

The environment teaches. Outdoor education in small schools

By Vittoria Volterrani, Giuseppina Rita Jose Mangione, Stefania Chipa e
Giuseppina Cannella

Stories

Tools

Studies



Learning in the woods

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The *Biblioteca di Lavoro* (Work Library) was a unique and innovative editorial work, desired and directed by Mario Lodi and created between 1971 and 1979 by a group of educators made up of Fiorenzo Alfieri, Francesca Colombo, Tullio De Mauro, Caterina Foschi Pini, Alberto Gianola, Angelica Gianola, Roberto Lanterio, Palmira Maccarini, Luciano Manzuoli, Gioacchino Maviglia and Francesco Tonucci.

The idea was an educational project that emerged as an alternative to the single textbook. In a format carefully designed for essential functionality, 80 volumes including “Documents”, “Readings” and “Guides”, as well as 68 flashcards offered ideas, suggestions and operational tools to teachers, leaving them the greatest freedom of choice for working according to the needs of their class.

A true encyclopaedia of the most significant teaching experiences carried out in Italy. A reference index from which teachers, parents and children were able to take inspiration to carry out activities, in any geographical and social situation, as alternatives to schooling based on the transmission approach, through a methodology structured upon tools permitting concrete and organic teaching interventions.

Mario Lodi and his collaborators wanted to help teachers and families get to know the child and help the child get to know him/herself and others.

We all want a better, humane and scientifically correct school that starts from the child's experience, in order to understand the world we live in. The *Biblioteca di Lavoro* (Work Library) helped to do this.

Cosetta Lodi

President of Casa delle Arti e del Gioco - Mario Lodi

<http://www.casadelleartiedelgioco.it>

Many years after the experience of the *Biblioteca di Lavoro* (Work Library), the desire to build a better school is still alive. However, still today, perhaps even more now than before, the resistance of schooling based on the transmission approach is strong and deeply-rooted, both in practices and in the imagination, as "normal schooling".

INDIRE has the task of providing support and visibility to research carried out by teachers that seeks to "carry teaching towards proposals, organisations and learning environments that enhance the value of students' autonomy and responsibility and are capable of developing significant knowledge, skills and lasting competences" (*Indicazioni Nazionali. Nuovi scenari*, 2017.) (National Directions. New Scenarios). The operational tools of the *Biblioteca di Lavoro* (Work Library) conceived by Lodi were very effective in this regard. With their simple, clear language, basic form and the credibility of the research work deeply rooted in the practices and in the living experience of teaching, they contributed to the spread of active, inclusive and democratic ways of teaching. More than many programmatic documents, the documentation and teaching techniques included in this "encyclopaedia" have offered teachers tools for making changes and for acting coherently in practical terms, with a view to pedagogical innovation.

The *Small School Notebooks*, divided into "Stories", Tools" and "Studies", pay tribute to this experience, which is an example of how to value and follow up on the research and educational experimentation conducted in schools.

We thank Mario Lodi's heirs for having authorised the use and reworking of the material taken from the *Biblioteca di Lavoro* (Work Library) and also Grandi & Associati, who collaborated in the publication of this volume.

Researchers of the INDIRE - Piccole Scuole group
<http://piccolescuole.indire.it>

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Introduction

The educational value of outdoor schooling

Giuseppina Rita Jose Mangione, Stefania Chipa, Giuseppina Cannella

The INDIRE research carried out within the National Movement of Small Schools^[1] framework observed how, in small-sized schools,^[2] enhancing the value of the place^[3] constitutes a resiliency strategy^[4] for addressing problems common to these types of non-standard schools at international level.

The growing popularity of outdoor education among teachers is a consequence of the results of national and international research that support the added value it brings to teaching and learning processes^[5]. Research shows that outdoor learning can have a positive impact on social relationships between students^[6] and that it contributes to motivating^[7] them and involving them to a greater extent in the classroom^[8]. Positive effects of outdoor learning are also found in knowledge learnt, long-term memory^[9] and in the perception of individual and collective self-efficacy^[10]. The positive impact on the results of learning has also been confirmed for students with emotional, cognitive and behavioural disabilities^[11]. Last but not least, teaching in nature supports the development of an ecological attitude, environmental awareness and being an active and responsible citizen, thanks to the connection to life forms and the understanding of natural phenomena.

Outdoor teaching contributes to achieving the educational goals of traditional schooling, as defined by the national guidelines (MIUR - Ministry of Education, University and Research - 2012: 2018)^[12]. It does

Annotations

[1] Chipa S., Orlandini, L. (2022), *Spazio e didattica nella scuola di prossimità* (Space and teaching in the local school), in Chipa, S., Mangione G. R. J., Greco, S. Orlandini, L., Rosa, A. (edited by), *La scuola di prossimità. Dimensioni, geografiche e strumenti di un rinnovato scenario educativo*, pages 127 – 157, Brescia, Morcelliana – Scholè.

[2] Baker, M., (2005) Landfulness in adventure-based programming: Promoting reconnection to the land. *Journal of Experiential Education* 27(3), 267-276.

[3] Gruenewald, D. A., & Smith, G. A. (Eds.). (2014). *Place-based education in the global age: Local diversity*. Routledge.

[4] Lyson, T. A. (2002), What Does a School Mean to a Community? Assessing the Social and Economic Benefits of Schools to Rural Villages in New York. *Journal of Research in Rural Education*, 17(3), pages 131-137.

[5] Schenetti, M. (edited by) (2022), *Didattica all'aperto. Metodologie e percorsi per insegnanti della scuola primaria (Outdoor Didactics. Methodologies and programmes for primary school teachers)*, Trento: Erickson.

[6] Becker, C., Lauterbach, G., Spengler, S., Dettweiler, U., & Mess, F. (2017). Effects of regular classes in outdoor education settings: A systematic review on students' learning, social and health dimensions. *International journal of environmental research and public health*, 14(5), 485.

