"Project Management in Action"

An Integrated Approach to Project Management Training

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Abstract

Project Management is a strongly integrated professional discipline. The PMBOK Guide® knowledge areas touch different aspects: from hard techniques to soft managerial issues, and the use of this standard cannot be separated from the PMI ethical code.
Every day Project Managers and their project management teams are faced with the need to choose the appropriate tool and make the difference with their behaviour.
Based on this assumption, this paper illustrates the basic components of an integrated approach to project management training named "PM in action©".
It defines why an integrated approach is particularly important in project management training, when it would be the appropriate training strategy and highlights the essential components of this approach.

"PM in action©" is structured around a few, essential, fundamentals:

- Use of the PMBOK Guide® and its set of integrated models;
- Use of a training path, rather than single courses, which includes a kick-off event, classroom sessions and field trials, a closing event and lessons learned;
- The integration of project management hard and soft skills though the concurrent presence of two specialized trainers, especially designed materials and classroom activities;
- Field and supporting activities which include individual and group assignments, training on the job, on-call consultancy and coaching.

This approach has proved particularly effective when the assessment of training needs indicated a requirement to consolidate the project management glossary and culture within a small group of peers; and when the new models and skills should be acquired in a short period and be immediately applicable.

Introduction

"*We learn an art or a craft by doing things that we shall have to do when we have learnt it: for instance, men become builders by building houses, harpers by playing the harp. (...) Again, the actions from or through which any virtue is produced are the same as those through which it also is destroyed - just as the case with skills in the arts, for both the good harpers and the bad ones are produced by harping, and similarly with builders and all craftsmen: as you will become a good builder from building well, so you will become a bad builder from building badly. Were this not so, there would be no need for teachers of the arts". (Aristotle, p. 73*)

The *PMBOK® Guide* clearly states that Project Management is "an integrative undertaking" (Project Management Institute, 2004, p. 38) requiring Project Managers and their project management team not only to understand and apply their knowledge, skills, tools and techniques, but also to "determine what is appropriate for any given project" (Project Management Institute, 2004, p. 3).
The choices facing Project Managers and their project management teams are not mere selections of the most appropriate tools or techniques; they are also connected with a fundamental ethical question regarding the professional responsibility of each individual. The PMI "Member Code of Ethics" and the "PMP Code of Professional Conduct" define the expected behaviour and outline a complete professional profile to match the ever increasing complexity of the marketplace.
Project Management Training is thus faced with the difficult task of providing an integrated learning environment for the different areas of expertise required for effective project management which "although they appear as discrete elements, they generally overlap, none can stand alone. Effective project teams integrate them in all aspects of their project" (Project Management Institute, 2004, p. 12).

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Traditional training separates knowledge and behaviour, tools and skills, technical and personal competencies into the wide definition of "hard" and "soft" skills. However such distinction implies a distinction between what happens during a training session and real life, where our actions cannot be so easily separated into what we know and what we are. Following this distinction, in traditional courses, participants are asked to concentrate on a specific aspect of their experience and are left to "bridge" their learning experience with the constraints of real working life.
Since any kind of professional training must also produce tangible results, both from a personal and an organizational point of view, participants in a training course are implicitly required to initiate some level of personal and/or organizational change.

Gregory Batenson has defined the changes associated with any learning process as going from little changes to large changes which influence the behaviour of the individual. In "Steps toward the ecology of mind" he writes:
"The word 'learning' undoubtedly denotes *change* of some kind. To say *what kind* of change is a delicate matter. However, from the gross common denominator we can deduce that our descriptions of 'learning' will have to make the same sort of allowance for the varieties of logical type which has been routine in physical science since the days of Newton. The simplest and most familiar form of change is *motion*, and even if we work at that very simple physical level we must structure our descriptions in terms of 'position or zero motion', 'constant velocity', 'acceleration', 'rate of change of acceleration', and so on." (Bateson, 1972, p. 282).

According to Bateson, the amount of change produced by learning can be subdivided into five levels:

Zero learning is "the simple receipt of information from an external event, in such a way that a similar event at a later (and appropriate time) will convey the same information: I "learn" from the factory whistle that it is twelve o'clock." (*ibidem*, p. 284). The change is minimal, a response without reflection or lasting effect on the individual's behaviour. Although attending a course could in fact prompt some basic response, this type of learning does not need to be discussed with reference to professional training programs.

