

Project Management Credentials Compared

A Follow Up Analysis

By Paul D. Giammalvo

INTRODUCTION

Back in December of 2010, I attempted to create a “scoring model” that would enable some sort of rational and meaningful comparison between the various credentials common in the world of project management. The initial study consisted of those credentials having a reasonable degree of global recognition, including those of PMI, IPMA, AIPM, AACE, INCOSE and APM/OGC. (Reference PM World Journal Volume 2, Issue 1 January 2013, Second Edition <http://peworldjournal.net/article/project-management-credentials-compared-a-preliminary-analysis/>)

To recap, this scoring model was based on the total “end to end” “level of effort” required to qualify for, prepare, take and earn each of the credentials, applying the principle of “earned hours” for fulfilling each of the requirements. The underlying assumption being that the more stringent and tough the requirements, the more likely the credential was to reliably and accurately validate “COMPETENCY”.

As a baseline, I selected the US “Professional Engineer” license (PE) as the benchmark of excellence, as it is a well-recognized and highly regarded professional level “license to practice” which established both the MINIMUM acceptable level to begin to practice (as an Engineer In Training- EIT) as well as an upper threshold, which was the MINIMUM acceptable level to obtain a license to practice as an independent Professional Engineer. (PE) As this scale does not have a true zero, it only provides us with the ability to create an interval scale. That is, lacking a true zero point, we can plot the relative standings of each credential, but we are unable to say with any reliability by how much one credential was “tougher” or “easier” to obtain, when compared against any another.

To further support the efforts to establish a true ratio rather than merely an interval scoring model, I researched to find a metric which had a true zero point. For that, I looked to the contemporary writings of Malcolm Gladwell, who, in his book “Outliers”¹ made a strong case that to become “PROFESSIONALLY COMPETENT” at anything, one had to dedicate at minimum of 10,000 hours of serious, professional level practice and progressively more challenging experience before one could

¹ Gladwell, Malcolm, “Outliers”, 2008, Penguin Press, Chapter 2, pages 38-76

master his/her sport or profession, be it music, basketball, auto racing, commercial piloting or project management.

With Gladwell having provided not only a true zero point, but also a minimum threshold of hours, it provides us with a way not only to create an interval scale measure of the various credentials but also to create a true ratio scale- that is, we can see whether one credential requires half the level of effort of the other or twice as much level of effort to obtain it, the inference being, the more rigorous the process, the more likely the credential is to actually measure competency.

The scoring model I created in 2010 was published in the December issue of the now defunct PM World Today/PM Forum e-Journal. It was also made available under creative commons license from our website download page. (<http://tinyurl.com/c59awm3> or here <http://tinyurl.com/ceq77vs>) During the past two years, there have been over 8,000 downloads of the narrative/Excel spread sheet based version and during the past 2 years, received some 25 comments/suggestions for improvements on the model. This update incorporates those inputs.

As with the original publication, I do not see this as a final end product, but merely a progression to help us understand the process of measuring and assessing competency in applied project and program management. Accordingly, I am actively seeking graduate or PhD level researchers who would be willing to pick this early research and conduct a more rigorous, scholarly assessment.

However, in the meantime, I think readers will find this update to the initial research to be interesting and if nothing else, I hope it stimulates a robust dialog about what professional organizations purporting to represent the practice of project management can and should be doing to "raise the bar" consistent with other professions.

CHANGES IN THE MODEL

Based upon the comments, suggestions and other inputs offered by those who read the article and/or who downloaded the Excel spread sheet; this section contains suggested improvements interested independent contributors believed would add to the accuracy, reliability and validity of this comparison. Accordingly, the following modifications have been reflected in this update:

- 1) An additional adjustment factor has been added to cover the increased difficulty in preparing for and writing exams containing fill in the blank, matching, short essay, compound questions (case study analysis) and open ended essay questions compared against the basic Multiple Choice/True or False based exam questions.
 - a. For fill in the blank phrases (<15 words) or matching responses, a factor of 05% was added. This factor is identified in our updated model as Difficulty Level 1 or "DIF1".

- b. For compound questions (case study analysis) and short essay responses (>15 words but less than 250) a factor of 10% was added. This factor is identified in our updated model as Difficulty Level 2 or "DIF2".
- c. For open ended essay questions (>250 words) a factor of 15% was added. This factor is identified in our updated model as Difficulty Level 3 or "DIF3".

Note these factors are arbitrary and are based solely on the authors experience. Exactly what the relative weighting factor should be is one which requires more rigorous academic research. However as these factors have been applied equally to all the credentials which qualify, it should not change the overall ranking.

