances are important
i. Communicating effectively

6. Reassess project control plans by scheduling periodic reviews in order to ensure their effectiveness and currency.

Knowledge of:
a. Components of the control management plan (communication, risk, etc.)
b. Current situation (stakeholders' reports, meeting minutes, project diary, and status reports)
c. Appropriate review standard and frequency
d. Existing project documents
e. Negotiating techniques

Skill in:
f. Auditing
g. Analyzing variance
h. Exercising judgment to determine what variances are important
i. Using intuition
j. Communicating effectively
k. Negotiating

7. Respond to risk event triggers in accordance with the risk management plan in order to properly manage project outcomes.

Knowledge of:
a. Risk management plan
b. Risk event (actual or potential)
c. Existing project documents
d. Risk management process and techniques

Skill in:
e. Exercising judgment
f. Communicating effectively
g. Using risk management procedures

8. Monitor project activity by performing periodic inspections to ensure that authorized approaches and processes are followed or to identify the need for corrective action.

Knowledge of:
a. Planned approaches and processes
b. Effectiveness of possible corrective actions
c. Applied approaches and processes
d. Existing project documents

Skill in:
e. Auditing
f. Exercising judgment to determine what variances are important
g. Communicating effectively

Performance Domain V: Closing the Project

Evaluation and Allocation of Questions for Domain V.

Task	RATINGS				
	Importance	Criticality	Frequency	% of Items on Test	# of Items on Test
1	4.4	4.0	3.9	2.0%	4
2	3.6	2.8	3.2	1.0%	2
3	3.7	3.2	3.4	1.5%	3
4	3.6	3.2	3.4	1.5%	3
5	3.4	2.9	3.3	1.0%	2
			Total	7.0%	14

Tasks and Knowledge and Skill Statements for Domain V

1. Obtain final acceptance of deliverables by obtaining formal approval from appropriate stakeholders to achieve closeout.

Knowledge of:
a. Effective communication techniques
b. Contract management techniques
c. Existing project documents

Skill in:
d. Negotiating
e. Communicating effectively
f. Managing conflicts
g. Resolving conflicts

2. Document lessons learned by surveying project team members and other relevant stakeholders to use for the benefit of future projects.

Knowledge of:
a. Stakeholders
b. Project results
c. Risk mitigation actions and results

d. Resources utilization
e. Documentation standards
f. Communication techniques
g. Existing project documents

Skill in:
h. Facilitating
i. Organizing and documenting information
j. Gathering, assessing, and integrating information
k. Interviewing
l. Writing effectively
m. Applying interpersonal skills

3. Facilitate administrative and financial closure in accordance with the project plan in order to comply with organization and stakeholder requirements.

Knowledge of:
a. Closing procedures
b. Customer requirements
c. Finance and law
d. Existing project documents
e. Conflict resolution techniques
f. Contract administration
g. Project contracts

Skill in:
h. Facilitating
i. Attending to details
j. Resolving conflicts
k. Administering contracts

4. Preserve essential project records and required tools by archiving them for future use to adhere to legal and other requirements.

Knowledge of:
a. Organizational records control and maintenance procedures
b. Recordsldocument management and control procedures
c. Intellectual capital management requirements
d. Proprietary information constraints
e. Storage mediums
f. Document production and retrieval requirementslspecifications
g. Existing project documents

Skill in:
h. Gathering, assessing, and integrating information
i. Making decisions
j. Managing intellectual capital
k. Organizing and documenting information

5. Release project resources by following appropriate organizational procedures in order to optimize resource utilization.

Knowledge of:
a. Project resources
b. Organizational procedures
c. Project contracts
d. Organizational units
e. Communication techniques

f. Resource re-deployment plan
g. Resource allocation and control techniques
h. Recognition options (e.g., awards)
i. Existing project documents

Skill in:
j. Making decisions
k. Gathering, assessing, and managing information
l. Negotiating
m. Using interpersonal skills
n. Recognizing performance

Performance Domain VI: Professional Responsibility

Evaluation and Allocation of Questions for Domain VI.

