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# WHAT IS THE SCHOOL-TO-SCHOOL-COLLABORATION SCENARIO, AND HOW TO USE IT?

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# INTRODUCTION

What do we mean by school-to-school collaboration? Broadly defined, school-to-school collaboration implies the performance of activities that are common or shared between different schools. Within that framework, in order to have a common or shared project, it is essential that there is collaboration: activities are based on projects developed jointly or collaboratively by the participating schools.

In this text, we will start by briefly covering collaborative learning and project-based learning, taking a quick look at a few of their characteristics and suggesting ways to organize work groups, whilst also calling attention to the more critical aspects of these teaching and learning methodologies. Further, we will deal with the classroom culture from the perspective of a relationship with a project culture conducive to learning, connected with the reality and nature of this century. We will then suggest the establishment of partnerships and the creation of or participation in experiential virtual communities, specifically through initiatives already established in this area – as in the case of eTwinning – as a way of allowing our students to achieve the skills needed to develop their digital literacy. Finally, we will try to bridge these aspects of our discourse and the scenario of interschool collaborative learning, making some observations on the related Learning Activities.

# COLLABORATIVE LEARNING

The concept of collaborative learning has been defined by Smith and MacGregor (1992) as “an umbrella term for a variety of educational approaches involving joint intellectual efforts by students. One enabling factor is the cooperation between students and teachers. In most collaborative learning situations students are working in groups of two or more, seeking together for comprehension, solutions, or meanings, or creating a product.”(p. 11). Based on Émile Durkheim, Kenneth Bruffee states that “collaborative activity happens willingly, even in traditional education setting a teacher perceives teaching as a process of creating conditions in which collaborative learning can occur,” bearing in mind that "[t]o create these conditions is not purely a matter of deciding ‘how much’ freedom or discipline a teacher should ‘give’ to students. The teacher must reconcile his role. He must become an organizer of people into communities for a specific purpose-learning. He must redistribute freedom and discipline within the class, thereby establishing a ‘polycentralized’ collaborative learning community in which the teacher moves to the perimeter of the action, once the scene is set“ (1973, pp. 636-637).

Educational activities focus, therefore, on people’s learning projects where “[i]t is important to see that the teacher does not simply take a laissez-faire attitude, abrogating his responsibility to educate. He reinterprets this responsibility. The teacher understands that his primary job is to organize the learning community" (Bruffee, 1973, p. 637).


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# PROJECT-BASED LEARNING

Project- based learning is not a new concept, it has already been discussed as early as end of the 19th century by Dewey. John Dewey believed that only active learning, brought about by solving problems, enables the reconciliation of the old, the general and the permanent with the new, the individual and the progressive (Dewey, 1897, pp. 17-18). However, the importance of learning through problem-solving is increasing, considering the diversity of challenges occurring due to the current rapid technological developments. On the one hand, activities related to project-based learning involve students in asking questions and solving related problems, and on the other hand, they set a self-learning design in which students assume a crucial role, preparing them to integrate better into a society increasingly based on change, innovation and the ability to respond to complex problems and challenges.

In "Work that Matters: The Teacher's Guide to Project-based Learning", a guide for teachers on learning, Patton and Robin (2012) emphasize that project-based learning is crucial because it includes assessment and showing results to a wider audience, which works as a unique and extremely powerful motivating factor not only for students but also for the other participants in the educational process. These authors highlight three key aspects for the success of the projects: (1) Multiple drafts, (2) Critique, (3) Exhibition.

## 1. MULTIPLE DRAFTS

While the advantages of giving students sufficient time to prepare several drafts of their work are hard to dispute, it is not always possible to allow for this time. Consequently, it is essential to establish a realistic timeline for the project already in the design phase. Keeping multiple versions and records of the project's progress is also valuable in personalising the evaluation because it provides the means to evaluate the final product that the students achieved and the degree of improvement of the project over time. Daniel Dennett (Dennett, 1991), although in a philosophical context, states that all types of thought or mental activity are completed through multiple parallel processes of interpretation and creation of sensory inputs. According to Dennett, information that enters the nervous system is under continual "editorial review" (1991, p. 111) and, in that way, the diversification of records in a project contributes to its quality, making it useful for all students, particularly to those who have special educational needs. Recording the project's development stages makes it possible to review it, remember or recover ideas or contributions, show its progress and even have an idea of the areas that still has to be covered.

## 2. CRITIQUE

The habit of creating several work records, as the project is evolving, has an enormous impact on the way that students face their responsibilities and their learning. In terms of evaluation, this routine is more useful when the students comment on each other's records than when they merely send them the teacher and wait for their feedback.

### A. Impacts of critique

Formal sessions aimed at commenting critically on students' project proposals give them the opportunity to learn from the work and others' comments, within a structured and guided context. Furthermore, these sessions may focus on criticizing the process - "how I did it" - and the product - "what I did" -, becoming genuine lessons that give the teacher the opportunity to introduce concepts and skills to students at the most appropriate time, that is, when they are most motivated to learn. These moments and times of (constructive) critique are also important since they allow students to reveal potential erroneous concepts they may have formulated, giving the larger group the opportunity to modify them.

### B. Characteristics of the critique

Everybody who subjects his work to criticism places himself in an extremely vulnerable position, in confrontation with the person criticizing, especially if that person is seen as having a position of greater power and security, in a privileged position. Taking this relationship of forces into consideration, Patton and Robin (2012) suggest that the criticism must be gentle, accurate and useful. However, even when one is gentle in the criticism, it is not valuable if it is not assertive, rigorous and exact. Being vague in comments is of very little help to students. On the contrary, suggesting other ways of doing things, giving alternatives, and providing advice and help all enrich the value of the critique.