[7] Dettweiler, U., Ünlü, A., Lauterbach, G., Becker, C., & Gschrey, B. (2015). Investigating the motivational behavior of pupils during outdoor science teaching within self-determination theory. *Frontiers in psychology*, 6, 125.

[8] Kuo, M., Barnes, M., & Jordan, C. (2022). Do experiences with nature promote learning? Converging evidence of a cause-and-effect relationship. *High-Quality Outdoor Learning*, 47-66.

[9] Kuo, et al., 2002; Fägerstam & Blom, 2013.

[10] Richmond, D., Sibthorp, J., Gookin, J., Annarella, S., & Ferri, S. (2018). Complementing classroom learning through outdoor adventure education: Out-of-school-time experiences that make a difference. *Journal of Adventure Education and Outdoor Learning*, 18(1), 36-52.

[11] Szczytko, R., Carrier, S. J., & Stevenson, K. T. (2018). Impacts of outdoor environmental education on teacher reports of attention, behavior, and learning outcomes for students with emotional, cognitive and behavioral disabilities. *In Frontiers in Education* (Vol. 3, p. 46). Frontiers Media SA.

[12] MIUR (Ministry of Education, Universities and Research) (2012), National guidelines for the curriculum of kindergarten and the first cycle of education, https://www.miur.gov.it/documents/20182/51310/DM+254_2012.pdf; MIUR (2018), National guidelines and new scenarios, <https://www.miur.gov.it/documents/20182/0/Indicazioni+nazionali+e+n-uovi+scenari/>.

not oppose traditional teaching, but integrates and enriches it by making the best use of classrooms, workshops and multifunctional spaces, without forgetting school gardens and outdoor spaces in the territory.

Outdoor teaching in small and rural schools is an educational approach that enhances the potential of both natural and urban outdoor spaces as significant, stimulating and inclusive learning contexts^[13]. It is an open teaching method that promotes a multidisciplinary approach, cooperation, autonomy and creativity in students. Outdoor teaching is based on the direct and active experience of the children, who are the protagonists of their own knowledge and who develop across-the-board skills and learn to be active citizens in a context that can stimulate well-being among peers^[14]. Last but not least, in the context of small schools, outdoor teaching that takes place outside the school boundaries makes it possible to explore the various aspects of local identity by giving the territory the prominent role in learning, with a function that consolidates the identity of students^[15].

On the basis of the assumptions expressed so far and in light of the national debate on the need to provide spaces outside schools with an educational function, also following unforeseen circumstances like the pandemic, INDIRE - Research Structure on Small Schools in collaboration with the Research Structure on School Architectures, has promoted a national survey, of an exploratory nature, on the use of outdoor spaces in small Italian schools to detect the pedagogical “behaviour” of school institutions regarding the use of outdoor spaces. The survey, which included the responses of 591 schools, 378 of which were primary schools and 213 middle schools, highlights an outdoor teaching method that has not yet taken root in small Italian schools. In fact, most of those that responded do not carry out outdoor teaching activities (61%) and the main reasons expressed can be specifically attributed to the lack of adequate spaces. The buildings of the schools where outdoor teaching activities are carried out were

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mostly constructed between 1946 and 1975 and, in 59% of cases, no renovations of the outdoor spaces were detected.

The schools stating that they carry out outdoor teaching activities (39% of those that responded, 70% of which are primary and 30% are middle schools) have a vision allowing it to be integrated into the curriculum with attention focused on STEAM subjects, included in the PTOF (Three-year Educational Plan) and implemented constantly within the weekly schedule (both in some months of the year and all year round) also thanks to collaboration provided by the territory (Bartolini et al., 2021). Education remains an element requiring large-scale intervention, both in the pedagogical and teaching dimensions and in designing the spaces.

The Tools Notebook entitled “*The environment teaches. Outdoor teaching in small schools*” sets out to be the answer to the need to understand how outdoor teaching can intervene in small school innovation processes, providing several indications for its “systematisation”, through the clarification of the organisational and teaching practice.

[13] Remington, T., & Legge, M. (2017). Outdoor education in rural primary schools in New Zealand: A narrative inquiry. *Journal of Adventure Education and Outdoor Learning*, 17(1), 55-66.

[14] Humberstone, B., & Stan, I. (2012). Nature and well-being in outdoor learning: Authenticity or performativity. *Journal of Adventure Education & Outdoor Learning*, 12(3), 183-197.

[15] Beams, S., Higgins, P., Nicol, R. (2012), *Learning Outside the Classroom Theory and Guidelines for Practice*, New York, Routledge

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1. Outdoor teaching in small schools: a natural choice

Being a small school surrounded by nature and distributed throughout several little buildings close to meadows, woods, paths, rivers and, in general, small, liveable and safe locations, facilitates the use of spaces as alternatives to the school. This is useful for letting students rediscover the relationship with the natural environment, in an open classroom in which they can learn curricular subjects, develop socio-emotional skills and experience complete educational experiences.

However, bringing students closer to nature or to the everyday open spaces found in the places where they live cannot be taken for granted, even for those who attend small schools in little villages. In fact, children and young people are now often involved in numerous extracurricular organised activities, which leaves little room for autonomous exploration, direct experience, group creation of natural objects or spontaneous contact with nature without mediation by adults.

Opportunity, normal practice and intention are often missing, because, although going out to conquer the small world around them was once taken for granted, today it is no longer so. Therefore, that area of informal education that plays a fundamental part in individual growth and in acquiring autonomy, trust and self-management is lacking.

Annotations



Some of the possible outdoor environments

What has been done over the last 5 years at the Istituto Omnicomprensivo in Bobbio is to start Outdoor Learning practices as part of the curricular activities, leading teachers to structure outdoor learning activities in the various subject areas and to ground their teaching in the natural or anthropic environment.

