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Training for responsibility through Participatory Science: the educational approach of Objectif Sciences International



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A major educational question

As the 2026 high season for the scientific travel programs of the NGO Objectif Sciences International is in full swing, this is an opportunity to acknowledge the incredible work carried out every day by the teams in the field, the result of preparation renewed each year.

And thus to say **THANK YOU** to the entire team, everywhere in the world.

One of the major challenges of contemporary education lies in a simple but demanding question: how can we train people who are capable of taking action without trapping them in guilt, dependence, or heroic illusion?

On the one hand, ecological, social, health, climate, and democratic crises show that collective systems profoundly shape human situations. Individuals do not choose alone the conditions in which they grow up, learn, work, live, or imagine their future.

On the other hand, reducing every difficulty to an external system can also produce powerlessness. If everything is structure, if everything is collective, if everything is elsewhere, where does the ability to act begin? Where does personal responsibility begin? Where does concrete transformation begin?

Since 1992, the educational approach of Objectif Sciences International has been positioned precisely at this point: neither naive individualism nor abstract collectivism. It is based on a demanding articulation between the person, the group, the project, society, and the living world.

From this perspective, responsibility is not a moral weight placed on the shoulders of the child, young person, or adult. It is a skill that is built. It is the ability to position oneself within a system, to understand what exceeds us, to identify what we contribute to, to act where we have leverage, and to cooperate with others to transform what cannot be transformed alone.

[The Educational Charter of Objectif Sciences International](https://vacances-scientifiques.com/Charte-educative-Projet-educatif.html)

[<https://vacances-scientifiques.com/Charte-educative-Projet-educatif.html>] gives this approach a concrete framework:

[participatory research](#), cooperation, quality, ecology, sustainable development, autonomy, empowerment, scientific rigor, non-violent education, respect for the living world, and training through practice.

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An epistemology of responsibility

Responsibility can be understood in several ways.

It can be reduced to fault: "Who is responsible?" then means "Who should be punished?" This conception produces fear, withdrawal, or defensiveness.

It can be diluted into the collective: "It's not me, it's the system." This conception may be fair when it analyzes real power relations, but it becomes insufficient if it prevents each person from recognizing their own share of action.

Finally, it can be understood as a capacity: the capacity to respond, the capacity to discern, the capacity to contribute, the capacity to transform.

It is this third path that best represents [OSI's Educational Charter](#)
[<https://vacances-scientifiques.com/Charte-educative-Projet-educatif.html>].

Responsibility is not separated from knowledge. To be responsible, one must learn to see. To act rightly, one must learn to understand. To transform, one must learn to distinguish what belongs to oneself, what belongs to the group, what belongs to the environment, what belongs to the system, and what requires broader cooperation.

It is an epistemological approach because it concerns the way we construct our relationship with reality.

A participant learns that their impression is not yet data. That their intuition can become a hypothesis. That their hypothesis must be tested. That the result may contradict them. That contradiction is not humiliation, but an opportunity to move forward. That knowledge is not an opinion stronger than others, but a process.

This inner discipline is the foundation of solid responsibility. It avoids the arrogance of the savior, who believes they know for others. It also avoids the passivity of the person who waits for the collective to decide in their place. It teaches one to say: here is what I observe, here is what I understand, here is what I do not yet know, here is what I can test, here is what I can do with others.

Participatory research: learning to act in the real world

Objectif Sciences International has made a structuring choice: to conduct real scientific research projects, carried out by non-scientist participants, enabling research training through research, in the form of stays and trips (holidays, school trips, expeditions, family weekends, etc.).

This means that participants are not merely exposed to scientific content. They are connected to their lived experience, to a living process.

Depending on the stays, ages, levels, and programs, they may take part in naturalist observations, biodiversity monitoring, water sampling, robotics projects, research in paleontology, astronomy, geology, ecology, appropriate technologies, species monitoring, the marine environment, or other fields.

This participation changes everything.

The child or teenager is not simply "kept busy." They contribute. They do not consume an activity. They take part in an investigation. They do not mechanically repeat a lesson. They discover that the world can be questioned methodically.

[Participatory research](#) then becomes a school of responsibility, because it requires taking care of the quality of what one does.

