

## **Project Management Certification Benchmarking Research: 2016 Update**

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### **INTRODUCTION**

As it is clear there are efforts underway to “professionalize” the practice of project management, now more than ever it becomes essential to benchmark the various project management credentialing programs against established, recognized professional credentials, ensuring that regardless of which country the credential originates from, that it serves to validate a LEGITIMATE professional level of competency, which, like obtaining one’s driver’s license, includes not only written exams but also appropriate levels of independently validated experience.

Since 2010, the author has been publishing an annual report, benchmarking many of the more popular, globally recognized project management certifications against both the US Professional Engineer (PE) license as well as Malcolm Gladwell’s “10,000 hour” rule. As over 30,000 copies of the report and the Excel template have been downloaded speaks to the interest this benchmarking research has generated as the question of “transportability” and “reciprocal recognition” of these credentials is the source of frequent debates. It also helps those organizations trying to UPGRADE their credentialing programs which, to their credit, many professional organizations have referenced in support of this effort.

For those who are not familiar with the evolution of this model, the benchmarking is based on the “level of effort” measured in person/hours it takes to qualify for, prepare for, apply and become certified, the underlying hypothesis being the more robust and rigorous the process, and the more it looks beyond the ability to pass multiple choice exams and actually analyzes real life deliverables and outcomes, the more likely it is to validate that the person holding the credential is “competent”.



1	<b>Rank Order based on PSCOR</b>	<b>Rank order of each credential based on the total Level of Effort required to earn the credential (PSCOR)</b>
2	<b>Organizational Affiliation:</b> <b>Acronym of Credential:</b>	Organization responsible to create and/or manage the credential Trade marked acronym used to identify the credential (i.e. PMP)
3	<b>Required Experience Hours AFTER Bachelors Degree</b>	Total hours required IN ADDITION to a Bachelors or 4 year degree. IF no degree is required then the MINIMUM experience is entered here. If no experience is required this cell is left blank.
4	<b>Bachelors (BDEG)</b>	The standardized value of a bachelors degree is 5,200 level of effort hours total
5	<b>Masters (MDEG)</b>	The standardized value of a masters degree is 1,900 level of effort hours total
6	<b>PhD/DBA (PDEG)</b>	The standardized value of a PhDs degree is 5,160 level of effort hours total
7	<b>Exam Duration in Hours</b>	IF an exam is required, how long is it in hours? If no exam is required, the cell is left blank
8	<b>Level of Effort To Prepare for Exam</b>	How many hours does it normally take the average person to prepare to sit for the exam and have a reasonable chance of passing?
9	<b>TOTAL EXAM Level of Effort</b>	Sum of Rows 7 and 8
10	<b>Exam Difficulty Factor DIF1</b>	IF an exam requires a mix of matching, fill in the blank or rank ordering, a 5% difficulty factor is given to the exam.
11	<b>Exam Difficulty Factor DIF2</b>	IF an exam requires a mix of matching, fill in the blank or rank ordering PLUS short answer essay responses, a 10% difficulty factor is given to the exam.
12	<b>Exam Difficulty Factor DIF3</b>	IF an exam requires a mix of matching, fill in the blank or rank ordering, short answer PLUS long answer essay responses, a 15% difficulty factor is given to the exam.
13	<b>PAPR Level of Effort</b>	For each 2500+ word paper is required, 50 Level of Effort hours is awarded
14	<b>Formal Mentorship (SUPRV1)</b>	IF a FORMAL mentorship/supervised internship or apprenticeship is required, the average or typical level of effort hours is recorded and added to the total.
15	<b>Peer Assessment (SUPRV2)</b>	IF a FORMAL assessment by a trained and/or certified assessor is required, the average or typical level of effort hours to perform the assessment is recorded and added to the total.
16	<b>REQUIRED courses</b>	IF there are any courses REQUIRED as a prerequisite to take the exam, those hours are recorded here. (i.e. PMI requires 35 hours before the PMP can be taken)
17	<b>ACTA Level of Effort</b>	Is the average or typical level of effort that the APPLICANT must invest in order to prepare for, apply for and complete all the administrative requirements to become certified.
18	<b>TOTAL PSCOR SCORE</b>	<b>This is the total cumulative level of effort in hours added from Rows 3-8 and 10 - 17. (Row 9 is the sum of Rows 7 and 8)</b>
19	<b>RATIO TO ABET PE LICENSE</b>	Ratio of the PSCOR/16,204 Level of Effort Hours to earn the ABET PE.
20	<b>RATIO AGAINST GLADWELL</b>	Ratio of the PSCOR/10,000 Level of Effort Hours identified by Malcolm Gladwell.
21	<b>EXPERIENCE to TOTAL RATIO</b>	Total Hours from Row 3/PSCOR. Assumption being EXPERIENCE is more important than tests.

Table 1- The Attributes of the Scoring Model

In Column B, we have the attributes used to create the scoring model. For those interested in a more detailed explanation of the mechanics and process of scoring, the 2014 Update <http://pmworldjournal.net/wp-content/uploads/2014/01/pmwj18-jan2014-giammalvo-project-management-credentials-comared-2014update-FeaturedPaper.pdf> explains it in much greater detail and for those interested in using the model to evaluate or compare other certifications, the latest Excel scoring model is accessible under Creative Commons License BY v 4.0 unported at this URL- <http://www.build-project-management-competency.com/download-page/> Line Items #37 and #38. While in Column C, there is a brief explanation about each of the attributes.

The most important element is shown in Line 18- Total PSCOR. This represents the CUMULATIVE level of effort expressed in person/hours necessary to earn each of the credentials. This includes not only the academic requirements (degrees, supplemental courses and exams) but also the experience requirements, understanding that the ratios for experience to learning used as the benchmark is predicated on the ratios common to the Professional Engineer license. These key performance ratios can be seen in Lines 19, 20 and 21 and have been color coded for comparison purposes.

The certifications are then rank ordered according to their PSCOR or the Total Level of Effort required to qualify for, prepare for and earn the credential, with the minimum threshold for any credential to be considered to be a legitimate “professional level credential” being Gladwell’s “10,000 hours”. To address those credentials which score below Gladwell’s “10,000 rule” we have also added in the Level of Effort require to earn the “Engineer in Training” (EIT) designation as being the MINIMAL acceptable level for any ENTRY level credential. (Any credential scoring below the level of effort to become an “Engineer in Training” (EIT) should not even be considered as being a “legitimate” professional track credential regardless of the job it is measuring.)



While the author recognizes that Gladwell’s “10,000 hour” rule has been and is being challenged on many fronts, by providing a defined zero point and the same units of measure (standardized level of effort hours) we have created a true ratio scale, enabling us to compare the relative level of effort between any two or more credentials.

For those interested in a more detailed explanation of the mechanics and process of scoring, the 2014 Update <http://pmworldjournal.net/wp-content/uploads/2014/01/pmwi18-jan2014-giammalvo-project-management-credentials-comared-2014update-FeaturedPaper.pdf> explains it in much greater detail and for those interested in using the model to evaluate or compare other certifications, the latest Excel scoring model is accessible under Creative Commons License BY v 4.0 unported at this URL- <http://www.build-project-management-competency.com/download-page/> Line Items #37 and #38.

**DISCLAIMER- THE DATA ANALYZED IN THIS RESEARCH WAS GLEANED FROM INFORMATION PUBLICLY AVAILABLE ON THE RELEVANT WEBSITES AND/OR WAS PROVIDED BY INTERESTED INDIVIDUALS. IF THERE ARE ANY ERRORS, OMISSIONS OR CHALLENGES, THE AUTHOR WILL BE HAPPY TO MAKE WHATEVER CORRECTIONS OR ADJUSTMENTS ARE DEEMED APPROPRIATE, BUT ONLY UPON RECEIPT OF WRITTEN PROOF FROM AN AUTHORIZED INDIVIDUAL FROM THE ORGANIZATION SHOWING WHERE THE INPUT DATA IS INCORRECT.**

