

FINAL REPORTING

All projects funded by STERF must submit a final report. These final reports are published on the STERF website and are used as a basis for dissemination of results. Final reporting must include a final report on the project, a popular science report and a project appraisal.

Writing a final report

Final report

Final report must be at most 15 pages long and 3 megabytes in file size. A document can be written in Times New Roman (font size 12) with single row spacing and have 2.5 cm upper, lower, left and right margins.

The following headings must be included in the final report:

- **Project title**

Go outdoors and use the Golf area in a pedagogical way –
Creativity, Learning and Health in the unlimited classroom

- **Authors of the report**

Anders Szczepanski, Dr. (Ph. Lic), ass prof Outdoor Education, Spetsa Company at Linköping University.

- **Conclusions on benefits and advice for the golf and turfgrass sector**

The analysis of the respondents, ways of experiences related to multifunctional pedagogical land use on a golf arena, shows in my concluding compilation of the answers, which is based on open questions. The teachers point out that it takes a certain time to discover the teaching and learning opportunities offered by the outdoor environment, as a reinforcement of the text-based learning compared to and practice in a more "traditional teacher-controlled" classroom teaching as it is expressed in several ways of their experience.

Most of the teachers in this pilot study perceive that the teachers themselves have become more secure and safe in their management of managing the pupils outdoors, there also arises outdoors as a more "free and problem-solving atmosphere that takes place in an interaction with the students" in comparison with the classroom situation. The outdoor environment also turn out to be "interwoven into a more movable learning process " if comparing the classroom's more sedentary learning environment, which appears in the majority of the

answers. "Thematically organized education" is also stated as a prominent argument for outdoor education but also the importance of learning to interact between both the outdoor- and indoor environment in teaching and learning. The teachers perceive an "opener climate" outdoors among the pupils and that they develop "a deeper understanding and contact with the pupils" and "that learning is enhanced when the body is activated and put into motion". "In the classroom it becomes very much to sit in the desk and perform a task". In the outdoor environment most teachers perceive the importance of utilizing the local environment to "concretise and create increased understanding of theoretical concepts". Several teachers emphasize the importance of being outdoors to "create safety and well-being" in the student group. Some teachers say that in teaching new arrivals, there is often a large "obstacle of fear" for everything that moves, crawls, jumps and curls in the green natural environment. But if a teacher is sustained, they get 100-fold back in the "outdoor environment when the students has become socialized" and accept the outdoor learning environment. A task is also to explain the importance of moving out the teaching and learning from the classroom for their parents. The same problem also exist among many Swedish children and their parents, is not just a phenomenon of new arrivals. Sometimes the outdoor environment is perceived in the same way among Swedish children of today.

Higher academical performance in school subjects, are supported both direct and indirect connected to more movable learning environments, physical activity and contact with nature, confirmed in the latest research overview from Linköping University published (2018): *Teaching with the Sky as a Ceiling – A review about the significance of outdoor teaching for children's learning in compulsory school*, by Johan Faskunger and Anders Szczepanski. My advice to the Golf- sector concerning *pedagogical land use*, is a great advantages with versatile use of the open golf environment as an educational resource and arena for teaching and learning to combine a high level of biological diversity with a high level of pedagogical diversity.

Many golf facilities can provide green unused surfaces and aquatic environments close to the cities in all seasons useful for school activities. This is important to point out in the increasingly densified learning environments that our cities offer today, with reduced green areas, nature and urban forests. This educational concept and pilot project can easily be applied both in a Scandinavian and European context, but also in a broader international perspective regarding *pedagogical land use* where the Golf area as a green arena, can support both public health and learning for sustainable development in practice and theory.

- Background

The nature landscape has been the birth place for human beings and development in millions of years. Now the screen generation in this "high tech" society have to recapture the "high touch" and first - hand experience connected to theory and practice about nature in kindergarten/preschool and schools within urban and rural learning environments around the world. We also need to increase and open up for outdoor education in terms of the curriculum in the exchange and variation between indoor- and outdoor learning contexts – text based and non-text-based techniques and practice. Outdoor activity, sustainable teaching and learning have to be reflective and integrate knowledge in action to implement scientific thinking. At the same time, it is also important to manage and learn a group of children and youth, to build up a team and be safety in the outdoors.