## 3. Presentation of the project

When students know that the project that they completed will be presented publicly, they take on tasks differently, conscious of the scrutiny and questioning by family, friends, peers and strangers. This factor inspires a much higher level of ambition and effort than just merely "getting a good mark". On the other hand, family and community learn about what is being done in school, providing them with opportunities to strengthen the school-community relationship.

### A. Organising the presentation of the project

Existing suggestions and pieces of advice for preparing a public presentation of students' learning projects vary. Even with regard to young people inexperienced in giving presentations, the literature recommends that the session should be treated with the maximum seriousness and rigour. Only if the session is well organised, participants can concentrate on showing their skills instead of organisational issues. Therefore, one needs to start by finding the appropriate space, preferably associated with the school's public activities, so that it becomes evident that the school supports and values the completion of projects. Within this context, it is best also to involve teachers which are not of the project in the session. To show that the entire educational community values the project, it is important that also other class teachers, the head teacher or a representative of the school administration are present. Then, it is important to carefully plan the session with the active participation of the student teams and promote it. One should make use of all possible means to invite the community, families, colleagues and other schools, if possible.

We must not forget that dissemination is part of the project itself and that students need to be involved in all the tasks, assuming risks and responsibility for developing the skills necessary to promote and carry out the events. To this end, it is important that they make posters with the messages they consider necessary, adapting their reach, language and format to the means of publicity and delivery. It is recommended that they use their preferred communication methods such as social media and that they learn to make the most of them, supervised or supported by adults, other teachers or outside experts. As they have to think about and produce dissemination documents such as posters and other materials on the projects they are involved in, students become more aware of their responsibilities and become conscious of skills they have and those they need to develop. In this process, other class teachers may become involved, from visual education to their native or foreign language, seeking to mobilise different subject areas, expanding the project beyond the area or context in which it initially started.

An effective way of involving all students in publicly presenting projects is to give everyone tasks, exploring the skills in which they excel or those in which they contribute most to the collective success of their teams. Tasks including technical skills, communication, public relations, organization, overall evaluation, recording, reporting, summarizing etc. have proven to be an excellent strategy in maximizing individual skills on a level of intergroup and interpersonal cooperation.

## B. EVALUATING THE PROJECT

According to some authors (Boss & Krauss, 2007; Patton & Robin, 2012), presenting a project is a time of celebration, not necessarily of evaluation in the strict sense of the word, and as such, should be treated with the elegance and splendour of a party. However, for some projects, the presentation is also important for the evaluation process, for which a panel of specialists or members of the community can be assembled to make an evaluative commentary on the *products* of the project. In other cases, the evaluation can have a limited dimension, being limited to the personal reflection of the participants or a summary poll of the public opinion.

Patton and Robin believe that the evaluative aspect of the public presentation of projects is always secondary. The celebrative aspect is essential, since it offers a unique opportunity to establish connections with students' families. Boss and Krauss believe that the celebrations are also projects, and in that sense, suggest that students are put in charge of organizing them. The celebration can be big or small, always in proportion to the size, duration and degree of strictness of the project, but it is better to think big. The teacher can define the parameters of the scale but should allow for students to choose the setting and guest list; make invitations, decorations, presentations; determine awards, games and extras such as food and drinks, but set the budget for the event, as well (Boss & Krauss, 2007).

## CHARACTERISTICS OF PROJECT-BASED LEARNING

The resources we could use to characterize project-based learning are endless, but few are as clear and objective as those summarised by William Bender, reproduced here in Chart 1.

**Chart 1 Essential characteristics of project-based learning, adapted from Bender (2012, pp. 31-32)**

| Characteristic | Description |
|---|---|
| **Anchor** | The introductory information of the context used to define the scenario and motivate students. |
| **Collaborative work** | Collaborative work as a team is essential in project-based learning experiences in the sense that it maximizes the possibilities for more authentic learning. |
| **Driving issue** | The issue that directs the student's attention and helps focus efforts. |
| **Feedback and review** | The structured support that is given in a systematic and routine manner, both by the teacher and by the collaborative learning process itself, is based on evaluations by the teacher or peers. |
| **Questioning and innovation** | Based on the driving or central issue, the group needs to find other questions geared more specifically to the project's tasks. |
| **Opportunities for reflection** | It is essential to create moments designed for student reflection in any learning project that is based on projects. |
| **Research process** | Guidelines set to frame the project, for its completion and for the creation of products or artefacts. |
| **Timeline** | The group must establish specific timelines and goals for the conclusion of various aspects of the project. |
| **Public presentation** | Project-based learning focuses on authentic problems that students are faced with in the real world, so the public presentation of the results is an essential aspect of this methodology. |
| **Student voice and options** | Students should have an active voice in completing the projects, and as such should be presented with exercises that require making decisions on various options. |

## CHARACTERISTICS OF A PROJECT

In the project management kit published by the Council of Europe, Abrignani, Gomes and de Vilder put together a simple set of characteristics of projects, which we can be summarised in the following way.

**A project has a purpose**: it has clearly defined and established objectives to produce certain results. Its purpose is to solve a "problem", which involves an advanced analysis of the needs and the suggestion of one or more solutions.

**A project is realistic**: its goals should be attainable, which means that it should be feasible, considering the needs and financial and human resources available.

**A project is limited by time and space**: the project has a start and end date and is implemented in a specific place and context.

**A project is complex**: it requires various planning and implementation skills and involves various partners and participants.