Poorly collected data may lose its value. An undocumented observation may become unusable. A poorly followed protocol may prevent comparison. Poorly stored equipment may hinder the next group. A conclusion reached too quickly may mislead.

Scientific rigor thus becomes educational rigor.

It teaches that our actions have consequences. Not in a guilt-inducing logic, but in a logic of contribution. What I do matters. What I neglect also matters. My precision, my patience, my attention, my intellectual honesty, and my ability to acknowledge an error contribute to the quality of the shared project.

Train more in order to control less

One of the most powerful principles of OSI's Educational Charter is formulated as follows: **train more in order to control less.**

This principle reverses a very widespread logic.

In many educational settings, when fear increases, control increases. There is more supervision. Margins of freedom are reduced. Prohibitions multiply. Mistakes are prevented by preventing initiatives.

OSI proposes another logic: the more participants are trained, the more they can be involved in managing the stay, the project, the group, and the place. Autonomy is not given all at once. It is built, supported, secured, and made possible by a framework.

In the field, this translates into precise pedagogical choices: co-constructed rules of life, daily forums, progressive management of free time, participation in meal organization, room maintenance, cooperative evening activities, presentations by young people, and individual and collective self-assessment.

These gestures may seem ordinary. Yet they are decisive.

Making one's bed, putting away one's equipment, helping clear the table, preparing an outing, checking one's bag,

respecting a natural site, listening to another participant, speaking in a forum, contributing to a presentation: **these are all micro-experiences of responsibility.**

Education for autonomy does not begin with grand speeches. It begins in the repetition of concrete gestures that build confidence in one's own ability to act.

Cooperation as educational infrastructure

Individual responsibility cannot be separated from cooperation.

A person can learn to act alone. But they cannot learn to transform the world sustainably without learning to cooperate.

OSI's Educational Charter places cooperation at the heart of its approach. It situates it within popular education, education for all, and the diversity of languages, cultures, origins, profiles, and abilities.

Cooperation is not merely a pleasant atmosphere. It is educational infrastructure.

It requires tools: forums, brainstorming, co-design of programs, conflict mediation, non-violent education, organization of roles, reviews, and evaluations. It requires a culture: tolerance, a sense of service, mutual aid, listening, complementarity of profiles, and constructive antagonisms. It also requires a purpose: enabling each person to become more capable.

This cooperation is particularly important in Participatory Science.

No field research depends solely on one individual. Observations must be distributed, perspectives crossed, documentation produced, comparisons made, rereading carried out, discussions held, hypotheses confronted, errors integrated, and results shared.

Participants thus discover that the collective is not an abstraction. It is a reality made up of behaviors, decisions, words, silences, efforts, misunderstandings, adjustments, and contributions.

Transforming the collective therefore requires transforming the way each person takes part in it.

Quality: taking care of the project, the group, and oneself

In OSI's Educational Charter, quality is not limited to scientific quality. It concerns the entire experience.

Quality means the rigor of the scientific project. But it also means quality of life, health, food, sleep, free time, the relationship with the group, the capacity for discernment, respect for rhythms, training of supervisors, and annual evaluation of practices.

This point is essential because it links responsibility to care.

Being responsible does not only mean producing more. It does not mean exhausting oneself to prove one's worth. It does not mean sacrificing oneself for a project. It means learning to contribute sustainably.

Care for oneself, the group, and the project are connected.

A participant who is tired, poorly fed, isolated, or stressed does not learn in the same way. A group without clear rules does not cooperate sustainably. A project without methodological quality does not produce reliable knowledge. Ecology without daily attention becomes a disconnected discourse.

OSI therefore articulates responsibility with health, balance, quality of life, and progression. It is embodied responsibility, not abstract responsibility.

Ecology and sustainable development: moving beyond educational anthropocentrism

OSI's Educational Charter explicitly links science to ecology, sustainable development (or even sustainable evolution), peace education, and the rights of nature.

This perspective gives a particular depth to education for responsibility.

It is not simply a matter of learning to "protect nature," as if humans were outside the living world. It is about learning to position oneself differently within the ecosystemic circle.

