PhD Summer School in Outdoor Studies 2017
Stockholm, Sweden, May 2-6

Outdoor and environmental education research – a critical exploration into ontology, epistemology, methodology and methods

Jonas Mikaelsa, Suzanne Lundvalla, Erik Myginib, Ulrich Dettwilerc

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b University of Copenhagen, Department of Geosciences and Natural Resource Management
c University of Stavanger

CALL FOR PAPERS

The PhD Summer School aims to bring together PhD students, and some of their supervisors, from various disciplines in the field of outdoor studies. This includes education (both teaching and learning), environmental education, learning outside the classroom, udeskole, leisure and recreation. The seminar aims to build on the social, cultural and critical dimensions of research and theorising in diverse outdoor practices.

This year’s seminar builds upon previous PhD summer schools, hosted by Copenhagen University in partnership with University of Edinburgh in 2015, and Technische Universität München in 2016. The focus will be to share and explore the diversity of outdoor and environmental education research going on amongst the participating PhD students and supervisors.

PhD students, please apply by sending in an abstract in the form of a “one-pager”. This one page should include: your research question(s), theoretical framework, methodology, findings (if you have data), conclusions (if you have findings) and what do you plan to do next (any particular problems that needs to be addressed in your research?)

Please send your one-pager to: jonas.mikael@gih.se

Deadline: April 1, 2017

For any questions please contact either Jonas Mikael jonas.mikael@gih.se or Suzanne Lundvall suzanne.lundvall@gih.se
The seminar

The seminar will be held at the island of Svartsö in the Stockholm archipelago. We all meet at Strömkanjen at 14:00 (2 pm) on the 2nd of May. When booking your flights to Stockholm, make sure that you make it to Strömkanjen on time. The boat to Svartsö leaves at 15:00 (3 pm). We will be back at Strömkanjen again at about 2 pm on May 6.

We will be staying at the Svartsö Hostel in shared 2 person bedrooms. We will have one large conference room as well as two smaller rooms at our disposal. Drawing on the comments from last year’s seminar evaluation, apart from being totally awesome, there seemed to be a call for more opportunities for students to share and discuss their projects in the form of parallel sessions.

Therefore, similar to the seminar hosted by Erik Myging and Simon Beames in Denmark two years ago, this year’s seminar aims at providing PhD students with an opportunity to present their project to a supportive audience of fellow PhD students and their supervisors. Secondly, the seminar aims at providing students and researchers with an overview of emerging research in the field and of opportunities for future collaboration. Discussions of each student’s work will take place after every presentation.

- Each PhD student does a 10-15 minute oral presentation with 15-20 minutes for questions and discussion afterwards
- Two PhD students will act as moderators – asking questions and managing the questions from the audience after each presentation

To allow for further and deeper discussions, time will be allocated for workshops where students with related theoretical framing, aims and research questions, team-up in parallel workshops for discussions in more depth. There are a few more details, such as invited keynote speakers, that need to fall into place before we can finalize the program. However, the above description will give you an idea of how the seminar will be structured.

Fees and tuition

All costs that are related to the seminar will be covered. This means that there will be no tuition fee. Nor will there be any costs for food or accommodation.

There is also a travel grant available for each accepted PhD student that completes the seminar. An €800 (EUR) travel grant for students from overseas and a €300 (EUR) travel grant for students within Europe.

We are really looking forward to receiving your application and seeing you in Stockholm!

Jonas & Suz
<table>
<thead>
<tr>
<th>Date</th>
<th>Sessions</th>
<th>Content</th>
<th>Presenters &amp; moderators</th>
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<tbody>
<tr>
<td><strong>Tuesday May 2nd</strong></td>
<td>Arrivals to Stockholm</td>
<td>Meet and greet</td>
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<td>14.00</td>
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<td>Catered dinner</td>
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<td>Welcome/opening of seminar</td>
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<td>Suz &amp; Jonas</td>
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<td><strong>Wednesday May 3rd</strong></td>
<td>Morning outdoor exercise</td>
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<td>Karen Barfod</td>
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<td>Review session</td>
<td>Seminar summary</td>
<td>Erik, Ulrich, Jonas &amp; Suz</td>
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<td>Bike trip to Svartsö Krog</td>
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**Participating PhD students**

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<tr>
<th>Name</th>
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**Participating senior researchers/supervisors**