Also note that if an exam is a HYBRID (consisting of all four types of questions) it is possible to get bonus hours for each category. (Again, it is the opinion of the author, subject to further research, that any exam measuring competency should incorporate all 4 types of questions, with an emphasis on those questions which test or validate the higher order knowledge)

- 2) A new category was added for those credentials requiring a publishable quality paper be prepared and submitted as an integral, required component of the credentialing process. Based on first-hand experience in preparing these papers as well as 20+ years of mentoring students in the preparation of 2500 to 5000 word papers, 50 hours has been added for those credentials requiring a written paper being published as part of the credentialing process. Again, while substantiated through experience, ideally a more rigorous or academically sound analysis is in order. This factor is identified in our model as "PAPR"
- 3) If the experience was SUPERVISED and signed off for (as in a formal mentoring relationship) and/or VALIDATED by an independent assessor, then a factor was applied to the experiential hours. One of the concerns expressed with PMI's PMP process is that although 10% of the applicants are audited, the audit only supposedly checks to validate that the hours claimed are accurate. The PMP audit process does NOT validate that the projects the person worked on were successful or whether the contribution made by the applicant added to or detracted from the outcome. Similar concerns have been made about PMI's PgMP assessment process. While the PgMP requires 12 people to verify the work done by the applicant, there is no assessment as to whether or not the project was "successful" or whether the PgMP applicant contributed to the success or tried to prevent the failure. The method PMI has chosen can be contrasted against the PE license, where a licensed Professional Engineer must review and SIGN OFF on the work his subordinates/mentored produce- where the license of the supervising PE is on the line if the junior Engineer in Training (EIT) makes an error in fact or judgement. This factor is identified in our model as "SUPRV" and represents an arbitrary "bonus" or "premium" of 25%. To address concerns

expressed about the non-standard approach PMI has taken, a DEDUCT of 200 hours has been applied against the SUPRV category for the PgMP.

In addition, the following updates were made to reflect changes by the organizations in their testing procedures and/or certification offerings or to correct any errors or omissions on my part in the initial research.

asapm (US IPMA entity)-

Based on inputs from several key leaders from asapm, the following clarifications/corrections have been incorporated into the scoring model:

- Level A: no exam; paper required
- Level B: no exam; paper required
- Level C: 60 multiple choice (89%), 7 long essay (11%), 3 hours
- Level D: 75 multiple choice (94%), 5 long essay (6%), 3 hours
- Level A 5 years documented and validated experience
- Level B 5 years documented and validated experience

AACE-

AACE also added a new credential- the Decision and Risk Management Professional (DRMP)²

Unfortunately, AACE not only dropped the top rated C3PM credential but also apparently have “dumbed down” their exam from 7 hours to only 5 hours to accommodate computer based testing. These changes are also reflected in the revised scoring model.

PMI-

PMI added the “PMI Agile Certified Practitioner” (PMI- ACP), which has been included in this analysis. Also a DEDUCT of 200 hours has been applied against the PgMP assessment process.

ASEM (American Society for Engineering Management)

This update includes both the Associate Engineering Manager (AEM) and the Professional Engineering Manager (PEM)

FAI (US Federal Acquisition Institute)

The FAI has added their Federal Acquisition Certificate for Program and Project Management Entry (FAC-P/PM Entry) Middle (FAC-P/PM Mid) and Senior level credentials. (FAC-P/PM Senior)

GPM (Green Project Management)

The GPM has asked that we include their entry level “Green Project Manager-b” (GPM-b) and their senior level “Green Project Manager” (GPM) into the analysis.

² <http://www.aacei.org/educ/cert/DRMP/> Last accessed 12 December 2012

To summarize, the three major changes to this scoring model are:

- 1) The TYPES of exams have been factored to address the issue that essay questions^{3, 4, 5}, are a “better” way to test higher order complex critical thinking skills than are multiple choice type questions and;
- 2) An additional “bonus” for those credentials requiring a publishable quality written paper as part of the credentialing process, and;
- 3) Whether the experience has actually been VALIDATED as part of the credentialing process. This does not mean that the hours were audited (as PMI does) but whether the work output was actually reviewed and approved or endorsed by the mentor (As is done as an integral part of the PE licensing process) OR assessed by a trained assessor.

To recap the ORIGINAL scoring model we published in 2010 analysed the following variables:

Total Hours of Work Experience for a person WITH a 4 year degree = WEXP⁶
Standardized Value of a 4 year Degree = BDEG⁷
Standardized Value of a Masters Degree = MDEG⁸
Additional REQUIRED Training Hours = ARTH⁹
Total Level of Effort to prepare for and take the exams = EXAM¹⁰
Total Level of Effort required to prepare for and be assessed = ATCA¹¹
Total Level of Effort and Degree Requirements Professional Score = PSCOR

³ Warren, G. (1979), Research reports: Essay versus multiple choice tests. J. Res. Sci. Teach., 16: 563–567.
doi: 10.1002/tea.3660160610

⁴ <http://www.fastcoexist.com/1679134/the-end-of-multiple-choice-the-quest-to-create-accurate-robot-essay-graders>

⁵ <http://www.usnews.com/education/blogs/high-school-notes/2011/11/28/do-multiple-choice-questions-pass-the-test>

⁶ This value was taken from the published requirements on the various certification websites and/or downloadable .pdf files.

