**white paper**

Purpose

This white paper outlines the functionality within Project Mentor's Personal Learning Plan (PLP). The white paper contains a detailed definition of the assessments within the PLP, how they have been designed and how the assessment results should be interpreted. Actual statistics from the PLP results database illustrate the knowledge improvements that have been gained from Project Mentor users across the world. Managers wanting to decide upon the suitability of Project Mentor as a learning aid for themselves or their colleagues can use this document to help them reach their conclusions.

The questions within the PLP are similar in format and difficulty to those found within the Microsoft Certified Technical Specialist (MCTS) certification 70-178. Project Mentor users with a high aggregate PLP score should possess the necessary knowledge and competency to attain the Microsoft 70-178 certification. The BOK links within the Tools section of Project Mentor provide mapping of modules, lessons, references and primers to competencies within the 70-178 certification.

Background

The PLP is a unique feature within Project Mentor. It is more than a simple test. The PLP has been carefully designed to be a challenging knowledge assessment that a user takes both before and after learning. Containing over one hundred and ten questions in total, users can get a thorough assessment of what they knew before using Project Mentor, compared to what they have learned after using Project Mentor.

Before a user commences the lessons within a Project Mentor module, they should take a pre-learning test. This will let them determine the knowledge about the lessons within the current module that they already possess. The assessment received will help them structure their learning; what aspects of the module they need to cover, and to what depth. Once the relevant lessons and module exercises have been completed, the user should then take the post-learning test within the PLP. This final assessment will let the user determine what gains in Microsoft Project knowledge they have achieved.
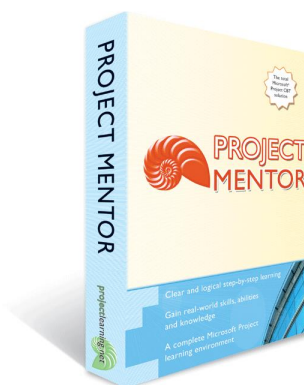
Design, structure and process

As Project Mentor is a modular learning system, each module contains its own set of PLP questions. The largest module contains 20 individual questions; the smallest module contains 6 questions. Each question relates to a particular skill set taught within that particular module. Furthermore, questions are grouped by lesson within the module. For example, the PLP for module A comprises of 10 questions; Lesson A1 has 3 questions, A2 has 4 questions and A3 has three questions. Throughout the entire PLP system no less than 3 questions and no more than 6 questions will relate to a particular lesson.

Each question is multiple-choice with four possible answers plus a "Don't Know" option. All of the four possible answers are plausible, but only one of them is correct. Each correct answer carries a weighted percentage score. To provide the most accurate assessment a user should not guess any answer. If they genuinely are unsure about any question, they should always choose the "Don't Know" option.

In designing the PLP our focus group rated each PLP question dependant upon two factors; difficulty and frequency of use. Questions testing skills that would be difficult to accomplish and would be frequently performed carry the highest scores; relatively simple skills that may be infrequently used have lower scores. A user answering every question relating to a particular lesson correctly would score 100% for that lesson.

In addition to scoring the questions themselves we also apply rating factors similar to those used by Microsoft in the rating of Microsoft Project certification exams. These ratings helped us determine our cut-off scores.

Worked example

The example below illustrates a hypothetical module. Module X comprises of 2 lessons, each of which has 4 questions relating to it. Each of the questions has a particular percentage score:

Module X	Lesson X1	Lesson X2
Question A	18%	22%
Question B	22%	24%
Question C	24%	26%
Question D	36%	28%
Totals	**100%**	**100%**

Pre-learning test

When our hypothetical user (John Doe) attempts the PLP questions for this module for the first time (pre-learning), he achieves the following scores (shown in blue cells below):

Module X	Lesson X1	Lesson X2
Question A	18%	22%
Question B	22%	24%
Question C	24%	0%
Question D	0%	0%
Totals	64%	46%

For Lesson X1 John got three questions correct and achieved a score of 64%. This will give him a cut-off assessment of 64% and a yellow stoplight indication. This means that John is reasonably familiar with the skills taught within this module but he would not reach the 75% cut-off that would give him a green stoplight and relate to a "Pass" score if he were to undertake a Microsoft certification examination. John should therefore work step-by-step through this lesson and also attempt the module's exercises. Due to his higher than average score, he should not need to work through the module's reference topics.

In lesson X2, John has not done as well as he did in lesson X1. He answered the two lowest scoring questions (less than 24% rating) correctly and achieved a score of 46%. This would give him a cut-off score of 46% and be less than the 50% rating required for a yellow stoplight. The red stoplight that he receives indicates that he should refer to the reference topics that relate to this lesson in addition to working through the lesson and the module's exercises.

Post-learning examination

After he has worked through the two lessons, the related module exercises and the appropriate reference topics, John attempts his PLP again. He can see the answers that he gave the first time around and he can choose to agree with his previous choices or make new choices based upon what he has learned. In this worked example, his score is illustrated in the purple cells below:

Module X	Lesson X1	Lesson X2
Question A	18%	22%
Question B	22%	24%
Question C	24%	26%
Question D	0%	28%
Totals	64%	100%

John has still given the wrong answer for lesson X1, Question D. This was the highest-scoring question for this module. John will have been shown the correct answer to this question, together with an explanation as to why that answer was correct and his answer was incorrect. The cut-off score of 64% is still quite credible. John retains his yellow stoplight assessment.