**A project is collective**: it is the fruit of a collective effort, executed by teams, involving various partners, whilst meeting the needs of others.

**A project is unique**: all the projects emerge from new ideas, seeking an innovative and specific response to a need or problem, within a specific context.

**A project is an adventure**: each project is different and innovative and, for that reason, always involves some degree of uncertainty and risk.

**A project can be evaluated**: a project is planned and organised according to measurable objectives that should be subject to evaluation.

**A project is completed in phases**: the project has distinct and identifiable phases: definition, implementation, evaluation. (Abrignani, Gomes, & de Vilder, 2004, p. 29)

In order to have a preconceived notion of the potential value of our project it is useful to have a better understanding of the main reasons for the success and failure of projects. Once again we resort to Abrigani and colleagues, grouping those characteristics in Table 1.

**Table 1 – Reasons for the success and failure of projects based on Abrignani, Gomes and de Vilder (2004, p. 29)**

| Why they are successful… | Why they fail… |
|---|---|
| The structural organisation is appropriate to the project team. | Inadequate authority. |
| The project team participates in the planning. | Lack of planning and participation by the project team. |
| The project team strives to meet deadlines. | Lack of participation of the project team in problem-solving. |
| The project team establishes realistic budgets. | Inadequate communication abilities. |
| The project adequately uses network planning techniques and does not allow for the plan to be an end in and of itself. | Inadequate technical skills. |
| The project team works with bureaucracy, policy and the administrative procedures and not against them. | Inadequate administrative skills. |
| The project team agrees with the specific and realistic objectives. | Unrealistic timelines. |
| The target audience is involved from the beginning of the project. | Unclear objectives. |

## HOW TO BUILD A PROJECT

As we have seen, *defining, implementing* and *evaluating* are three fundamental phases of a project identified by Abrignani and colleagues (Abrignani et al., 2004). The definition of the project (*defining*) corresponds to the planning phases, being based on the analysis of the needs or on the identification of the problem that we are interested in. It consists of the definition of objectives, identification of activities and the selection of strategies and resources needed to be completed in the project. Planning involves a lot of work, many times unseen, but determinant for the purpose of the project:

- The analysis of the needs of social reality,
- An analysis of the capabilities or interests of the organization and its promoters,
- The concrete definition of the goals and objectives,
- The identification of the possible and probable activities,
- The aspects that need evaluating,

- The scheduled timeline for the project,
- The potential resources,
- Those responsible for the project – establishment of the team,
- The partners,
- Writing a draft of the project,
- The costs and financing possibilities.

The implementation phase (*implementing*) frequently merges with that of the definition of the project because some tasks in this phase occur simultaneously with the design phase (*defining*). This phase includes:

- The completion of activities and the way they are interconnected,
- The management of resources: human, financial and technical,
- The adoption of communication and public relation strategies,
- The process of evaluation, feedback and regulation,
- Reporting and keeping records of events,
- How to involve people, specifically young people and the community.

The evaluation of the project (*evaluating*) is the process of establishing criteria and collecting information in order to (a) evaluate what was accomplished (b) explain what was accomplished, and (c) obtain data to plan future projects.

In these aspects of evaluation, Abrignani and colleagues suggest that one should evaluate:

- **the results**, distinguishing between those that were planned and those that were not;
- **the objectives**, considering that the natural purpose of an evaluation is to compare the results achieved with the initial objectives;
- **the financial management**, importance of which goes beyond the normal need to make a financial report to present to sponsors and the organisation;
- **the impact on the organisation**, that is, the school, since knowing the impact on the organisation is useful for projects that represent significant innovation;
- **the process in and of itself**, since the results are not only the tangible aspects, but also the results of learning and experience acquired in a certain field.

In order to be aware of the results and to understand them, it is necessary to be able to answer questions like: What have we learned from completing this project? What have we learned about project planning and management? What could we have done differently?


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Assuming that a change or improvement will only happen if something is done in light of the results of the evaluation, it is essential to understand that a project is a cycle of events that does not perpetuate itself. It is remade, reformulated and reborn in the form of new projects. Among the many representations of the cycle of a project, our ideas are best identified with those that are represented in **Error! Reference source not found.**, showing the three phases of the project.