Learning I is the most common learning level and could also be called "trial and error". Learners face different options, assess them and choose instead of simply executing an action like in Zero Learning. "Hands-on experience" and "good practices" are the result of learning at his level. A typical example of Learning I is the Pavlovian experiments where learning is based on either reward or punishment.
On one hand, the possibility of having trial and error allows individuals to follow a process of creative adjustment. However, on the other hand, the difference between the stimulus and the context where the stimulus occurred is often confused and the response becomes linked to the context and not to the stimulus itself. The resulting risk is that the learner finds it difficult to apply the tools and skills acquired in the classroom in daily life, thinking that their effectiveness is connected with the classroom environment rather than with the problems they are designed to solve.

Learning II is achieved when the learner discovers how to interpret the various stimuli and in addition understands how to create contingent alternatives. This means that the learner "learns how to learn" and he/she is able to transfer the knowledge from one context to another. Also called meta-learning, Learning II entails changes in the process of Learning I and in particular "corrective change in the set of alternatives from which choice is made" (*ibidem*, p. 293). In other words, a learner will form new habits, largely unconscious and no longer questioned but transferable to different contexts: "Broadly, we can afford to sink those sorts of knowledge which continue to be true regardless of changes in the environment, but we must maintain in an accessible place all those controls of behaviour which must be modified for every instance." (*ibidem*, p. 142).

Learning III is considered a rare occurrence, similar to the enlightenment of many religious and mystical traditions, while **Learning IV** pertains to the evolution of species. Therefore they are not considered relevant to the present work and will not be discussed here.

A central issue in the difference between Learning I e Learning II and the possibility of achieving Learning II in a training program is linked to the concept of context and "context maker".
Bateson defines context as "a collective term for all those events which tell the organism among what set of alternatives he must make his next choice" (*ibidem,* p. 147). The ability to respond to the same stimulus in different contexts is what Bateson connects to the presence of "context makers", i.e. sources of information that allow us to classify the different context.

When a training program is designed to promote some level of individual and organizational change, such as acquiring new skills or developing an integrated set of technical and personal competencies, the program must first of all guarantee a consistency between the learning context and the context of application in order to facilitate the development of the capacity for context correction (i.e. from classroom to daily life) which characterizes Learning I.
Secondly the context makers must be selected to create a learning environment which allows the learners to be part of a "stream of events" that may lead to the change in the pattern of behaviour that designates Learning II.
Finally the level of tolerance to change (also called "ecology of a system") must be taken into consideration and possibly defined, both at individual and organizational level.

Therefore, to create a training program which enables the different levels of change defined as Learning 0, Learning I and Learning II, participants must be able to enter a learning environment which guarantees the following:

- consistency of content, i.e. integrated model and standards;
- coherence of approach, i.e. shared experience and methodology of the trainers;
- time continuum between the learning experience and the application of knowledge and skills, i.e. training sessions alternated with field assignments;
- level of change adequate to the levels of tolerance of the person and of the organization, i.e. support from management.

The training program presented in the following paragraphs satisfies all the above criteria. It has been used in organizations of different types, always producing a significant contribution to the development of the Project Management culture within the organization.

"PM in action®"

"PM in action®" is an integrated approach to project management training. In this instance "integrated" refers to the use of the PMBOK® Guide as a standard (with its integrated process-based approach), to the combination of multiple instructional delivery methods but, most of all, to the combination of both hard and soft training objectives within the same training session, with the firm belief that one without the other provides a partial and limited view of project management and therefore a less applicable learning experience.

PMBOK® Guide and other integrated models

The PMBOK Guide® is the reference for processes, models and tools. Though the training is normally not aimed at "teaching the PMBOK Guide®", in fact all models used, whether hard or soft, find a reference in the standard and, most of all, the description of the interrelation between the different processes provided in the PMBOK Guide® is used as the key to exercising the project management profession in an effective way.