⁷ For the purposes of this experiment, the assumptions used in calculating BDEG were:

- 1) The average project management undergrad degree required 130 credit hours for graduation;
- 2) That for each 3 credit hours, 40 hours of class time was required;
- 3) That for each 40 hours of class time, 2 hours of homework, research, writing or outside work was required by the student.

⁸ For the purposes of this experiment, the assumptions used in calculating MDEG were:

- 1) The average project management graduate degree required 36 credit hours for graduation;
- 2) That for each 3 credit hours, 40 hours of class time was required;
- 3) That for each 40 hours of class time, 3 hours of homework, research, writing or outside work was required by the student.

⁹ As only PMI REQUIRES training prior to taking the PMP exam and because that training can be fulfilled by simply studying books of sample questions or listening to a podcast, I did not count it as being equal to academic course work and counted the hours only, with no outside or additional effort. (See exam prep effort below)

¹⁰ Based on inputs received from several sources and based on firsthand experience, I assumed 30 hours of preparation for each hour of exam. For the PMP only, I deducted the required 35 hours from the total. (4 X 30 = 120 - 35 = 85)

¹¹ To calculate the value to prepare for and be assessed, includes the actual assessment time plus an estimated value for the applicant to prepare the evidence for review by the assessors.

Thus the WEXP + BDEG+ MDEG + ARTH + EXAM + ATCA = PSCOR, where the PSCOR is equal to the cumulative "level of effort" for each of the variables. As noted previously, the whole premise of this model is based on the concept of "earned hours" using the estimated average level of effort to fulfill each of the requirements to qualify, prepare for and take the exam(s) or otherwise being assessed, in earning each of the credentials being compared.

To the original model, we are now ADDING a total of five new "bonus" or "premium" hour categories, the expectation being that these changes will more accurately reflect the rigor of the credential:

- 1) To account for the relative difficulty of the type of questions, we are adding the following to the EXAM score from the original model:
 - a. ADD 05% for Fill in the blank (short phrases <15 words) or matching type questions =DIF1
 - b. ADD 10% for Compound (Case Study Analysis) questions or short essay questions =DIF2
 - c. ADD 15% for open ended (long essay) questions >250 words =DIF3

- 2) To give credit for a publishable quality paper, (Minimum of 2500 words) as part of the assessment process, we have added 50 hours to the entire scoring model =PAPR

- 3) To account for the importance of formal mentoring to the development of competent, capable professionals, we have ADDED 100 Level of Effort hours to those credentials which INCLUDE a formal (signed off) mentoring program =SUPRV1

- 4) To account for those credentials requiring an ASSESSMENT by certified or qualified ASSESSORS, we have added 50% to the original ATCA score =SUPRV2

Summarized, the original scoring model- WEXP + BDEG+ MDEG + ARTH + EXAM + ATCA = PSCOR, has now been refined and improved by adding the above modifications to the original resulting in the formula for the revised model being WEXP + BDEG+ MDEG + ARTH + EXAM + **(DIF1 +DIF2 + DIF3) + PAPR** + ATCA + **SUPRV1 + SUPRV2** = PSCOR

Based on these modifications, the new ranking can be seen in illustrations 1 - 4 below.

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 OR OMISSIONS, THE AUTHOR WILL BE HAPPY TO MAKE WHATEVER CORRECTIONS ARE NECESSARY, UPON RECEIPT OF WRITTEN PROOF FROM AN AUTHORIZED INDIVIDUAL FROM EACH ORGANIZATION.

There are many instances where the data is not clear, is contradictory or is only available buried deep in the various documents. One of the conclusions of this paper will be to urge the member/owners of these organizations to publish an FAQ page which clearly states the total level of effort required to obtain their credentials. I have made the Excel spreadsheet available ¹²for anyone to download and update if you find information which is incorrect. My only request is you cite the reference where you obtained your updated information so I can validate your changes.

I also encourage others to download the Excel spreadsheet and add in any other credentials you would like to see compared. Again, my only request is you cite your sources of the data so I can validate what you have done.

