

**Response to Pat Weaver’s Letter to the editor regarding the paper titled  
“Project Management Certifications Benchmarking Research: 2016 Update”,  
published in the December 2016 edition of the PM World Journal**

**By Paul D. Giammalvo**

31 January 2017

Dear Editor,

See my responses to Pat’s posting below **[PDG]....**

Weaver: With reference to Dr. Paul D. Giammalvo’s featured paper **‘Project Management Certification Benchmarking Research: 2016 Update’**, I believe his focus on Malcolm Gladwell’s 10,000 hour rule is misplaced<sup>1</sup>.

The concept of a 10,000 hour rule has been widely criticised in the academic media, not least by the authors of the research paper used by Gladwell as a basis for his rule. It certainly takes effort become an expert but the 10,000 hour maxim was drawn from non-relevant data. In an article entitled **‘Malcolm Gladwell got us wrong: Our research was key to the 10,000-hour rule, but here’s what got oversimplified’<sup>2</sup>** the authors of the research used by Gladwell as a basis for his ‘rule’, Ericsson and Pool, claim to have been misunderstood and that Gladwell’s 10,000 hour rule over simplifies a complex set of requirements.

**[PDG] Agreed and I tried to be clear that I too do NOT agree with Gladwell’s “10,000 hours” and in fact, argue strongly and consistently that it should be 15,000 hours to qualify as a top tier professional. (See the end for the ranges for different job titles)**

**In the 2016 Update- Page 3:**

**"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."**

**2016 Update Page 12- 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-**

<sup>1</sup> Malcolm Gladwell’s 10,000 hour rule was set out in his book ‘Outliers’.

<sup>2</sup> The full article by Anders Ericsson and Robert Pool can be read at:  
[http://www.salon.com/2016/04/10/malcolm\\_gladwell\\_got\\_us\\_wrong\\_our\\_research\\_was\\_key\\_to\\_the\\_10000\\_hour\\_rule\\_but\\_heres\\_what\\_got\\_oversimplified/](http://www.salon.com/2016/04/10/malcolm_gladwell_got_us_wrong_our_research_was_key_to_the_10000_hour_rule_but_heres_what_got_oversimplified/)



ABET) Level of Effort Hours, earning them honorable mention as also being "legitimate" professional level credentials:

**2015 Update- Page 1:**

"Some of the key findings from previous year's research shows that at least in the field of project management, Gladwell's "10,000 hours" is too low, with 15,000 hours "level of effort" being closer to what it actually takes to produce a "competent" professional level practitioner"

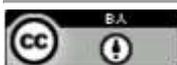
**2014 Update- Page 1:**

Malcolm Gladwell's "10,000 Hour" rule came from his 2008 book "Outliers- The Story of Success" where he posited that to become "successful" at anything, required a minimum of 10,000 hours of progressively challenging experience. And while his research has been challenged, the primary reason for choosing this as a benchmark is by providing a true zero point and having the same unit of measure, it enabled the creation of a ratio scale analysis. So while the "10,000 hour" rule has been used as a benchmark, this research makes a reasonable argument that the number should be closer to 15,000 hours not 10,000, at least for project management.

Weaver: As a starting point the choice of 10,000 hours was arbitrary, a study published by Ericsson in 1993 on a group of violin students in a music academy in Berlin found that the most accomplished of those students had put in an average of ten thousand hours of practice by the time they were twenty years old. However no student at 20 years of age is a master of the violin, this level of skill is rarely achieved until the age of 30 or older, after a total of 20,000 hours or more of directed practice – 10,000 hours is only part of the way to mastery. Conversely becoming a master in other disciplines may require significantly less than 10,000 hours. To quote Dr. Francis Mayer of St. Thomas University, Minneapolis (1963) '*an amateur practices until he can do everything right and a professional [master] practices until he can't do anything wrong*'. If Gladwell had selected a different age for the students a different number of hours of directed practice would have accumulated, but still would not have represented the time needed to achieve 'mastery' of the violin.

The next major flaw in the use of 10,000 hours lays in the difference between directed practice focused on achieving mastery of a specific skill element and general performance<sup>3</sup>. Much of the time spent by the violin students was in directed practice (as was much of the time spent by Tiger Woods in his practice of golf swings); whereas much the time spent by the Beatles also referenced in Gladwell's book was spent in performance. Experience is the outcome of performance, competence or capability is more likely to be the outcome of directed practice, coaching, training, or similar skills development work. The issue with all of the credentials is

<sup>3</sup> **Deliberate practice** is defined as: repetitive performance of intended cognitive or psychomotor skills, with rigorous skills assessment and specific information feedback. The objective is achieving a better level of skills performance. [https://en.wikipedia.org/wiki/Practice\\_\(learning\\_method\)#Deliberate\\_practice](https://en.wikipedia.org/wiki/Practice_(learning_method)#Deliberate_practice)



they ask for 'time served' in a role – this is not the directed practice advocated by Gladwell and used as a basis for the 10,000 hour rule. A person can easily spend 5 years in a role and spend Zero hours in 'directed practice'.