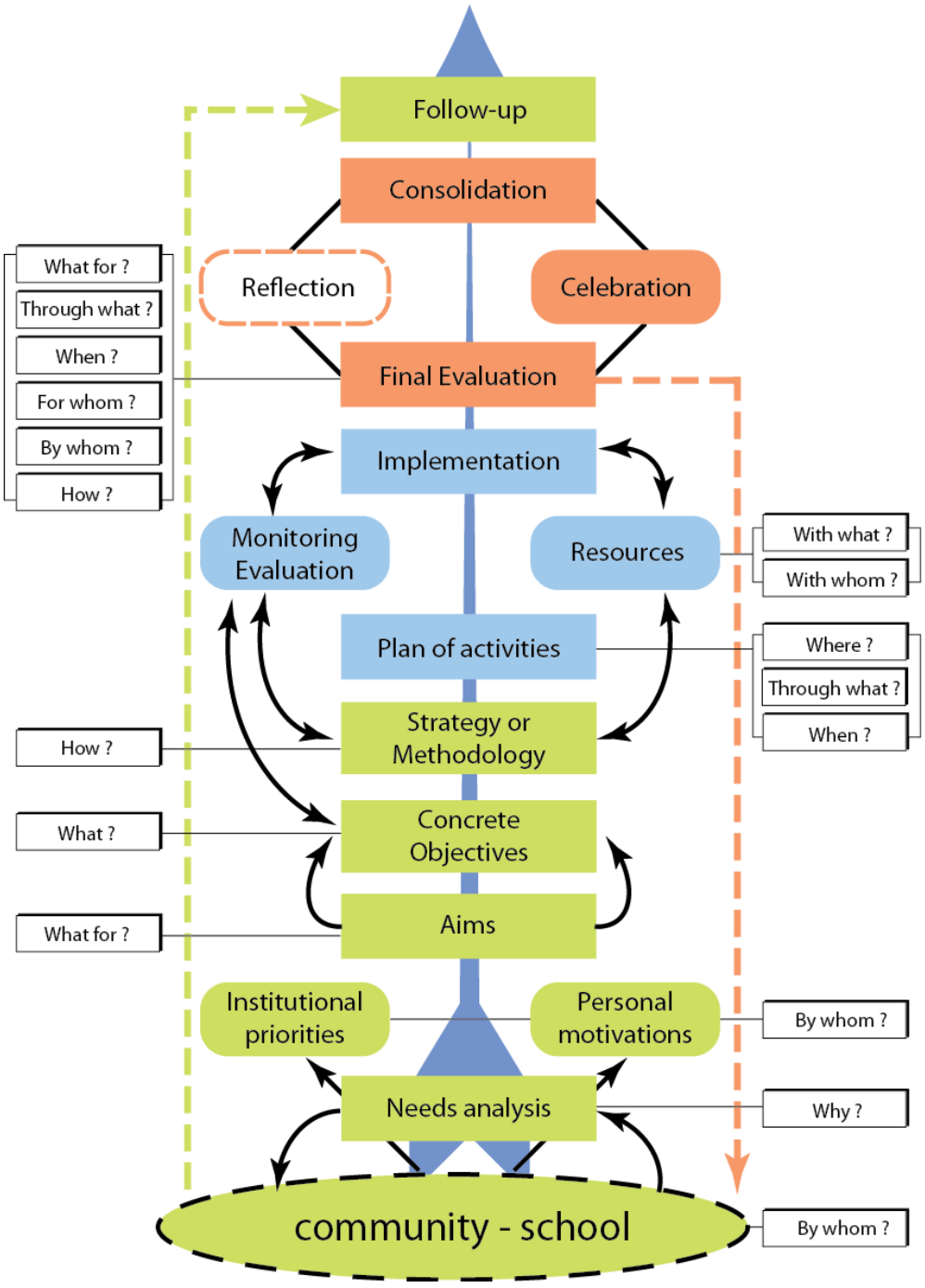


**Figure 1 Organisational model of the project. Adapted from the proposal by Abrignani, Gomes and de Vilder (2004, p. 43)**

## A Culture of Project in the Classroom

The connection between a good project and a classroom has as a common element the culture of project. It is not expected, however, to find a culture of project in a school that has never participated in projects. The culture is built primarily through experience, although it is possible to accelerate the process with some expertise, as Patton and Robin suggest, and as we summarise below.

1. Discover the students' prior skills, interests and experiences. As we all know, projects function better when they are appropriate to the age, interests and skills of the students participating. A good way to complete this task is to ask students to create a "project CV", highlighting their personal characteristics that could be pertinent to the project.
2. Foster students' ownership of knowledge. If the students feel like they are the pilots of their own learning journey, they will also feel more responsible for the process. They can be given freedom in various different ways. For example: (a) we can give them the freedom to choose how to respond to a brief project or to choose the central problem to be studied; (b) we can allow them to decide everything, the subject and the design; (c) we can help define the project assessment criteria and design it in light of the objectives, integrating critical analysis sessions into the building process.
3. Establish the "rules of the game" or standards of procedure in the classroom so that all students have a role. The use of protocols is very important to the project work, since it allows the analysis of everyone's contributions in an organized manner and enables students themselves to solve the conflicting situations, without resorting to the teacher's intervention. The standards should include the acceptable behaviours within the group. The best way to do so is to collaboratively establish them, integrating everyone's contributions. The best rules are those that succeed in being gentle, specific and useful. The standards should be well known and accepted by all and, until they are well adopted, they should be the object of specific work, so they are understood and mutually accepted.
4. Help students learn to fail and to learn from failures. Generally, students take one of two approaches to failure; (a) they are so frightened by it that they rarely, or never, are able to acknowledge it, or (b) they see it as intrinsically natural. Patton and Robin label these as "failure rookies" and "failure specialists", respectively. Being a failure rookie or specialist is not an advantage to any of the groups, but being "failure knowledgeable" is a factor that helps to acknowledge when one has made a mistake, making it possible to respond to

the errors and learn from them, transforming the temporary frustration into an opportunity to learn. Obviously, this requires that the project allow sufficient time for students to err and to correct their errors.

5. Trust students and give them reasons to trust in themselves. Experience has shown that when more responsibility is given to students, they have the ability to surprise us with their maturity. The teacher is, therefore, responsible for creating conditions favourable for building up the students' confidence in themselves and in the teacher. But the students also need to trust in their peers, a trust that grows with participation in activities that increase their interpersonal knowledge. The completion of small projects that do not require major responsibilities, at the beginning of the school year for example, can be a strategy to achieve good results, helping to create a culture of companionships, mutual trust, and the search for excellence, at the same time that it allows students to practice independence and gives the teachers indicators of the leadership profiles within the groups. (Patton & Robin, 2012, pp. 73-75)

## PROJECTS AND PARTNERS

In the educational field, the involvement of young people in all phases of completing the projects constitutes a wealth of opportunities to learn and grow which no educator should neglect. In addition to the acquisition of academic skills that such involvement provides, it enables and stimulates the development of social skills, which are increasingly 21st-century skills.