A characteristic of the distinctive nature in outdoor education is action-oriented learning with the whole body which embassies development of knowledge through activity, namely the theory about pragmatic progressivism like the ideas of John Dewey (1859 – 1952) was spread through a pragmatic progressivism in the education sector over hundred years ago. Dewey's (1938) progressive educational philosophy can also be related to the concept of experience, which in its turn is connected to the two criteria interaction and continuity. Interaction implies according to Dewey an interplay with the environment, while continuity alludes to the experiences that are continually generated in a social setting ("the school in the society and the society in the school"). The acquisition of experiences becomes a process of a rational character, since it is coupled with an external environment of perceived physical settings which is continually changing in the eye of the beholder. To learn through practical action – "learning by doing" – and an extended physical sensing – "learning under the skin" – appear for Dewey as both socially and physically related to the place.

Further, the natural environment is regarded as both the *place* and the *object* of learning about nature and culture. We also see outdoor educational *as a way of learning*. It is in a theoretical perspective, one of the few – if not the only – example of how a pedagogy is defined with one expression, which specifies learning's location its *where*, not only in the brain, but also the learning landscape out-of-doors. When we open up the classroom door and go out, the school bell calling us out, not to break but to teach and learn on scientific basis and proven experience. Then we can talk about *Teaching with the Sky as a Ceiling* (Faskunger, J. & Szczepanski, A. 2018).

<http://liu.diva-portal.org/smash/record.jsf?pid=diva2%3A1253050&dswid=9278>

This project is part of the STERF program *Multifunctional use of golf facilities and ecosystem services* focusing the golf course as a pedagogical tool in the teaching and learning process. One pilot school was selected in the collaboration by Sterf with 15 teachers and pupils at Smedsby primary school in Motala Municipality, Sweden, mainly at grade 4-6, that have been a part of the outdoor education intervention and training in outdoor education at the Golf area in Motala during 2017-2018. At the start of the project, 15 teachers were interviewed before the training intervention was carried out to create tools for participating teachers prior to implementation in the pupil group linked to achievement and aspirational goals, topics and themes in the curriculum (Lgr11, revised 2018). A final interview (2018) was then conducted with 10 of the participating teachers at the end of the project, all of whom carried out the development about knowledge and skills in outdoor education with their pupils. The loss of 5 participants was caused by the fact that the school's principal chose to send these teachers to participate in another training course of importance for their school development, which meant that they could not complete our pilot outdoor project.

A qualitative study and analyse with open questioners about how teachers experiences outdoor teaching and learning has now been completed, after the outdoor education intervention and after their experience about teaching with pupils at the Motala Golf- area. With focus on the *ways of experiencing* and the importance of the learning environment for teaching in an outdoor pedagogical context – action-based knowledge, reflection and knowledge in action (Szczepanski, 2008).

This interview with the teachers was then *compared with* the same interview with these primary teachers as respondents before the start of the project (2017). The same following up interview questions were answered again by the 10 remaining teachers:

1. How do you teach outdoors and how do you teach indoors?
2. Why did you choose to have your teaching structure (topics and themes) outdoors?
3. How do students perceive teaching and learning in the outdoor environment?

The learning activities was connected to the Swedish school curriculum (Lgr11) and written down from the teachers at every occasion in the 8 days of outdoor education intervention and outdoor didactic course that Spetsa Company at University Holding was responsible for. At the same time we have reflection with the teachers about the key outdoor didactic questions: *what* (the subject and theme, the content of learning in the Lgr11 curriculum), *where* (the place of learning in the Golf area), *when* (the time connected to the day, week, month, season

and year), *how* (methods) and *why* (evidence based outdoor teaching and learning). The learning activities were then connected to language, science, mathematics, technology, aesthetic subjects, physical activity and health, that we have worked out with the teachers during this project. The material has been put in a “pedagogical outdoor rucksack” with some other equipments. There is also a video production by Sterf to inform about the project both national and international in Sweden, Scandinavia, Europe and Japan (as one example, invitation at ISGA = International school ground conference in Yokohama, November 2018), <https://www.youtube.com/watch?v=6a1pbDcmQpg&t=29s>. even translated to an English version by one of the teachers in the project.

