

8. Outdoor activities in different subjects

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Introduction

In all subjects and themes in school, we can identify many clear relationships with the environment around us (arts, history, nature, etc). Every subject in school has the opportunity to offer the students a way to see the contents around them and there are a number of studies that provide evidence of positive outcomes from programmes which involve experiential learning and new or adventurous activities. This is not to suggest that outdoor education is a better form of learning than class-based learning. But rather, it is to suggest that some learning is better suited out-of-doors and that there are good educational reasons for identifying and capitalizing on these opportunities. It's the teacher's mission to identify these opportunities and to make an outdoor programme to give the students the opportunity to learn from the real world instead of learning everything seated at a chair indoors.

That brings us two problems:

1. The cost of time and money that outdoor activities imply.
2. The selection of the correct contents, methods and claims to achieve the pre-established aims.

Both of them can be solved by the teachers. The first one can be solved with team work, making the most of one outdoor activity for different subjects. The second one has to be solved by a reflective professional practice. The teacher has to constantly ask him/herself these three questions:

- why am I doing this activity with these individuals at this time?
- what does theory and experience tell me about the choice of activity and what young people are learning?
- how do I know if I have been successful in achieving my stated aims?

Outdoor education as a link to the real world

‘The important metaphysical assumption of objectivism is that the world is real, it is structured, and that structure can be modelled for the learner. The meaning that is produced by these thought processes is external to the understander, and it is determined by the structure of the real world.’ (Jonassen, 1991: 28). According to this, we can see how the educative system divides this reality into different “boxes” called subjects. These subjects are the way a teacher models the above mentioned structure for his/her students (understanders). While the knowledge gained from these subjects is important in and of itself, it’s essential to connect this knowledge to the real world and the systems it’s made of (physical, biological, chemical, social, economic, mental, linguistic, etc.). Outdoor education allows us to experience in person contents from different subjects in one single activity. For example, one day on St. James’s Way can show us things about history, nature, religion, physical education and geography. And many studies reveal the positive influence that experimental learning has on the learning process.

Educators all over Europe must make themselves familiar with the historical, cultural, geographic, etc. environment which surrounds their educational centers and use them as resources for their programmes. They have to utilize the natural and cultural resources in the urban and rural areas (museums, churches, concerts, beaches, mountains, etc.) in such a way that students are able to have the most outdoor experiences possible in relation with different subjects. That could become a problem because even though we can find a lot of resources outdoors, we don’t have time to work with all of them individually.

The period the young people are involved in an outdoor programme is often brief, so the key aspiration of teachers should be to deliver the most effective programme possible within this period of time. This means that teachers from different subjects have to collaborate in the making of the outdoor programmes, thinking first in what the environment has to offer the students to reach the aims of the subject. There is a clear correlation between activities and places; places can create activities.

Then, teachers have to create one common programme which includes elements from each subject areas. All of this, keeping in mind the common goals for the complete development

of each student (values, attitudes, skills, etc.) aside from the contents of each subject. Maybe these are the most valuable goals of the learning process and the most closely related to traditional outdoor education.

We have to keep in mind that as reality can be divided, intelligences can, too. Gardner shows us eight different types of intelligences. This is further explained in the table below.

Table 1. Gardner’s Eight Intelligences.

Intelligences	Description
Linguistic	An ability to analyze information and create products involving oral and written language such as speeches, books, and memos.
Logical-Mathematical	An ability to develop equations and proofs, make calculations, and solve abstract problems.
Spatial	An ability to recognize and manipulate large-scale and fine-grained spatial images.
Musical	An ability to produce, remember, and make meaning of different patterns of sound.
Naturalist	An ability to identify and distinguish among different types of plants, animals, and weather formations that are found in the natural world.
Bodily-Kinesthetic	An ability to use one’s own body to create products or solve problems.
Interpersonal	An ability to recognize and understand other people’s moods, desires, motivations, and intentions.
Intrapersonal	An ability to recognize and understand his or her own moods, desires, motivations, and intentions.

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All these intelligences have a different nature and have to be stimulated in different ways. The teachers’ duty is to stimulate all of them, keeping in mind the differences between individuals and their stage of development. Therefore, we can conclude that in order to develop these intelligences it is necessary that the stimuluses be varied and appropriated for the group of students. As we can see, each intelligence has a clear relationship with a subject in particular, outdoor activities allow us to introduce different contents from different subjects therefore we’ll can offer to the pupils this variety of stimuluses we were talking about.