The daily reality shows us that young people seek out and explore all the opportunities to socialize through new technologies, according to the paradigms that they adhere to, in a quick succession associated with technologies and services that are emerging. Taking that information into consideration, it is to be expected that the development of collaborative projects involving other partners, whether they be from the community or from other schools, would be generally well received by students.

Partnerships in projects with technologies may cover the community, to involve families, experts or professionals with whom the school does not have frequent contact, but they may also involve other schools from the same region, other regions or other countries. They may also explore the technological resources of the entire community, such as cybercafés and companies or other centres with public Internet access, expanding the available resources, in addition to those at the school.

As we have already highlighted previously, it is advisable to start by participating in small projects with local partners, whom one can trust for a successful completion and who are able to provide supplemental aid as needed. Later, when the students and the teacher acquire some expertise in the development of projects, they

can expand their range of action. In the meantime, it is helpful to keep in mind a few principles summarized by Boss and Krauss (2007, p. 135): (1) foster student-focused learning, since they need to be responsible for their own learning; (2) design genuine projects so that students recognise their need and relevance, and also because they like to be involved in solving real problems in the community; (3) use technologies as tools, not as content, because students need to use the most relevant technologies to solve real problems, in a professional manner; (4) encourage cooperation, because students working as a team to develop genuine projects produce more than when they work independently.

## PROJECTS, TECHNOLOGIES AND MOBILITY

If we pay attention to information that is published regularly on new technologies and their inclusion in our daily lives, we easily conclude that we will either learn to "live" with those devices or they will bury us alive. According to the International Data Corporation (IDC, 2014b), the global market of tablets increased more than 50% from 2012 to 2013, surpassing 217 million units sold in 2013. In 2014, quarterly sales of tablets increased by more than 11%, despite a few signs of a slowdown in that growth (IDC, 2014a). But we do not merely use tablets, we also use smartphones, and that sector is growing at a truly dizzying speed, with sales of that equipment surpassing 327 million units in the third quarter of 2014 (IDC, 2014c). Reflecting on these numbers, it is not hard to see the impact that such high numbers of mobile devices will have on education. In fact, there is a gigantic global movement surrounding mobility and digital technologies, as shown in recent studies by UNESCO (2012a, 2012b, 2012c, 2012d, 2012e). On the other hand, we foresee an increasing awareness of the importance of new technologies and their integration in the day-to-day academic sphere. According to IDC, a study completed in Western Europe in 2013 showed that "60% of executives at learning establishments believe that mobile technologies can improve students' learning experiences" and "46% of the interviewees had already made investments related to the management of mobile devices, seeking to respond to the demands of students and teachers under the idea of bring-your-own-device (BYOD)".

In terms of integrating mobile devices in education, industry pressure – especially directed towards tablets and smartphones – is such that, faced with a clear ineptitude of traditional producers of educational content, the device and software industry itself came to the fore, leading some pilot projects and other more extensive ones for infusing technology into education. This was reported by studies on initiatives related to iPad tablets in Scotland (Burden, Hopkins, Male, Martin, & Trala, 2012), Canada (Karsenti & Fievez, 2013), the United Kingdom (Heinrich, 2012), the Netherlands (Seve Jobs School, 2013), Australia (Department of Education and Training, 2012) and France (Marcant, 2012), for example. The same applies to the Samsung Galaxy Note in the United States (Samsung, 2012b) and South Korea (Samsung, 2012a), and Microsoft's Surface RT (Microsoft, 2011) here and there around the world, or for example, Acer tablets in Europe (Balanskat, 2013).

The central focus of the majority of the works mentioned is the interlinking of the nomadic characteristic of young people and their sociability with their preference for the latest technologies and the need to communicate and establish networks, which education needs to grasp. From the point of view of supporters of these devices, special emphasis goes to the literacy of their users and accessibility to the real and virtual world that the mobile devices provide. Ecological arguments such as the replacement of printed books with digital books and the

possibility of mixing activities with educational materials in printed and digital sources are present in practically all the studies. But the increase of the interaction between students and between students and teachers and the increased educational efficiency of the teachers, the written introduction of data and the completion of records or creative work, are also arguments used. The multimedia dimension, the ease of making an immediate evaluation of the students, the existence of multiple computer solutions or applications (apps) depending on the needs of each – whether a student, teacher or the school – and a greater communicational intimacy and monitoring, are also included in the frequent arguments defending the use of tablets and smartphones in learning activities. Despite this positive perspective, hypothetically over-exaggerated due to the interest generated by the education business and some understandable bias stemming from the enthusiastic support of commercial brands given to studies with the greatest impact, some challenges raised by the integration of tablets and smartphones in educational activities should be considered.

Some studies (Clark & Luckin, 2013; Karsenti & Fievez, 2013) note that (a) the tactile surfaces are more distracting to students; (b) Tablets do not increase the ability to learn to write and written output tends to be shorter; (c) some resources are not as appropriate for devices as would be necessary and others require a permanent connection to the Internet; (d) the organization of the students' learning space and activities changes radically and abruptly, presenting teachers with more complex challenges; (e) knowledge of the resources, content and tools available consumes more and more of teachers' time; (f) in many cases, school performance dropped, attributed to students' increased distraction.

