

## A Methodological Kit for the Primary Schools

**Maria Moresco, Teacher of Primary School of Milan – Italy**  
**Walter Ginevri, VicePresident of PMI Northern Italy Chapter**

### Abstract

A 20th century pedagogue (Bruner, 1971) stated that education, in the future time, couldn't be confined anymore to the mere passing on of knowledge, but should aim higher: at teaching to learn.

Accordingly, in 2006 the PMI Northern Italy Chapter (NIC) launched a training program about project techniques in school, to be implemented initially in primary school. Teacher teams, supported by PMI NIC experts, carried out several practical trials in educational projects involving students aged 6 to 11 (*PMI Today*, 2006).

In 2007, these experiences were capitalised through the implementation of a methodological kit, which is a complete project management methodology, fully compliant with the *PMBOK® Guide* principles, applied to education. The kit includes also the training material for teachers and pupils with a set of examples taken from projects conducted so far in three primary schools.

### Structure of the Kit

In 2006, the PMI Educational Foundation developed the *Project Management Methodology for Post Disaster Reconstruction* (PMI, 2006), aimed at helping leaders and coordinators in a disaster recovery field during reconstruction. This example was used as a guideline for PMI-NIC educational kit.

Accordingly, the structure of the kit was divided into sections:

- The first one introducing the conception of the kit, its aims, and its construction
- The second one, the kit core, giving full details of the development method of a project
- The third section, including teaching matter to use for teachers' and students' preliminary training
- The fourth section, thoroughly going into the use of the project method instruments
- The fifth section, illustrating, as examples, some projects conducted in primary schools.

### Supporting Methodology

#### Project Activation

Project starting choices are essential for a favourable launch. In order to make preliminary assumptions as clear as possible to the teachers involved in the school project planning and in its organisation, here's a summary of the first steps (Exhibit 1).

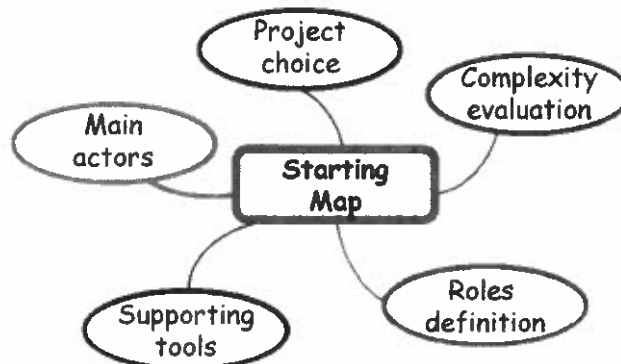


Exhibit 1 – Starting Map

- First, all actors involved must be clearly identified, paying special attention to who's playing the role of the Sponsor (usually it's the Headmaster) and who are the Stakeholders (including stakeholders outside school, such as the pupils' families);
- Another key step is the choice giving rise to the project, be it part of the annual official teaching program or an occasional students' requests (for example, a school party organisation);
- To avoid interference between the organisation of the school project and regular teaching activities, our methodological kit includes guidelines showing expedite procedures and techniques for scope definition, in compliance with the particular time and complexity limits of the situation;
- Bearing in mind the special target of our kit, great attention is given to the distribution of the tasks among teachers and students. With the exception of projects involving only the teaching staff, our proposal includes two options: the first one assigns the role of project manager to the teacher, the students reporting to him or her as team members. As an alternative, the work can be organised in groups (or sub-projects) each directed by a student as project manager. In this case the teacher will support the students as an outside facilitator. Obviously the choice between these options is up to the teacher, according to the project quality and the students' age;
- As for the choice of tools, apt to encourage collaboration and learning, the inspiration came from "visual programming." The best idea, one that gave positive results at each testing, is to use stick-up notes on big white sheets of paper hanging on the classroom walls and let the students manipulate them.

## Project Development

The best explanation of the methodological path at the kit core comes from an exhaustive article published after the kit presentation to the public (Baroni, 2006).

The students involved were fifth graders (last year in Italian primary school). The project was about the organisation of a theatre play for the end of the school. Of course the parents had to be invited; the date was set but many activities and deliverables were still to be planned: the subject, the script, customs, music, rehearsals, and invitation cards.