Humans are not the center of an anthropocentric system. They are stakeholders. Their actions, needs, tools, waste, consumption, knowledge, and ignorance have effects.

OSI stays make this tangible.

Respect for a bivouac site, attention paid to an animal, understanding of a habitat, the value given to each object, the fight against waste, the choice of food that is at once good, ecological, balanced, and suited to the activities: all of this forms a lived ecology.

Environmental education then becomes more than awareness-raising. It becomes a way of perceiving, inhabiting, and acting.

The notion of "Being Nature," present in OSI's pedagogical projects, expresses this ambition: learning to make peace with nature, to recognize the intrinsic value of the non-human, and to integrate points of view other than the human point of view alone into scientific and technical issues.

Not creating saviors: training contributors

A major contemporary challenge is to avoid placing an impossible mission on the shoulders of young people: saving the world.

The intention may seem noble, but it can produce anxiety, guilt, moral fatigue, or a heroic posture. The young person feels either crushed by the scale of the crises or invested with a disproportionate mission.

OSI's approach makes it possible to formulate something else.

It is not about creating saviors. It is about training competent, lucid, and cooperative contributors.

A contributor does not need to solve everything alone. They need to understand where they stand, what they can learn, what they can do, with whom they can act, how they can progress, and how their contribution fits into a broader chain.

This posture is healthier, but it is also more robust.

It teaches that sustainable commitment does not come from the illusion of omnipotence, but from the ability to hold one's place in a shared undertaking.

Not creating dependencies: training for the ability to act

The other educational risk is symmetrical: creating people who expect everything from the framework, the adult, the institution, or the activity.

In this case, the participant remains a consumer. They wait for others to organize for them, decide for them, solve things for them, and provide meaning for them.

OSI's Educational Charter seeks, on the contrary, to gradually move participants from "receiving an activity" to "taking part in an action."

This progression is visible in the formula: leaving behind "providing an activity" in order to move toward "letting do," through "having them do" and "doing with."

It is a pedagogy of transition.

At the beginning, the adult (and, for trips with adult participants, the supervisor) secures, explains, demonstrates, and supports. Then they do things with the participant. Then they have the participant do them. Then they let the participant do more as they become capable. This autonomy remains framed, but it becomes real.

The purpose is clear: to support people toward the capacity to become actors in their own lives.

Summer as a privileged moment of transformation

Summer scientific stays and trips offer a particularly favorable framework for this transformation.

Time is different there. Participants step out of their routines. They discover a place, a group, a rhythm, and a mission. They share meals, observations, efforts, evening activities, successes, and unexpected events. They experience a rare relational and experiential density.

This intensity enables learning that school, family, or weekly activities cannot always offer in the same way.

A child may discover that they are capable of speaking up. A teenager may discover that they enjoy the rigor of a protocol. Another may understand that they have a valuable role in a group. A female participant may feel legitimate in science. A young person may experience surpassing themselves. An adult may rediscover their capacity to learn, to marvel, and to contribute.

These transformations cannot be decreed. They emerge from well-designed situations.

This is the whole purpose of an educational charter: to ensure that the experience is not only enjoyable or spectacular, but truly formative.

An education to help reality progress

Objectif Sciences International upholds a demanding conception of science education.

It does not separate science from everyday life. It does not separate knowledge from responsibility. It does not separate autonomy from cooperation. It does not separate ecology from relational quality. It does not separate the individual project from the collective project.

Training for research through research means training people who are capable of questioning the world with rigor.

Training for cooperation through cooperation means training people who are capable of acting with others.

Training for responsibility through the concrete exercise of responsibilities means training people who are capable of recognizing their share without denying what exceeds them.

This is perhaps one of the most valuable contributions of OSI's scientific stays and trips: showing that holidays for children, teenagers, and adults, as well as school trips, can be spaces of wonder, adventure, and joy, while becoming a true school of autonomy, discernment, cooperation, and commitment.

A more sustainable world will be built neither with isolated saviors nor with dependent spectators.

It will be built with people capable of understanding, acting, cooperating, transforming themselves, and transforming

with others the systems in which they participate.

This is the capacity that Objectif Sciences International's scientific stays cultivate, summer after summer, in the field.