ANALYSIS OF THE DATA

¹² The complete Excel spreadsheet can be downloaded from <http://www.build-project-management-competency.com/download-page/>

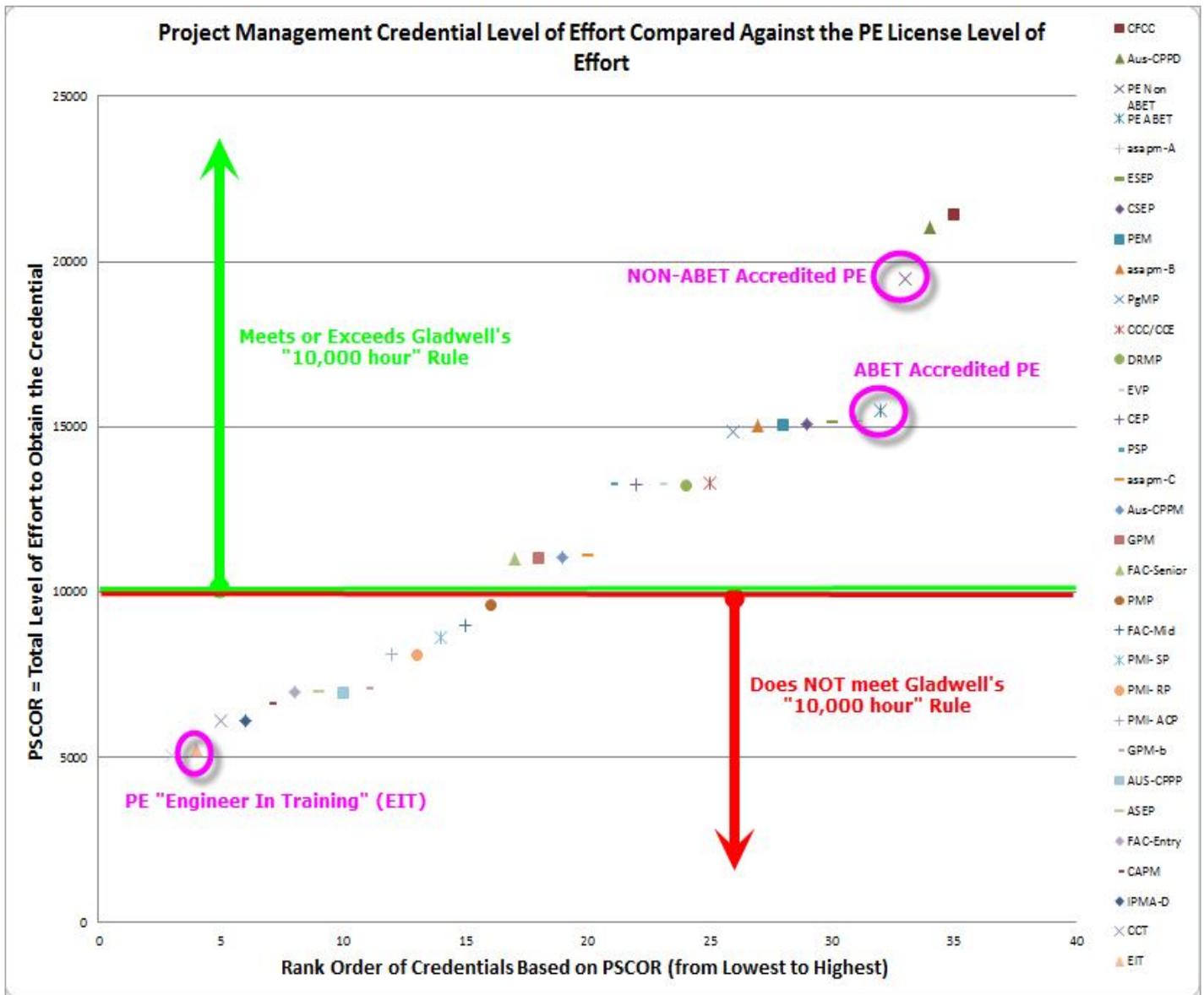


Illustration 1-Graph showing the rank order of the various credentials from lowest to highest¹³

This illustration shows the rank ordering of all the 35 credentials including in this survey, benchmarked against both the US Professional Engineering (PE) License process, starting with the Engineer In Training (EIT) and including the requirements for those graduating from both ABET accredited universities and non-ABET accredited universities. The reason the non-ABET PE's rank higher is because they generally are required to document more work experience and as this model clearly favours experience over exams, the non-ABET PE ranks higher than the ABET by about 26%.

¹³ The complete Excel spreadsheet can be downloaded from <http://www.build-project-management-competency.com/download-page/>

(PSCOR 19496/15496 = 1.258) As Gladwell has provided us with a true zero point, it is possible to make a relative comparison between any two credentials.

Worth highlighting are the two credentials which EXCEED the PE License requirements- AACE's Certified Forensic Claims Consultant (CFCC) and AIPM's Certified Program and Project Director (CPPD).

Also worth noting are asapm's A and B level credentials; INCOSE' ESEP and CSEP; ASEM's PEM and PMI's PgMP all score at or near the same level of effort as the ABET PE license. However, there is concern that the assessment process PMI is using is not consistent with other assessment standards or practices.