Outdoors, readings, walks, vegetable gardens, games or civic actions are not the only things that can be done; all the subjects are taken outdoors, with habitual and scheduled frequency, because the pebbly river bed and the squares, streets, woods and meadows become learning environments that are much more stimulating and useful for developing curricular and cross-cutting knowledge, skills and competences.

Working outdoors on a systematic basis modifies space, time and teaching and leads students to a Total Physical Response approach and one of discovery and understanding. It promotes the use of active student-centred and group-based methods and supports deep

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learning because it is experiential and lived, involving the different areas of growth: cognitive, physical, emotional and relational.



The different areas of growth: cognitive, physical, emotional, relational

An approach to outdoor learning therefore promotes *formal*, didactically structured learning and learning placed in the subject field, *non-formal* learning, educational for life skills and not strictly linked to the school curriculum in collaboration with educational agencies in the community and *informal* learning, both subject and non-subject-based, arising by chance through the direct experience of nature and the environment.

Learning outdoors therefore involves a new approach to the teaching curriculum, developed through different ways of learning that are active and in the open air. Doing this in a systematic and non-sporadic way requires a conceptual and organisational framework that includes compulsory steps.

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2. Outdoor Learning: what and why

Outdoor Learning is not a true teaching method and, in fact, it has no operational sequence defined in steps to follow rigidly or any obligatory techniques to apply. In Outdoor Learning, however, various innovative methods can be implemented, generally geared towards learning in small groups.

Outdoor Learning is undoubtedly active, lively and experiential teaching, often based on shared discovery, dynamism and play.



Image search activity in pairs by the river for storytelling about the village

Outdoor education is not, and must not be, a reward, because this would imply its occasional nature and it would give the student the perception of a recreational situation rather than one of learning.

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Outdoor Learning is, on the other hand, an inclusive moment of learning, leading students to the rediscovery of a relationship with the natural environment, becoming an open-air classroom where they can learn curricular subjects, experiment with interdisciplinary situations, practice their socio-emotional skills, act on their learning and have complete educational experiences.



Impromptu dramatisation on the lawn from a reading in English

When outdoors, it is possible to move, feel emotions, enjoy a tangible experience of the subjects, experiment with real life situations, solve problems, discover, create and interact with the community...

Working through Outdoor Learning means promoting the development of academic and across-the-board skills and facilitating the implementation of situated experiences.

There are numerous reasons for launching Outdoor Learning in a small school:

- allow students to be outdoors, thus also favouring those necessary, but increasingly rare, informal learning situations that are fundamental for growth;

Annotations

- raise awareness of protecting nature locally, promoting the understanding of global protection and facilitating a mentality geared towards sustainability models;
- systematise active and experiential learning in order to fully engage the students;
- encounter the different types of intelligence thanks to a multidimensional environment;
- facilitate teaching a multi-age class with experiences that are easy to manage in a situation of mentoring between classmates;
- enhance the value of movement, experience, action and contact with the environment in a situation of oxygenation and continuous stimulation;
- allow the brain to work in the best conditions.

Annotations

3. Sporadic vs Routine procedure

There are a great many small and large schools that, despite having easy access to an outdoor space, useful for learning or immediately available, such as the garden or the schoolyard, do not use it regularly for educational purposes, but relegate it simply to the space for breaktime, for playing or for occasional educational activities, which are often not organised.

There are different reasons that lead many teachers to prefer the classroom to the outdoors and they extend to various areas. Here are some common examples:

- *bureaucratic*:: the spaces are not up to standard, there is no insurance coverage, we need at least two teachers;
- *conceptual*: they cannot learn grammar in the garden;
- *motivational*: they have always learned at their desks the families would not understand, there is too much to prepare, I wouldn't know where to start;
- *logistical*: I have no space/the space is uncomfortable, you need to adapt to the weather, there is no equipment;
- *management-related*: the students get too fidgety and a lot of time is wasted;
- *didactic*: the lesson in the classroom routine cannot be moved outdoors;
- *evaluative*: what you do outdoors cannot be evaluated...

We could go on and on, but resistance to change is fundamentally a rather natural motivation and has solid roots in the comfort zone that, even in the educational field, inevitably leads to repeating practices that are considered effective, familiar and well-known and avoiding experimenting with new methods. That which exists outside

Annotations

the operational comfort zone involves structuring a new teaching approach, using creativity, putting experiences into play and adapting them to new situations, finding alternatives to one's own patterns and habits, seeing the student differently, reversing focus... all actions that involve effort, uncertainty, risk of failure, fear and therefore resistance.

In reality, the motivations that lead to a preference for habitual school environments and to adopting well-known teaching methods within them can easily be stripped of their value, simply by launching a procedure that makes it possible, even gradually, to structure an effective and stimulating educational *habitus* that finds strong added value in the outdoors, in a safe and declared organisational framework, possibly also in collaboration with the various educational agencies.

The sporadic nature of outdoor teaching leads to experiencing numerous negative aspects, because its occasional nature brings with it technical risks, weak procedural teaching awareness of teachers, poor organisation, difficulty for children learning in open spaces to stay focused due to the many environmental stimuli and the tendency of families not to understand the motivations.

Outdoor Learning is a teaching approach that requires structure and a procedure, but when launched in an organised and habitual way, it leads to considerable results in terms of subject-based, across-the-board and motivational learning, as well as growth and personal well-being.

Annotations

4. Territorial alliances and all possible spaces

Working in a small school facilitates an undoubtedly more relaxed and direct approach to the territory. Proximity is part of everyday life and possible stakeholders are often well-known and easy to reach. It therefore becomes easy to act spontaneously, without promoting coordinated or systemic actions, thereby enriching and setting the outdoor experience free.

In fact, it is good to think broadly and channel the different educational agencies of the territory into creating a school concept of sharing and community, capable of using all the potential the territory has to offer. We are supported in this by the Community Educational Pacts¹, which the Ministry of Education in the 20/21 School Plan has indicated as an effective tool for supporting the educational alliance between schools and the educating community, which invite us to dialogue and form alliances with the possible stakeholders in the territory.