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<thead>
<tr>
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<tr>
<td>Suzanne Lundvall</td>
<td>Sweden</td>
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<td>Erik Mygind</td>
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<td>Ulrich Dettweiler</td>
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<tr>
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<tr>
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<td>Patrick Daigle</td>
<td>Physical Educators in Nature... A Rare Breed!</td>
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<td>Jakob von Au</td>
<td>Outdoor Education at Schools in Denmark, Scotland and Germany – Competence Oriented and Context Oriented Influences on Intention and Action of Experienced Outdoor Education Teachers</td>
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<td>In-depth learning through uteskole (outdoor learning)</td>
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<td>Embodied learning in outdoor education</td>
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<td>The Nature of Public Provision Outdoor education in Ireland</td>
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<td>Matlaba Khan</td>
<td>Environment, Engagement and Education</td>
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<td>Jennifer Wigglesworth</td>
<td>“Rock On, Dudette!”: A Feminist Analysis of Indoor and Outdoor Rock climbing</td>
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<td>Students’ physical activity during a compulsory curriculum-based one year outdoor education programme</td>
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<td>Jonas Mikaelis</td>
<td>A Deleuzoguattarian exploration of outdoor education philosophy: Challenging the image of thought of school-based friluftsliv in the Swedish curriculum</td>
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<td>Social relationships development in school classes through outdoor education courses</td>
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<td>Growing meshwork – a relational materialist reading of “What’s going on between children and their everyday outdoor places?”</td>
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<td>Yujun Xu</td>
<td>Intercultural Learning and Youth: Preliminary Observations</td>
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<td>Outdoor Learning and Oral Production in English Second Language Teaching – Acknowledging the Value of Learning English Oral Communication Beyond the Classroom</td>
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<td>Recovery in everyday life – nature-experiences of persons with eating disorders</td>
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<td>Out-of-School Learning in Hungarian Primary Schools</td>
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<td>Teaching outside the classroom: The influence of regular outdoor teaching in school surroundings on self-concept and integration (social participation) of pupils, especially of refugee children – a case study</td>
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<td>The Role of Outdoor Education for Child Development in Italian Nursery Schools</td>
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<td>Military Outdoors – Exploring the Psychosocial Benefits of Outdoor Recreation and Education in Danish War Veterans</td>
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<td>Tomas Brnik</td>
<td>The effect of different bike rim diameters and somatic characteristics to the energy expenditure of the organism</td>
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<td>Ji Zheng</td>
<td>Forest plantations and climate change</td>
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Physical Educators in Nature... A Rare Breed!

Daigle, Patrick, M.A.; Gadais, Tegwen, Ph.D. and Grenier, Johanne, Ph.D. 
Université du Québec à Montréal

The links between bad lifestyle habits, including sedentary living, and health issues are prompting many organizations to become concerned about public health, particularly for young people. Quebec’s school system has chosen to play a major role in young people’s health via its program for Quebec schools (Ministry of Education, Recreation and Sports, MERS, 2006). To secure this institutional priority and promote a healthy, active lifestyle, the school system has tasked Physical Education and Health program (PEH) teachers with developing competencies related to health management within their discipline.

The reality of Quebec schools is that most PEH teachers only teach inside a gymnasium, offering few opportunities to learn in other settings (Daigle, 2012). Yet the government’s physical education program stipulates that numerous settings for physical activities should be offered to students, so as to encourage knowledge development and the adoption of healthy lifestyles (MERS, 2006). Nature is one such setting that would be particularly relevant, since many benefits (psychological, cognitive and physiological) have been shown to be linked with this setting (Keniger, Gaston, Irvine & Fuller, 2013).

This problem is of concern to PEH teachers since they are responsible for choosing the settings of physical activities practised in the context of their courses. Some teachers offer their students no activities in nature – which may be attributable to the difficulty of including outdoor activities in a school program (training, budget, transportation, etc.) (Maziade, Barryman, Thériault, & Gadais, 2016). Nevertheless, certain educators find a way to teach their classes in an outdoor setting (Daigle, 2012). What are the reasons, the motivations, the paths and experiences that prompt these teachers to work outdoors?