The following poem reminds us of the connection between the individual abilities (intelligences) of each small part of our body and how each of these form part of a whole (body or intelligence).

We need the whole body

Eyes can see, ears they hear

but hands know best how it is to touch.

Your skin knows best when somebody is close.

You need your whole body to learn.

The brain can think and maybe understand,

but your legs know best how it is to walk.

Your back will know how it feels to carry.

You need your whole body to learn.

If we are to learn the basics about our planet Earth,

then it is not enough with words.

We must be able to get in close,

you need the whole body to learn.

(Unknown author)

We can relate the whole body with the world or reality and the different parts of the body with the different intelligences. Each intelligence has a nature of its own, you can stimulate each one through different experiences. You can't stimulate bodily-kinesthetic intelligence with words as you can't stimulate linguistic intelligence by solving physical problems.

Different agents in education programmes. Methodology

In the following paragraphs we are going to talk about the relationships between the experience, the student and the teacher and how we can organize them for the best possible for outdoor education. A great number of studies connect outdoor education with experimental learning and constructivist pedagogy and report clear benefits for the learning process using these methodologies. In outdoor education the student can learn directly about the relationship of knowledge to the physical reality of the place where the learning process is happening.

We can distinguish 3 different ways in which the students connect with the experience and the role of the teacher during this process.

1. The student connects directly with the experience and builds his/her own learning according to his/her skills and interests. The teacher doesn't participate in the process therefore making the student the only person responsible for his/her own learning. What is missing from this model is for the pupil to be able to distinguish between something educative and something "mis-educative" (Dewey, 1963). If there's no reflection on the practice there's no education. The role of the teacher controlling and guiding the process seems to be necessary to reach the pre-established aims.

2. The teacher is an intermediary (filter) between the experience and the student. Each person has their own concept of reality. In this model the experience first passes through the lens of the teacher changing it before it arrives to the students. Therefore the experience would be different, it can be only focused on one area or it can be focused on too many areas at once. This is the common practice in traditional classrooms and, if something is representative of outdoor education, it facilitates direct contact between the real world (experiences) and the pupils.

3. The teacher and the pupils have a direct and individual relationship with a common experience. The learning that each one receives is different and determined by their own knowledge and previous experiences, but the key to this model is that all participants share and compare their own views after the experience therefore creating a greater knowledge about it. It's assumed that the teacher has had a greater range of experiences making him or her the guide of the students' learning process. At the same time, both the teacher and students can learn new concepts from the students' reflections.

We can conclude that for outdoor learning the following is essential:

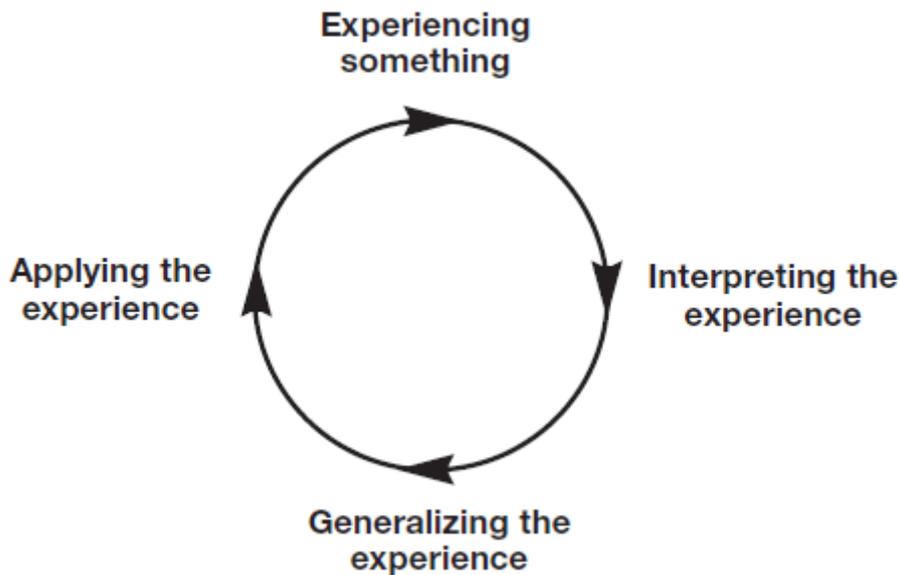
- a) A direct relationship between the information (experience) and the student. The teacher becomes a guide instead of the intermediary he/she is in the classroom.
- b) A feedback session between the students and the teacher after the experience is completely necessary.