Task	RATINGS				
	Importance	Criticality	Frequency	% of Items on Test	# of Items on Test
1	4.3	4.1	4.2	4.0%	8
2	3.6	2.7	3.3	1.5%	3
3	3.8	3.0	3.7	2.5%	5
4	3.8	3.5	3.7	2.5%	5
5	4.4	3.9	4.3	4.0%	8
			Total	14.5%	29

Tasks and Knowledge and Skill Statements for Domain VI

1. Ensure individual integrity and professionalism by adhering to legal requirements and ethical standards in order to protect the community and all stakeholders.

Knowledge of:
a. Legal requirements
b. Ethical standards
c. Community and stakeholder values

Skill in:
d. Exercising appropriate judgment

2. Contribute to the project management knowledge base by sharing lessons learned, best practices, research, etc., within appropriate communities in order to improve the quality of project management services, build the capabilities of colleagues, and advance the profession.

Knowledge of:
a. Knowledge base in project management
b. Appropriate communities
c. Media (Internet, newsletters, etc.)
d. Research strategies
e. Effective communication techniques

Skill in:
f. Communicating effectively
g. Exercising judgment
h. Transferring knowledge (coaching, mentoring, training, etc.)
i. Implementing research strategies

3. Enhance individual competence by increasing and applying professional knowledge to improve services.

Knowledge of:
a. Personal strengths and weaknesses
b. Instructional methods and tools
c. Appropriate professional competencies
d. Personal learning style
e. Training options

Skill in:
f. Self-assessment
g. Development planning
h. Attaining and applying new information and practices

4. Balance stakeholders' interests by recommending approaches that strive for fair resolution in order to satisfy competing needs and objectives.

Knowledge of:
a. Stakeholders' interests
b. Competing needs and objectives
c. Conflict resolution techniques

Skill in:
d. Exercising judgment in determining the fair resolution
e. Generating alternatives
f. Negotiating
g. Communicating effectively
h. Gathering, assessing, and integrating information
i. Resolving conflicts

5. Interact with team and stakeholders in a professional and cooperative manner by respecting personal, ethnic, and cultural differences in order to ensure a collaborative project management environment.

Knowledge of:
a. Standards for professional communication
b. Ethnic and cultural norms of team members and stakeholders
c. Stakeholder and team members' communication preferences

Skill in:
d. Exercising self-control
e. Maintaining an open mind
f. Communicating effectively
g. Embracing diversity
h. Exercising tolerance and compromise
i. Exhibiting empathy

Glossary of Terms

contend Validation: A special form of validation. The process by which a certification examination is determined to reflect what professionals actually do on the job.

Criticality: A rating that is used in the validation of a domain or task. Criticality is defined as the degree to which lack of knowledge or skills in a domain or task could lead to adverse consequences.

Frequency: A rating that is used in the validation of a domain or task. For the PMI *Role Delineation Study,* frequency was defined as the percent of projects on which Project Management Professionals would perform duties associated with each domain or task.

Importance: A rating that is used in the validation of a domain or task. Importance is defined as the degree to which a particular task or domain is essential to the job performance of a professional in the particular field being examined.

Performance Domain: The major content areas of a profession, as defined by the technical advisers to a role delineation study.

Role Delineation Study: A process that defines the responsibilities of a particular profession. A role delineation typically consists of two phases: one in which technical advisers define the responsibilities of the particular profession, and another in which individuals working in the profession validate the responsibilities identified by the technical advisers. The second phase is typically accomplished through use of a survey.

Tasks: Specific actions that are performed by professionals in a particular field. A role delineation study should define all the relevant tasks that a professional might be expected to perform in fulfillment of his or her duties.

Technical Advisers: Experts in the field who are involved in the definition of the domains, tasks, and knowledge and skill statements of the particular profession, as outlined in the *Role Delineation Study.*

Test Specifications: Also called test blueprint. Test specifications identify the proportion of questions from each domain and task that will appear on the certification examination. Test specifications are developed by combining the overall evaluations of importance, criticality, and frequency and converting the results into percentage.

Validation: The process by which a certification examination is determined to measure what it has been designed to measure. In other words, does the certification examination perform as designed (i.e., distinguish between those candidates who have an acceptable level of knowledge and application and those candidates who do not)?