**HOW TO READ/INTERPRET THIS DATA**

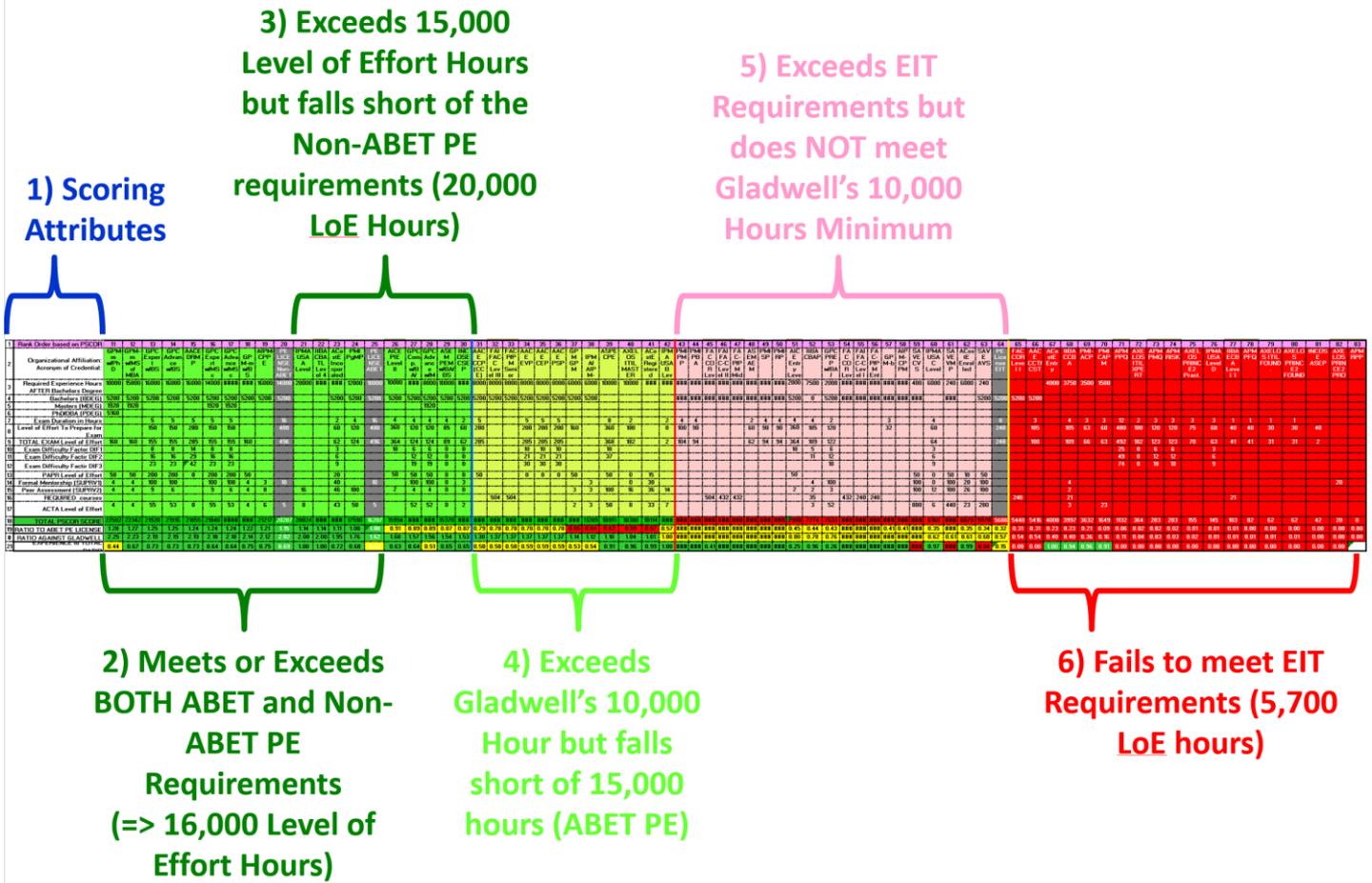


Figure 1- How to read the Rank Ordering of the credentials

Scoring Attributes. These are the 14 elements or components comprising how the total level of effort (PSCOR) was calculated. The details of this can be found in Table 1 above or the Excel spreadsheet can be downloaded here- <http://www.build-project-management-competency.com/download-page/> Line Items #37 and #38.

- 1) Any credential which falls in this section is an indication that it MEETS or EXCEED both the ABET and NON-ABET PE license level of effort. The difference being that an individual graduating from an ABET accredited university only has to successfully complete 16,200 level of effort hours, while those graduating from a NON-ABET accredited university much fulfill 20,000 level of effort hours, or about 2 years of additional experience in lieu of an ABET degree. For those believing that experience counts more than education or training, credentials scoring in this range are what you or your organization should be considering when hiring or providing in-house training in preparation for. This category consists of 19/82 or 23% of the total number of credentials analyzed and of the 64 credentials which meet or exceed the EIT requirements, the percentage is 19/64 = 30%. Truly the only credentials which can justify being labeled as being “gold standard” project management credentials as required under the US Federal Trade



Commission Act. <https://www.ftc.gov/tips-advice/business-center/guidance/advertising-faqs-guide-small-business>

- 2) As this category requires 16,200 level of effort hours to earn a PE after graduating from an ABET accredited university makes a compelling argument that Gladwell's "10,000 hour" rule is too low and thus not appropriate to those who desire project management to earn the respect accorded other traditional professions. To simplify the analysis, the cut-off point of 15,000 level of effort hours was established as being the MINIMUM acceptable level of effort hours for any project management credential to be considered a legitimate "professional" level credential. This was based on the reputation and respect accorded those who hold these credentials. Of the 82 total number of credentials included in this research, 28 of them or 34% exceed 15,000 level of effort hours and they represent 44% of the 64 credentials which meet or exceed the requirements to become an Engineer in Training (EIT).
- 3) The credentials falling in this range EXCEED the level of effort requirements to qualify for an EIT (5,688 hour PSCOR) but fall short of Gladwell's 10,000 hours. These are acceptable IF the credential is identified as an "Intermediate" or "Practitioner" level" credential, but any organization claiming that their credential falling in this category is a "professional" level credential needs to look at their Codes of Ethics and/or the local Consumer Protection laws to ensure that their advertising is not making false and/or misleading claims. This category consists of  $12/82 = 13\%$  of the 82 credentials included in this analysis or 19% of the 64 credentials which meet or exceed the requirements to become an Engineer in Training (EIT)
- 4) Any credential falling in this range does not even meet the requirements of a fresh graduate from an engineering university. For whatever reasons 23% (19/82) of the total number of credentials benchmarked failed to meet even this minimum requirement. The really bad news is that many of the more popular credentials (i.e. Axelos PRINCE2 and ITIL in particular) score in this category. IF we wish to professionalize the practice of project management, then there should be no credential which fails to at least meet the level of effort to earn an EIT. One of the ongoing challenges of this research is for those organizations whose credentials do not meet at least those of the EIT need to either upgrade them or consider dropping them. For those who are serious about project management as a career path you need to think long and hard whether these are worth the time and effort you have to invest to earn them when they rank so low.

### **ADDITIONAL or NEW CERTIFICATIONS BEING BENCHMARKED FOR 2016**

The following 20 credentials have been ADDED to the analysis during 2016, bringing the total from 62 in 2015 to 82 in 2016. While previously the certifications covered in the study were coming only from the USA, United Kingdom and Australia, we are pleased to note that the Associazione Italiana di Ingegneria Economica (Italian Cost Engineering Association) has asked that their family of credentials be included in this year's analysis and have provided the information necessary to properly score and rank them.



1	Rank Order based on PSCOR	8	20	22	25	26	32	33	45	46	47	51	54	55	56	64	65	71	73	74	77	78	82	83
2	Organizational Affiliation: Acronym of Credential:	AICE EIE Level 1	PE LICENSE Non- ABET	IIBA CBATL Level 4	PE LICENSE ABET	AICE PIE Level II	FAI FAC-C Level III	FAC- P/PM Senior	FAC COR Level III	FAI FAC-C Level II	FAC- P/PM Mid	AICE Entry Level 1	FAC COR Level II	FAI FAC-C Level I	FAC- P/PM Entry	PE License EIT	FAC COR Level I	APM PPQ	APM PMQ	APM RISK	IIBA ECBA Level 1	APM PFQ	AXELOS PRINCE 2 PROF.	APM RPP
3	Required Experience Hours AFTER Bachelors Degree	20000	14000	20000	10000	10000	8000	8000	4000	4000	4000	2000	2000	2000	2000									
4	Bachelors (BDEG)	5200	5200		5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200							
5	Masters (MDEG)																							
6	PhD/DBA (PDEG)																							
7	Exam Duration in Hours	4	16		16	4						4						12	3	3	1	1		
8	Level of Effort To Prepare for Exam	360	480		480	360						360				240		480	120	120	40	40		
9	TOTAL EXAM Level of Effort	364	496		496	364						364				248		492	123	123	41	41		
10	Exam Difficulty Factor DIF1	18				18						18						25	6	6				
11	Exam Difficulty Factor DIF2																	49	12	12				
12	Exam Difficulty Factor DIF3																	74	18	18				
13	PAPR Level of Effort	50				50						50												
14	Formal Mentorship (SUPRV1)		10		10																		20	
15	Peer Assessment (SUPRV2)	2				2						2												
16	REQUIRED courses						504	504	504	432	432		432	240	240		240				21			
17	ACTA Level of Effort		5		5																			
18	TOTAL PSCOR SCORE	25998	20207	20000	16207	15994	13704	13704	9704	9632	9632	7998	7632	7440	7440	5688	5440	1132	283	283	103	82	20	0
19	RATIO TO ABET PE LICENSE	1.48	1.15	1.14	1.00	0.91	0.78	0.78	0.55	0.55	0.55	0.45	0.43	0.42	0.42	0.32	0.31	0.06	0.02	0.02	0.01	0.00	0.00	0.00
20	RATIO AGAINST GLADWELL	2.60	2.02	2.00	1.62	1.60	1.37	1.37	0.97	0.96	0.96	0.80	0.76	0.74	0.74	0.57	0.54	0.11	0.03	0.03	0.01	0.01	0.00	0.00
21	EXPERIENCE to TOTAL RATIO	0.77	0.69	1.00	0.62	0.63	0.58	0.58	0.41	0.42	0.42	0.25	0.26	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Table 2- Twenty (20) NEW credentials ranked vs Non-ABET PE, ABET PE and EIT

Of the 20 new additions, 3 of them met or exceeded the 15,000 hours required to be considered “professional” level credentials. (AICE Expert Level 1, IIBA’s CBATL Level 4, AICE Practitioner, Level 2); 2 of them scored greater than 10,000 hours but less than 15,000 hours, qualifying them as being legitimate “Intermediate” or “Practitioner” level credentials (FAC-C, Level 3; FAC P/PM Senior;) and 7 of the 22 scored higher than the EIT, (5,688) but lower than the 10,000, qualifying them as legitimate Entry level credentials. (FAC-COR Level III; FAC-C Level II; FAC P/PM Mid-Level; AICE Entry Level 1, FAC-C Level 1 and FAC-P/PM Entry.