But how do we go about organising an effective Community Educational Pact that is not limited by the normal agreements on the use of premises? What are the different educational agencies that can support effective alliances in terms of mutual support? More specifically, how can all this promote a type of outdoor teaching?

In general, the creation of a Community Educational Pact requires an open dialogue and a common vision centred on future generations, that identifies educational priorities and theorises opening up the school towards the territory and the territory towards the school.

Establishing an initial round table with the municipalities of the Comprehensive Institute, discussing what is important for the future adults and inhabitants of the area and conveying mutual needs can be a good starting point for launching a shared vision.

Annotations

1. <https://www.invalsiopen.it/patti-educativi-comunita/>

The municipalities themselves will then be able to proceed with mapping resources in terms of associations, spaces and people potentially helpful to a school that is willing to build a different educational concept that is not limited to traditional classroom lessons with teachers, but that wants to start authentic learning experiences inside and outside the classroom, also supported by the expertise of people and associations, to enrich experiential activities, often with a civic connotation.



*Possible places for carrying out outdoor activities:
the square, the woods, the riverbank, a sports field...*

The school can bolster the action of territorial mapping, by proceeding with a survey aimed at families, in order to detect any intentions they have to collaborate with the school. By using simple forms, it is possible to request the families' willingness to participate voluntarily in school life, in terms of time and practical or academic skills, creating a sort of Time Bank available to teachers.

Annotations

The data collected from associations, spaces and families represents great potential for taking the school outdoors, in the right spaces, with the appropriate expertise and adequate organisational support, all elements useful for building rich and meaningful experiences, because they are part of reality and are frequently capable of improving it.



The Books newscast in the square, open to the free participation of the community

It will therefore be easier to proceed with the creation and implementation of projects that are shared and inclusive of all the useful components and structure actions that bring school and community together, in mutual support, also for embarking upon paths of civic-mindedness.

Once the effective collaboration between the various social parties and stakeholders begins, the signing of a Community Educational Pact will also define all possible indoor and outdoor educational spaces, a part from the school, useful for promoting simple curricular activities, situated experiences, Service Learning...

In this way, working with students at the river, in the woods, in the square or in the park becomes known, authorised and normal...

Annotations

as does defining the possible installation of open-air classrooms, with simple table and bench set-ups, which can also be used by the community outside of school hours, along with designing nature trails or routes through the village that motivate or enrich all the inhabitants.



Teaching in open-air classrooms

There are plenty of possibilities and these are often specific to individual municipalities, but everything starts from discussion and dialogue and a formal and effective system of collaboration by every part of the community. This is undoubtedly easier in small locations.

Annotations

5. Equipment/tools

Taking single disciplines outdoors or structuring interdisciplinary courses in the community is basically always feasible, also in less than optimal weather conditions, even for an hour and even if it appears to be impossible. However, the necessary conditions must exist for the outdoors to be experienced without fatigue or any unnecessary wasting of time. There's nothing difficult in this, just a few useful measures that simplify implementation.

In addition to going out with a planned activity, it is in fact necessary to have created the right working conditions, in terms of logistics and equipment.

Let's take a look at those small elements that we need to include, in order to facilitate outdoor teaching activities

The basics:

- folding fishing stool - when outdoors, there is often nowhere to sit. Sitting on the ground is not always comfortable or functional for the activity and the weather conditions can make it hard to sustain. Buying or having someone buy a folding fishing stool with a shoulder strap solves the problem. It is very inexpensive, can be labelled with the student's name and kept at school in their personal locker or in a simple box in the classroom. It allows you to position yourself anywhere, in small groups or individually, and makes the activity feasible at all times;
- clipboard - when outdoors, you can also write, take notes, draw and calculate. So a notebook, a notepad or a sheet of paper are often useful tools, which require a clipboard in order to use them properly. There are clipboards available on the market to facilitate writing by providing a mobile surface to lean on. In the absence of a clipboard, a normal drawing folder is an equally effective alternative;

Annotations

- waterproof jacket - when going outside in the colder months, or in the mid-seasons, it is always wise to have additional protection in case of need. All students have a raincoat at home that, without taking up too much space, can be kept in a backpack at all times and is available for any eventuality;
- materials needed for the activity - adhesive tape, book, string... whatever is expected to be useful, on a time-by time basis, must be taken into account and procured by the teacher or by the students;
- tablet - whether or not it is connected to the network, it is still an excellent documentation tool that can be used by the teacher and the students to record important moments and use them in the reinforcement and metacognitive review phase in class.

Additional materials:

- rubber boots - depending on the outdoor places used, it may sometimes be useful to have rubber boots available, to be kept at school or to bring in case of need;
- easels - for outdoor artistic activities, a fabric shopping trolley, with a few folding easels for painting, can facilitate the use of tempera and watercolours even outdoors;
- magnifying glasses - they can be small and adhesive, to attach to the tablet, or traditional ones. They make in-depth and unexpected exploration of natural micro-worlds possible, stimulating the students' sense of wonder, not fascination, that fuels the spirit of discovery and the desire to learn more and delve deeper in class.

Annotations



Essential and useful equipment for outdoor teaching

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6. Collaboration with families

If you want to start a systemic path of outdoor teaching activities, you need to talk to families and help them increase their awareness of the rationale behind them, allowing them to understand the conceptual framework and neuroscientific motivations and, if necessary, request collaboration that is part of the educational pact and that also provides support for the necessary materials and possibly the organisation of the activities.

This moment of encounter and exchange is also useful for clearing up doubts and concerns and reminding families of the students' need to return to greater contact with nature and with those informal activities that, even at home, contribute to developing life skills, such as self-management, autonomy, problem-solving and organisation skills. Understanding the families' motivations facilitates and strengthens the process and creates structured collaboration that later also supports other dimensions at school.

After the moment of exchange with families, the continuous authorisation for outdoor activities near the school, or in any case in the municipal area, is signed, unless it has already been done.