In lesson X2 John makes improvements in his scores. As the questions within lesson X2 are more similar in terms of score, John has been able to answer all of them correctly. This gives him a 100% cut-off score for the lesson and a green stoplight.

If John's scores for this complete module are aggregated, he achieves a cut-off score of 82%. If he is able to replicate this level of knowledge across all other modules he has an overall level of Microsoft Project knowledge that will exceed the cut-off level (usually 74%-78%) to achieve the Microsoft Project Specialist qualification. Even if John decides not to pursue the qualification itself, his level of knowledge is much higher than the average Microsoft Project user.

Actual PLP results

The PLP results database contains the scores achieved by hundreds of Project Mentor users across the world. The graph below displays the average of all user scores, taken across our entire PLP database. These users are both individuals and also project managers within major corporations.

Average PLP results across all Project Mentor users
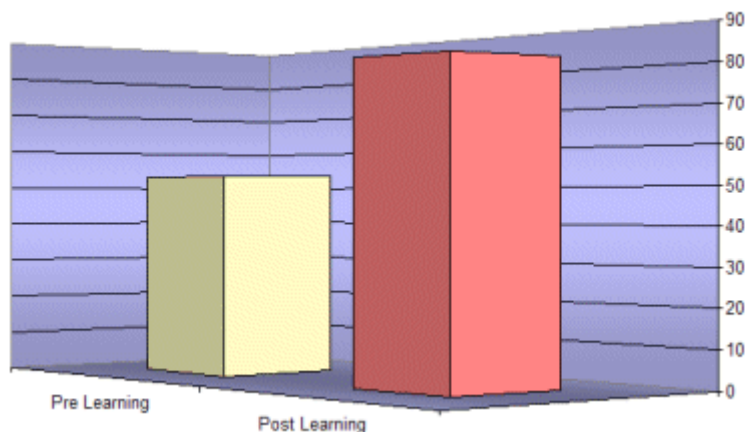
The graph above indicates an average pre-learning test score of 53% and an average post-learning examination score of 83%. This indicates an overall knowledge increase of 30% and a relative knowledge increase of 57%. If the percentage values are related to the Microsoft certification examinations, most Project Mentor users would have failed the qualification based upon their pre-learning test and successfully passed the examination based upon their post-learning examination score.

Individual and corporate assessments

Both individuals and organisations can benefit from the data contained within the PLP database.

Individual PLP scores

Any individual using Project Mentor can check the status of their PLP results across all modules they have undertaken, at any time.

Detailed lesson-by-lesson scores are displayed, along with a total weighted score for each module.
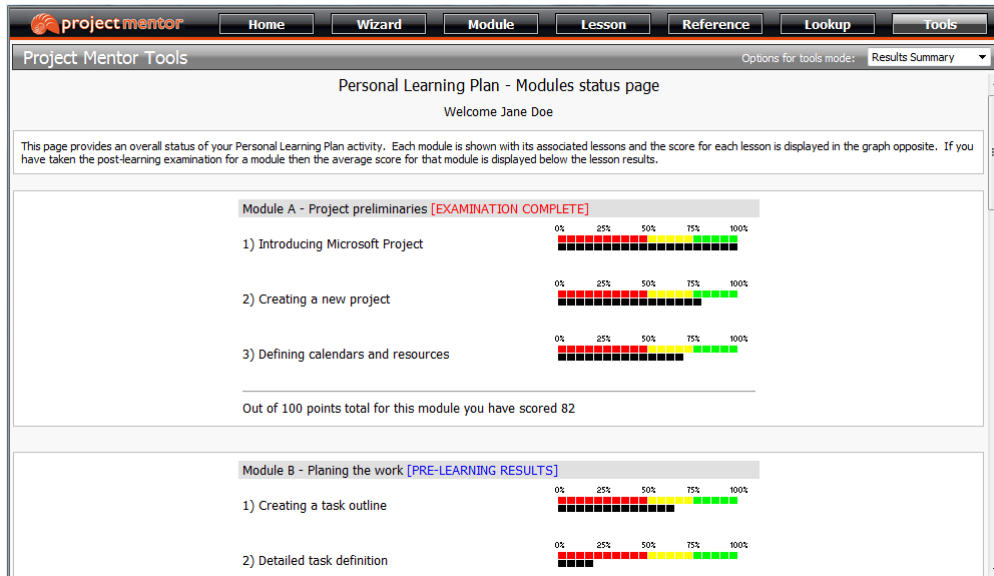
At the base of the status page, a total score for all completed modules is displayed. This information will help users to confirm their progress through Project Mentor

Corporate PLP data

As part of our service to corporate users, several reports are available as a free of charge service. These reports include: Scores by user by module; Average results by module; Overall results and performance figures. From the data that we provide, many client-specific reports can be created by administrative users. In addition, bespoke reports can be provided by Project Learning International Limited as a chargeable service.