### Phase 1

Where to start from? For the first part of the project, the creative part, the teacher guided the students with the help of a striking metaphor, comparing the students' journey to a journey at sea.

In the sea of imagination, children started to seek their destination through *brainstorming*, one of the tools of the kit. Children used brainstorming in the most natural way: everyone wrote an idea on a sticky note and stuck it randomly on a wall poster. Ideas came up in great number and varied form: some dealing with the show, others with the roles, with the setting or with the subject.

How to organise all these ideas? A *mental map* helped the children arrange the elements they produced in a logical order. The mental map is another tool of the kit: it simplifies the classification of the ideas and their grouping under the title of some primary questions implying the basic elements of any project: who? (stakeholders), why? (goals), what and how? (deliverables and activities), when? (duration), and if? (risks). At this stage the creative part was finished: the destination in the sea of imagination was set, and so had the means of getting there.

### Phase 2

Now on to planning the trip and setting the course. In the planning phase activities to be carried out must be defined, and so must their succession, the resource allocation, and time planning.

The pupils, almost naturally, built the *project tree*, the WBS. What were this project deliverables? Invitation cards, script, stage designing, soundtrack, ... and what activities had to be carried out for each one of them? For example, invitation cards had to be created, printed, and then distributed.

Finally, all primary activities were identified. For each of them a person in charge of this particular activity had to be chosen, and duration estimated.

Students began to realise that many activities could not be carried out at the same time, and that a logical sequence had to be kept, if the goal was to be reached. At this stage the project was taking shape, each pupil was well involved and knew what to do. Now the project had to be entered in the *project calendar*, with only one constraint: an end-of-the-year play must be performed on the last day of school!

### Phase 3

The planning was done, now execution: the trip had begun and the students needed a compass to keep their course. Accordingly, one of them, on Monday mornings, kept the progress report of the project.

The project had been supplied with project traffic lights," connected to each group of activities: according to the colour of the light one could see at a glance if an unexpected event or a delay was jeopardising the final date.

Every now and then a red light caused anxiety, but, as we know, project managers are used to it! (A red light on the ballet rehearsals was actually showing a delay, but the girls apparently didn't care so much and kept rehearsing at their own pace! This was making the project manager really nervous....) In this phase the teacher pointed out that changes, which happen in any project, were not a negative feature: change could arise from an unforeseen event, a constraint or another restriction, but also from a new idea. Children adjusted easily to the new inputs; this should teach us project managers a lesson as the fact that some brilliant ideas came up in the execution and control phases strongly proves change and innovation to be a positive feature.

### Phase 4

The last phase of the project life cycle (see Exhibit 2) taught the students how to outline the project story: they had sailed through the sea of imagination and had reached their destination, now it was time to relate the adventure.

Back to reality, students started finding out that what they just learned might help them face and win other challenges, with different school fellows, maybe, or in their companies in the years to come. In this last phase, the actors focused on two targets: teachers checked if the learning process achieved its goal, and together, students and teachers, could capitalise their experience and discuss what could have been done better, what would they change the next time and so on.