Keeping these two ideas in mind, it's inevitable to think about **experimental learning and constructivist pedagogy**. Both theories are closely linked with these two concepts even though the individual focus of each one is slightly different.

Experimental learning focuses on the direct relationship discussed in point “a” with expressions like “*learning by doing*” or “*hands-on learning*”. There's another famous sentence that says “*I hear and I forget; I see and I remember; I do and I understand*”. We're not totally agree with this sentence, hearing and sight are ways to perceive the world, it isn't true that if you hear you'll forget. We think that the interpretation of the sentence alludes to the necessity to use all the senses to really understand something, like the poem above told us, you need the whole body to learn. Learning is a complex process with different stimuluses and different intelligences. The student have to make connections between stimuluses and thoughts to really understand something, and doing give us the evidence if we have learn something or not.

The experimental learning process can be explained by Kolb's famous cycle, there are four different phases:

Kolb Cycle of Experimental Learning



First, the experience happens, but the learning doesn't happen as the automatic result of the participation in the activity, it's necessary to give it meaning. The second step is the interpretation of the experience, this is where the role of the teacher comes into play. His/her mission is to facilitate this understanding in relation to the educative objectives because the students often need this help. Then, to generalize the experience, it'll be necessary to connect it to the social world around the students. This point also usually requires the teacher's help. Finally, to complete the learning cycle, it's essential that the student applies his/her new thought to future decision making. Now the student has more information than before the experience.

According to Ernesto Yturralde "In school we learn the lesson and then we are subjected to the test; in real life, first we are subjected to the test and then, only if we pay attention, we learn the lesson". Here, the teacher is not in the equation, but he's the one who helps the pupils pay attention to what is important and what is not to interpret and to generalize the experience. It's not only about the skill acquisition inherent to the activity (experimental training), it's about utilizing the activities as tools to develop personal and social skills (experimental learning).

Direct experience with the reality and the role of the learner as the responsible of his/her own learning process also are concepts related with the constructivist pedagogy. “According to the constructivist view, the individual himself construes and adds to this knowledge by frequent visits to the real world” (Dahlgren and Szczepanski, 1998: 20).

The reflection and learning of these visits to the real world are necessary too. A new concept of constructivist, pedagogical thought, seen from three different perspectives (Reich 1996: 118) may be taken as a basis for constructivist teaching:

- **Construction** We invent our own reality. In communicating, we exchange our different ways of seeing things. Each way of seeing things is a construction. Our main aim is not, however, to convince others of the validity of our way of seeing things. What matters is each person's own reality, which they themselves construct.
- **Reconstruction** We discover our own reality. ‘Reconstruction’ means constructing our reality with reference to already formed constructions. Our already formed constructions are ‘re-discovered’.
- **Deconstruction** We destroy our reality. ‘Deconstruction’ means questioning our constructions and forming new constructions.

In both theories, learning is understood as something constant during the whole life, knowledge is something adaptable. Direct experiences and the reflection about them are the basis for the construction of knowledge. With these methodologies it seems that the importance lies in teaching the students how to learn instead of teaching them something concrete. Values and attitudes (hard work, consistency, etc.) will be the goals of the program, contents will be the tools to work with. Acquisition of personal and social skills will be more valuable and more long-lasting for the future life of the students. “In all education it is therefore important to look for the effects, and their durability over time” (Bagner, 1998).

Traditionally, outdoor education has been a tool for education of values in a natural environment more than a transmission of theoretical contents. There are many companies looking for outdoor programmes for their workers. These programmes try to promote personal and social skills (team work, leadership, etc.). It's suppose that school prepares us

for the future life and gives us tools for the lifework, but this show us that there's still a big work to do with outdoor education in the school.

As a conclusion of all of this, we will try to transmit what has to be the role of everyone involved in the teaching-learning process for a successful outdoor programme.

The role of the teachers must be totally different before the experience (design of the programme) and during the experience (guide the learning process).

Before the experience **teachers** from the different have to find places where pupils can experience things (subject contents) directly and make concrete associations with the subject contents and with his/her view of the reality. Teachers have to find their contents in the outdoor environment. They have to coordinate them with the contents from another subject with the purpose of transmit the contents and reach the goals efficiently. They also have to try to give the students variated stimuluses in order to develop the different intelligences of the section above. Keeping on with the outdoor activity on St. James's Way; history, religión, physical education, geography and natural sciences have to know what can the students learn from the Way and they have to make a programme to offer the pupils the possibility of experience them at first person (churches, bridges, houses, the story of the Way, how to organize the material for a long walk, first aids, flora and fauna from the enviroment, etc.). They also have to create activities that make the pupils interact with the environment in order to construct new learnings.