Research Question and Methodology

Bearing in mind the elements presented previously, we seek to understand: “What is the process that favours PEH instruction in an outdoor setting by teachers?” Since this research area has not been extensively studied, we intend to use a grounded theory to identify elements of this little-known phenomenon, proceeding from actual experience as expressed by the teachers themselves (Paillé, 1994). This will permit us to “better explain phenomena such as change, process or lived trajectory in relation to a given situation” (Corbière & Larivière, 2014).


Outdoor Education at Schools in Denmark, Scotland and Germany – Competence Oriented and Context Oriented Influences on Intention and Action of Experienced Outdoor Education Teachers

Abstract:

The background for this work was the weak implementation of Outdoor Education (frequent lessons outside the classroom) in Germany compared to Scotland and Denmark. The question was raised about how Outdoor Education could be fostered in Germany, especially amongst 10-15 year old children. Examples of good practice in Scotland, Denmark and Germany were studied and experienced Outdoor Education practitioners were interviewed in order to better understand the motives and actions of teachers working the field. One important finding was that context related influences on Outdoor Education (both structural and organisational) were perceived quite similarly by Scottish, Danish and German teachers. At the same time competence related influences such as motivational orientation and subjective theories were found to be comparable amongst Scottish, Danish and German teachers. Furthermore, no indications were found that there are fewer teachers in Germany who demonstrate the characteristics required for Outdoor Education identified in the course of this work. The results support the assumption that differences between countries concerning the implementation of Outdoor Education exist primarily due to context related influences and can therefore be positively altered from outside. Both competence related and context related influences were found through interviews, observations and document research (curricula and guiding principles). The most relevant positive context related influences in Scotland and Denmark were allocated to structural and school organisational areas.

Keywords:

Outdoor Education, Learning outside the classroom, international, teaching skills, motives, subjective theories, self-efficacy expectation, biography and personality related characteristics, context-related influences
Tentative title: In-depth learning through uteskole (outdoor learning)

Øystein Winje, PhD-student, Oslo University College of Applied Sciences

Abstract

The project is part of the research project Body and movement with regard to learning in school (BOMLIS) at Oslo University College of Applied Sciences.

Aim of the study: This project will examine if and how student’s perceptions and experiences in uteskole can contribute to in-depth learning in primary schools. The project takes inspiration from experiential pedagogy and focuses on the interaction in learning processes between perception and experience in practical actions and the acquisition of theoretical knowledge.

The main research question is:

How is outdoor-learning (uteskole) related to in-depth learning in primary school?

In-depth learning is a relatively new term in Norwegian school discourse. It is used to describe student’s gradual development of understanding of terms, methods and relations both within school subjects and between different subjects. The students have to use their abilities to analyze, solve problems and reflect on their own learning to construct a lasting understanding. To learn something thoroughly presupposes active participation in the learning process.

Theoretical framework: The project’s theoretical framework is based on Maurice Merleau-Ponty’s dialectic understanding of the role of the body in the human being’s acquisition of knowledge, and John Dewey’s didactic perspective. Merleau-Ponty accentuated the body as the basis for all perception and experience and gave the body first priority, ahead of the purely mental/cognitive domain. John Dewey’s perspective is that effective learning is far more than internalizing instruction, and favors a didactic that focus on stimulating the developing student’s problem-solving repertoire.

Method: Data will be collected through a fieldwork consisting of participatory observation and qualitative research-interviews with students and teachers. Informants will be teachers and students in two strategically selected primary schools from the eastern part of Norway that regularly (one day a week/weekly) use outdoor learning. The observation will be carried out during a 12-week period, and the number of participants will be evaluated on the back of data saturation. The material will be transcribed and analyzed through systematic text condensation.

The project will result in an article-based dissertation with three peer-review articles in international journals.

Challenges:

1. What is in-depth learning and how do you collect information about it?
2. Which school subject would be suitable for studying in-depth learning in uteskole?
3. Which methods can be used to collect outcome-data about in-depth learning in uteskole?
Abstract
In contemporary Sweden outdoor education is seen as a natural and important part of Swedish school. Outdoor education has a long history, connected to peoples statutory right of public access to nature and hegemonic ideas about sustainability in society. Within Swedish School outdoor education resonates all the way back to Jean-Jacques Rousseau eighteenth century natural romance and to the Swedish botanist Carl von Linné. Over time, outdoor education, together with movements, health and lifestyle, have come to constitute the cornerstones that form the main knowledge contents in physical education. As such the recreational values for the individual as well as Swedish society in general has been enrolled in the governing policy documents guiding the contents and practice of Swedish school and the forming of new generations (Skolverket, 2011).