We also acknowledge disadvantages in the fragility of equipment, in the large discrepancy of technical characteristics and usage experiences, in the increase of inequalities stemming from students' economic and cultural contexts, in the need for continued training – both for teachers and families – and in the safety risks of networks. In addition to this, issues of ethics and the respect for copyrights cannot be ignored, in terms of the content that is downloaded, as well as that which is published online, along with the issues of trust, credibility, relevance and depth of content that deserve attention. Lastly, the risks of increased isolation of youth and students' individualism challenge project leaders to consider alternatives to 1:1 learning situations, evolving towards solutions of sharing devices and increasing cooperation between students (UNESCO, 2012f).

However, some characteristics and specifications of mobile devices clearly enhance their use in contexts of education and the development of learning projects. The capacities for reproduction, multimedia editing and sharing, specifically through the use of multifunctional devices that gather fixed or moving images and record sound and geographical data, immediately integrating those elements in documents of rich content, are considered assets for the classes in real context or augmented reality, on the street, in museums or science centres or in nature. It is also worth considering the capability for interaction, the connectivity with other devices using distinct wireless protocols such as Wi-Fi and Bluetooth, or the possibility of connecting to projectors or larger screens, or even connecting with sensors and robotic devices. We also highlight their portability or mobility, the relatively lower cost than that of laptops with similar performance, the reduction in costs for paper and printing, and the existence of countless resources and free or low-cost apps. It is important, therefore, to

incorporate the use of mobile devices and learning moments with technological resources in a 1:1 logic, in a collaborative/cooperative manner, supported in the methodology of project work.

In summary, we can consider as essential concerns of education those that are raised by the urgency of project-based work and the use of the most recent technologies. Also getting our attention is the need for enlightened leadership, open to innovation and entrepreneurial in nature, the need to create a teaching group capable of developing internal projects or with partners who already have collaborative experiences, involving students and, whenever possible, families before going on to larger or more demanding projects.

Many testimonials point out that the increase in school-to-school collaboration could enrich the abilities and skills necessary to do teamwork; to use other languages besides the mother tongue to communicate ideas and objectives or opinions; to increase self-confidence and improve self-awareness of students and teachers in the cultural knowledge of the world around us and that which is more distant; in short, it may be a more effective way of obtaining the skills that are essential for the 21st century.

## SCHOOL-TO-SCHOOL COLLABORATION: ETWINNING INITIATIVE

When teachers "dare to" enter the experience of project-based learning, the eTwinning initiative is a significant trampoline and protective shield. In fact, eTwinning is, in and of itself, a progressive project in collaboration between schools that freely and independently develop learning projects. In the words of Christina Crawley (2012, p. 8), eTwinning is a European initiative "designed to help teachers connect with each other, in order to meet, share and work together as a network community." That intentionality of helping teachers connect with each other is one of the foundations of the project that offers a secure place on the Web (the eTwinning platform), a type of virtual collaborative school building where we can look for partnerships with teachers of other schools as we develop our projects or join the projects that other teachers have designed. eTwinning functions as a "dating agency" in terms of everyone's skills, privacy and needs, whilst also serving as a space aided by official national support groups (National Support Services – NSS) in all the countries involved. In addition to this support network, there is a set of eTwinning ambassadors in each country, made up of specialists in good practices and experienced participants in collaborative projects, capable of motivating and supporting those who are starting or who have little experience in this work methodology.

The eTwinning platform integrates a set of basic tools that help manage the collaborative project and communicate with partners in an environment that protects the privacy of all participants, students and teachers.

Initially, the eTwinning initiative only allowed the development of projects founded by schools in different countries, but starting in 2014 it became possible to start collaborative projects between schools in the same country, a factor that may reduce the multicultural characteristics of most of the projects but it also helps in the first steps on the journey of adventure through collaborative learning. In short, the eTwinning initiative "is connective and non-bureaucratic, offers tools, support and opportunities for professional development, builds quality assurance at national and European level in the form of Quality Labels and offers recognition through prizes, the ambassador network and conferences" (Crawley, 2012).

## SCHOOL PARTNERSHIPS

Some of the most successful partnerships between schools, as is the case of the schools in Hanau (Fulton et al., 1996; McNamara, Grant, & Wasser, 1998; Wasser, 1998), a German city that hosts an American military base, are based on the response to the needs of students and the demands of the curricula, making the professional development of teachers an on-going dialogue and keeping challenging goals in mind, focused on how students think and what they "produce". One other important consideration is based on the need to show how it is done and not merely teach how to do it, an aspect for which the co-optation of various teachers is important. According to Elizabeth McNamara (1998), a partnership is an amalgamation of implementation and research activities into four critical areas: (1) the planning process for building the school and the community; (2) linking technology to the curriculum; (3) professional development for the infusion of technology; and (4) leadership and management of technologies.

In the United Kingdom, Christopher Chapman and colleagues have studied for several years the impact of collaborative work in school federations – a federation is a group of two or more schools that share the same management body. In one of their more well-known works, (Chapman, Muijs, & MacAlliste, 2011), these researchers gathered evidence that suggests that schools that develop collaborative work, especially at the secondary education level, have better results than other schools, pointing to strong leadership as another evidence related to good results. According to Chapman, another positive aspect of developing collaborative work between schools seems to be the increase in opportunities for continued professional development through the presentation and sharing of practices, ideas and strategies among teachers. School-to-school collaboration provides the structure and the opportunities for professional development in a deeper and more sustained way, capable of adapting teachers' values, beliefs and behaviours. In other words, school-to-school collaboration helps change the way they think and work.

