

REFERENCES

outdoor education

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Introduction

In this document you will find some important references that underlie outdoor education.

First, you can read more about outdoor education in general. You will also find some important people who speak out about outdoor education.

Last you will find the consulted sources.

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1. Outdoor education

1.1 Outdoor education: a general view

Outdoor education literally means 'teaching and learning in the outdoors'. It is also called 'organised outdoor learning'. It's about **active learning**. You learn through your own **experiences**. It can be about learning in nature or just learning about nature.

When you teach outside, the students have to be outside for the most part and the activities have to promote **the connection with nature**. Nature can also be a tool to achieve goals.

You can look at **example countries** like Sweden, Scotland and Norway that invest a lot of time in outdoor education, without compromising learning outcomes.

1.2 Advantages of outdoor education

Outdoor education is a topical subject around which various **studies** are organised. Different benefits can be achieved each time. All these benefits are closely linked to each other. From one advantage a new one can emerge. For example, Marchant, E., Todd, C. & Brophy, S. carry out research for 'the conversation UK'.¹ There are many other studies that are described on sites. These can be found in the literature list.²

Pupils who are taught outdoors, feel **connected to nature**. They feel more **responsible** for nature and deal with it much more independently.

The brain is responsible for the daily information processing that people undergo. The new information that is learned outside is **stored in a better way**. As a result, pupils will remember the information better.

In the classes the context is always the same: the same light, the same temperature, the same arrangement and the same lessons. This space can therefore not offer much to the students. Moving outdoors opens up a world of new and **unfamiliar stimuli**. The new things they learn here then linger better and children will remember them faster, easier and also for a longer period of time.

Children have a **natural urge to move**. They learn best in an active way. By going outside, they work in an active way with concrete material. This stimulates their learning. Because of the natural urge to move, the children were made to work outside. They are intrinsically **motivated** and this results in a great learning gain.

¹ Marchant, E., Todd, C., & Brophy, S. (2019, 4 juni). Outdoor learning has huge benefits for children and teachers — so why isn't it used in more schools?: *the conversation*. Geraadpleegd op 27 februari 2020 via <http://theconversation.com/outdoor-learning-has-huge-benefits-for-children-and-teachers-so-why-isnt-it-used-in-more-schools-118067>

² Bachelors degree online. (2012). *11 Proven Benefits of Outdoor Learning*. Geraadpleegd op 27 februari 2020 via <https://www.bachelorsdegreeonline.com/blog/2012/11-proven-benefits-of-outdoor-learning/>

Children are inundated with thoughts, tasks, information, ... They suffer from a lot of **stress** at an early age. By going outside, this stress is clearly reduced. Nature brings the children to rest. They will have fewer fears.

There is now a '**seating society**'. Children sit on a chair almost all day long. By going outside and moving around, children go through life healthier. They will have less chance of 'child obesity'.

Outside, the children have to **work together**. They work in groups and also learn to get along better with each other. They can update their **social skills**. They also learn how to deal better with animals. They take care of each other and nature. They work as a team and can solve problems together.

Not only do they start to behave better outside, but their **good behaviour** in other contexts is also visibly increasing.

The children feel **free** outside the classroom walls. They have a nice feeling and feel more able to be themselves and express themselves. *(research 'The conversation')*

Children who often spend their time outdoors are better able to assess risks. They learn to **cope better with different situations**. They also quickly learn the rules outside through repetition and this is no longer an organizational problem. *(research 'The conversation')*

Teachers themselves experience their teaching style as better when teaching outside. Furthermore, their relationship with the students improves.

1.3 Disadvantages of outdoor education

Organising a lesson within the four class walls means a lot less work than teaching outside. This is a stumbling block for several teachers. They also want to be able to write, fill in workbooks, show videos, ... These things are a bit more difficult outside.

Not every school has an available space for this at or around the school. Using nature becomes very difficult when there is no green anywhere.

Parents and teachers are worried about the safety of their children. What if they fall? There are concerns about crime in our country and also the traffic that is everywhere. There are worries very quickly.

Not everyone likes standing in the rain the other day. The weather is a big stumbling block for several teachers.



2. Important references

2.1 Mark Mieras³

“Het lichaam is heel wat meer dan een voertuig om de hersenen in het klaslokaal te brengen.” (M. Mieras, 2015)

Mark Mieras is a researcher who is fascinated by the **brain**. He investigates it to see what makes people who they are. He also wrote some core insights of outdoor learning.

Outdoor learning is valuable. Here are some reasons why:

- There is more **oxygen** present, which allows students to think better and improves their learning performance.
- Children have a lack of movements. This also inhibits their cognitive development. **More exercise** at school helps. Pupils lose weight and get higher grades.
- Firm physical exertion stimulates the **production of growth factors** and improves attention.
- **Self-regulation** improves by moving and they behave better and more task-oriented in the classroom. It is especially about moving when playing agility games (e.g.: hopscotch). These stimulate the **executive functions of the brain**.
- **Language development** and play are closely related, as are playful movements and spatial insight. Children who physically imagine actions better record them. Children who make gestures in arithmetic and language also record the sums, words better.
- **Free play** is super important. Children learn better when they can regularly spread their attention or pause. **Breaks** have a low cognitive load and complement intensive learning.
- Physically unstructured play is often seen as **risky**. Eliminating the risk factors can lead to more risks. They need to learn to deal with risks and avoid them. Risky play goes hand in hand with social health.
- By playing outside, pupils can make their **own choices**, which helps for intrinsic motivation.
- It works especially well when the pupils have already acquired knowledge in the classroom. **Knowledge** is the basis and this allows the pupils to focus correctly.
- The **environment** is also very important. A green schoolyard and a natural environment invite pupils to be more offside. They really start to play exploratively and discover. They show a great variety in playing behaviour. Thanks to the right environment, pupils will have considerably more focused attention and their working memory will work more steadily.