Unfortunately of the 20 new additions, 8 of them (40%) failed to meet the EIT requirements of 5,688 level of effort hours (PSCOR). This is NOT the way to go if we want to build the image of project management as a profession by producing COMPETENT practitioners.

While all reasonable efforts to obtain information from the various organizations was made, including not only going to the website pages but also contacting several of the certification board members for clarification, one of the recommendations is that all organizations take the time to clearly communicate what their credentials require. Some of the better examples of clear and complete communications on their credentialing program come to us from PMI, <http://www.pmi.org/certifications>; AACE, <http://web.aacei.org/> and the Guild of Project Controls. <http://www.planningplanet.com/guild/certification> Applicants or their sponsors seeking to learn more about an organizations credentials should not have to dig through many web or handbook pages to find out the requirements. As you can see above, there are many of these new credentials which are missing information in many of the cells. As noted above IF there is anything that the author missed, please have someone authorized to speak (i.e. Certification Chair or Board of Directors) and provide the missing information and the author will be happy to update the research.



That said, pay special attention to Rows 19, 20 and 21.

1	Rank Order based on PSCOR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	Organizational Affiliation: Acronym of Credential:	INCOSE ESEP	GPC Fellow w BS/BA	GPC Fellow w/PhD	GPC Fellow w/MSc /MBA	AAE CFCC	ACostE Certified	PMI PfMP	AICE EIE Level 1	GPC Expert w/PhD	GPC Advance w/PhD	GPM-m w/PhD	GPM-m w/MSc/ MBA	GPC Expert w/BS	GPC Advance w/BS	AAE DRMP	GPC Expert w/MSc	GPC Advance w/MSc	GPM-m w/BS	AIPM- CPPE	PE LICENSE Non- ABET
18	TOTAL PSCOR SCORE	45220	33514	32594	31434	29598	29528	27598	25998	22996	22994	22502	22342	21920	21916	21855	21840	21836	21422	21217	20207
19	RATIO TO ABET PE LICENSE	2.79	2.07	2.01	1.94	1.83	1.82	1.70	1.60	1.42	1.42	1.39	1.38	1.35	1.35	1.35	1.35	1.35	1.32	1.31	1.25
20	RATIO AGAINST GLADWELL	4.52	3.35	3.26	3.14	2.96	2.95	2.76	2.60	2.30	2.30	2.25	2.23	2.19	2.19	2.19	2.18	2.18	2.14	2.12	2.02
21	EXPERIENCE to TOTAL RATIO	0.88	0.84	0.61	0.76	0.81	0.81	0.80	0.77	0.43	0.43	0.44	0.67	0.73	0.73	0.73	0.64	0.64	0.75	0.75	0.69

Table 3- Ratio of PSCOR: ABET value of 16,200; Ratio of PSCOR: 10,000 (Gladwell) and Ratio of Experience: PSCOR

19) Row 19 is the ratio between the level of effort for a graduate of an ABET accredited University to earn his/her PE license with a PSCOR of 16,207 hours divided into the level of effort to earn your organizations credential. In the example shown above, the top ranked INCOSE ESEP credential has a PSCOR of 45,220 level of effort hours.  $45,220/16,207 = 2.79$ . Meaning the INCOSE ESEP credential requires 279% more effort to earn than does getting a PE for a graduate of an ABET accredited engineering university. To explain the color coding for Row 19:

GREEN is any value  $\Rightarrow 1.00$

YELLOW is any value  $<1.00$  but  $> 0.60$

RED is any value  $<0.60$

20) Row 20 takes the same approach but this time uses Gladwell’s 10,000 hours as the baseline. Applying the same example, the INCOSE ESEP credential has a PSCOR of 45,220 level of effort hours.  $45,220/10,000 = 4.52$ . Meaning the INCOSE ESEP credential requires 452% more effort to earn than what Gladwell suggests is what is required to be a “professional” anything. (10,000 hours) To explain the color coding for Row 20:

GREEN is any value  $\Rightarrow 1.00$

YELLOW is any value  $<1.00$  but  $> 0.60$

RED is any value  $<0.60$

21) Row 21 is perhaps the most interesting and arguably enough, the most important as this measures and enables us to assess the ratio between EXPERIENCE hours and EDUCATION/TRAINING hours. The assumption being that even though the PSCOR changes, that the ratio between the PSCOR of each credential and the experience required for that level should remain within “acceptable” or “reasonable” limits which are constant and which are based on the PE licensing requirements as the benchmarking baseline.

The color coding criteria in terms of the ratio between EXPERIENCE and EDUCATION/TRAINING requirements. This is calculated by dividing the EXPERIENCE HOURS ONLY/TOTAL PSCORE:

GREEN is any value  $\Rightarrow 0.67$  meaning regardless of the level of effort required for any certification, that 67% of the credential is EXPERIENCED based and 33% is EDUCATION based. As 25 out of the 30 credentials scoring  $\Rightarrow 15,000$  level of effort hours (83%) showed higher than a ratio of 0.67% makes a compelling argument that this is a “valid”



ratio for any credential to be considered “appropriate” regardless of the category or level.

**YELLOW is any value <0.67 but > 0.40** meaning that any credential showing YELLOW requires 40% to 66.9% weighting on experience vs training/education. Out of the top 30 credentials only 5 of them (17%) fall within this range, and many of these show up in those credentials which formally recognize those holding a PhD in lieu of some experience as a part of the credentialing process.

**RED is any value <0.40** meaning that any credential scoring red has less than 40% weighing put on experience and 60% weighting on education/training. Of the top 30 credentials with a PSCOR =>15,000 hours not a single one of them requires less than a 60:40 ratio between experience and education/learning. IF your credential scores in the red in Row 21, it is not necessarily “bad”, however, it is an indication that the requirements should be analyzed to see if the ratio between experience and education make sense in the context of what other comparable, professional level credentials are requiring. However in the end, as Malcolm Gladwell pointed out, “progressively more challenging experience is what separates the true professional”<sup>1</sup> in any field, meaning that what really matters is experience, and not the ability to pass exams. This is reinforced when we look again to analogy of obtaining our first driver’s license. How much of obtaining one’s first driver’s license is exam based and how much is predicated on proven experience?

As this is a BENCHMARKING research the color coding is not designed to denote any KPI as necessarily being “Good” or “Bad”. All the color coding does is alert those organizations responsible to create and maintain their credential how their credential ranks compared against all the other credentials, with the hopes that they will use this information as the basis to upgrade their credentialing program to bring it into line with the baseline norms appropriate to the level of competency it is designed to validate.

## **TOP RANKED PROFESSIONAL CERTIFICATIONS FOR 2016<sup>2</sup>**

It is encouraging to see that the number of credentials which now EXCEED the 15,000 level of effort hours has INCREASED from 20 in 2015 to 28 in 2016, an increase of 40% year on year. This positive trend is an indication that more professional societies are moving away from certifying based only on exams are and finally starting to look at the more important aspect, which is documented and independently validated experience of the applicant. It is also an encouraging sign that organizations are starting to “raise the bar” by looking at BOTH experience and learning to find the most appropriate mix.

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<sup>1</sup> Gladwell, Malcolm, Outliers, page 74

<sup>2</sup> Disclosure- the author of this article previously served as the Chair of the Accreditation Board of the Green Project Management organization and currently serves as a compensated advisor to the Guild of Project Controls. However, the scoring model was created and published well before becoming involved with either of these organizations.



1	Rank Order based on PSCOR																				
2	Organizational Affiliation: Acronym of Credential:	INCOSE ESEP	GPC Fellow w BS/BA	GPC Fellow w/PhD	GPC Fellow w/MSc /MBA	AACE CFCC	ACostE Certifi ed	PMI PfMP	AICE EIE Level 1	GPC Expert w/PhD	GPC Advance w/PhD	GPM-m w/PhD	GPM-m w/MSc/ MBA	GPC Expert w/BS	GPC Advance w/BS	AACE DRMP	GPC Expert w/MSc	GPC Advance w/MSc	GPM-m w/BS	AIPM- CPPE	PE LICENSE Non- ABET
3	Required Experience Hours AFTER Bachelors Degree	40000	28000	20000	24000	24000	24000	22000	20000	10000	10000	10000	15000	16000	16000	16000	14000	14000	16000	16000	14000
4	Bachelors (BDEG)	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200
5	Masters (MDEG)			1920	1920					1920	1920	1920	1920				1920	1920			
6	PhD/DBA (PDEG)			5160						5160	5160	5160									
7	Exam Duration in Hours					5	2	4	4	5	5			5	5	5	5	5			16
8	Level of Effort To Prepare for Exam					150	60	120	360	150	150			150	150	280	150	150			480
9	TOTAL EXAM Level of Effort					155	62	124	364	155	155	160	160	155	155	285	155	155	160		496
10	Exam Difficulty Factor DIF1						3		18	8	8			8	8	14	8	8			
11	Exam Difficulty Factor DIF2						6			16	16			16	16	29	16	16			
12	Exam Difficulty Factor DIF3					23	9			23	23			23	23	42	23	23			
13	PAPR Level of Effort		300	300	300	50	26		50	200	200	50	50	200	200	0	200	200	50		
14	Formal Mentorship (SUPRV1)	3				4	50			100	100	4	4	100	100		100	100	4	3	10
15	Peer Assessment (SUPRV2)	10	9	9	9	6	56	100	2	6	5	4	4	9	6		9	6	4	8	
16	REQUIRED courses																				
17	ACTA Level of Effort	7	5	5	5	5	53	50		53	53	4	4	55	53	0	55	53	4	6	5
18	TOTAL PSCOR SCORE	45220	33514	32594	31434	29598	29528	27598	25998	22996	22994	22502	22342	21920	21916	21855	21840	21836	21422	21217	20207
19	RATIO TO ABET PE LICENSE	2.79	2.07	2.01	1.94	1.83	1.82	1.70	1.60	1.42	1.42	1.39	1.38	1.35	1.35	1.35	1.35	1.35	1.32	1.31	1.25
20	RATIO AGAINST GLADWELL	4.52	3.35	3.26	3.14	2.96	2.95	2.76	2.60	2.30	2.30	2.25	2.23	2.19	2.19	2.19	2.18	2.18	2.14	2.12	2.02
21	EXPERIENCE to TOTAL RATIO	0.88	0.84	0.61	0.76	0.81	0.81	0.80	0.77	0.43	0.43	0.44	0.67	0.73	0.73	0.73	0.64	0.64	0.75	0.75	0.69

Table 4- Certifications which score = > 20,200 hours Level of Effort (=> Non-ABET PE License).