The pillars of the collaborative process appear to be based on the construction of a collaborative ethos within the school, the development of a network within the framework of interschool collaboration, the creation and strengthening of experiential communities, the direct accountability to stakeholders through systematic self-assessment and peer assessment, combined with the development of internal leadership strategies that promote professional growth (de Botton, Hare, & Humphreys, 2012). In summary, participation in common experiential communities through learning projects with technologies is an expression of the collaborative work that is based on the standards of developing skills for the 21st century and the innovation and entrepreneurship of the school.

## VIRTUAL COMMUNITIES

The term Virtual Community was introduced more than 20 years ago by Howard Rheingold (1993) in a publication that deals with his experience using the online conference system of the oldest known virtual community: "The Whole Earth 'Lectronic Link", or simply WELL, described as a small city.

## 1. THE FOUNDATIONS OF COMMUNITY

Rheingold's work is of interest to us primarily due to his way of looking at issues that, to many of us, only recently are intelligible and make some sense. We highlight the foundations, that is, the rules of a virtual community, underlying the author's thinking, even if it is not organized in a specific way. Rheingold shows a community where nobody is anonymous and, even though pseudonyms are acceptable, they are always connected to the ID of real users, known by whoever "manages" the community, and where it is mandatory that the author's name be associated with all published messages. All the members of any virtual community have the obligation to formally and informally broadcast to the population the presence of impostors, so that the community creates an immune system for self-defence, that is, solidarity and the sharing of information form a basic rule for survival. In general, when joining a virtual community, one is ill-prepared to deal with the cunning tricks of the more experienced users or with the potential of false information or identities and as such, it is the role of the community to protect the newer members. It would be interesting to help new members become aware that they can be faced with unclear situations in the community and that they will make friends with people they probably will never see in person.

## 2. MANAGING THE COMMUNITY

In terms of integrating new members, Rheingold (1993) states that we, as human beings, are often identified as social animals, but nobody ever characterizes us as creatures of a virtual community. Now, in order to survive in a community we are forced to relate with others but we are not used to relating with the inclusion, reality, self-awareness, vulnerability, commitment, transparency, freedom, equality and love of a real community. So, Rheingold goes on to say that it is our central, fundamental and essential task to go from being mere social creatures to become community creatures. In that sense, it is necessary to remind everyone that the members of the community may be children, teachers or other people, but anybody who abuses the rules of communication and good education may be expelled.

The hope is that in a community, communication between members would be cordial and there would be a framework for freedom of expression, although that does not mean that everybody has to be the object of base personal attacks. So, having moderated and non-moderated forums for the hotter topics is a technique that helps the community maintain the space for rational discourse without suppressing freedom of expression (Rheingold, 1993).

Another piece of advice that emanates from Rheingold's conversations is in regard to the security of the information, seeing that the quantity of bits that travel highly connected networks make it hard to define appropriate rules. However, in that difficulty there is also the opportunity to promote the discussion of the values, risks and freedoms of each member.

In order to establish trust relationships between people, it is necessary that people know each other. This aspect, the mutual knowledge between members of virtual communities, is not easy to achieve and may never attain the level desired. As such, there is a need to take some precautions in managing a virtual community. In the

CMSWire magazine, Noreen Seebacher (Seebacher, 2014) edited an article with contributions from various specialists in group management. Although it does not refer directly to education, due to its pertinence we extract the following recommendations:

- Build a climate of culture and trust. Teams will have good results!
- Be patient and persistent because creating teams is a process that requires both: patience and persistence.
- Create a relaxed environment before covering harder topics.
- Communicate frequently with all, both formally and informally.
- Seek to use technologies that do not place barriers on anyone.
- Ensure that distance communication has good audio and video quality.
- Keep a channel of trust open to communicate individually with each member of all the teams, since it is not possible to be physical present with everyone.
- Resolve conflicts once and for all, outside the group and with diplomacy.
- Define a strategy for recognition. The power of a "thank you very much" knows no bounds.
- Make sure you are not left out. Get involved!

More recently, Howard Rheingold published "Net Smart: How to Thrive Online" (2012), dealing with the need to learn the most powerful instrument of our mind – attention – to be successful on the network. The author speaks of "infotention", defining this concept as attention to information and considers it a key factor for growing on the internet, since he believes that our distraction in using the network, especially conscious distraction is our weakest point. Intention added to attention, in combination with the knowledge of information filtering tools, act together in a coordinated thought-machine process he calls "infotention". Critical thought, information filtering and essentially the "internal crap detector", using Ernest Hemingway's words, are the tools needed to use attention and to manage the flow of media in a virtual community. Infotention is, therefore, the specific combination of the learned attention skills with the knowledge of how to use information technologies, becoming a new and important aspect of digital literacy (Rheingold, 2012).

In this text, we started by briefly covering collaborative learning and project-based learning, taking a quick look at a few of their characteristics and suggesting ways to organize work groups, whilst also calling attention to the more critical aspects of these teaching and learning methodologies. Later, we dealt with the classroom culture from the perspective of a relationship with a project culture conducive to learning, connected with the reality and nature of this century. We suggested the establishment of partnerships and the creation of or participation in experiential virtual communities, specifically through initiatives already established in this area – as in the case of eTwinning – as a way of allowing our students to achieve the skills needed to develop their digital literacy. We will now try to bridge these aspects of our discourse and the scenario of interschool collaborative learning, making some observations on the related Learning Activities.