• Material and method

The “phenomenographical” approach about the *way of experience*, study and analyse, being used as the analytical method, interpreting the teachers’ answers that will be presented below in the *final result* from the research questions including the way of teaching we have developed as one method in the attached *pedagogical rucksack* about outdoor activities that will be usable for teaching in the out - of - doors (Uljens, 1989).

Methodological considerations

The study is qualitative and inductive. It has a phenomenological approach and its aim is to describe the variation in the respondents’ views in qualitatively distinct descriptive *categories*, which reproduce an overall structure of meaning of different ways to perceive the importance of *outdoor education* and the *local learning environment* for learning and teaching. It is here a matter of studying the implications and variations in how something is perceived, the so-called second order perspective, not how something actually is, a first order perspective. In accordance with Staffan Larsson (1986, 2005) we seek to capture implications, or variations in descriptions of how something appears (ways of experience) or is thought to be among the respondents. The analytical procedure and analysis form the framework of the working process (cf. Uljens, 1998; Hayes, 2000). It builds on transcribed interview replies from 10 respondents.

The results of the study cannot simply be generalized beyond the special research context, in this case the experience of the teachers interviewed. Staffan Larsson (2009) however argues for a pluralistic attitude in his account of the problems of generalization in qualitative

studies – the results can have a general value in various ways. A similar context does not necessarily mean for example that the results can be used in another context, but it can be so. Similarities in context indicate that there is discretion, a pragmatic potential in relation to the empirical result. For example, the results of this study offer an understanding of the importance of outdoor education for learning and teaching in an outdoor teaching environment, and this understanding can contribute to and influence thinking and application in other pedagogical contexts. The generalization is however loosely related to its context, in so far as the researcher cannot predict when the interpretation will be usable. The usefulness appears when the results are applied in new contexts. Thus, it cannot be determined in advance whether the results can have a more general applicability.

The pedagogical and teaching model integrate and interwoven the following 5 different perspectives in a three-dimensional theoretical way: *learning, personal and social development - team building, outdoor learning environments, personal health, environmental health connected to local and global impact on planet earth*. These five perspectives should be included in different parts and scope in different teaching arrangements developed in the so-called "educational backpack." This backpack consist of following material as: magnifiers, water and measuring equipment, small ropes, water resistant seat cushions, some security and hands out material equipment's and didactic instructions for outdoor teaching in water, forest and other places close to the Golf area. My colleague university lecturer Britta Brügge has produced a folder learning activities that we have worked out together with the teachers and they have implemented this activities with pupils and put it in their own "pedagogical outdoor rucksack."

The Golf Club have been very supportive and contributed with knowledge in the Golf area at occasions when the class visited the Golf area with their teachers during the project time 2017-2018. The video production by Sterf has been received very positively as a method to inform and promote the project both at the national- and international level. The *hands on learning* activities was written down by the teachers at every occasion when we have the reflection time and *minds on* thinking adjacent to the didactic questions: where, when, what, how and why.

• Result

Some of the points are summarized below about the answers selected in my interview analysis based on 10 teachers *ways of experience* connected to the concept *outdoor education and*

close learning environments – in what way as an educator the respondent teachers in this pilot study use the learning environments related to the completed educational intervention in outdoor education after the implementation of teaching arrangements out - of - doors in their own class at the golf area in Motala municipality during 2017-2018.

Selected excerpts from the 10 respondents' outcomes (sample space), which reveals teachers *way of experience* about the concept of *outdoor education* and the concept of *local environment in teaching* as the place of learning:

“Through outdoor education it becomes a learning opportunity to learn in nature where experience can later on be used in the classroom”;

“To use nature as a second classroom where the movement promotes learning;

With the help of nature, the various subjects are clarified and concrete”;

“To create understanding and concretize theoretical concepts, mainly mathematics in everyday learning situations outdoors”;

“Make use of nature to teach”;

“Learning in another way in other learning environments – outdoors is important also for children with special needs and support”;

“To go out, to see and feel the words we are talking about”;

“To work with thematic days outdoors, mainly in mathematics and collaborative exercises with a scientific focus”;

“To create community and participation in the group through teaching outdoors;

“To see topics and knowledge in a different context than to study them only in the classroom”;

“Here we are now working outdoors with all subjects during the year and interacting with the classroom”;

“To bring the knowledge goals and the curriculum out into reality”

Nature is perceived as an important part to use as an expanded "second" classroom outdoors to make life to the curriculum – Lgr11's goals and intentions. In this context, the movement will be stimulated in the learning process out - of - doors, but also the connections between theory and practice, where mathematics and science primarily perceived by most teachers as possible to implement in the outdoor classroom. Some teachers also see that the outdoor environment can support pupils *language development*. The significance of the outdoor environment for children with special needs is also mentioned by two respondents.