Worth noting in Table 4 above, is that while all the above credentials have a heavy experience component, by looking at the empty cells it is easy to see there are many different approaches to validating and assessing the learning/training component against the experience component. This approach enables organizations developing their credentials flexibility by providing a mix between published papers, formal training and/or longer or more robust/challenging exams to support or validate the underlying experience element.

Table 4 also shows us that there are 19 credentials which EXCEED 20,200 level of effort hours. (Non-ABET PE) This yields an impressive choice of global certifications available for project professionals to choose from which, based on the rigorous requirements, can back up their claim to be legitimate “professional” level credentials. It is these credentials that can provide PROOF substantiating they qualify as being the world’s “Gold Standard” against which all other project management credentials claiming to measure and validate COMPETENCY should be benchmarked. Keeping in mind using Gladwell enables us to produce a true ratio scale, this is also an appropriate way to measure or assess the RECIPROCITY, “mutual recognition” or “equivalency” between any two or more credentials, by looking for credentials which have approximately the same PSCOR. As an example, the #2, #3 or #4 ranked Guild of Project Controls “Fellow” level (specializing in Forensic Claims Analysis) with a PSCOR of ~32,500, could possibly be considered to be “equivalent” to #5 ranked AACE’s CFCC (Certified Forensic Claims Consultant) with a PSCOR of 26,600. These organizations would be justified in considering reciprocal recognition, especially if the Guild was to require 2-3 years more experience to address the 5,900 hours difference in PSCOR values or AACE added another 2 years’ experience to their CFCC requirements. Any credentials falling within a +/-10% range of one another should be considered to be “equivalent” and deserving of reciprocal recognition.



For those organizations, be they private or public sector, please consider giving people who hold these credentials the opportunity to at least interview for any positions you need filled. Many of the organizations who developed and administer these credentials do not have the marketing prowess of the more popular but much lower rated credentials. Explained another way, the “popularity” of a credential does not necessarily translate into how competent the person who holds that credential may be, a fact borne out by the number of people holding these lower rated credentials but yet we still experience a rather abysmal “failure rate” of projects the world over.

### **AND THE WINNERS FOR 2016 ARE...**

The 12 top ranked GLOBAL project management certifications for 2016 which EXCEED the Non-ABET PE Level of Effort = >20,200 hours are:

- 1) **International Council of Systems Engineers (INCOSE) ESEP-**  
<http://www.incose.org/certification/CertWhichOne>
  - a. ABET Ratio = 2.79
  - b. Gladwell Ratio = 4.52
  - c. Experience/Total Ratio = 0.88
- 2) **Guild of Project Controls (GPC) FELLOW level- (with a BA/BS, MSc/MBA or a PhD. )**  
<http://www.planningplanet.com/guild/certification>
  - a. ABET Ratio = 2.07
  - b. Gladwell Ratio = 3.35
  - c. Experience/Total Ratio = 0.84
- 3) **Association for the Advancement of Cost Engineering (AACE) Certified Forensic Claims Consultant (CFCC)-** <http://web.aacei.org/>
  - a. ABET Ratio = 1.83
  - b. Gladwell Ratio = 2.96
  - c. Experience/Total Ratio = 0.81
- 4) **Association of Cost Engineering (Acoste) Certified Cost Engineer (CCE)-**  
[http://www.acoste.org.uk/template\\_content\\_R.php?page\\_id=335&](http://www.acoste.org.uk/template_content_R.php?page_id=335&)
  - a. ABET Ratio = 1.82
  - b. Gladwell Ratio = 2.95
  - c. Experience/Total Ratio = 0.81
- 5) **Project Management Institute (PMI) Portfolio Management Professional (PfMP)-**  
<http://www.pmi.org/certifications/types/portfolio-management-pfmp>
  - a. ABET Ratio = 1.70
  - b. Gladwell Ratio = 2.76
  - c. Experience/Total Ratio = 0.80
- 6) **Associazione Italiana di Ingegneria Economica (AICE) AICE Expert Level 1-** <http://www.aice-it.org/en/certification/528-aice-professional-certification>
  - a. ABET Ratio = 1.60



- b. Gladwell Ratio = 2.60
- c. Experience/Total Ratio = 0.77
- 7) Guild of Project Controls ADVANCED/EXPERT Level- (w /PhD)  
<http://www.planningplanet.com/guild/certification>
  - a. ABET Ratio = 1.42
  - b. Gladwell Ratio = 2.30
  - c. Experience/Total Ratio = 0.43
- 8) Green Project Management MASTER Level (GPM-m)- (w/PhD or MSc/MBA)  
<http://www.greenprojectmanagement.org/gpm-m-certification>
  - a. ABET Ratio = 1.39
  - b. Gladwell Ratio = 2.25
  - c. Experience/Total Ratio = 0.44
- 9) Guild of Project Controls ADVANCED/EXPERT Level- (w /BS or BA)  
<http://www.planningplanet.com/guild/certification>
  - a. ABET Ratio = 1.35
  - b. Gladwell Ratio = 2.19
  - c. Experience/Total Ratio = 0.73
- 10) Association for the Advancement of Cost Engineering (AACE) Decision and Risk Management Professional (DRMP)- <http://web.aacei.org/>
  - a. ABET Ratio = 1.35
  - b. Gladwell Ratio = 2.19
  - c. Experience/Total Ratio = 0.73
- 11) Guild of Project Controls ADVANCED/EXPERT Level- (w/MSc or MBA)  
<http://www.planningplanet.com/guild/certification>
  - a. ABET Ratio = 1.35
  - b. Gladwell Ratio = 2.18
  - c. Experience/Total Ratio = 0.64
- 12) Australian Institute of Project Management (AIPM) CPPE (Portfolio Manager, Senior Project Executive)- <https://www.aipm.com.au/certification/national-certification/which-level-is-right-for-me>
  - a. ABET Ratio = 1.31
  - b. Gladwell Ratio = 2.12
  - c. Experience/Total Ratio = 0.75

As all of the above credentials EXCEED the Non-ABET PE requiring 20,000 level of effort hours to qualify, despite the false and misleading claims of other organizations THESE are the credentials which are the world's "Gold Standard" in validating project management COMPETENCY.

**HONORABLE MENTION...**

The following 8 GLOBAL project management certifications scored greater than 15,000 Level of Effort hours and/or between 16,200 (ABET PE) and 20,000 (Non-ABET) Level of Effort Hours, earning them honorable mention as also being “legitimate” professional level credentials:

1	Rank Order based on PSCOR	20	21	22	23	24	25	26	27	28	29
2	Organizational Affiliation: Acronym of Credential:	PE LICENSE Non- ABET	IPMA USA A Level	IIBA CBATL Level 4	ACostE Incorporated	PMI PgMP	PE LICENSE ABET	AICE PIE Level II	GPC Comp. w/BA/ BS	ASEM PEM w/BA/ BS	INCOSE CSEP
3	Required Experience Hours AFTER Bachelors Degree	14000	20000	20000	14000	12000	10000	10000	10000	10000	10000
4	Bachelors (BDEG)	5200			5200	5200	5200	5200	5200	5200	5200
5	Masters (MDEG)										
6	PhD/DBA (PDEG)										
7	Exam Duration in Hours	16			2	4	16	4	4	4	2
8	Level of Effort To Prepare for Exam	480			60	120	480	360	120	85	60
9	TOTAL EXAM Level of Effort	496			62	124	496	364	124	89	62
10	Exam Difficulty Factor DIF1				3			18	6	0	0
11	Exam Difficulty Factor DIF2				6				12	0	0
12	Exam Difficulty Factor DIF3				9				19	0	0
13	PAPR Level of Effort				20			50	50	0	0
14	Formal Mentorship (SUPRV1)	10			40		10		100	0	3
15	Peer Assessment (SUPRV2)		16		46	100		2	4	0	0
16	REQUIRED courses										
17	ACTA Level of Effort	5	8		43	50	5		52	0	2
18	TOTAL PSCOR SCORE	20207	20024	20000	19492	17598	16207	15994	15691	15378	15329
19	RATIO TO ABET PE LICENSE	1.25	1.24	1.23	1.20	1.09	1.00	0.99	0.97	0.95	0.95
20	RATIO AGAINST GLADWELL	2.02	2.00	2.00	1.95	1.76	1.62	1.60	1.57	1.54	1.53
21	EXPERIENCE to TOTAL RATIO	0.69	1.00	1.00	0.72	0.68	0.62	0.63	0.64	0.65	0.65