This study directs it attention to outdoor education, critically pursuing questions regarding what students actually learn in and through outdoor education. In spite of a long history in Swedish society research on what kind of knowledge and learning outdoor education brings and is supposed to give students is scarce. As it have been shown in previous research that physical education teachers sometimes have a hard time motivating both themselves, students, the school management and parents why outdoor education should be part of the curriculum, there is a need to further investigate students learning processes in outdoor education.

Purpose
The purpose with the study is to analyse learning processes in outdoor education. Basically I am interested in what kind of knowledge that is acquired and the processes through which this knowledge is socially and culturally negotiated and later also embodied in different ways. The study is guided by the following research questions.

- How is knowledge acquired in outdoor education and how does the knowledge affect student’s way of understanding the social, cultural and natural context of outdoor education?
- What embodied experiences occur through outdoor education, and in what ways can these experiences be understood in terms of embodied learning processes?
Theoretical framework

Basically the study departs from a constructionist approach to knowledge (Berger & Luckmann, 1966). This means that that specific subject positions are seen as something being created through bodily practices and interactions. Physical skills and physical knowledge is in this context not to be considered as something that easily can be transferred from one entity to another, such as from a teacher to a student. Rather acquisition of knowledge and the learning of different skills, through for example movements in and experiences of nature are seen as inter-subjective. Put differently; knowledge and competence is created/learned through action and communicative encounters between individuals (Schiro 2008:160). The sense of who you are and what you are able to do can thus be understood as intimately interwoven with bodily/embodied experiences. When people do/perform, they learn. They acquire experience in relation to their surroundings and through these also an understanding of themselves. How bodies are used, interpreted and what we do with them, is in other words, also a question of how learning processes are intertwined with identity constructions (Biesta 2006:42).

Method

The study employs an ethnographic approach. Using interviews, informal conversations and (video)-observations in the different environments in which students act and interact, I intend to try to understand the learning processes that manifest in outdoor education.

Beginning in autumn 2015, I have followed two classes of high school students in their outdoor education, when they went hiking for a week in northern Sweden. Each class was followed separately. During the week in the north of Sweden observations, group interviews and individual interviews where conducted. The students experiences and discussions where also recorded with Go-Pro cameras which they had attached to their heads or chests. The recording that where made through these cameras where then used as observational material as well as a foundation for further interviewing. In total the empirical material emanates to 25 h film, 16 in place made observations, 8 group interviews, 22 individual interviews and 29 logs. The sampling represent some kind of diversity in terms of gender, nationality and so forth, but it is basically a Swedish middle-class stratum being in focus.
Conclusions
What happens when the textbook becomes reality, from pulpit teaching to the outdoors. Students personal development, what happens when you are not able to “check out”, you can not run away from your learning. When you change environment the learning becomes embodied. It seems like there are special benefits to the environment where the learning takes place. I will have more analysed data to present when the summer school take place.

Referenser


Keywords
Outdoor education, high school students, embodied learning, physical education
The Nature of Public Provision Outdoor Education in Ireland

This study aims to explore the public provision outdoor education sector in Ireland with a view to describing the sector in terms of what claims are made of practice and what actually happens. This will then allow for the building a depth of understanding as to why the sector operates as it does.

The major questions include:

- What do Outdoor Education & Training Centres (OETCs) claim to achieve?
- How much do they meet these claims in practice?
- To what degree do these match?
- What factors exist, or combine, to result in this form of practice?

A social constructivist paradigm will underpin this research. The main goal here is to generate understanding and interpret the detail to arrive at a theory of explanation (Creswell & Plano Clark, 2011). A constructivist approach lends itself well to an exploratory study of this kind. Knowledge and understanding will emerge from the interactions between the researcher and the participants (Guba & Lincoln, 1994), recognising the impact on understanding of both what is observed and the interpretation of same through previous experience and values. Such a socially dependent context accepts multiple realities that tend to be subjective, interpretive and non-generalizable (Cohen, Manion & Morrison, 2011; Mertens, 2015).