Annotations

7. Formalisation in school plans

It is important that the school's educational philosophy is proposed at staff level, discussed and clarified in dedicated groups and among the teaching body and then formally declared and socialised with all the educational components.

Outdoor Learning can so easily be combined with other active methods and it is an approach that involves a general change in the teaching concept, because it addresses experiential areas, facilitates active group-based teaching situations, promotes an environmental protection mentality and supports the formation of a mentality geared towards sustainability.

It produces change and an impact that can be found at different levels and in different target audiences.

In view of these reasons, just like with the use of other active methods, Outdoor Learning must be declared in the Three-Year Educational Plan offered by a school, explaining the reasons and implications, to support the various educational agencies in understanding the new school model that is being created to meet society's new needs.

For the same purpose, as well as other possible approaches and methods, it is best to explain, in the Annual Class Educational Scheduling, the reasons that lead a class council to adopt the outdoor approach, clarify general methods and organisation and define the academic and across-the-board benefits that come from adopting this specific educational choice. Similarly, Outdoor learning should be declared in the various Annual subject-based Plans.

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The Outdoors as a teaching environment also falls well within the new educational paradigm, strongly supported by the NRP² in Action 4³, particularly in the School Plan 4.0⁴ and in the Anti-School Dropout Plan⁵, which envisages a school based much more on reality, strongly integrated with the digital world, promoted in active and experiential learning situations in which students are not passive recipients of knowledge, but co-creators of their growth path and increasingly aware of what and how they learn.

Outdoor teaching activities and the creation of outdoor teaching environments can therefore be included in the scheduling linked to these two important actions that look to the future, promote a high-quality school that is inclusive, attentive to the person, aimed at innovation, based on reality and geared towards 21st century skills.

Annotations

8. Safety management and risk management

With regard to outdoor safety management, common sense and attention are the basis of every teacher's actions, as in any other learning situation or educational outing.

Before going out to teach outdoor lessons, if the chosen location is a new one, you need to make sure that it is suitable, does not involve any risks and is not the site of other activities that could disturb the lesson. In the outdoor environment, it is always good to identify, along with the students, points of reference that together create an imaginary perimeter beyond which it is not possible to go. It should also be agreed that the same rules that apply in the classroom also apply outdoors.

The fact that places outside the school perimeter are used, during school hours, does not require special attention with regard to insurance, provided that the outdoor teaching activities have been included in the PTOF (Three-year Educational Plan) and approved by the teaching staff. If desired, it is also a good idea to use an activity sheet or a project sheet for indicating details of the goals and motivations of outdoor teaching and to specify that, from time to time, the outdoor space will be used both during school hours, when the subjects are explained outdoors, and also for activities involving the community.

Any external experts included in the project, who work with the class group outdoors, are normally covered by insurance, just like at school.

Therefore, the basic rules also apply outdoors: an outing is based on a ratio of 1 to 16, in the case of declared illnesses with life-saving drugs, and with a first aid kit for outdoor activities in isolated places.

If, within the Community Educational Pacts framework, it is possible to make use of volunteers, staff from associations and parents, it is advisable to proceed with the signing of a co-responsibility agreement.

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Nevertheless, the teacher remains responsible for the activity.

On a voluntary basis, and as long as there are no impediments resulting from the carrying out of other tasks, classroom support staff can also accompany the teacher, preferably with a service order from the Head Teacher.

Experiencing the outdoor environment, based on best practices and with awareness when managing it, does not constitute any additional danger. On the contrary, it encourages students to act responsibly in acquiring proper behaviour, because it is the result of experience and increasing autonomy.

- 2. <https://www.governo.it/sites/governo.it/files/PNRR.pdf>
- 3. <https://www.mur.gov.it/it/pnrr/missione-istruzione-e-ricerca>
- 4. <https://pnrr.istruzione.it/news/pubblicato-il-piano-scuola-4-0/>
- 5. <https://pnrr.istruzione.it/news/disponibile-il-riparto-delle-risorse-per-le-azioni-di-contrasto-della-dispersione-scolastica/>



Shopping at the market, as a routine based on tangible activities that link mathematics to reality

In general, checking the details of your policy with the insurance agent helps clarify any doubts and allows you to work in compliance with legality and safety.

Annotations

9. Organisational change of spaces, times and teaching

To launch a solid and lasting Outdoor Learning procedure, you need to consider organising changes in the 3 fundamental areas: *space, time and teaching*.

In fact, being outdoors involves a completely different approach to the teaching/learning process, because it requires using the environment in a way that makes it a source of impromptu stimulus or a place of experiences designed and structured with a teaching concept closely linked to it and with a flexible use of time.

Exploiting environmental potential also means going out with a specific lesson on the environment that will be used, with the right equipment and the necessary materials, with sufficient time, but it also means being ready to welcome unexpected stimuli and use them to stimulate learning, beyond what had been planned, adapting or even postponing what was scheduled.

- Identifying outdoor environments

There are different types of outdoor environments and each has specific potential.

The schoolyard or garden is an initial outdoor environment allowing both teachers and students to develop the first procedures and acquire the first habits to ensure smooth implementation both from a teaching and an organisational standpoint.

In the initial phases of an approach to outdoor learning, getting used to organising a lesson outdoors, but in **an environment near the school**, allows the teachers to have simplified management, reduce

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the level of anxiety and risk, take cover easily, optimise timing and understand how to coordinate in the best possible way, even without the tools and equipment normally available in the classroom.



Starting a geography activity on the school steps

Getting students accustomed to using the environment close to the school, in order to develop short and simple curricular activities, allows them to improve their self-management in unusual teaching/learning situations, adopt an operational ability in managing different spaces and materials, stay focused in an environment that is usually used for recreational activities and that, as such, could cause them to concentrate poorly on the goal of their actions.