Table 5- Certifications Requiring Between 15,000 LoE Hours to 20,200 LoE Hours

13) International Project Management Association (IPMA USA) Level A- <http://www.ipma-usa.org/certification/what-certification-level>

- a. ABET Ratio = 1.24
- b. Gladwell Ratio = 2.00
- c. Experience/Total Ratio = 1.00

14) International Institute of Business Analysts (IIBA) Certified Business Analysis Thought Leader (CBATL)- <http://www.iiba.org/Certification-Recognition/certificationlevels/level4-cbatl.aspx>

- a. ABET Ratio = 1.23
- b. Gladwell Ratio = 2.00



- c. Experience/Total Ratio = 1.00
- 15) Association of Cost Engineering (AcostE) INCORPORATED-  
[http://www.acoste.org.uk/template\\_content\\_R.php?page\\_id=335&](http://www.acoste.org.uk/template_content_R.php?page_id=335&)
  - a. ABET Ratio = 1.20
  - b. Gladwell Ratio = 1.95
  - c. Experience/Total Ratio = 0.72
- 16) Project Management Institute (PMI) Program Management Professional (PgMP)-  
<http://www.pmi.org/certifications/types/program-management-pgmp>
  - a. ABET Ratio = 1.09
  - b. Gladwell Ratio = 1.76
  - c. Experience/Total Ratio = 0.68
- 17) Associazione Italiana di Ingegneria Economica (AICE) AICE Practitioner Level 2-  
<http://www.aice-it.org/en/certification/528-aice-professional-certification>
  - a. ABET Ratio = 0.99
  - b. Gladwell Ratio = 1.60
  - c. Experience/Total Ratio = 0.63
- 18) Guild of Project Controls COMPETENT Level-  
<http://www.planningplanet.com/guild/certification>
  - a. ABET Ratio = 0.97
  - b. Gladwell Ratio = 1.57
  - c. Experience/Total Ratio = 0.64
- 19) American Society for Engineering Management (ASEM) Professional Engineering Manager (PEM) <https://www.asem.org/EM-Professional-Cert-Program>
  - a. ABET Ratio = 0.95
  - b. Gladwell Ratio = 1.54
  - c. Experience/Total Ratio = 0.65
- 20) International Council of Systems Engineers (INCOSE) CSEP-  
<http://www.incose.org/certification/CertWhichOne>
  - a. ABET Ratio = 0.95
  - b. Gladwell Ratio = 1.53
  - c. Experience/Total Ratio = 0.65

For any organization be it public or private sector for whom project management is a CORE COMPETENCY, any of the above credentials should be the first choice when considering to hire senior, advanced or expert level professional practitioners or when looking to implement professional development or capacity building programs in your organization.

Highlighting the issue of “reciprocity” or “equivalency”, both the Australian Institute of Project Management (AIPM) and IPMA USA are members of IPMA. To validate whether or not their credentials are reciprocal, AIPM’s top ranked CPPE (#19) with 21,217 LoE hours and IPMA USA’s top ranked “A” level (#21) with 20,024 LoE hours are clearly equivalent. Because IPMA is an umbrella organization consisting of independent country organizations, what would be interesting would be for



all IPMA country organizations to benchmark their credentials against these standards to see if the IPMA organizations in different countries are equally consistent with their requirements

**MID-CAREER PATH CREDENTIALS**

1	Rank Order based on PSCOR	20	25	30	31	32	33	34	35	36	37	38	39	40	41	63
2	Organizational Affiliation: Acronym of Credential:	PE LICENSE Non- ABET	PE LICENSE ABET	AACE CCP (CCE)	FAI FAC-C Level III	FAC- P/PM Senior	AACE EVP	AACE CEP	AACE PSP	GPM GPM	IPMA/ AIPM- CPPD	ASPE CPE	AXELOS ITIL MASTER	ACostE Registe red	IPMA USA B Level	PE License EIT
3	Required Experience Hours AFTER Bachelors Degree	14000	10000	8000	8000	8000	8000	8000	8000	6000	6000	10000	10000	10000	10000	
4	Bachelors (BDEG)	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200					5200
5	Masters (MDEG)															
6	PhD/DBA (PDEG)															
7	Exam Duration in Hours	16	16	5			5	5	5			8	2		2	8
8	Level of Effort To Prepare for Exam	480	480	280			200	200	200	160		360	180		0	240
9	TOTAL EXAM Level of Effort	496	496	285			205	205	205			368	182		2	248
10	Exam Difficulty Factor DIF1						10	10	10			18				
11	Exam Difficulty Factor DIF2						21	21	21			37				
12	Exam Difficulty Factor DIF3						30	30	30							
13	PAPR Level of Effort			50			0	0	0	50		50	0	15		
14	Formal Mentorship (SUPRV1)	10	10								3		0	30		
15	Peer Assessment (SUPRV2)									3	3	100	16	36	14	
16	REQUIRED courses				504	504										
17	ACTA Level of Effort	5	5							2	3	50	8	33	7	
18	TOTAL PSCOR SCORE	20207	16207	13820	13704	13704	13671	13671	13671	11415	11209	10991	10388	10114	10025	5688
19	RATIO TO ABET PE LICENSE	1.25	1.00	0.85	0.85	0.85	0.84	0.84	0.84	0.70	0.69	0.68	0.64	0.62	0.62	0.35
20	RATIO AGAINST GLADWELL	2.02	1.62	1.38	1.37	1.37	1.37	1.37	1.37	1.14	1.12	1.10	1.04	1.01	1.00	0.57
21	EXPERIENCE to TOTAL RATIO	0.69	0.62	0.58	0.58	0.58	0.59	0.59	0.59	0.53	0.54	0.91	0.96	0.99	1.00	0.00

Table 6- Mid Level or “Competent” level credentials

The credentials identified above require less than the ABET PE of 16,200 level of effort hours but EXCEED Gladwell’s 10,000 hours. Explained another way, a person holding these credentials would be classified as a mid-career path professional and as such would be expected to have between 5 to 8 years’ experience. The holders of these credentials would be considered to be sufficiently competent to be able to function with limited supervision and guidance. However, while they exceed Gladwell’s “10,000 hour” rule they do not meet truly professional levels of effort, as baselined against the US Professional Engineer (PE) license. IF we have any hopes of earning the respect as professional project managers it is essential that we start by developing credentialing processes which are benchmarked against those occupations which already enjoy the trust and respect of the consuming public.

Worth noting is that the AACE and FAI/FAC credentials ranked between #30 and #35 represent the highest of the exam only credentials- that is, although these credentials scores are about 85% of the ABET PE score of 16,200, they do NOT require any independent assessment of competency or validation of the experience based on a peer review of work outputs or deliverables. One of the recommendations or suggestions to these organizations would be to add in a peer review of the work



outputs from the applicants and it should be easy enough to raise the score to be equal to at least meet the 15,000 hour requirements which is the recommended minimum acceptable standard for professional level credentials.

**ENTRY LEVEL CREDENTIALS**

1	Rank Order based on PSCOR	20	25	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
2	Organizational Affiliation: Acronym of Credential:	PE LICENSE Non- ABET	PE LICENSE ABET	PMI- PMP	PMI PBA	FAC COR Level III	FAI FAC-C Level II	FAC- P/PM Mid	ASEM AEM	PMI- SP	PMI- RP	AICE Entry Level 1	IIBA CBAP	GPC PREP w/BA/ BS	FAC COR Level II	FAI FAC-C Level I	FAC- P/PM Entry	GPM- b	AIPM- CPPM	SAVE CVS	IPMA USA C Level	SAVE VMP	ACostE Enrolled	SAVE AVS	PE License EIT
3	Required Experience Hours AFTER Bachelors Degree	14000	10000	4500	4500	4000	4000	4000	4000	3500	3000	2000	7500	2000	2000	2000	2000	2000	2000	480	6000	240	6000	240	
4	Bachelors (BDEG)	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	5200	0	5200	5200	5200	5200	5200	5200			5200		5200	5200
5	Masters (MDEG)																								
6	PhD/DBA (PDEG)																								
7	Exam Duration in Hours	16	16	4	4				2	4	4	4	4	2				3			4				8
8	Level of Effort To Prepare for Exam	480	480	100	90				60	90	90	360	105	120				32			60				240
9	TOTAL EXAM Level of Effort	496	496	104	94				62	94	94	364	109	122							64				248
10	Exam Difficulty Factor DIF1											18	5	6							3				
11	Exam Difficulty Factor DIF2												11	12							6				
12	Exam Difficulty Factor DIF3													18							9				
13	PAPR Level of Effort											50								50	0	50	10	50	
14	Formal Mentorship (SUPRV1)	10	10										4	100					100	0	100	20	100		
15	Peer Assessment (SUPRV2)											2	2	3					100	12	100	26	100		
16	REQUIRED courses					504	432	432					35		432	240	240								
17	ACTA Level of Effort	5	5										3	52						880	6	440	23	280	
18	<b>TOTAL PSCOR SCORE</b>	<b>20207</b>	<b>16207</b>	9904	9884	9704	9632	9632	9322	8884	8384	7998	7774	7633	7632	7440	7440	7232	7200	6810	6160	6130	6079	5970	5688
19	<b>RATIO TO ABET PE LICENSE</b>	<b>1.25</b>	<b>1.00</b>	0.61	0.61	0.60	0.59	0.59	0.58	0.55	0.52	0.49	0.48	0.47	0.47	0.46	0.46	0.45	0.44	0.42	0.38	0.38	0.38	0.37	0.35
20	<b>RATIO AGAINST GLADWELL</b>	<b>2.02</b>	<b>1.62</b>	0.99	0.99	0.97	0.96	0.96	0.93	0.89	0.84	0.80	0.78	0.76	0.76	0.74	0.74	0.72	0.72	0.68	0.62	0.61	0.61	0.60	0.57
21	<b>EXPERIENCE to TOTAL RATIO</b>	<b>0.69</b>	<b>0.62</b>	0.45	0.46	0.41	0.42	0.42	0.43	0.39	0.36	0.25	0.96	0.26	0.26	0.27	0.27	0.28	0.28	0.07	0.97	0.04	0.99	0.04	0.00