# SUGGESTIONS FOR THE DESIGN OF THE LEARNING ENVIRONMENT


**Dream**

The first step may consist in choosing the curricular topic and theme of the collaborative project or search for projects, for example on the eTwinning portal, that are open to new partners. Then it is essential to form work teams that include members with different roles within the academic community. Whenever possible, teams should be formed with groups of students and adults (parents, teachers or other members) in order to achieve a greater involvement of the community in the projects. Later, each team can make project design proposals, adopting a unique model or basing it on models suggested in the above text. The crucial point is that each team can propose a complete design for the project.

Since not all activities can be developed simultaneously, it is important to use web tools – specifically those designed to record ideas during brainstorming sessions (idea map creators, forums, project management systems, etc.), like Padlet, MindMup, Edmodo or Freedcamp or other tools the group is familiar with.

After clarifying the objectives of the project, the teams should create a timeline to check the progress of the related activities. This intermediate evaluation of the project's design process will generate ideas which need to be documented, not only to document the progress of the work but also to help to re-evaluate progress at future stages.

Assessment should focus on the individual contributions and the collective effort, supporting the improvement of results and suggesting alternate routes. The project design should include the objectives, the proposed activities and a calendar with the planned activities, timing and mechanisms for monitoring and evaluation, as well as the composition of the teams and the roles of each team member.

It is helpful to keep a systematic record of individual inputs and give feedback to all participants, for example with activity sheets that describe all activities or digital records on platforms for project follow-up. The feedback gathered in this way should be incorporated into the learning, thus improving the process and quality of learning.


## Explore

In this stage, teams should look for the tools and techniques needed to gather, record and process the information related to projects they are involved in, in addition to experimenting with different ways of working collaboratively. It is recommended that during this phase the Internet security issues are dealt with systematically and formally, leading to the creation of cyberspace citizenship awareness. Members of the community or other schools can be invited in order to energise debate sessions on the theme and explore the ample online resources on the subject. These sessions can be held at a distance, if the collaborative project is developed with a remote school, by using videoconference tools such as Skype, Google HangOut or appear.in, for example.

This process of exploration includes a vast range of activities and can be enriched by the contribution of suggestions from third-parties. The promotion of school-to-school collaboration is an excellent area in which we can be receptive to the most varied suggestions.


## Map

In this stage, the main objective is to share the project ideas that each team or group outlined. To that end, the use of online collaborative tools is an appropriate option and there are numerous possibilities for that purpose: ZoHo, Google Drive, OnlyOffice – free for up to 4 users –, MangoApps or Bitrix24, for example.

Other mapping tools available online, such as idea maps, storyboards, sketch maps, flowcharts, diagrams and infographics also make sense for the sharing of opinions between physically separated groups and their respective communities. We should also emphasise the need to use the devices that students have, or that they use comfortably, to make multimedia records of their activities and then share them with staff at other schools.

> Note: As a rule, we only mention online resources in this document because, from the outset, these are the tools that run on browsers and are free of compatibility problems. However, there are countless similar, or even more appropriate, apps for some tasks that should be evaluated beforehand by teachers.


## Make

It is time to do things. The collaborative project is fine tuned. It is up to the teams to carry out the planned activities and share them, incorporating the maximum amount of contributions from the greatest number of partners possible, in order that all have a feeling of ownership for the project.

This phase is very critical from the point of view of involving partners who are not physically present and accepting their suggestions, skills, sensibilities and personal tastes or specific demands. It is, therefore, advisable to carry out a particularly close supervision of the work groups' social relationships. Adopting transparent monitoring tools, in other words, tools that allow all participants to accompany the completed records, helps in controlling the situation and detecting potential deviations.

The use of project management systems may simplify the work and, simultaneously, provide data for its evaluation and the evaluation of students (ex.: www.asana.com, https://freedcamp.com), but online office systems also have interesting tools for following the development process of the projects. Also worth noting are learning management systems and electronic portfolios which, when used creatively, not only help in monitoring the project but also provide individual and collective feedback.

Foreseeing the need to create presentations to show the results or products during the last learning activity (Show), it is worth thinking about both collaborative production options and multimedia distribution and online sharing services.


## Ask

This is the phase of pre-presentation of the results of the project, or of the first prototype of the product, when it is very important to gather the largest amount of opinions, suggestions and help. It is essential to organise the collection of information produced by the teams themselves and the external partners in all the participating schools, with the feedback serving as the occasion for times of self-reflection and discussion. The use of structured tools, such as short questionnaires with closed-ended questions and surveys, are perfect for this task since they are easy to use and adapted to the end in view, in addition to the speed with which collected information can be analysed, represented and shared among all. The systems that reduce human participation in analysing data, as with the case of online forms, are good options and facilitate the interpretation of the meaning, keeping in mind that there are decisions to be made that may be not based on the absolute majority of opinions.


## Remake

After gathering feedback from participants and community specialists, for example, this is the phase for reformulating some of the weaker points of the project, incorporating some features that can improve the final product and the time to prepare the celebration of presenting and completing the project. Team members' reflections on their own work and the work of their colleagues is very important, and it is recommended that they are recorded and shared among everyone.


## Show

This is the time to celebrate the result of the collective and collaborative effort. Working as a team, collaboratively, it is possible to complete projects with dimensions that surpass the limits of the schools participating. No promotion of the work completed will be exaggerated, and this should be a time to demonstrate the power and pleasure of collaboration. The collective result should be commended as more important than the sum of the individual contributions. It is important to recognise and assume that this is the stage that should lead to new projects that are more ambitious, wider ranging, more challenging. The team should consider involving the community in the evaluation and gather feedback from the audience of each partner. Do not neglect sharing conclusions and results through records and online publications, in order to preserve the memory and motivate others.

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