The other major flaw is the simple fact that no amount of directed practice or the actual performance of a role will guarantee excellence. To a degree, particularly at the higher levels, innate ability underpins the function of directed practice to enhance performance. Whilst is certainly true both directed practice and 'time served' in a role will enhance a person's capability; and to a degree the more directed practice and the more time spent in a role the greater the enhancement in capability, this is not based on any set figure. The value of 10,000 hours has as little direct relevance to this important criteria; at best the time spent in a role is a proxy for experience gained but the connection is tenuous.

A new Princeton study<sup>4</sup> supports this argument. In a meta-analysis of 88 studies on deliberate practice, the researchers found that the improvement in performance attributable to directed practice differed significantly in various domains:

- In games, practice made for a 26% difference
- In music, it was a 21% difference
- In sports, an 18% difference
- In education, a 4% difference
- In professions, just a 1% difference

The best explanation of the domain dependency is probably found in Frans Johansson's book **'The Click Moment'**. Johansson argues that deliberate practice is only a predictor of success in fields that have stable structures. If the rules never change (music, golf), you can study up to become the best, in professions such as project management every project is unique and adaptive behaviours are needed to apply skills effectively, this requires experience and knowledge rather than 'directed practice'. There is no doubt that deliberate practice is important in learning how to apply a skill, both from a statistical and a theoretical perspective. It is just less important than has been argued, and importantly, deliberate practice is very different from time served in the performance of a role such as working as a project manager.

So in summary whilst 10,000 hours (approximately five years of work) may be a convenient benchmark for assessing professional qualifications it is arbitrary and does not really consider the capability of the person being examined, the degree of capability actually required by a competent person in that particular role, how long a particular individual will need to acquire the required capability, or how effective the person is at applying the skills in a unique situation.

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<sup>4</sup> See: ***Deliberate Practice and Performance in Music, Games, Sports, Education, and Professions - A Meta-Analysis***. Brooke N. Macnamara, David Z. Hambrick, Frederick L. Oswald

In a professional situation time served in a role (rather than Gladwell's directed practice) may be a useful proxy for 'experience' and 'experience' may correlate to capability and competence but these are tenuous connections.

**[PDG] The above concerns were also addressed very clearly in the research. MOST of those certifications which scored >16,200 LoE hours tended to consist of integrated credentialing programs which required multiple, progressive levels of certifications, following or covering a typical career path life span. (i.e. International Council of Systems Engineers, (INCOSE); Guild of Project Controls, (GPC) and Green Project Management (GPM) specifically) In the two of the three top scoring examples, (GPC and GPM) it was quite clear that not only was the KIND or TYPE of knowledge being validated progressively more sophisticated, but HOW that knowledge was being used or APPLIED also being assessed, against Bloom's 6 cognitive levels. To my knowledge, the Guild of Project Controls and the Green Project Management organization are the only two global professional organizations adopting such a sophisticated assessment matrix.**

**This becomes important because it ties the requirements of the credentialing program directly to the development of training courses to prepare people to earn each level of certification.**