Therefore, it is best to start from the outdoor environments close to the school, before moving on to the necessary identification of different spaces, outside the school perimeter, which encourage objective contact with **nature** or with **everyday reality**. Small schools are privileged in this because they are often located in little villages, frequently surrounded by a stimulating natural environment, easy to

Annotations

get to and convenient to use. A meadow, the bank of a torrent or lake, a public garden, the woods, a field...



Drawing and painting activities in the open air

...They are all places that permit the development of curricular activities useful for promoting both subject-related and across-the-board knowledge and skills and competences in students, as well as taking them back to contact with nature aimed at increasing their environmental awareness, promoting deeper observation, critical and creative thinking and forming an inclination for sustainability, starting at the local and then the global level.

In addition to natural environments, it is also useful to think about **available outdoor anthropic spaces** and consider using them and

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linking them to a subject, in an authentic situation and incorporated into reality. The village square can become a place for obtaining a practical understanding of geometry, the façade or colonnade of a church, a reason for observing and depicting architectural styles, the tree-lined avenue in the centre, an opportunity to understand and explore the decimal metric system, the village market, a space for experimenting with mental calculations, spending for profit, use of currency, gross/net/tare weight, a visit to the farm, a moment to think about geography, territory, raw materials, production, marketing...



Activity in English, in one of the squares in Bobbio, based on vocabulary linked to parts of the body

If a school is supposed to be a training ground for life, to prepare students for the real world, it cannot remain confined within the walls of a building. Instead, it needs to encounter the world around it and use it for having authentic experiences, acquiring strategies that can be reapplied later on, understanding cause-and-effect relationships, predicting consequences, observing, reasoning and doing.

From the perspective of *Place Based Education* (not so much of Outdoor Learning), indoor places that allow for experiences of tangible

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contact with reality and the potential learning linked to it also offer situations of situated learning that make it possible for students to encounter different learning objectives and place abstract knowledge into uplifting areas of real life. A visit to a museum, a company or an aqueduct, a trip to the shops or participating in a municipal council meeting... can help students navigate through reality, understand how it works, acquire a sense of belonging and perceive the impact of school on their growth. These moments must nevertheless be structured in detail and include on-site activities, be supported by tools useful for guiding observation, promoting curiosity and a desire to delve deeper, facilitating authentic experimentation and tangible contact with the elements and processes that characterise that specific environment. All the life experience stimulated during these indoor or outdoor Place Based Education situations will later be the basis of subject-related elaboration, webQuests, experiments, storytelling and operational activities, best if experienced and organised in small collaborative groups.

- *Organising times*

Giving Outdoor Learning a procedure means thinking ahead of time in an expanded way, at times seemingly slow.

The first experiments at the Institute had initially led to the idea that too much time had been used to achieve the planned activity, because travel time had an impact and the poor ability of the students to focus on precise aspects extended the time needed to reach the goal. This happened because the outdoor exercises were neither systematic nor managed with adequate awareness and, because of inexperience, we expected to move the classroom rhythms outdoors and seek immediate results, even if not very long-lasting ones.

The Outdoor Learning experience is always more complex and meaningful than that in the classroom: it links abstract knowledge to reality, engages the student in different areas, stimulates him/her from a sensory, cerebral, motor and emotional standpoint and, therefore, in

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long-term memory learning and stratifying the experiences essential for building skills and competences.

It requires time and regularity because it is an approach that promotes holistic learning.

The strategies for organising time can be different and depend on the type of activity you intend to implement outdoors.

In the case of our school, the introduction of a timetable that includes **45-minute hours** has made it easier to identify systemic moments for outdoor experiential lessons. Adopting a timetable with 45-minute units allows us to **dedicate 25% of school time** to a curriculum linked to the territory, skill-based activities and curricular and cross-cutting experiences also to be lived outdoors.

However, not being able to count on this type of organisation, various alternatives are still possible and should be discussed and adopted possibly in a team/class council, to facilitate **regularity in shared outdoor learning procedures** with more than one teacher.

During the experience conducted in recent years at the school, especially Primary School, it was extremely useful to plan, at team level, **curricular lessons, cross-cutting lessons and regularity in the outdoor experience**. For example, it was agreed that each teacher would organise at least **one outdoor subject-based lesson per week**, leaving everyone free to increase regularity, but asking them to respect the agreed minimum threshold. This allowed students to **learn curricular subjects outdoors for at least 3 or 4 hours per week**, speeding up their acquisition of the habit of a type of experiential learning, linked to movement, to the group, to observation and to practical experimentation, increasing their level of self-management and normalising operational procedures, with a consequent reduction in timing. In short, the more the habit of outdoor learning grows, the more the use of time by teachers and students becomes effective in terms of management and results. The more sporadic the action, the less effective it is and the more time it requires.

Annotations

For larger cross-curricular projects, which use the outdoors as a learning space, time management is shared between several colleagues. Based on the subject-related goals and the purpose of the pathway, they organise the time for lessons and outdoor experimentation by alternating indoor/outdoor activities, making weekly agreements in order to balance teaching interventions.

- *Teaching choices*

Outdoor teaching is never frontal teaching. There is no outdoor teacher's desk.

It is a teaching method that places students in the centre, stimulating them to observe, question, exchange, experiment, try, reflect, modify, challenge, move...

In its essence, it is an active teaching method, which starts from the body, movement and experience, forcing the teacher to form dynamic paths, geared towards the curriculum, mainly based on the group, and to be ready for possible changes in the programme, because unexpected learning situations can arise in the outdoors and they must most certainly be understood.

Precisely in this perspective, the outdoors supports formal, non-formal and informal learning.

Outdoors, all 9 of Gardner's intelligences⁶ can be stimulated because there are numerous stimuli and useful opportunities leading students to develop their minds, in the nine types of intelligence⁷, through different perspectives and learning situations.

According to Gardner, learning is the result of different approaches to the same topic and the competence acquired is the consequence of practice in different contexts of application⁸.