"PM in action®" was created following the Systemic Design of Instruction, also known as the Dick & Carey model (Dick, Carey & Carey, 2001). The model is used to design any form of instruction with particular attention to the desired learning outcomes. "Careful attention is paid to determine what must be learned and what learners must already know in order to begin instruction. The instruction is focused on the skills to be learned and is presented under the best condition for learning. (…) Instruction does not consist of a range of activities only some of which may be related to what is to be learned." (*ibidem*, p. 11).
Generally speaking the model includes four phases: planning, development, implementation and evaluation of instruction. Each phase consists of different processes and, in this sense, this approach is very similar to project management.
Our experience clearly shows that each and every edition of "PM in action®" is indeed a unique training project. Therefore we tend to emphasise the point of contact between the learning experience of participants and our own contribution to the success of the learning program in terms of active project management.
"*Enjoy your project"* is our motto as well the most recurrent message which is given to participants during the learning sessions: they are guided to recognize how the success of a project is also related to the pleasure which derives from experimenting, risking and discovering new solutions along the way, sharing experiences and knowledge and creating something unique and complete in itself.
Moreover the integrated approach entails a high level of interaction between training sessions and "real life", with particular attention to the tailoring of methods, tools, techniques and skills to the specific needs of both the

individual participating in the program and the organization they belong to, with its culture, opportunities and constraints.
The contribution of participants to the organization is defined not only in terms of individual development and "shared best practices", but also with specific and measurable results such as the revision, creation and introduction of new project management standards within the company, the increased effectiveness in managing projects, the improved communication among peers, and so on.

Training path

The choice of using a training path, rather than single courses, rests with the need to create a space-time continuum between the learning session and daily activities.
Exhibit 1 shows the basic structure of a training path, which includes a kick-off event, a varied number of modules or classroom sessions, a closing event and the group's lessons learned.

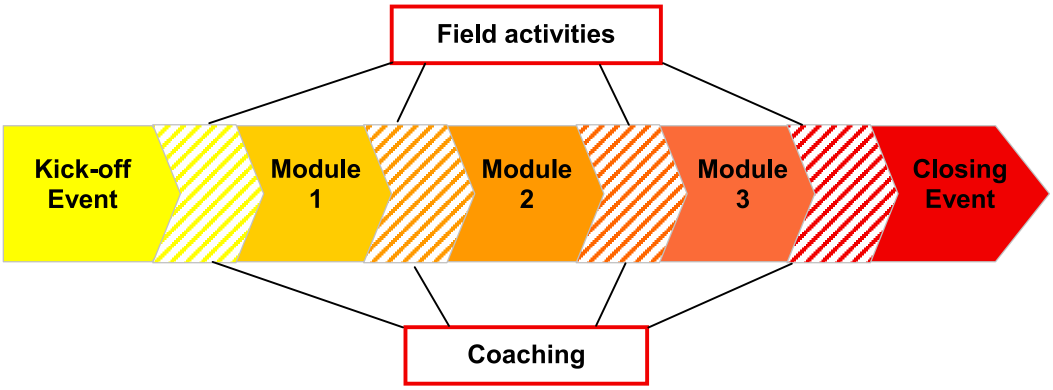

Exhibit 1 - Basic Structure of "PM in Action" Training Path

The Kick-off event may include individual interviews with each participant followed by a formal presentation of the training path; or a formal presentation followed by the first group activity intended as an "ice breaker". The main objective of the kick-off event is to present the program and establish the "sense of urgency" required to initiate a successful process of change (Kotter, 1996, p.35)

The number of modules can range from a minimum of three modules to a maximum of twelve modules, during a period that varies from 6 to 12 months, usually with a monthly frequency. Classroom sessions are usually limited to a maximum of two days and usually cover one specific knowledge area, i.e. time management, project communications, etc.

The contents and level of depth of each module vary according to the needs and requirements defined during the planning and development phase of the program. Assessment tools include interviews with the customer, namely the Human Resources or Training department or the Project Management Office, integrated with specific interviews with participants and/or knowledge assessment questionnaires.

The questionnaires, together with special papers on project management which are provided to participants before the actual start of the program, also have the aim of preparing participants to the upcoming training sessions by providing some basic knowledge on what they will be studying subsequently.

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Each single module follows the same structure, as shown in Exhibit 2.