An ethnographic approach is suited to this research, with the focus on exploring the culture within the community of OETCs (Stan & Humberstone, 2011). Ethnography involves the generation of understanding of a social group through observation of everyday practice, documentary evidence and interviews, or informal conversations, with informants (Delamont, 2002; Gobo, 2008; Hammersley & Atkinson, 2007).

Phase one, already underway, will involve a “crystallization” (Mertens, 2015:444) of data from various sources, including participant observation of practice within OETCs, along with information from their websites and internal documentation that will be analysed using content analysis. An impression of day-to-day practice may emerge from this phase. Phase two will develop out of phase one and may include, for example, semi-structured interviews with practitioners to deepen the understanding of issues arising from the analysis of the first round of data collection.

A theoretical framework focuses a study and aids interpretation and understanding (Silverman, 2014). The plan is to analyse the results of phase one and to look at phase two with a critical lens informed by the writings of Michel Foucault. At this stage in the research, I feel that it is of upmost importance to ensure I am constructing a “coherent and workable” (Maxwell, 2013:bc) research design.
References


Environment, Engagement and Education:
Investigating the relationship between primary school grounds and children’s learning: A case study from Bangladesh

Abstract
More than 59 million children are out of schools across the globe (UNESCO Institute for Statistics & UNICEF, 2015), despite the promise of education for all children by the year 2015. The situation is more pronounced in developing countries particularly in Africa and South Asia. Strategies adopted globally to attract children towards schools rarely considered improving the existing physical environments, despite evidence that primary school aged children (5 to 12 years) learn more effectively when their education is incorporated with surrounding environments (Khan & Islam, 2014; Lieberman & Hoody, 1998; Mygind, 2009). This study investigated the potential of a primary school ground to be an effective learning environment and explored how the design of an outdoor environment can contribute to children’s learning.

This interdisciplinary project is underpinned by classic psychological theories of child development (e.g. Piaget 1964 and Vygotsky et al. 1978), while Gibson’s (1979) ‘Concept of Affordance’ and Barker’s (1976) ‘Theory of Behaviour Settings’ have provided the framework for exploring the relationship between the school ground and children’s learning.

A quasi-experimental action research project was carried out in a Government primary school in Bangladesh, which included the design and development of the school ground, with the direct participation of children, teachers and parents. Another primary school (with no change to the outdoor environment) was used as a control school to compare the outcomes. A mixed methods approach to conduct this quasi-experiment included data from existing exam scores, questionnaire survey, observation and behaviour-mapping, focus group discussions and in-depth interviews.

The key findings from this study indicate an overall positive influence of the designed outdoor environment on children’s academic performance and their motivation to learn. An increase in children’s cognitive, social and physical activities in the school ground is also evidenced by the study. The analysis of the data likewise reveals that different behaviour settings of the school ground offered opportunities for different teaching and learning activities. Both natural settings and settings with built features afforded more focused activities (e.g. the gardens afforded exploration and connection with nature, while the play area afforded more functional play). Additionally, settings comprised of both natural and built elements (e.g. the area with loose materials and huts) and areas in close proximity with natural ones (i.e. the open yard) accommodated diverse and multiple teaching and learning activities (e.g. measuring, building/constructing and exploring). The findings further suggest that the design and use of the school ground had a surprising and unintended positive effect on teachers’ motivation and pedagogy. Through reflecting on the use of different landscape elements and settings in the school ground during formal outdoor classes and informal play times, the study has further come to propose some design recommendations for other new school grounds as well as the redesign of existing ones.

Having faced my viva on the 1st of March 2017 with minor correction, I am focusing on publication. I have prepared a publication plan and would like to have advice and suggestions on journal and book publications. I would also like to discuss how I can take this research forward and work for its wider implications across countries.
“Rock On, Dudette!”: A Feminist Analysis of Indoor and Outdoor Rock Climbing

Jennifer Wigglesworth

Positioned between leisure, lifestyle sport and outdoor education literatures, my dissertation seeks to empirically explore women’s everyday climbing experiences. My project investigates how gender relations are simultaneously upheld and transgressed in coed rock climbing spaces through one’s climbing participation. Therefore, my research question asks: What do women do in co-ed rock climbing spaces to produce, maintain and transform gendered power relations? Secondary research questions explore how ideas about femininity and masculinity are reproduced or interrupted through climbing, how gender shows up in a space where there is supposed gender parity, and how women’s experiences can inform and develop outdoor education pedagogy.