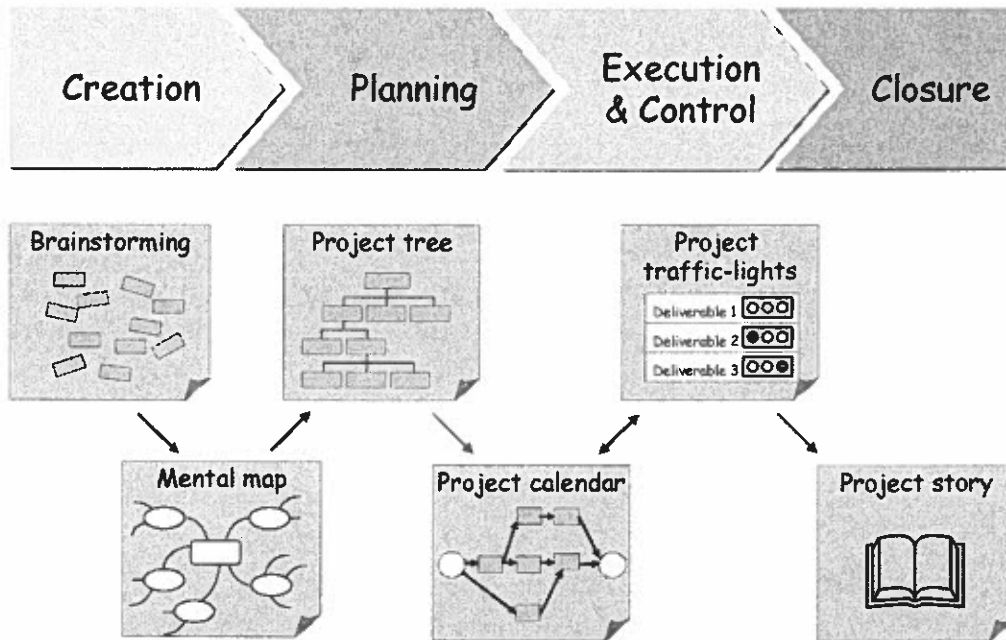


Exhibit 2 – Project Life Cycle

### Application of the Kit

The kit trials were implemented in three state or private Primary schools in Milan, and involved a big group of students, belonging to different social and cultural groups. A distinctive variety marked other choices too:

- The kind and aim of the project: show or party organisation, manufacturing of objects like a small wooden theatre, preparation of an exhibition open to outside visitors.
- The organisation pattern, with special reference to the project manager's role: in some cases this role was assigned to the teacher and he or she led the students project team. In other cases the *students were directly* responsible for some specific sub-projects, while the teacher acted only as a *communication facilitator* inside and between the sub-project teams.

Another element all the trial experiences shared was that teachers were completely free to conduct the school project as they chose, without any interference on the PMI NIC experts' part. The experts' task was to transfer project techniques before the beginning, in two training sessions, and then give assistance to the teachers, when requested, to dispel any doubt or check partial results. This choice brought in a double advantage:

- First of all, the teacher combined project management best practices with his or her own formulation and running criteria, which are anyway liable to planning and progress control.
- In the second place, the teachers suggested modifications or enrichments of the kit structure, according to the trial experience. The adoption of mental map as a "bridge" between brainstorming and the WBS is the best example of how useful such contributions were.

In our opinion the kit as it is today has been tested well enough and can now be applied on a larger scale. We're working toward this new goal in two directions:

- A search for volunteer project managers who feel like dedicating some of their time to promote the use of our kit, follow its trial use, and give support if needed. We already acquired applications from Northern Italy Chapter members, but we'd welcome candidates from anywhere in the wide PMI network.
- The definition of a statistic pattern enabling to estimate how and how much the use of the project management kit affected the children's learning processes. Of course this involves all the participants and witnesses, including the students' parents.

Concerning this last point, the most significant lesson learned was testified by an 11-year-old female student with these words: “Our teacher gave us the opportunity of completing a project 100% under our own responsibility: all the decisions were in our hands. This gave us such a feeling of participation that if we were behind schedule we’d skip our break to make up for time. In this situation, even the children who usually stand aside, played a part and worked hard with the group.”

## Conclusion

Project management is often seen as a rigid discipline, having little in common with a reality made of unforeseen events and change. The fact that uncertainty is a basic element of projects, too, is forgotten most of the time, while, in our opinion, project management claims among its main achievements the possibility of managing uncertainty and keeping it in a definite framework, as long as flexibility and commonsense are used.

The students who worked with the kit prepared by PMI NIC have been able to grab the essence of this principle; while at work, they said they felt “motivated, invested with responsibility, and their creativity was stimulated.” They learned teamwork and self-organisation, referring to the teacher only if they needed help to overcome a difficult moment. As for the teachers, experiencing the use of the project management kit helped not only for the completion of the goal in the students’ project, but also in the reach of the highest aim in a teacher’s profession (shared by any professional project manager, too): helping people entrusted to their care to keep carrying further the students’ or team members’ personal and professional development.

## References

- Baroni, S. (2007, July/August). *Buon senso e flessibilità*. Computer Business Review Italy, 36, p. 66.
- Bruner, J. S. (1971). *The relevance of education*. New York: WW Norton and Co.
- PMI. (2006, September). Chapter brings project management to primary schools. *PMI Today: A supplement to PM Network*.
- PMI Today*. (2006). *Project Management Methodology for Post Disaster Reconstruction CD-ROM*. Newtown Square, PA: Project Management Institute, Inc.