Table 7- Entry Level Credentials

The credentials shown in Table 5 above EXCEED the level of effort required to become an “Engineer in Training” (EIT) #63 of 5,688 LoE, but require LESS than Gladwell’s “10,000 hour” rule and less than 61% of the level of effort to earn an ABET PE license. Explained another way, these credentials are appropriate for person with between 0 and 4 years’ experience, which makes them equivalent to an apprentice or intern and do NOT qualify as legitimate professional level credentials. Unfortunately, many organization’s including PMI are claiming these to be “professional” level credentials which not only brings into question whether these claims are consistent with their professional codes of ethics, but also whether making these claims for what are clearly entry level credentials violates US Federal Trade laws, which require amongst other things that these organizations offer proof or evidence to support their marketing claims. To put the absurdity of this unsubstantiated marketing hype in perspective, would you get on the next commercial jet if you found out:

- The pilot in command (PIC) had never demonstrated he/she has ever taken off or landed the plane successfully;
- That the 4500/7500 hours of experience was not logged on the flight deck as co-pilot or flight engineer but as part of the cabin crew or ground crew;
- The pilot in command had gotten his/her pilots license after studying a book of sample questions for 35 hours, followed by;



- Sitting for a 4 hour long, multiple choice exam consisting of 200 questions of which only 175 actually count and;
- Then passing said exam with a score of 10/175 or ~62%?

Surely no one in their right mind would get on a plane if they knew this is how the pilot got his/her pilots license, so why should we accept this as being a legitimate professional level credential for those people we expect to run our projects? No WONDER that after 45+ years of these organizations being in existence and hundreds of thousands of people holding these certifications that projects continue to fail with such alarming regularity. Are we surprised? Should we be surprised?

So why are we allowing professional organizations to tout what are clearly entry level credentials as “validating competency” or being a “gold standard”? Where are our professional ethics? When are we going to start to demand more honesty and transparency from the professional organizations we choose to support with our time and money?

Based on the fact that PMI’s PMP and ACP both fall just short of Gladwell’s “10,000 hours” the next time PMI upgrades these credentials they may want to consider boosting the experience requirements and/or the education requirements to move them above a PSCOR of 10,000? Then at least they can honestly market them as being legitimate ENTRY level credentials?

Also of concern is the fact that the Society for Value Engineering (SAVE) credentials score so low in the ratio of experience to total level of effort. The next time those credentials are upgraded, why not consider INCREASING the experience requirements which will not only fix the experience to total ratio but will also move the SAVE credentials up closer to the 10,000 hour minimum?

### **BUT THE REALLY BAD NEWS IS...**

The following 19 credentials (19/82 = 23%) do NOT even meet the EIT requirements of 5,688 Level of Effort hours and speaking in all seriousness, the organizations sponsoring these credentials as well as those individual’s considering earning them need to reflect on what it takes to validate “competency” and consider whether these credentials are actually doing anything to further the efforts to “professionalize” the practice of project management or are they making a mockery of it? Asked another way are these credentials actually worth anything, beyond validating the ability to pass a written exam? Unfortunately, many of the more popular credentials (i.e. ITIL and PRINCE2) fall into this category.

While the UK’s Association for Project Management (APM) credentials were evaluated as “new” for this year, the information contained on their website is vague and hard to locate and while several attempts were made to contact appropriate people responsible for these credentials, as of the publishing deadline, no responses had been received for the data necessary to evaluate them. One would hope that during 2017, APM would make efforts to benchmark their credentials and ensure that their



requirements were appropriate to the claims made in their marketing materials as to what the different levels of credentials are validating.

1	Rank Order based on PSCOR	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
2	Organizational Affiliation: Acronym of Credential:	PE License EIT	FAC COR Level I	AACE CCT/ CST	ACostE Entry	IIBA CCBA	PMI- ACP	PMI CAPM	APM PPQ	AXELO S ITIL XPRT	APM PMQ	APM RISK	AXELOS PRINCE2 Pract.	IPMA USA Level D	IIBA ECBA Level 1	APM PFQ	AXELOS ITIL FOUND.	AXELOS PRINCE2 FOUND.	INCOSE ASEP	AXELOS PRINCE 2 PROF.	APM RPP
3	Required Experience Hours AFTER Bachelors Degree				4000	3750	3500	1500													
4	Bachelors (BDEG)	5200	5200	5200																	
5	Masters (MDEG)																				
6	PhD/DBA (PDEG)																				
7	Exam Duration in Hours	8		3		4	3	3	12	2	3	3	3	3	1	1	1	1			
8	Level of Effort To Prepare for Exam	240		105		105	63	60	480	180	120	120	75	60	40	40	30	30	40		
9	TOTAL EXAM Level of Effort	248		108		109	66	63	492	182	123	123	78	63	41	41	31	31	2		
10	Exam Difficulty Factor DIF1								25	0	6	6		3							
11	Exam Difficulty Factor DIF2								49	0	12	12		6							
12	Exam Difficulty Factor DIF3								74	0	18	18		9							
13	PAPR Level of Effort																				
14	Formal Mentorship (SUPRV1)					4															20
15	Peer Assessment (SUPRV2)					2															
16	REQUIRED courses		240			21									21						
17	ACTA Level of Effort					3		23													
18	TOTAL PSCOR SCORE	5688	5440	5416	4000	3997	3632	1649	1132	364	283	283	155	145	103	82	62	62	42	20	0
19	RATIO TO ABET PE LICENSE	0.35	0.34	0.33	0.25	0.25	0.22	0.10	0.07	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
20	RATIO AGAINST GLADWELL	0.57	0.54	0.54	0.40	0.40	0.36	0.16	0.11	0.04	0.03	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
21	EXPERIENCE to TOTAL RATIO	0.00	0.00	0.00	1.00	0.94	0.96	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 8- Credentials which fail to meet the EIT Level of Effort

Even those advertising as “Entry” level credentials (i.e. AACE’s CCT/CST, #65; AcostE Entry #66; IIBA’s ECBA, #77 or PMI’s CAPM, #70 or IPMA USA Level D, #76) should give some serious consideration to increasing the experience and/or educational requirements so that their credentials score at least equal to if not higher than the EIT. (5,688 level of effort hours)

As the AcostE Entry, #66; IIBA CCBA, #67; PMI ACP, #68, AICE C2TCM, #69 and PMI’s CAPM, #70, already have favorable Experience to Total Level of Effort ratios, these organizations may want to consider boosting the education/training requirements to raise these credentials to score higher than the EIT?

But what is most disturbing is to see credentials being branded as being “Expert” (i.e. Axelos ITIL Expert, #72) or “Practitioner” (i.e. IIBA’s CCBA, #67; Axelos PRINCE2 Practitioner, #75 or the APM’s PPQ, #71; PMQ, #73 and especially APM’s RPP. #82) which are implying that those who hold them qualify to be “professional” or “competent” practitioners. These need to be looked at to see if what they are claiming is both ETHICAL and LEGAL:

- ETHICALLY to see if there is any basis what so ever to claim that a project manager is “competent” or should be labeled as a “professional” with absolutely no validated experience requirements and;
- LEGALLY to see if the claims that state or imply these are “competent” or “professional” level credentials when they don’t even meet the EIT requirements, violate any of the “Truth in Advertising” or “Consumer Protection” laws in the countries where the home organization is based and/or where they offer their credentials.



Building on our earlier analogy of getting one's first driver's license, you pass a multiple choice exam which validates that you have sufficient knowledge and understanding of the rules of the road, signage and driving etiquette. By passing this exam, you earn a LEARNERS PERMIT, which authorizes you to drive the family sedan around town, usually under the watchful eyes of an adult family member or driving instructor. After some period of time (apprenticeship or internship) where you build your physical driving skills, you qualify to enter the second part of the competency assessment, which is to book a driving test where you sit next to the Dept. of Motor Vehicles officer who puts you through a series of tests- starting on a hill, parallel parking, three point turn etc. Assuming you pass the actual competency portion of the test, you are awarded your first driver's license. HOWEVER, this does not authorize you to drive a semi-rig, school bus, heavy equipment or other commercial applications. To qualify as a PROFESSIONAL driver you must undergo further experience, preparing for and passing both written and practical exams. The implications of this being we should expect organizations to be creating at least 3 or 4 levels of competency based assessments or credentials, more or less aligned with a typical career path progression.

## **CONCLUSIONS AND RECOMMENDATIONS**

With 30,000+ downloads<sup>3</sup> thus far, this topic of benchmarking the various credentials is clearly important and of interest to many. Towards this end, below is a simple scoring matrix you can use to help guide you in evaluating or assessing your favorite credential without having to go through a more complex scoring process.