- Discussion

Most teachers (10 of 15 at the start) completed the project at Smedsby skolan have received increased knowledge in outdoor education as the result from my interpretation from there interviews, based on facts, skills and understanding related to Lgr 11 in: mathematic, language, technology, geography, biology / ecology, physical activity, sustainable development and physical activity/movement outdoors. But also, knowledge about what way the learning environment outdoors could be supportive, that means: *what* (the content in the curriculum), *where* (the importance of the place), *when* (during the day week, month, season), *how* (methods) and *why* (evidence) the expanded learning environment is a complement to a more "traditional" classroom teaching. Most of these teachers complain in their final reflections – that they will continue to use the expanded learning environment as a “classroom” to a greater extent compared with their answer in the first interview before the start of the project. The interviews also pointed out the importance of a "critical mass" consisting of 3 - 4 teachers in the school to dare to take the schoolyard into possession for teaching.

A competence development in the field of outdoor education and its didactics and a supportive management (principal/headmaster) needs for this to be a lasting and long-term living. This will be a part of school development according to the curriculum with organization and routines for planning, implementation the outdoor and classroom work. "Outdoors, one can learn the same concepts as indoors, firmly in a new way", this reinforces memory and consolidates knowledge. Several of the teachers in the study perceive that they have become safer in their management of managing the pupils as a group outdoors, there also arises outdoors as a more "free and problem-solving atmosphere, that takes place more in an interaction with the students" compared to the classroom situation. The students also perceive, based on the teachers *ways of experience* and statements, outdoor teaching as "an opportunity to learn" which makes the teaching a little more interesting and "more fun" as it is expressed by the main part of the teachers. The difficulty may be to get the students to understand when it is a “lesson” and not a break for "play" which emerged in some of the answers. It is a little hard to understand that the game/play can be a part of learning (to play with a learning backdrop). Current research indicates that play and learning can be a part of the same coin (Dahlgren & Szczepanski, 1998).

The outdoor environment is perceived by the respondents "interwoven into more movement" in the learning process, compared to the classroom's more sedentary learning environment, which appears in the answers and that "mathematics is perceived to be particularly suitable to do outdoors" in the work on central concepts such as: position orientation, size concepts, space, time, shapes, pattern recognition (algorithms), the base of the computers' instructions. A "thematic approach" is also stated as a prominent argument for outdoor environmental education but also the importance of learning to interact between outdoor and indoor in teaching and learning. The teachers perceive an "opener climate" outdoors that one gets "a deeper contact with the students" and "that the learning is reinforced when the body is activated and put into motion, in the classroom it becomes very much to sit in place and perform a task". The analysis of these teachers' responses related to multifunctional pedagogical land use on a golf arena, shows in my concluding compilation of the responses based on open questions, that it takes some time to discover the opportunities that the outdoor environment offers, as a reinforcement of the more text-based practice in a classroom.

References/Electronic references

- Dahlgren, L.-O. & Szczepanski, A. (1998). *Outdoor education – Literary education and sensory experience – An attempt at defining the identity of outdoor education*. Linköping: Linköping University.
- Dewey, J. (1938). *Experience and Education*. New York: The Kappa Delta Pictures Series, Collier Books.
- Hayes, N. (2000). *Doing Psychological Research: Gathering and Analysing Data*. Buckingham: Open University Press.
- Larsson, S. (1986). *Kvalitativ analys: exemplet fenomenografi*. (Qualitative analysis: the example of phenomenography.) Lund: Studentlitteratur.
- Larsson, S. (2005). Om kvalitet i kvalitativa studier. (On quality in qualitative studies.) *Nordisk Pedagogik*, 25 (1), 16–35.
- Larsson, S. (2009). A pluralistic view of generalization in qualitative research. *International Journal of Research & Method in Education*, 32 (1), 25–38.

