

—— Academic performance is improved
with outdoor education ——



Utenavet

**Swedish Network for the
Promotion of Outdoor Education**



Nobody would question the importance of knowledgeable and dedicated teachers for students' learning. Recent research shows that the place that the teachers choose for their pedagogical activities is also important for improving school achievements among compulsory school students. Utenavet has reviewed research from all over the world.

The research review "Teaching with the Sky as a Ceiling" demonstrates that students perform better if outdoor teaching is part of the education.

There is sufficient scientific evidence for recommending outdoor-based teaching to be implemented at all levels of the educational system so as to contribute to improved goal achievement and higher grades.

Effects of outdoor teaching

Believing that outdoor teaching is useful is not enough, you also need to know why. Now it is easier for teachers and other professionals to argue for the benefits of outdoor education, based on scientific evidence.

The review is based on results and conclusions from scientific and systematic overviews from all over the world that illustrate how academic performance – primarily among students in compulsory school – is affected by outdoor teaching, regular physical activities and contact with nature.

Scientific support for improved goal achievement and public health

Outdoor education with regular physical activity and contact with nature have positive and meaningful effects, both directly and indirectly, on learning, academic performance, health and wellbeing, as well as on students' personal and social development. From a public health and school perspective, this is most relevant because of the contribution to better goal achievement in the compulsory school, preschool and leisure-time centre. The conditions are, however, that competence-raising methods in outdoor-teaching didactics are implemented on a large scale and that they are long-term endeavours.



Long-lasting and more extensive educational efforts are more effective, physically, socially as well as cognitively, than shorter ad-hoc educational initiatives.

Strong evidence for factors that influence school performance

Regular physical activity with extended mobility and contact with nature during the school day has overall positive effects on learning ability and academic performance. Elements of outdoor teaching promote concentration ability and improve working memory, compared to classroom teaching, mostly indoors, using more or less traditional teaching methods. There is, for example, strong scientific evidence, that outdoor teaching contributes to increased study motivation, better self-confidence, self-control and impulse control, creativity, ability to collaborate, and intentions for a healthier lifestyle (physical exercise and eating habits).

Regular physical activity and contact with nature during the school day and in teaching indirectly contribute to improved academic performance.

More time in teaching theoretical subjects does not lead to better results

Increased physical activities during the school day, for example more Physical Education (PE) lessons, do not have negative influence on the results in theoretical subjects. On the contrary, most of the research indicates that more physical activities during the school day seem to have positive effects on students' achievements in theoretical subjects, among students in compulsory school, even if more research is needed in order to draw extensive conclusions. An increased amount of teaching hours in theoretical subjects, at the expense of, for example, Physical Education, does not have any positive effects on the results in theoretical subjects.

More classroom teaching in theoretical subjects may even increase the risk of physical and mental ill health among students.

More research about long-term effects

The review helps us to draw important conclusions but contains certain knowledge gaps. As a large part of the research material consists of short-term evaluations, it is difficult to draw far-reaching conclusions regarding the use of outdoor activities in teaching and how they can contribute to a purposeful school development that will positively influence academic achievements in the long run.

More research is needed, especially more longitudinal studies based on a school and teaching context.



Conclusions and suggestions

The review demonstrates The review demonstrates, that the scientific evidence is strong enough for decision-makers, education authorities, school leaders and universities to consider taking measures in order to stimulate teachers to use the outdoor environment as a learning space and a teaching resource throughout the whole educational system.

UTENA VET BELIEVES that the goal achievement in school and preschool may increase by:

- **systematically implementing** outdoor-based education at all levels of the educational system. This would contribute to better goal achievements, improve academic performance and promote healthy living habits among children and youth in the compulsory school. Teachers should be provided with training in the theory and practice of outdoor teaching.
- **ensuring that the country's teacher training programmes** coordinate and create a national programme to secure the possibilities of relevant university education in outdoor teaching. This as a way to prepare the teachers for the learning environments that they will work in the future. The planning of such a programme could also be tied to a national competence centre for outdoor-based learning.



Different stakeholder groups can together with the teaching profession make use of the conclusions of this research review. Thus, the foundation can be made to create and maintain outdoor environments suitable for play, learning and wellbeing, learning environments to be used during the whole school day, alternated with indoor activities.

UTENAVET BELIEVES that suitable steps towards this direction are:

- **to create national competence centres** for planners, landscape architects, building engineers, garden constructors, property owners, public health planners, etc., who are planning, creating and administering appropriate outdoor environments for children and youth in the schoolyard or in the surrounding areas.

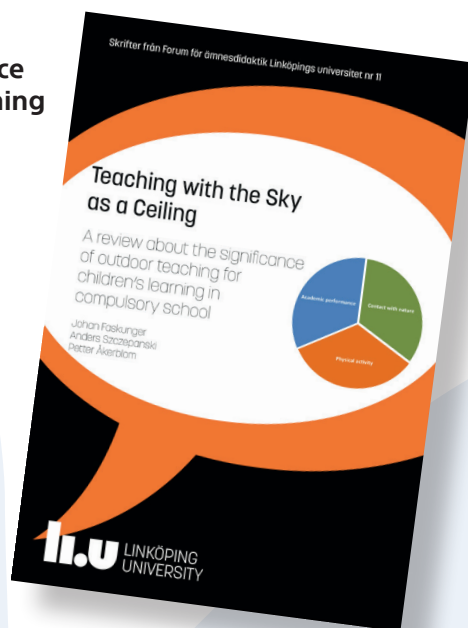
**Teaching with the sky as a ceiling.
A scientific review about the significance
of outdoor teaching for children's learning
in compulsory school.**

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This research review has been produced at the request of Utenavet – the National Network for Promoting Outdoor-based Learning in Sweden. Utenavet distributes knowledge and inspiration about outdoor education and nature guidance and works for an introduction of outdoor education into the Swedish educational system on all levels.

Utenavet communicates good examples of outdoor space based education, and one of its major intentions is to demonstrate how experiences in nature and cultural heritage can contribute to the achievement of curricular goals.

In addition, Utenavet regularly arranges conferences for teachers, pedagogues, city and public health planners in Sweden and the Nordic countries.

Utenavet includes Forum for Outdoor Education at Linköping University; Swedish Outdoor Association; Federation of Swedish Farmers (LRF); Nature School Association; Forest in School national cooperation program; Swedish Local Heritage Federation; Movium Think Tank; and Swedish Centre for Nature Interpretation (SCNI) at the Swedish University of Agricultural Sciences (SLU).

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