My theoretical framework is a bricolage that draws upon feminist phenomenological and feminist post-structural approaches. One of my key concepts is Iris Marion Young’s (1980) “feminine bodily existence,” which I use to analyze alternative female embodiments in rock climbing as compared to traditional female embodiments. My analysis is also guided by Marcel Mauss’ work at the intersection of the social, psychological and biological, and Emily Grosz’s writings on bodily intentionality, the body as a process across time, and space as grasped through one’s bodily situation.

I employ an ethnographic methodology. My methods include reflexive, personal narratives from my own climbing experiences, participant observations, semi-structured interviews, and follow-up focus group interviews. My dissertation centres on one climbing population in Ontario, Canada. I have received ethical clearance from my university, and I am currently completing six months of participant observations at an indoor climbing gym as well as at two outdoor climbing sites used by members of the climbing community. I am observing male and female climbers and noting how they negotiate gender relations on the climbing wall and on the rock face. I am also in the process of interviewing 10 female recreational climbers. My next steps include transcription, data analysis and writing.

Climbing could tell us about where we are going, not only in recreation and leisure, but as a larger society. My project seeks to better understand, challenge and change the power relations of gender in women’s leisure lives. I want to contribute to the knowledge base on girl’s and women’s leisure that emboldens and empowers them to use their bodies emphatically and for hopeful transfer of this confidence to other elements of their lives. I plan to offer pedagogical recommendations for outdoor education in my concluding remarks. For example: How might we influence program design for girls and women, and boys and men, in wilderness settings? My dissertation could present empirical evidence that supports the need for teaching why certain bodies may excel at physical pursuits because of socializing categories like gender, social class and race. This would be a significant addition to outdoor education programs and instructor workshops. Furthermore, the prospective research may be used to inform and develop policies in health and physical education contexts.
Students’ physical activity during a compulsory curriculum-based one year outdoor education programme – A mixed-methods approach

Theoretical Framework

Participants in Outdoor Education Programmes (OEP) can benefit from this in terms of their social and personal development, academic achievement and physical activity (PA). However, very little is known about regular compulsory school and curriculum-based OEPs, especially taking into account specific circumstances within the German school system.

Methodology

In a prospective longitudinal study I searched into the PA levels of students having regular compulsory curriculum-based outdoor teaching in the forest controlled against children in the normal indoor school setting. 48 children were enrolled, 37 in the intervention group (IG) and 11 in the control group (CG). The intervention consisted in one full school day per week in the forest over the school year 2014/2015. Children within IG had classes in Biology, Geography, Physical Education (PE) and Nature Phenomenon’s in the forest. The children’s PA was objectively measured in fall, spring and summer using Axivity AX3 accelerometers. Regarding fall and spring, PA was measured for one school day only; in summer, PA was measured for five consecutive school days. Collected data sets will be analysed regarding time spend in different activity levels: sedentary, light, moderate, vigorous and moderate-to-vigorous physical activity (MVPA). I conducted group interviews with selected children and asked them about their experiences concerning perceived PA and opportunities to being physically active during indoor and outdoor classes.

Research Questions

I. How does a compulsory curriculum-based outdoor education programme influence students’ physical activity?

II. How do students perceive their physical activity during indoor and outdoor classes?

Findings and next steps

Comparing one school day in each season, children in the IG were significantly (on average 11:30 min) longer in MVPA-level than their peers in the CG (p<0.001). Even though, first impressions based on the interviews indicate that the students perceive PE during outdoor lessons as informal PA rather than formal PE. That is in concordance with my own observations. The interview transcripts as well as PA data sets regarding the summer season have to be analysed in detail. Especially, possible differences in students sedentary and light PA have to be taken into account as the didactical concept in the forest setting implicates that the students stand up and walk more often. Possibilities to compare the different data sets in a mixed-methods approach have to be clarified.
Abstract - PhD Summer School in Outdoor Studies 2017

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A Deleuzoguattarian exploration of outdoor educational philosophy: Challenging the image of thought of school-based friluftsliv in the Swedish curriculum

Background: There is a growing body of research questioning the underlying philosophical and pedagogical assumptions underpinning outdoor education theory and practice (Brookes, 1993, 2002; Nicol, 2002, 2014; Loynes, 2002; Greenwood, 2004; Wattchow & Brown, 2011; Mannion, Fenwick & Lynch, 2013). These authors suggest that an outdoor education practice centred on adventure or pursuit-based activities, for the purpose of personal and social development, have become dominant at the expense of environmental awareness and people-place relationships. However, despite the ongoing dialogue on place in outdoor studies internationally, Schantz (2011) suggested that place as a conceptual framework has been largely overlooked in Swedish outdoor education.