6. *Infographic* - <https://bit.ly/gardner9intelligence>

7. *Frames of mind: the theory of multiple intelligences* - H. Gardner 1983

8. *Education and development of the mind. Multiple intelligences and learning* - H Gardner 2022

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The verbs of competence

Knowledge becomes effective personal and stable competence, if it is achieved through a path that proceeds on different terrains.

I observe, I think, I experiment, I imagine, I represent, I act, I listen, I speak, I write, I read, I solve, I classify, I orient myself, I communicate, I collaborate and I meditate are the verbs of outdoor competence.



The verbs of competence: outdoor work is above all action

The multiple stimuli that have an effect outdoors reach a greater number of students, because it is a pluralistic approach to teaching, which uses different educational methods and perspectives: the same activity becomes reinforcement for some and a reminder for others, allowing each student, even those in difficulty, to feel at ease and learn effectively.

Learning outdoors is a *total physical experience*. It engages the student on a physical, mental and emotional level, linking learning to meaningful moments that support the improvement of subject-related performance.

It is active and experiential teaching.

Annotations

10. Methods, techniques and strategies that can be resumed in Outdoor Learning

Outdoor Learning is not a method in itself, but an approach to learning that allows us to transfer active methods of various kinds, teaching techniques and well-defined educational strategies into the *open air*.

Let's see, in a non-exhaustive form, those that can easily be referred to in outdoor teaching:

PEER-TO-PEER: peer-to-peer learning generally occurs between two students who learn mutually from and with each other. It means they are sharing an activity, carrying it out together, supporting each other to reach the best conclusion, combining their knowledge and organisational and communication skills. The peers are both students who benefit from sharing. There is no mentor guiding the other. Both members of the pair support each other equally in achieving a common educational goal and, at the same time, strengthening across-the-board skills.

In the case of the *proctor* model, the pair can be formed by an older or more expert student who supports the younger or less expert student in achieving the goal. In this case, both benefit, because the expert grows stronger by teaching and the less experienced student understands more by having a facilitator who is his peer, with a more comprehensible level of communication.

Small peer-to-peer groups can also be organised, for research or study activities or for completing a more structured project.

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In any case, it is therefore easier to put the students in pairs or in a small group, even a random one, when outdoors and give them a subject-based task to complete within a given time.

THINK PAIR SHARE: basic technique of informal Cooperative Learning, which can be suitable for numerous teaching activities. The teacher asks an open question and gives the students time to reflect independently and in silence, also taking note of the thoughts that emerge, if necessary. Random pairs are then formed and take turns at sharing. At the end of the sharing, the teacher can ask for a summary of the 2 possible positions, bringing out the different perspectives or a common conclusion. The moment of final discussion is useful for focusing on the key concepts or for clarifying any doubts.

ROLE PLAY: students interpret a scenario, to simulate the real situation and be ready to face it. In the large outdoor space, without barriers, it becomes easy to form groups and give them a real-life situation to represent, letting them agree on how to interpret it, organise it, try it out and present it, while also stimulating the youngsters to use creativity in order to quickly search for, find or build the props necessary for the representation.

Once the time for organising the Role Play is over, everyone sits in a large semicircle and each group watches the representations of the other groups. At the end of each one, they start a discussion on the proposed situation and on the representation itself. In this way, they train their creativity, critical thinking, delivery skills, collaboration and self-management and they can also work in their mother tongue or in a foreign language.

CIRCLE TIME: Circle Time is a teaching strategy, now very widespread, that allows the teacher to explore problematic issues, conduct a lesson with good participation or deal with situations that concern the students. Circle Time involves everyone, welcoming the various contributions, and allows students to share knowledge, thoughts and points of view with the class group.

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It allows them to share their thoughts and ideas with their classmates. In Circle Time, taking turns to speak is respected, contributions are listened to and the opinions of others are welcomed and respected.

TOTAL PHYSICAL RESPONSE: particularly suitable for the acquisition of foreign languages at the first educational level. The fundamental concept of T.P.R. is that of associating words or phrases with the relative body movement, to secure the object of learning in the long-term memory. Outdoor learning can support the acquisition, in T.P.R. of numerous lexical areas and communicative structures, both in logistical terms and thanks to rich environmental context.

WORKSHOP TEACHING (in which nature is the workshop): a shared learning experience, in which each student works with others, using different working methods, to find the solution to a real problem. The outdoor environment offers a great many possibilities to use one's knowledge to recreate, solve, compose and experiment in an authentic context.

STORYTELLING: the art of turning the page. At school, it is intended as the ability to tell stories or talk about experiences or messages, according to a narrative structure, taking care to understand the goal and the target. The outdoor space is easy to transform into Digital Storytelling, as it offers plenty of situations to talk about and scenes of natural life, which lend themselves both to creative storytelling and to the summary of experiences lived through, thereby also triggering processes of deep metacognitive review.

EDUCATION IN S.T.E.A.M.: science, technology, engineering, art and mathematics, S.T.E.A.M. Education combines different areas of teaching, approaching them in a concrete way and linked to real situations and problems, bringing together, as in life, areas that are often separate subjects at school. Starting from the anthropic and natural world, when outdoors it is easier to reason about mathematics and physics and link science and technology, simply by looking at what is

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happening and applying theoretical knowledge to tangible situations, to understand how the subjects come to pass in our surroundings.

TINKERING: innovative approach to S.T.E.A.M. education, facilitating a form of learning based on learning by doing, promoting problem-solving skills. It leads to imagining, planning and building objects and cognitive objects, starting from recycled materials, breaking down and rebuilding imaginary machines that fire up creativity and critical thinking. Based on Constructionist Pedagogy, in an outdoor situation, it allows you to start from real situations, use natural or recycled elements to experiment with how the world works and verify the evidence of what regulates it, explaining the physical laws with clarity and simplicity.