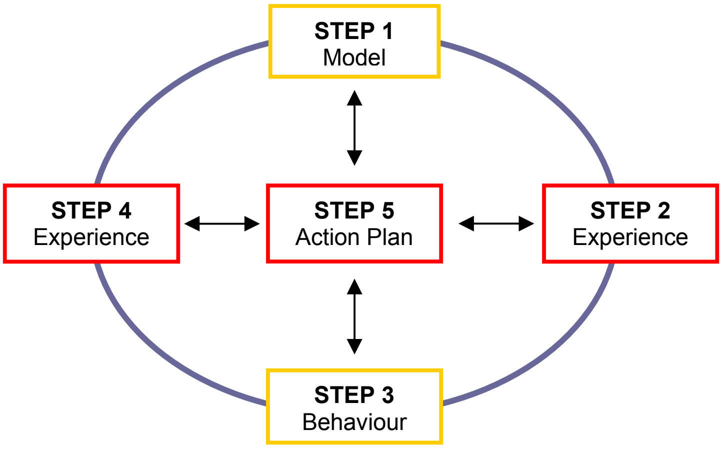

Exhibit 2 - Module structure

The structure closely follows the "plan-do-check-act" cycle and emphasizes the concept of integration between the different areas of expertise and the strong link between this type of training and results.
Furthermore each step refers to specific learning objectives, to be met using appropriate instructional delivery methods, materials and classroom activities.

- Step 1- Presentation of a methodology and the relevant tools (for example, *how do we measure and communicate progress in a project?*);
- Step 2- Experimentation and synthesis, inductive analysis of the experience and identification of soft issues (for example, *given data from a case study, participants are invited to prepare and present a report for management*);
- Step 3- Modelling and formalization of soft skill elements (for example, *the basic rules for delivering effective presentations*);
- Step 4- Experimentation and inductive analysis of the experience and synthesis (for example, *more experimentation and feedback from peers*);
- Step 5- "Action plan" and control on the variables of feasibility and sustainability (for example, *can we define some standards for project progress reports in our projects?*).

Between modules, especially when the modules are many, we sometimes add intermediate learning tests, which could be sets of open questions, case studies or multiple choice tests. The objective of the tests is to focus the attention of participants on the program (a strongly felt need, particularly in longer training paths) and to help them identify areas they need to review.

The Closing event usually take place after the end of the classroom sessions and the completion of field works.
It always includes a "Lessons Learned Meeting" where trainers and participants review the entire training program, focusing on the effectiveness of change in technical and personal competencies.
Important issues and possible new training requirements highlighted by participants are included in a short report for the client which is prepared by the trainers involved in the program and called "Summary for Management". The document has the aim of reviewing and appraising the training program and closes it officially.
Often the Lessons Learned Meeting is accompanied by other group activities, such as a small party, the official presentation of the field work to management, or a special form of training related to the personal competencies

developed during the program. For example, one group worked a whole day with a professional actor to refine their public speaking abilities.

The Closing Event always includes a small “ritual”. Rituals may vary according to the characteristics of the group and the length of the program. In committed and mature groups, in the course of the program various participants usually express a particular interest for specific issues or topics. When the programs reach their natural end and we wish our participants “fair wind and following seas” in their future projects, we have found that they really appreciate receiving a book related to that their theme of interest. So the “gift of the book” becomes our special ritual to mark the passage from a trainer/learner relationship to a peer/peer relationship.

Finally, field activities and coaching take place between modules and pertain specifically to the contents examined during the previous classroom session. They will be analyzed in detail in a later paragraph.

Integration of hard and soft skills

The educational choice of separating hard and soft skills makes the passage from the classroom to real life all the more difficult. The choice of integrating hard and soft skills in a single classroom session is based on the need to recreate a “real life” situation and at the same time prompt a change of pattern in the learners.
Also we strongly believe that a classroom session is successful when it provides an experience to which each learner can refer easily when and where he/she needs to use the same skills in a new situation or context.

To achieve this aim we choose to have the concurrent presence of two trainers but with a different experience and training specialization. Typically there will be a method or an organizational specialist and a behaviour specialist or a counsellor, if conflict resolution, stress management or group dynamics are at stake in the program.
Although these skills often are well combined in one trainer, we choose a “team approach”: all trainers share the common ground of project management (they are certified PMP®s) and related training methodologies, but each trainer brings very specific qualifications and several years of experience in his/her field.