Objectives and relevance: It may be assumed that the environment plays an integral role in outdoor education, simply because outdoor education commonly occurs in natural places. Often places become no more than a backdrop for people centred activities in the outdoors (Baker, 2005). In response to the call for more critical awareness in outdoor studies focusing on sustainable human-nature relations, an emphasis on the role of place in outdoor education has been given attention by researchers and practitioners (e.g. Orr, 2004; Raffan, 1993; Stewart, 2008; Wattchow and Brown, 2011). Proponents of theory and practice focusing on place in outdoor education are concerned that traditional outdoor education practices centred on personal and social skill development, promote and reinforce anthropocentric world-views, rather than challenge them. An alternative to a people centred practice focusing on personal and social development outcomes may be found in having place as the focal point for teaching and learning in outdoor education. I position my study within the place-responsive realm of outdoor studies. Due to the lack of research focusing on school-based friluftsliv as a learning area within PEH in Sweden, this study will contribute with new knowledge to help fill the identified gaps within the educational context of school-based friluftsliv research.

Theoretical framework: Drawing primarily on the work of Deleuze and Guattari (1987) and their concept of becoming-other; the relational materialist approach suggested by Hultman and Lenz Taguchi (2010); and Michel Foucault’s (1980) notion of discourse and power, the focus for this dissertation project is of the renewal of educational philosophy and upon empathizing with, and becoming responsive to, the outdoors as particular places, rich in local meaning and significance.

Methodology: This is a thesis by publication based on four articles. For each of the articles, different sets of empirical materials in this qualitative research have been used. The first article draws on Foucauldian theoretical insights to analyse interview transcripts derived from semi-structured interviews with eight outdoor education teachers in New Zealand. The second article draws on students reflective journals from a month long journey in the Canadian Rockies. The third article draws on a yearlong case study with a group of PEH teachers in Swedish 7th to 9th grade schools. Empirical materials were collected through pre- and post project interviews and individual workshop reflections. The fourth article is a critical text analysis of three Swedish statutory curriculum documents. The analysis is informed by Deleuzoguattarian concepts to help pry open reified boundaries in order to challenge the image of thought.

Findings: The overall findings from this dissertation project suggest that different discourses co-exist and are intertwined in educational practice. Associated with a dominating discourse of adventure are subdiscourses of pursuit-based activities, risk and safety, skill and assessment. However, resistance towards a discourse of adventure with pursuit-based activities can be traced in a discourse of learning focusing on place-responsiveness as the focal point for teaching and learning in outdoor education. Findings suggest that a decentering of humans in favour of mutual and relational engagements with matter and the more-than-human, in combination with place stories and outdoor skill development that involves reading the land, learning about its natural and cultural history, opens up new possibilities for embodied relations to place(s) in school-based friluftsliv.
References


Social relationships development in school classes through outdoor education courses

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Research questions

How does an outdoor course effect the social relationships network in school classes? How does it change before, after and three months after the course?

Theoretical framework

A sense of belonging, being a member of a social group, is one of the basic human needs (Breunig, O'Connell, Todd, Anderson, & Young, 2010). Apart from a family, it is the school class that represents an important part of an individual’s social area (Řezáč, 1998). It brings a unique chance for adolescents to develop social connections with their peers. Outdoor education programmes provide opportunities for social groups to engage in activities that require support, teamwork, and communication over an extended period of time (Hattie, Marsh, Neill, & Richards, 1997; McKenzie, 2000). Priest and Gass (1997) describe the aims of outdoor education as the development of both intrapersonal and interpersonal relationships. Research in interpersonal relationships and their changes in the group can be examined by the method of sociometry (Cillessen, 2011).