	A	B	C	D	E	F	G	H	I	J	K
4	Rank Order from High to Low based on PSCOR	35	34	33	32	31	30	29	28	27	26
5	Acronym of Credential	CFCC	Aus-CPPD	PE Non ABET	PE ABET	asapm-A	ESEP	CSEP	PEM	asapm-B	PgMP
6	Experience Hours AFTER Bachelors	16000	16000	14000	10000	10000	10000	10000	10000	10000	9750
7	Standardized Value of BDEG	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667
8	for BDEG	3333	3333	3333	3333	3333	3333	3333	3333	3333	3333
9	Total Value of BDEG	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
10	Standardized Value of MDEG	0	0	0	0	0	0	0	0	0	0
11	Level of Effort (Homework/Research) by student to earn MDEG	0	0	0	0	0	0	0	0	0	0
12	Total Value of MDEG	0	0	0	0	0	0	0	0	0	0
13											
14	Required Specialty Training	0	0	24	24	0	0	0	0	0	0
15											
16	Exam Duration in Hours	8	0	16	16	0	2	2	4	0	4
17	Level of Effort To Prepare for Exam	240	0	480	480	0	60	60	80	0	100
18	ADD for Fill in the Blank Phrases (<15 words) or Matching Answers +05% (DIF1)	0	0	0	0	0	0	0	0	0	0
19	ADD for Compound Questions (Case Study Analysis)/Short Medium Essay (>15 words but	24	0	0	0	0	0	0	0	0	0
20	ADD for Open Ended, Long Essay Questions (>250 words) +15% (DIF3)	36	0	0	0	0	0	0	0	0	0
21											
22	Publishable Quality Paper required (Minimum 2500 words)(PAPR)	30	0	0	0	50	0	0	0	30	0
23											
24	Assessment Process Man/Hours	4	3	0	0	16	4	3	0	5	0
25	Level of Effort To Prepare for Assessment	40	30	0	0	160	40	30	0	50	0
26	Add for formal mentoring/sign off by Mentor			100	100				0		-100
27	ADD for formal ASSESSMENT of Work Experience by Trained Assessor (SUPRV2)	22	16.5	0	0	88	0	0	0	27.5	-100
28	TOTAL CUMULATIVE LEVEL OF EFFORT BEYOND	3424	3030	3620	3620	5314	5106	3085	3089	3133	4904
29											
30	TOTAL PSCOR SCORE	21424	21033	19486	15496	15176	13106	13085	13089	13035	14854
31											
32	Ratio of Level of Effort to Cumulative Score	25%	24%	29%	36%	35%	34%	34%	34%	34%	33%
33	Ratio of Exam Only to PSCOR	1.16%	0.00%	2.54%	3.20%	0.00%	0.41%	0.41%	0.59%	0.00%	0.70%
34	Ratio of Assessment Process only to PSCOR	1.98%	0.24%	3.18%	4.00%	2.07%	0.70%	0.63%	0.59%	0.88%	-0.65%
35	Ratio of Experience only to PSCOR	74.68%	76.07%	71.81%	64.53%	63.89%	66.20%	66.23%	66.27%	66.42%	63.64%
36	Ratio of Education Only to PSCOR	23.34%	23.77%	25.65%	32.27%	32.95%	33.10%	33.12%	33.14%	33.21%	33.66%

Illustration 2- Top Ranked Credentials Scored by Total Level of Effort¹⁴

¹⁴ The complete Excel spreadsheet can be downloaded from <http://www.build-project-management-competency.com/download-page/>

Illustration 2 shows in greater detail the credentials which are approximately equal to or exceeding the requirements of either the ABET or non-ABET PE license process.

As we can see, there are now only two credentials which EXCEED both Gladwell's 10,000 hour rule AND the US Professional Engineer (PE) license: AACE's Certified Forensic Claims Consultant (CFCC) and the Australian Institute of Project Management's "Certified Program/Project Director (CPPD)

AACE's Certified Forensic Claims Consultant (CFCC) remains as the top ranked credential. However, with only 71 people certified globally out of a total membership of ~7500 (<1%), this credential cannot be a money –maker for AACE. It also says something about the risks of making any credential too elitist or focused only on the North American market.

The Australia Institute of Project Management's "Certified Program/Project Director" (CPPD) remains another highly ranked credential. Interesting to note that there are no exams associated with the AIPM "RegPM" credentials. It remains based on documented experience and formal assessments by trained competency assessors. This is also one of the oldest of the competency based project management credentials. Within the past 12 months or so, AIPM has now joined IPMA.