During the experience the teacher who is in charge has to guide the students through the learning process to make the experience educational and to reach the pre-established goals of the programme.

Learning out-of-doors is an important motivation factor. In this setting **students** learn directly about the relationship of knowledge to the physical reality of that place. This is achieved through environmental, social, and cultural dimensions whereby that which is known has a past, present and future. Through these means students learn about the key importance of relationships and respect for the learning and teaching process.

Besides, the pupil has to change his/her role of information receiver and he/she has to have a critical and reflective view about the experiences in order to construct his/her own view of the reality. This way, his/her attitude during the process changes totally and he/she has more

responsibility, something necessary for every adult life. We have to say that there are a lot of information sources through information arrives to the students (school, internet, television, family, friends, etc.), if the students don't have the necessary tools to interpret the information and relate it with their own vision of reality, they'll be missing a lot of opportunities.

Besides, the reflection between all the students and the teacher after the experience creates an opportunity to improve the communicative skills and to know different points of view. This can be useful to improve the understanding of the experience. As a result of this experiential process, participants should take increased responsibility for their own learning, and consequently develop increased confidence in their own judgement and ability to direct their lives.

Outdoor activities at museums or theatres, for example, are experiences for a short period of time. Students can appreciate directly the stimuluses, but usually there's no time to do activities implying the active participation of the students, much less for a feedback session about the experience. The quality of the activity can be missed if the teachers don't use them with an educational purpose. It's complicated, but teachers should take advantage of the outdoors and propose activities attractive for the students before, during or after these outing. The surrounding area of the museum or the theatre can help, but teachers don't have to get obsessed about it, they have to look for the most quality experience and sometimes return to classroom can be the best option. Anyway, what is important is to don't let the outdoor activity get cold before its analysis, teachers have to take advantage of it even through an indoor activity.

Another outdoor activities in a natural or cultural environment allow for a more interactive experiences. Playing in the historic center of a town, in a natural environment can help the teachers to transmit contents from different subjects and the participation of the students will be more active than in an indoor activity. Besides, the students can look for the information as part of the game in order to learn more than facts and information, we can't forget personal and social skills present in every subject. At the end of the game will be necessary the feedback session to interpret the information acquired and giving it meaning.

Both outdoor activities are different but have the same problem, school schedule use to be strict and taking advantage of the outdoor experience needs its time. We can't lose time with every outdoor activity during the school years, teachers have to keep in mind a single word, QUALITY. They have to use the most suitable activities to design the outdoor programme and reach the goals (giving students tools for their own learning process).

Outdoor activities and residential education

As a way to solve the problem of time we can introduce outdoor activities in a residential setting. In our society it's easy to recognize outdoor activities in a residential setting like summer camps. There are studies that reveals the educational influence of residential settings, and the goals of this education are closed with the outdoor education (self-esteem, self-awareness and interpersonal relationships).

Research evidence, *Sail Training* (McCulloch, 2002), suggests that the optimum minimum time for residential is four days though longer is generally better. Less than that doesn't allow the relationships between students and teachers to be established and a shared understanding of the experience. Everybody is in a new environment (natural and social) which provides people the opportunity to know best themselves as an individual and as part of a group far from their usual setting (family). More than four days seems to be better but the changes are more subtle and probably less significant. During these days students will have to participate in adventure activities, they'll have to solve problems, to interact with the natural environment, etc. Different from summer camps (recreation), all these activities have to be coordinated with educative aims and the participation of the teachers is necessary, at least in the design of the programme. But it would be much better if they're present during the programme to control the process and to guide the students to reach new learnings. It could be required the participation of another professionals, for example in adventure activities, but the control of the teacher is better than the control of professionals external to the design of the programme.

It can look like 4 days increases the problem of time, but we can select the period during the school schedule or out of it (holidays, weekend and two class days, etc.). Besides, there's no need to do this more than once during the whole educational period, this way we can avoid

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the economic problem because this experience will suppose costs. We have to remember one of the three questions above “why am I doing this activity with these individuals at this time?”; to be more efficient it looks like the final year of secondary school as the optimum moment to introduce this experience to the pupils. The most important thing is that this programme can be much more effective than 4 quality outdoor activities.

Conclusions