The two trainers take turns in conducting the session and they provide a different, detailed and exhaustive prospective for every item on the agenda and for every issue which arises during the group work and discussions. Moreover they are able to highlight correlations and interactions in every aspect of project management, promoting and demonstrating a systemic approach which starts in the classroom.
Classroom material and activities have been especially designed to match this approach and blend hard and soft skills to fit reality. Case studies and exercises are often designed from material provided by the organization and feedback is focused on immediate application in the field.
A good example of an integrated training session would be the simulation of a project progress discussion meeting. The team needs to analyze data concerning how the project is advancing (time, cost, scope, quality and risk), they will have to analyze variances, identify causes and make projections. The earned value technique is particularly suitable for all the “number-crunching” part, but a number of personal competencies are also employed such as the capacity to handle conflicts, to negotiate, to build the team and to solve problems.

Sometimes analogical activities may be introduced to intensify Learning II and enhance possible changes of behaviour. The analogical content allows participants to focus on the learning process: they are guided to analyze the analogical experience and identify personal competencies and new patterns of behaviour within the personal and organization level of tolerance. In a word they “learn how to learn”.

Field activities and Coaching

Field activities and coaching are an important element of the integrated approach. They provide a fundamental interaction not only between the classroom experience and real life, but also between the different modules.
Field activities include individual and group assignments which subsequently become the object of discussion, by providing examples and the possibility for further in-depth analysis during classroom sessions. On-call consultancy and support is usually available for individual and group assignments, although participants are strongly encouraged to develop a “support network” within their group.

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The most appreciated type of field activity is when participants are divided into small groups and are assigned the objective of formulating proposals for improving or integrating the company's project management standards. The assignment usually requires the production of documents, templates and models which need to be scalable and accompanied by a cost-benefit analysis.
Training on the job, and project management labs in particular, are special projects usually launched towards the end of the training program or shortly afterwards, when one or a few participants are given the opportunity and responsibility of applying in real life what they did in the classroom, from standards and methodologies to specific sets of behaviour.
Specialized coaches provide support on specific issues and at fixed intervals. Coaching activities can also be strictly individual and upon request: usually a number of coaching bonuses or tokens is pre-defined for each module and participants are free to claim them as they deem necessary.
Individual coaching is particularly important because certain behaviour can change only by working on it in a private session, rather than in public. The "secret" relationship and the complicity which is created with the coach allows participants to lower their barriers and be more open to experimentation, feedback and change.

Critical Factors for Success

There are a number of definitions for critical success factors, but all agree that these are the factors which need to exist and be monitored in order to guarantee the success of any initiative: "Key success factors are the things that you need to do or the capabilities you need to have to achieve your goals and vision."(Mark Graham Brown, 1996, p. 164)
The "PM in action®" approach is extremely powerful but requires some specific critical success factors to be guaranteed otherwise the cost/benefit ratio deteriorates and participants have a strong feeling of disorientation and risk losing motivation.
Below are the CSF we have identified for "PM in action®". Since, by definition, all factors can endanger the outcome of a project, they are listed in casual order and not in order of importance. Pros' and Cons' can be determined by an analysis of the CSF.

- Project Management must be one of the company's strategic levers for business;
- Participants must be carefully selected by the company in terms of real needs to improve their Project Management competencies, real interest to develop their project management role and a similar level of seniority in their role;
- Participants must be well informed on the objectives and the expectations of management and must be encouraged to focus on defining their own objectives and expectations and sharing them;
- The customer, in the form of the Human Resources department, of participants' line management or of the sponsor of the training program, must actively promote the program and all its components (i.e., allowing some work-time to be allocated for field work);
- The final proposals made by participants must be given proper space and receive a formal response in terms of value for the organization and applicability;
- It must be easy for participants to meet, exchange information and build a professional community;
- The level of tolerance to change of the whole organization must be assessed before launching the training program because the classroom sessions and field work will produce a certain level of change that must be accepted and sustained within the organization.

If all these conditions are met, "PM in action®" becomes a shared collective experience uniting participants, their organization and the training provider in a journey which is bound to produce a deep socialization and consolidation of the project management culture and glossary, empowering participants and providing a real added value to the organization.

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