Worth noting is that the revisions and refinements made to the scoring model have "cleaned up" several of the anomalies from the 2010 version. Specifically, the asapm A and asapm B are now scoring very highly, appropriate to the rigor of their certification process. As asapm is also a member of IPMA, it is interesting that AIPM's CPPD and asapm's A credential bracketed the US PE license. Will some combination of what AIPM has been doing modified by what asapm has done will become the "standard" which will help professionalize the practice of project management? Certainly it is a question worth asking.

Also worth noting is that while PMI's PgMP made the list, considerable concern has been expressed that the non-standard process of having 12 "peers" write recommendations is not rigorous enough. PMI needs to consider either modifying the requirements that at least 3 of the reviewers have to have been direct supervisors of the applicant and that 3 of the reviewers must have been customers of the applicant. Either that or PMI needs to consider training/certifying assessors, much as IPMA and AIPM have done. But relying on 12 "friends" to vouch for your competency has been derisively described as the "12 friends and a case of wine" method. This process is suspect at best and has been raising questions as to the credibility of the credential because of this assessment process.

	A	D	E	I	M	S	T	V	Y	Z	AC	AG	AH
3													
4	Rank Order from High to Low based on PSCOR	33	32	28	24	18	17	15	12	11	8	4	3
5	Acronym of Credential	PE Non ABET	PE ABET	PEM	DRMP	GPM	FAC-Senior	FAC-Mid	PMI-ACP	GPM-b	FAC-Entry	EIT	AEM
6	Experience Hours AFTER Bachelors	14000	10000	10000	8000	6000	6000	4000	3000	2000	2000	0	0
7	Standardized Value of BDEG	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667
8	BDEG	3333	3333	3333	3333	3333	3333	3333	3333	3333	3333	3333	3333
9	Total Value of BDEG	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
10	Standardized Value of MDEG	0	0	0	0	0	0	0	0	0	0	0	0
11	Level of Effort (Homework/Research) by student to earn MDEG	0	0	0	0	0	0	0	0	0	0	0	0
12	Total Value of MDEG	0	0	0	0	0	0	0	0	0	0	0	0
13													
14	Required Specialty Training	24	24	0	0	0	112	80	0	0	112	0	0
15													
16	Exam Duration in Hours	16	16	4	5	0	0	0	3.5	3	0	8	2
17	Level of Effort To Prepare for Exam	480	480	83	250	0	0	0	105	90	0	240	60
18	ADD for Fill in the Blank Phrases (<15 words) or Matching Answers +05% (DIF1)	0	0	0	0	0	0	0	0	0	0	0	0
19	ADD for Compound Questions (Case Study Analysis)/Short Medium Essay (>15 words but <250 words)	0	0	0	25	0	0	0	0	0	0	0	0
20	ADD for Open Ended, Long Essay Questions (>250 words) +15% (DIF3)	0	0	0	38	0	0	0	0	0	0	0	0
21													
22	Publishable Quality Paper required (Minimum 2500 words)(PAPR)	0	0	0	0	0	0	0	0	0	0	0	0
23													
24	Assessment Process Man/Hours	0	0	0	1.5	3	0	0	0	0	0	0	0
25	Level of Effort To Prepare for Assessment	0	0	0	15	30	0	0	0	0	0	0	0
26	Add for formal mentoring/sign off by Mentor (SUPERV1)	100	100	0	0	0	100	100	0	0	100	0	0
27	ADD for formal ASSESSMENT of Work Experience by Trained Assessor (SUPERV2)	0	0	0	0	16.5	0	0	0	0	0	0	0
28	TOTAL CUMULATIVE LEVEL OF EFFORT BEYOND:	5620	5620	5089	5334	5050	5212	5180	5109	5093	5212	5248	5062
29													
30	TOTAL PSCOR SCORE	19496	15496	15089	13272	11033	11000	9000	8109	7093	7000	5248	5062
31													
32	Ratio of Level of Effort to Cumulative Score	29%	36%	34%	40%	46%	47%	58%	63%	72%	74%	100%	100%
33	Ratio of Exam Only to PSCOR	2.54%	3.20%	0.59%	1.92%	0.00%	0.00%	0.00%	1.24%	1.31%	0.00%	4.78%	1.22%
34	Ratio of Assessment Process only to PSCOR	3.18%	4.00%	0.59%	2.52%	0.45%	1.93%	2.00%	1.34%	1.31%	3.03%	4.78%	1.22%
35	Ratio of Experience only to PSCOR	71.81%	64.53%	66.27%	60.28%	54.38%	54.55%	44.44%	37.00%	28.20%	28.57%	0.00%	0.00%
36	Ratio of Education Only to PSCOR	25.65%	32.27%	33.14%	37.67%	45.32%	43.43%	55.66%	61.66%	70.49%	71.43%	95.27%	98.78%

Illustration 3- New Credentials Scored by Total Level of Effort¹⁵

This grouping only looks at the NEW credentials added to the comparison which were not included in the 2010 version. It also serves to demonstrate the demarcation line between those credentials which meet or exceed Gladwell's 10,000 hour rule from those which do not meet it.