Learning in the Outdoor Classroom – a Swedish Anthology of Activities (2015). Translation: Mandy Bengts. Vimmerby: Outdoor Teaching Company Vimmerby (published). ISBN 978-91-979600-9-0 web site Outdoor Teaching Company: <http://www.outdoorteaching.com/en/>

Lgr 11, *Curriculum for the compulsory school, preschool class and school-age educare* (revised 2018) Stockholm: The Swedish National Agency for Education.

“Smedsby satsar mer på pedagogik utomhus” – Smedsby primary school support outdoor education. published on Motala municipality’s website

<http://ostgota.lokaltidningen.se/2017-08-21/-Smedsby-skola-satsar-på-uteprofil-351450.html>

Teaching with the Sky as a Ceiling – A research review about the significance of outdoor teaching for children’s learning in compulsory school, Faskunger, J & Szczepanski A., Åkerblom, P. (red)

Linköping University 2018 web site <http://liu.diva-portal.org/smash/record.jsf?pid=diva2%3A1253050&dswid=-4501>

Szczepanski, A. (2008) *Handlingsburen kunskap: Lärares uppfattningar om landskapet som lärandemiljö. (Knowledge Through Action: Teachers’ perceptions of the landscape as a learning environment.)* Licentiate thesis. Linköping: Linköpings universitet, Institutionen för beteendevetenskap och lärande, Institutionen för kultur och kommunikation. (Dept. Of Behavioural Science and Learning.)

Uljens, M. (1989) *Fenomenografi: forskning om uppfattningar. (Phenomenography: research on conceptions.)* Lund: Studentlitteratur.

Uljens, M. (1998). Fenomenografien, dess icke-dualistiska ontologi och Menons paradox. (Phenomenography, its non-dualistic ontology and Menon’s paradox.) *Pedagogisk forskning i Sverige. (Pedagogical research in Sweden.)* 3 (2), 122–129.

Knowledge transfer (KT) and Dissemination

- 1) Dissemination through local newspaper, website and local TV program in the county of Östergötland (more described below, see under Publications).
- 2) Information at the *National Conference “Outside is in Place, Tools and Methods”* - seminars held in Nynäshamn, 21-22 September 2017. Presentation by Anders Szczepanski.
- 3) Dissemination by ass prof Anders Szczepanski and MSc outdoor educator Britta Brügge at *the Outdoor Learning Race and Outdoor Classroom conference in Växjö 7th – 8th Sept 2017 a*

project with Linne Food House, KI (Karolinska Institute) and Växjö University. The Outdoor classroom presentation: <http://www.uteklassrum.se>

- 4) Dissemination at the Landscape conference in Ireland/Waterville, Iveragh *Learning Landscape Symposium*, 6 October 2017 – “Learning and Teaching in the context of landscapes”, Presentation by Anders Szczepanski.

- 5) Presentation at the *Scandinavian Nature and Nordic Camp Association* conference about outdoor education and place based learning at Peking University/Beijing. Key note presentation by Anders Szczepanski: "Outdoor Learning in Green open Urban settings" 11th – 14th May 2018.
 - 6) Dissemination a second time at the *Learning Landscape symposium* in Ireland/Waterville, 5-7th October 2018 – Key note: "Learning in, about and for landscapes – reflect rethink and reform", Presentation by ass prof Anders Szczepanski Spetsa Company at Linköping University.
 - 7) Dissemination at the *International School Ground confrence (ISGA)* that occur every second year, this time in Yokohama, by Anna Cervin, first- and primary teacher in Motala Municipality by a poster and film with UK translation about the Sterf project. Also by ass prof Anders Szczepanski at the workshops. About 250 teachers participate, landscape architects and administrators with focus on urban planning from 18 countries in the world.
 - 8) Accepted for a new presentation and dissemination at the *National conference Outdoor is Indoor – Ecosystem Services* in Jönköping Municipality and Elmia conference center 29th – 30th August 2019 by Anna Cervin and MSc outdoor educator Britta Brügge at Spetsa Company University Holding. Utomhuspedagogik och ekosystemtjänster: <http://www.utenavet.se/pd.php?id=71>
-