PROBLEM-SOLVING: a method that supports the development of a mindset trained to solve problems, implemented through 5 main phases: *Understanding* the problem, *Predicting* possible solutions, tools and resolution times, *Planning* the resolution process based on the data and knowledge possessed, *Monitoring* what happens during the resolution process to make changes and modifications, *Evaluating* the process and the result, reasoning about possible alternatives for improvement. In Outdoor learning, there are numerous possibilities for developing Problem-Solving activities and reasoning about physical and mathematical laws, starting from situations in nature or from the materials present.

GAME BASED LEARNING: G.B.L. (not to be confused with Gamification or playful activities) is not a true method, but game-based teaching. In Game Based Learning activities, learning comes directly from the game itself. G.B.L. has a simple structure, with declared rules, a limited duration and challenging and fun single activities that can be linked to all subjects and a winner (whether individual or group). Outdoors, it mainly takes the form of a physical team game and brings together cooperation and competition, in balance.

COOPERATIVE LEARNING: it is the father of all active methods and allows small regulated teams to use a variety of learning activities

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to improve the understanding of a problem, increase skills and achieve a common goal. C.L. - its 5 basics: *positive interdependence, individual and group responsibility, mutual face-to-face interaction, appropriate use of social skills and metacognitive review, it facilitates the achievement of academic and educational goals in an active way and through the group.* Based on the Constructivist Theory, outdoor learning allows you to easily implement various informal cooperative techniques, useful for acquiring knowledge, skills and competences.

PROJECT BASED LEARNING: it is the ultimate method that most allows the development of academic and across-the-board skills, using reality and its problems as the background where the action for all the work takes place. Based on the group, it links the various disciplines leading to their contextualisation in real situations, thus giving meaning and concrete application to theoretical knowledge. Its basics: *a connection to the real world, focus on learning, structured collaboration, student-led, multidimensional assessment throughout the project*, it makes it possible to work with the youngsters in an interdisciplinary way, integrating the outdoors in situated contexts, in the various phases of the learning process.

SERVICE LEARNING: not a method, but a pedagogical approach that combines the *Service* to the community or to specific targets among citizens, and *Learning*, as the learning of knowledge and the acquisition of lasting academic and across-the-board skills and competences. Like P.B.L., it is student-centred, initiated by and in real contexts, and is interdisciplinary with a close relationship to school curricula. Often associated with the P.B.L. method, it channels the actions of students towards improving social aspects through actions of solidarity, campaigns, volunteer work and crowdfunding. Throughout the project, it encompasses reality and the people who are active within it, taking the school beyond its walls to work with and for the community.

Other methods can be integrated outdoors, such as Enquiry Based Learning and Challenge Based Learning, or activities, both

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experiential and otherwise, that fall outside a precise methodological context, but that must still be well structured by teachers before being integrated into an outdoor teaching path.

In conclusion, outdoor learning does not include frontal lessons, but involves the person as a whole, in the cognitive, physical, emotional, relational, recreational spheres, thus supporting holistic development.

Annotations

11. Outdoor and digital teaching

These words seem to be in contrast with each other, but they are not.

The digital element can be directly integrated outdoors, or later on in the classroom, after the outdoor lesson, in order to document and/or delve deeper into what was learned outdoors.

The digital dimension is essential to teaching in today's schools, both small and large ones. It can and must be integrated into subjects as a normal tool for enhancing learning and, also in a physical and experiential environment, like nature or a situated environment, it can find a harmonious and balanced placement, useful in supporting the student's learning.

Not many devices are needed outdoors, but a couple of tablets for taking pictures, maybe with a few adhesive lenses for studying and taking photos of micro-worlds, can certainly be useful.

If you have a connection, you can use several apps, which may be useful for identifying natural elements on site and allowing students to start to delve into their small and large discoveries in nature, but also to create geolocalised routes and for measuring, estimating and recognising.

For example, downloading plant life and wildlife recognition apps on tablets allows you to have precise knowledge of what you are investigating outdoors, which will later be useful, both outdoors and indoors, for starting various types of texts or in-depth studies, always connected to the use of the digital sphere.

Annotations



Recognition of natural elements with a specific app

In Notebook 11.2 *The environment teaches. Outdoor teaching in small schools - worksheets*, practical examples will be provided, showing how the digital element can be directly integrated outdoors and/or during a later phase as a multidimensional in-depth study, as a facilitating element of paths obtained from the outdoor experience and as a tool for deep metacognitive review.

Annotations

12. Work team and educational planning

In a small school, teamwork is essential and becomes even more indispensable in multi-age class situations.

If you decide to incorporate outdoor learning in a systemic way, it is best to come to an agreement with the team and plan at least 2 or 3 weekly outings distributed among the various subjects, so that a teacher goes out, even just once a week, while the students can benefit from a more frequent outdoor experience and assimilate rules and work procedures.

This allows you to avoid disorder, wasting of time and that “wow effect” typical of activities that only happen once in a while, but that overstimulate students for short periods of time, making them difficult to manage.

What takes place outdoors is schooling in every way and sensationalism needs to be avoided. On the contrary, the normal practice must ignite wonder, the state of mind that stimulates the desire to know more, do more, discover and learn with pleasure.

It isn't possible to improvise outdoors, unless you have a consolidated process. When you close the school door behind you, the teacher must have an outline of his/her work, useful materials and possibly the necessary digital tools, but he/she must also be ready to abandon all plans if interesting educational situations or unusual phenomena worth observing should arise, on which learning paths can be built.

In short, you need to start off organised, but be open to what might happen outdoors.

Annotations



The entire teaching team organises and manages outdoor activities

Within the team or the small school itself, it is very important to find, along with the students, a few rules of behaviour that must be clear, shared by all and binding.

Time management is fundamental, as with all active teaching. A timer is certainly useful for respecting the teaching schedule and making students understand the importance of the time to dedicate to the important things required outdoors.

The experiences included in Notebook 11.2 can provide numerous ideas, examples and a possible model for outdoor scheduling.

Annotations



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