As we can see, the American Society of Engineering Management's (ASEM) "Professional Engineering Manager" (PEM) scores quite favourably with the ABET PE license. (PSCORE of 15089 for the PEM vs 15496 for the ABET PE) Because we have a true zero to work from, we can say that the process to obtain the PEM is $15089/15496 = 97.4\%$ as difficult as obtaining the ABET PE and $15089/19496 = 77.4\%$ as challenging as getting a non-ABET PE.

¹⁵ The complete Excel spreadsheet can be downloaded from <http://www.build-project-management-competency.com/download-page/>

Other newly created credentials which meet or exceed Gladwell's 10,000 hour rule are ACE's Decision and Risk Management Professional (DRMP) with a score of 13272/15496 or 85.6% of the effort to earn an ABET PE; the Green Project Manager (GPM) with a score of 11033/15496 = 71.2% and the US Federal Acquisition Institute's (FAI) "Federal Acquisition Certification for Program and Project Managers – Senior" with a score of 71%.

PMI's newest credential the "Agile Certified Practitioner" (PMI-ACP) falls short of both Gladwell's benchmark with a PSCOR of 8109/10000 = 81.1% against Gladwell and 8109/15496 = 52.3% against the ABET PE. Explained another way, the PMI-ACP only requires 81% of the effort to obtain than Gladwell's minimum and slightly over half the level of effort necessary to get an ABET PE license. Certainly factors to consider when measuring or evaluating the credibility of any credential.

	A	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
4	Rank Order from High to Low based on PSCOR	16	15	14	13	12	11	10	9	8	7	6	5	4	3
5	Acronym of Credential	PMP	FAC-Mid	PMI-SP	PMI-RP	PMI-ACP	GPM-b	AUS-CPPP	ASEP	FAC-Entry	CAPM	IPMA-D	CCT	EIT	AEM
6	Experience Hours AFTER Sections	4500	4000	3500	3000	3000	2000	2000	2000	2000	1500	1000	1000	0	0
7	Standardized Value of BDEG	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667
8	For BDEG	3333	3333	3333	3333	3333	3333	3333	3333	3333	3333	3333	3333	3333	3333
9	Total Value of BDEG	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
10	Standardized Value of MDEG	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Level of Effort (Homework/Research) by student to earn MDEG	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Total Value of MDEG	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13															
14	Required Specialty Training	35	80	0	0	0	0	0	0	112	0	0	0	0	0
15															
16	Exam Duration in Hours	4	0	3.5	3.5	3.5	3	0	0	0	3	4.25	3.5	8	2
17	Level of Effort To Prepare for Exam	85	0	105	105	105	90	0	0	0	90	127.5	105	240	60
18	ADD for Fill in the Blank Phrases (<13 words) or Matching Answers 40% (DIF1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	ADD for Compound Questions (Case Study Analysis)/Short Medium Essay (>15 words but <250 words) +15% (DIF3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	ADD for Open Ended, Long Essay Questions (>250 words) +15% (DIF3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21															
22	Publishable Quality Paper required (Minimum 2500 words)(PAPR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23															
24	Assessment Process Min/Hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Level of Effort To Prepare for Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Add for formal mentoring/sign off by Mentor		100							100					
27	ADD for formal ASSESSMENT of Work Experience by Trained Assessor (SU PRV2)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	TOTAL CUMULATIVE LEVEL OF EFFORT BEYOND	3124	3180	3109	3109	3109	3093	3000	3000	3212	3093	3132	3109	3248	3062
29															
30	TOTAL PSCOR SCORE	9624	9000	8609	8109	8109	7093	7000	7000	7000	6593	6132	6109	5248	5062
31															
32	Ratio of Level of Effort to Cumulative Score	33%	36%	36%	33%	33%	72%	71%	71%	74%	77%	84%	84%	100%	100%
33	Ratio of Exam Only to PSCOR	0.92%	0.00%	1.26%	1.34%	1.34%	1.31%	0.00%	0.00%	0.00%	1.41%	2.15%	1.78%	4.73%	1.22%
34	Ratio of Assmt/Process only to PSCOR	1.29%	2.00%	1.26%	1.34%	1.34%	1.31%	0.00%	0.00%	3.03%	1.41%	2.15%	1.78%	4.73%	1.22%
35	Ratio of Experience Only to PSCOR	46.76%	44.44%	40.66%	37.00%	37.00%	28.20%	28.57%	28.57%	28.57%	22.75%	16.31%	16.37%	0.00%	0.00%
36	Ratio of Education Only to PSCOR	31.95%	33.56%	38.08%	61.66%	61.66%	70.48%	71.43%	71.43%	71.43%	73.84%	81.34%	81.85%	95.27%	98.78%

Illustration 4- Credentials Which Do NOT Meet Gladwell's 10,000 Hour Standard¹⁶

¹⁶ The complete Excel spreadsheet can be downloaded from <http://www.build-project-management-competency.com/download-page/>

This illustration shows those credentials which do NOT meet Gladwell's "10,000 hour" rule. To provide some perspective, all the credentials falling between the two blue lines are entry level credentials, designed for those practitioners who have just graduated from University with little or no experience. Regardless of which organization, the PSCOR range is between 6100 and 7100 hours or 61-71% of Gladwell's 10,000 hours or between 39% to 46% of the ABET PE.