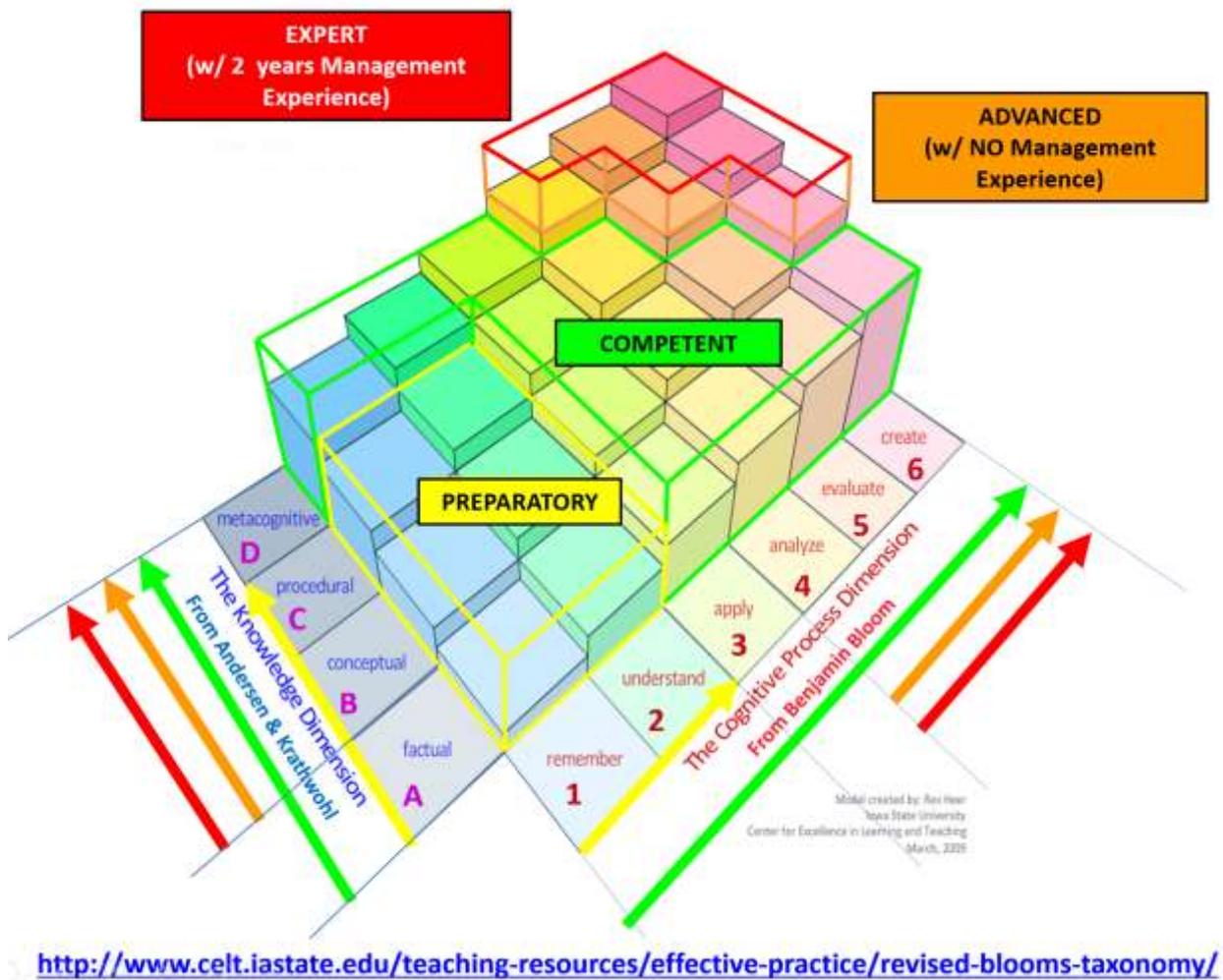


Figure 2- Guild of Project Controls Competency Assessment Model using Iowa State University Matrix.<sup>5</sup> (Note that the Green Project Management organization uses the same model for their certifications)

Weaver: I'm not sure what value or measurement the institutions setting credentials and/or Paul could use in his paper that is more relevant or more accurate but over emphasizing Gladwell's 10,000 hour rule is probably not the best thing to do, even if it is convenient.

[PDG] As noted in the paper, Gladwell's "10,000 hour" rule was chosen as only ONE of TWO metrics, the other and most important, being the level of effort to prepare for and earn the highly respected "Professional Engineer" (PE) license in the USA.

Secondly, as was made very clear, choosing Gladwell's number, which has a well-defined, and meaningful zero point and equal increments, (starting point of zero and measuring level of effort hours), enabled the creation of a true ratio scale. By developing a true ratio scale,

<sup>5</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

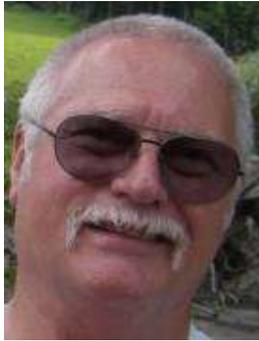
**we can now establish “reciprocity” or “equivalency” between any two or more credentials and we can establish or see exactly how “tougher” or “easier” one credential is Vis a Vis alternatives.**

**Bottom line- While I certainly appreciate the challenges raised by Pat, had he taken the time to read and reflect on the entire article before initiating his challenge, I think he would have seen that all his issues had been addressed?**

- **That the level of effort for each level should be not only be progressively more difficult in terms of knowledge domain and cognitive domains (see Iowa State Matrix above) but each level should fall approximately within these ranges:**

| 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, Orange 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, Orange Belt   | Junior Project Manager, Junior Cost Estimator/Cost Engineer, Junior Planner/Scheduler, Junior Business Analyst  |
| 5,500                  | 6,624  | 1st Year Apprentice or Intern, Orange 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  |

## 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).

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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).