³ Mieras, M. (2015). Buitentijd = leertijd. Op *mieras.nl* [Website]. Geraadpleegd op 3 maart via <https://www.mieras.nl/schrijven/buitentijd-leertijd/>

2.2 Phases of Cornell – ‘flow learning’⁴

An interesting learning method to use in outdoor education is 'Flow learning'. This was developed by Joseph Cornell. The method aims to provide a more intense experience of nature.

It makes you think about things you wouldn't have thought about otherwise.

The **first phase** of Cornell is to stimulate enthusiasm.

It's best to start an outdoor activity by making children enthusiastic. The children should have fun. You are going to prepare them for learning.

Then you have **phase 2**. Here you concentrate the attention. Here you let the students focus on their senses. Concentration is an important part of an outdoor activity.

It concerns simple attention game forms in which you isolate one of the senses so that you can focus on it.

Then you have **phase 3** where it's all about experiencing directly. It's about experiencing nature more intensely.

This phase resembles phase 2, but here the child is more directly involved in nature. This is where one or more senses are used in the activities. People will feel more connected to nature and they will understand it better.

Then you have **phase 4** in which you will share your inspiration. You're going to create a deeper consciousness.

You let the students tell about their experiences, they share everything with each other.

They reflect together on what they have learned.

⁴ Cornell, J. (2013). *Sharing Nature: spelvormen voor natuurbewustzijn*. (A. Beyen, vertaler). Nederland: A3boeken (Origineel werk gepubliceerd in 2013).

2.3 Juliet Robertson⁵



“Learning outside is messy, but children don't learn in a nice order, they learn messy.” (J. Robertson, 2019)

Juliet Robertson is an educational advisor from Scotland and supports schools to approve their outdoor education program. She wrote a book on this subject, “Dirty teaching”. She also started thinking specifically about mathematics in nature. She wrote a book about this: “Messy maths”. In her books she mentions several possible activities with pictures.

She now writes research, studies, ... about outdoor education and she also has her own blog about it at 'I'm a dirty teacher, get with OUTSIDE here'. She gives training to schools to help them with outdoor education and she is very much coveted on an international level.

“Performing is not learning, when they do something, they don't necessarily know it.” (J. Robertson, 2019)

You have to start each time from where the children are standing and to where they have to go and get.

She wrote about the **5 'R's**. She built this model to show how everyone can create the conditions to go everywhere. Many teachers say they don't have a good space outside. This model wants to prove otherwise. The elements that needed to be mentioned are:

First you have **routines**. You have to organize a fixed framework for children to work in. This way they always have something to hold on to. This can also be done outside the classroom and does not have to be about writing your name above your sheet.

'You can also make sheets for outdoors with first this then that ...

Every time you go out you can sing a song. This song has a certain length of time and that can work as a routine as well.'

Then you have **resources**. What sources and materials do you need and where are you going to find them? How are children going to be able to reach them easily.

Always try to use what's around you. (sticks, stones, ...)

'Pupils can discover, find and design materials themselves.'

Next there is **responsibilities of adults**. It's the adult's job to teach children new sights. You're obligated. Every moment is a learning moment. Anything you say can be a lesson for children.

"When you gather the children outside and start counting to see if they're all there, you make them count."

Further you have **rights of a child**. Every child has the right to learn. This is the underlying message.

Last, you have **reimagining the outdoor space**. Making people look at their place outside again. They have to look at it again according to their 'lesson'. That's how they see new opportunities.

'For example, in a lesson on geometry, you could see how geometric your playground actually is.'

⁵ Professional learning International. (2018). *Outdoor learning: Maths in the early years – Juliet Robertson*. Geraadpleegd op 4 maart 2020 via <https://www.professionallearninginternational.com/outdoor-maths-juliet-robertson/>

2.4 Jan Van Boeckel ⁶ en Richard Louv

Jan Van Boeckel is a researcher who wrote a review of the book 'The last child in the forest' by Richard Louv. He mentions some important points that are mentioned below.

Fewer and fewer children go outside. Parents find nature **too dangerous**. Not only parents support this principle. Schools also go less outside with the pupils. Parents and schools opt that this is due to the lack of time they have to deal with.

Green spaces are also increasingly difficult to find because of the urbanisation that is taking place.

All these things contribute to the **natural deficiency syndrome**. From the lack of contact with nature various phenomena continue to flow. In short, it contributes to ADHD, obesity, lack of creativity, lack of curiosity, lack of knowledge of local flora and fauna and lack of respect for nature.

The syndrome can be **combated**. Children have to go outside again. They have to gain new nature experiences. They can only grow out of this as children.

“Nevertheless, the desire to go into nature is in our genes. It's in us, it's part of us.” (R. Louv, 2007)

Wondering about nature is one of the most important things. We see this amazement less and less.

Indeed, contact with nature is an essential part of children's **healthy development**. It provides a lot of creativity and much less stress.

There are a lot of dangers going outside and parents immediately see those risks as well. As a counterpart, don't forget the **dangers of staying inside**.

⁶ Van Boeckel, J. (2011). *Huisarrest voor kinderen*. Geraadpleegd op 24 maart 2020 via https://www.hetlaatstekindinhetbos.nl/boek_recencies.html

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