For those holding the popular PRINCE2 credentials, the fact the PRINCE2 credentials fall below the PSCOR of even the most basic entry level credentials should be very worrisome to you as one of the biggest factors in the top ranked credentials is the importance of documented and proven EXPERIENCE over the ability to pass multiple choice or even essay questions. The fact that neither of the PRINCE2 credentials requires experience and the exams focus only on the process puts them lower than entry level credentials, including the Engineer In Training (EIT) process

Worth noting is APM/APM Group was contacted and offered the opportunity to include their newest credentials in this assessment, but as of the publication deadline had yet to respond.

CONCLUSIONS-

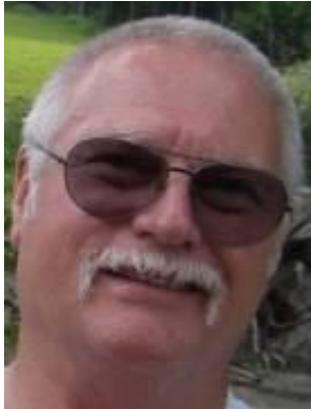
It is clear from the interest this research has generated that the consuming public- both those who are seeking these credentials as well as those who use the services of those who hold them- are eager to have some way to compare the plethora of credentials relating to project management. Thus the first recommendation is for practitioners to DEMAND that the organizations they belong to publish sufficient information about their credentials to enable a fair and impartial comparison based on the level of effort required to obtain the credential.

What is also clear that the top ranked credentials are very strong on demonstrated and PROVEN experience, which has been validated either through formal mentorship (as in the PE) or via peer review by trained and competent assessors (as in the AIPM, asapm and IPMA approach). What this means is IF we want to raise the professional image of those who practice the art and science of project management, it is up to us to insist that those professional organizations who want to earn the right to our hearts, minds and money, "raise the bar" by creating more competency based credentials. There are far too many credentials out there which, while popular, are only measuring or validating the ability to pass multiple choice exams, not actually validating or proving we can actually manage projects.

One of the most common complaints amongst senior managers from all sectors is the inability of our technical professionals to be able to write a logical, coherent professional analysis, assessment or business case. Therefore a major part of both the formal assessment process AND the written exams should move away from multiple choice format and start to include BOTH a publishable quality paper as part of the certification process AND include essay questions as part of the certification exam process.

As this research is proving to be a living document, it is essential that we work to refine the scoring model. I am more than happy to mentor/supervise any graduate or Doctoral candidate interested in researching the various credentials in more depth to come up with a scoring model which we can use to compare the credentials against other professions. At the same time, it behoves the professional organizations to make access to the data necessary to make informed and rational decisions more readily available- sort of a "truth in certification" policy. For those organizations which have truly credible, competency based credentialing programs, this should not be a problem.

About the Author



Dr. Paul D. Giammalvo

Jakarta, Indonesia



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. He is also an adjunct professor, Project and Program Management, at the Center for Advanced Studies in Project, Program and Portfolio Management (www.casr3pm.edu.sn) and develops and teaches graduate level curricula in Asset and Project Management for Western Australia University, Perth. www.blendedlearning.ecm.uwa.edu.au For 17+ 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 also sat on the Board of Directors of the Global Alliance for Project Performance Standards (GAPPS), www.globalpmstandards.org, Sydney, Australia and is active as a regional leader in the International Guild of Project Controls. <http://www.planningplanet.com/guild> He has spent 18 of the last 35 years working on large, highly technical 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, Unocal, BP, Dames and Moore, SNC Lavalin, Freeport McMoran, Petronas, Pertamina, UN Projects Office, World Bank Institute and many other multi-national companies and NGO organizations. Dr. Giammalvo holds an undergraduate degree in Construction Management, his Master of Science in Project Management through the George Washington University and was awarded his PhD in Project and Program Management through the Institute Superieur De Gestion Industrielle (ISGI) and Ecole Superieure De Commerce De Lille (ESC-Lille- now SKEMA School of Management) under the supervision of Dr. Christophe Bredillet, CCE, IPMA A Level. Paul can be contacted at pauldgphd@gmail.com.