Let's start by defining *COMPETENCE*<sup>4</sup> as being *"the quality or state of being functionally adequate, characterized by marked or sufficient aptitude + attitude + skills + strength + knowledge"*.

What that means is to calculate the total level of effort (PSCOR) can come from measuring and assessing any combination of the following attributes: APTITUDE plus ATTITUDE plus SKILLS plus STRENGTHS plus KNOWLEDGE based on any one of a number of examination formats, personality assessment instruments and peer reviewed work outputs or results. But in the end, documented and validated work experience will trump education and formal documented university level education will trump any single exam.

One of the problems in professionalizing the practice of project management lies in the lack of consistency in job titles. The military, commercial aircraft piloting and medicine have solved this problem through the use of uniforms, where it is possible to see the "rank" of an individual from the uniform. Assuming we are unlikely to create a uniform for the different incarnations of project manager, we can only rely on job titles and/or different levels of certification. Below is a list of suggested job titles that we can or should be considering. (This author has also published research on the various job titles derived from doing key word analysis on "help wanted" advertisements)

<sup>3</sup> <http://www.build-project-management-competency.com/download-page/> line items #13, 14, 23, 24, 27 and 28, 37, 38.

<sup>4</sup> Compiled and Restated from Merriam Webster's Third New International Dictionary <http://www.merriam-webster.com/>



Level of Effort Ranges		Possible Certification Titles	Typical Job Titles
Low	High		
>16,000		Master Practitioner, Master Professional, Black Belt, Fellow, Senior Fellow, Subject Matter Expert	Project Manager CIFTER >19, Project Controls Manager, Director of Project Controls, Claims Consultant, Project Management Office Director, Program Manager, Portfolio Manager, Expert Witness, Business Analyst Subject Matter Expert
10,000	15,999	Journeyman or Professional Practitioner, Competent Practitioner, Advanced Practitioner, Red Belt	Project Manager CIFTER 12-19, Senior Cost Estimator, Project Controls Manager, Senior Planner/Scheduler, PMO Manager, Senior Cost Engineer, Senior Business Analyst
8,875	9,999	4th Year Apprentice or Intern, Orange Belt,	Project Manager CIFTER <12, Cost Estimator, Project Control Engineer, Planner/Scheduler, PMO Team Lead, Cost Engineer, Business Analyst
7,750	8,874	3rd Year Apprentice or Intern, Purple Belt	Assistant Project Manager, Assistant Cost Estimator/Cost Engineer, Assistant Planner/Scheduler, Assistant Claims Analyst, Assistant Business Analyst
6,625	7,749	2nd Year Apprentice or Intern, Green Belt	Junior Project Manager, Junior Cost Estimator/Cost Engineer, Junior Planner/Scheduler, Junior Business Analyst
5,500	6,624	1st Year Apprentice or Intern, White Belt	Project Manager in Training, Cost Estimator/Cost Engineer in Training, Planner/Scheduler in Training, Business Analyst in Training, Claims Analyst in Training
	<5,700	Novice, Entry, White Belt, Preparatory	Career Path Exploration, Evaluation or Probationary Hire, Fresh Graduate, New Hire, Apprentice, Intern

Table 9- Simplified Scoring Model to compare Level of Effort to Certification Titles to Job Titles<sup>5, 6</sup>

From an ethical if not legal perspective, it is imperative that the name of the credential accurately and reliably represent what the consuming public can reasonably expect from a person who holds any given credential. Specifically, calling a person a “professional” anything based only on their ability to pass a multiple choice exam is stretching the limits of credibility and only serves to damage the image of project managers or those providing project support services who truly are professional. Consistent with the various codes of ethics, does it seem unreasonable or inappropriate to expect that the name of the credential provides an honest and validated indication of what the capabilities of the person who holds the credential is capable of doing?

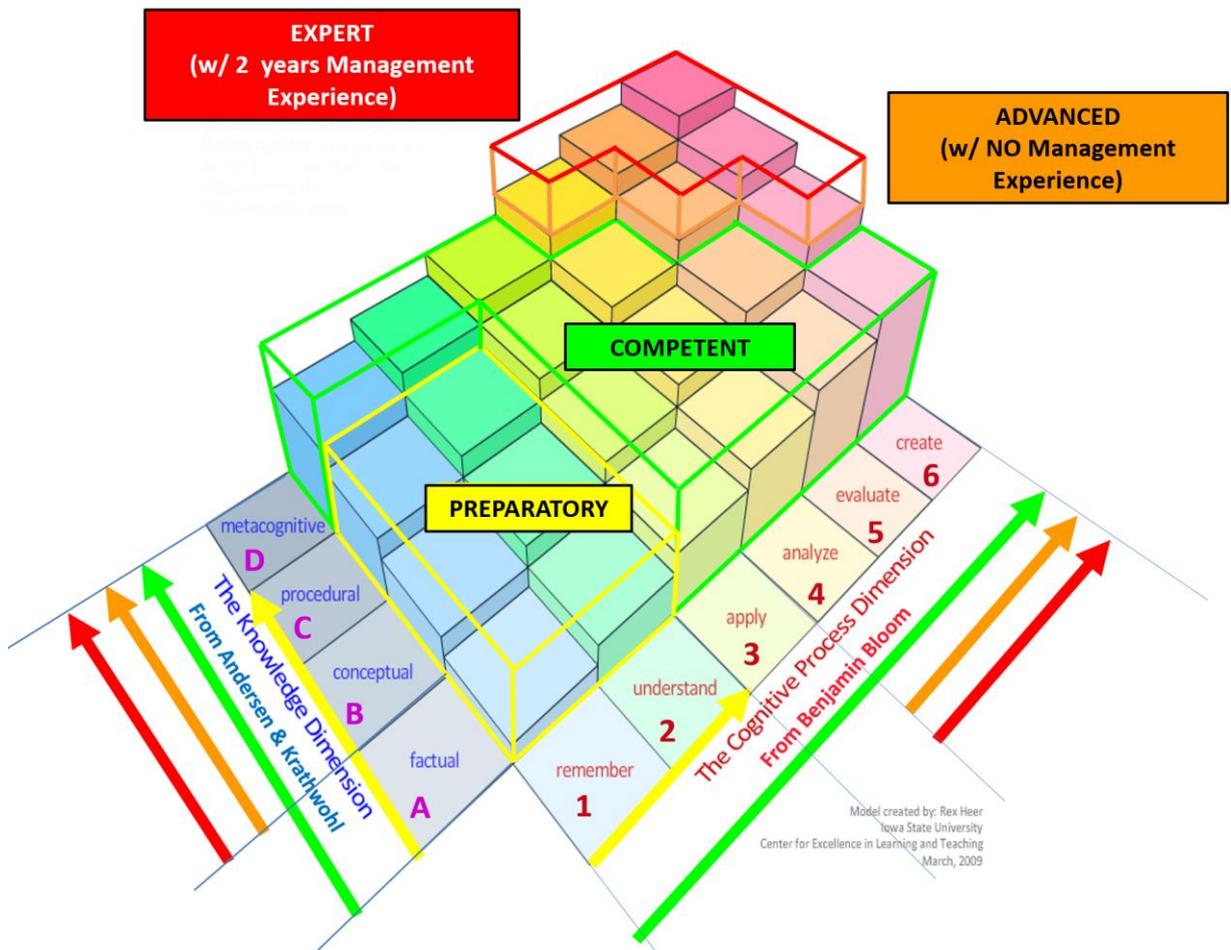
And to create a scoring model which is able to measure COMPETENCY, we need to look at three dimensions- What KIND of knowledge is required to accomplish the tasks identified in the role delineation studies, HOW that knowledge is applied in order to be deemed “competent” and what is the DEPTH of that knowledge.

For illustration purposes, the scoring model being featured below in Figure 2 is based on the 2015 top rated Guild of Project Controls family of competency based credentials.

<sup>5</sup> To learn more about how to calculate the Crawford Ishikawa CIFTER score, go to the Global Alliance for Project Performance Standards (GAPPS) [http://globalpmstandards.org/wp-content/uploads/2014/12/GAPPS\\_Project\\_Manager\\_v1.1150411\\_A4.pdf](http://globalpmstandards.org/wp-content/uploads/2014/12/GAPPS_Project_Manager_v1.1150411_A4.pdf)

<sup>6</sup> The belt levels were based on the Kung Fu System- <http://www.pureshaolin.com/classes/martial-arts-program-black-belt-program/>



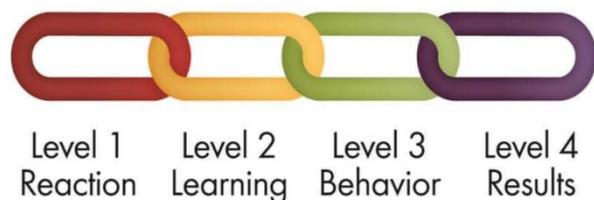


<http://www.celt.iastate.edu/teaching-resources/effective-practice/revised-blooms-taxonomy/>

Figure 2- Guild of Project Controls Competency Assessment Model using Iowa State University Matrix.<sup>7</sup>

By basing the scoring model on tested and proven educational course development tools and techniques, enables training providers the opportunity to take the appropriate and relevant role delineations plus the underlying “Body of Knowledge” or the “Methodology” and turn it into a curriculum which produces measurable results.

The next challenge is how do we measure or assess what the results of our training are? To accomplish that, the author recommends that training providers and those organizations which require their training providers to be “approved” or “endorsed” or “registered” be required to validate the effectiveness of their



<sup>7</sup> Adapted from Moor, R. (2009) Iowa State University, Center for Excellence in Learning and Teaching <http://www.celt.iastate.edu/teaching/RevisedBlooms1.html> last accessed 20 November 2016

training by applying the “Kirkpatrick Model” as the basis to prove the effectiveness and efficacy of their training programs. (See Kirkpatrick Method <http://www.kirkpatrickpartners.com/OurPhilosophy/TheNewWorldKirkpatrickModel/tabid/303/Default.aspx> Unless a training provider can demonstrate how they are going measure or assess the effectiveness and efficacy of their training against these 4 levels, then the individual or organization seeking the training should consider outsourcing training to those who CAN demonstrate compliance to the Kirkpatrick levels.

Lastly assuming we all can agree that one CANNOT learn to be a competent project manager by studying books of sample questions- that the ONLY way to learn to be a competent project manager is by “initiating, planning, executing, controlling and closing” real projects under the guidance and mentoring of senior practitioners, those organizations developing or delivering training as well as those organizations who are requiring their training providers to be “approved” or “endorsed” or “registered” need to start specifying that all project management related training will conform to the requirements of the Buck Institute’s “Project Based Learning” [http://bie.org/object/offsite/pbl\\_online\\_org/](http://bie.org/object/offsite/pbl_online_org/) both of which are subjects of previous and/or follow on papers on competency development and assessment published by this author.

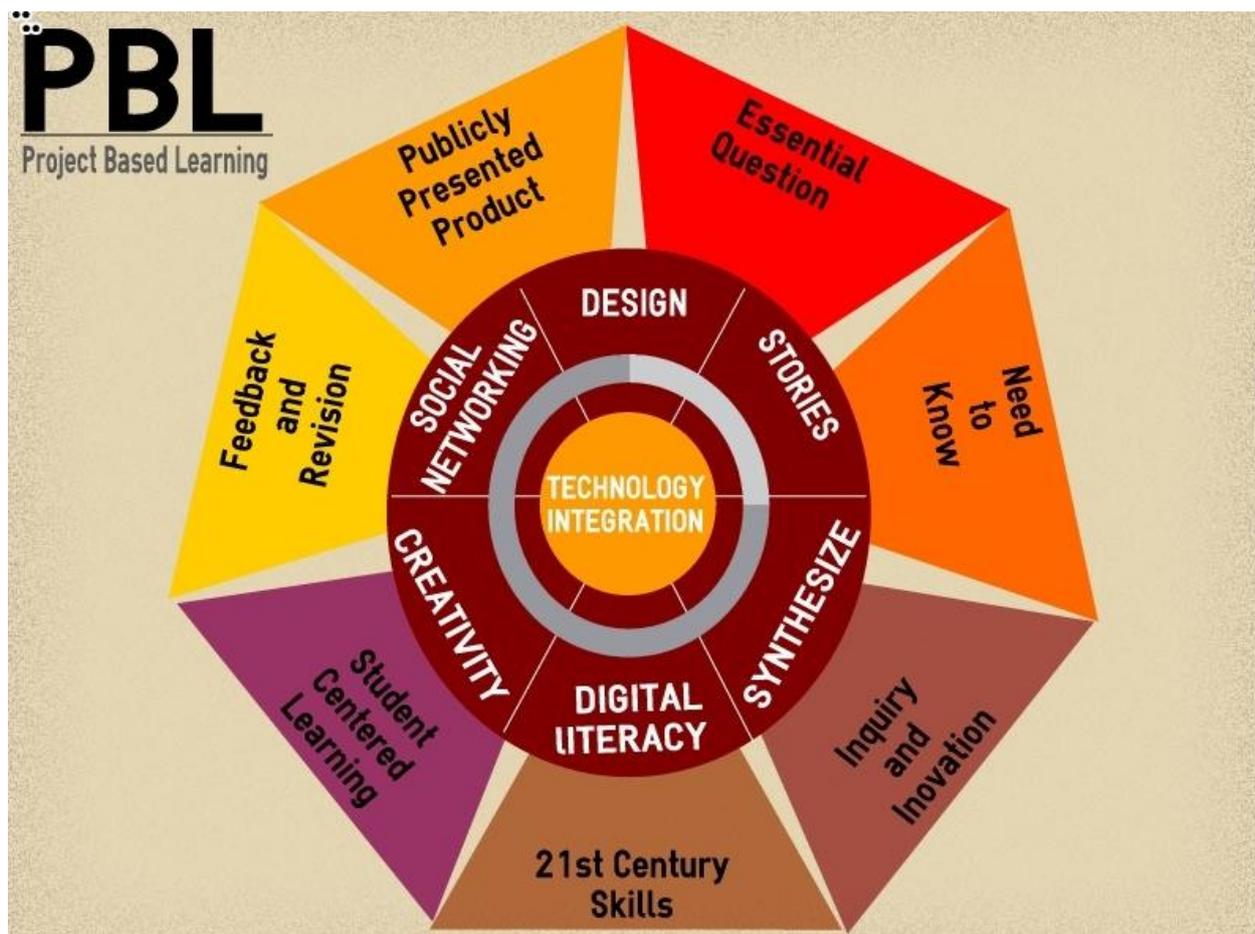


Figure 4- Buck Institute’s Project Based Learning Gold Standard

To summarize this article is proposing three “actionable items” for 2016:

#1) “Raise the Bar” by upgrading all beginner or ENTRY level credentials to require a minimum of 5700 hours level of effort, equaling or exceeding the EIT as being the MINIMUM acceptable level for any project management or project management support credential;

#2) “Raise the Bar” by upgrading all current PRACTITIONER level credentials to require a minimum of 16,000 hours of documented and independently validated experience, combined with formal education or training, making them legitimate PROFESSIONAL level certifications;

#3) Comply with ethical and legal requirements by renaming or rebranding those credentials which fall between 10,000 hours to 15,000 hours level of effort as being “Intermediate” or “Practitioner” rather than “Professional” level credentials. (Or upgrade them to >16,000 hours)

### **FOLLOW ON RESEARCH**

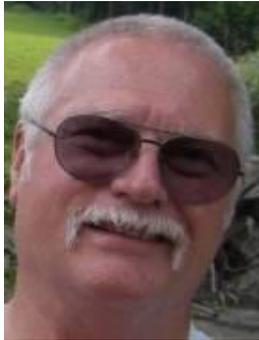
The author is actively seeking and encouraging Masters or PhD students looking for a thesis topic to build upon or refine this scoring model.

Specifically, research is needed to validate whether projects run by those who hold the higher level, competency based credentials are or are not more “successful” than those with lower level exam based credentials.

Another topic worth researching is whether or not having certifications translates into higher pay. While several professional organizations are quick to make this claim, someone with a passionate interest in this topic needs to see if there is any causal relationship between certifications and higher pay. Some preliminary research done by John Hollman, PE on ACE’s Annual Salary Survey suggests that while there may be correlation there is no causal relationship.

[http://validest.com/index\\_htm\\_files/Hollmann\\_2013%20Salary%20Study.pdf](http://validest.com/index_htm_files/Hollmann_2013%20Salary%20Study.pdf) This needs additional research to see if the work John has done applies to PMI and other organizations salary data.

## About the Author



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**Dr. Paul D. Giammalvo**, CDT, CCE (#1240), MScPM, MRICS, is Senior Technical Advisor (Project Management) to PT Mitratata Citragraha. (PTMC), Jakarta, Indonesia. [www.build-project-management-competency.com](http://www.build-project-management-competency.com).

For 25+ years, he has been providing Project Management training and consulting throughout South and Eastern Asia, the Middle East and Europe. He is also active in the Global Project Management Community, serving as an Advocate for and on behalf of the global practitioner. He does so by playing an active professional role in the Association for the Advancement of Cost Engineering International, (AACE); Construction Specifications Institute (CSI) and the Construction Management Association of America, (CMAA). He previously served on the Board of Directors of the American Society for the Advancement of Project Management (asapm) <http://www.asapm.org/> and served previously as the Chair of the Certification Board of the Green Project Management organization. <http://www.greenprojectmanagement.org/> He is active as a regional leader and a compensated consultant to the Planning Planet's Guild of Project Controls. <http://www.planningplanet.com/guild>

He has spent 18 of the last 45 years working on large, highly complex international projects, including such prestigious projects as the Alyeska Pipeline and the Distant Early Warning Site (DEW Line) upgrades in Alaska. Most recently, he worked as a Senior Project Cost and Scheduling Consultant for Caltex Minas Field in Sumatra and Project Manager for the Taman Rasuna Apartment Complex for Bakrie Brothers in Jakarta. His current client list includes AT&T, Ericsson, Nokia, Lucent, General Motors, Siemens, Chevron, Conoco-Philips, BP, Dames and Moore, SNC Lavalin, Freeport McMoran, Petronas, Pertamina, UN Projects Office, World Bank Institute and many other Fortune 500 companies and NGO organizations.

Dr. Giammalvo holds an undergraduate degree in Construction Management, a Master of Science in Project Management through the George Washington University and a PhD in Project and Program Management through the Institute Supérieur De Gestion Industrielle (ISGI) and Ecole Supérieure De Commerce De Lille (ESC-Lille- now SKEMA School of Management) under the supervision of Dr. Christophe Bredillet, CCE, IPMA A Level. "Dr. PDG" can be contacted at [pauldgphd@gmail.com](mailto:pauldgphd@gmail.com).

For those interested in copies of the paper or access to the Excel spreadsheet, they can be downloaded HERE <http://www.build-project-management-competency.com/download-page/> Line Items #37 and #38.