Methodology

The research sample was created by 13 classes – 362 students at the age of 13 - 16 years participating on outdoor courses. The relationships networks were recorded by a sociometric questionnaires administered before, straight after and three months after the course. The respondents were asked to choose their friends, rate each other according to different criteria, to express their feelings about the group and their position in the group. They filled in the same questionnaire in all measurements, only the follow-up testing was enriched with two open questions asking for the contributions of the course for participants. The courses were held out of school in natural settings at the beginning of a school year for newly originated classes. The programme of the courses was from 4 to 6 days long, focusing on getting to know each other, developing relationships, cooperation and trust within the group. Games and exercise in nature, ropes courses and creative activities were used to fulfil these aims. The data analyses is now in process, using sociometric indexes and sociograms to compare the network structure, quality and class climate within the three testings.

Findings and future plans

We have a lot of data being analysed recently. The results show that the course facilitated the relationships network development. There were more choices after than before the course, with more positive and mutual choices. Comparing the results of the third and second testing,
the number of choices decreased but still was higher than originally. The decrease can be caused by the high scores in the second testing that was influenced by positive participants’ spirits after the course. We are going to further analyse the relationships structure before, after, and 3 months follow-up in examined classes. We also plan to make interviews with the teachers to help to explain some of the discovered features.


Growing meshwork - a relational materialist reading of “What’s going on between children and their everyday outdoor places?”

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Background and aim: Children’s relations to outdoor and natural places have been subject to comprehensive investigation during the recent 40 years (e.g. Fasting, 2013; Hart, 1979; Kylin, 2003; Moore, 1986; Rasmussen, 2004; Sobel, 1990). The vast majority of these studies, however, draw heavily on a hierarchical ontology, which favours an anthropocentric and Cartesian perspective that supports the idea that humans are something exceptional and external to nature. As a result attention has been drawn against immaterial things such as language, discourse, culture and values, and material aspects of the child-nature relationship are largely ignored (Coole & Frost, 2010).

Drawing on a relational materialist approach (Barad, 2007; Deleuze & Guattari, 2013; Ingold, 2011a) the aim of this study is to challenge prevailing methodologies informed by a hierarchical ontology, and explore novel (material) ways to investigate the child-nature relationship by tying in with a flat ontology as an alternative way forward.

Theoretical framework: Within a flat ontology it is assumed that agency is not the ability of a human action, rather it is a relationship brought about by intra-action (Barad, 2007) between entities on the same ontological level (Rautio, 2013). Ingold offers – with inspiration from Lefebvre (1991) – the concept meshwork – that is composed of lines and knots – as a way to grasp the relationality of being-in-the-world (Ingold, 2011a, 2011b).

In Ingold’s animistic ontology the world is always becoming, as its inhabitants are ‘treading their own paths through the meshwork [and thereby contributing] to its ever-evolving weave’ (Ingold, 2011a, p. 71). And so, woven into the texture of the world are the lines of movement and growth of its inhabitants, and it is by this movement ‘that beings are instantiated in the world’ (ibid).

Methodology: The study is an ethnographical field study, using participant observation as the main source of data generation (Hammersley & Atkinson, 2007), which took place on a Danish, small-town municipal primary and lower secondary school. Ethnography is a commonly used approach in the field of relational materialist empirical studies due to the inherent ‘[…] capacity to contextualise events, and thereby revealing a range of relations that comprise the assemblage [Meshwork]’ (Fox & Alldred, 2014, p. 407).

The lines of becoming that make up the meshwork are (also) material, and are changing the texture of the world (Ingold, 2011a). In the present case, the reticular trails left by children as they go about their business around the schoolyard or in the neighbouring forest make up an obvious example. These are material evidence of how the lines of children’s movement and the material environment are entangled in a meshwork, and, as such, can be made subject to investigation. Reading children’s material environments tells of children’s lives and their relations to the material world. Hence, my ambition was to find methods to follow the children and the material trails they had left behind.

Various strategies were adopted in the ethnographical fieldwork ranging from walks guided by children to hanging out or nosing about waiting for something to happen. Data consisted of field notes, photographs and video recordings in order to grasp a multitude of nuances in the meshwork that comprises children’s places.

Inspired by the work of Jackson & Mazzie (2013) the analysis operated through thinking with theory or by plugging in Ingoldian concepts to the data (and vice versa), with the ambition to display new ways of understanding the child-nature relationship.

Findings and conclusions: The outdoor school grounds shows evident signs of children’s activities: Fine-meshed networks of small tracks run in all directions, an abundance of loose parts are scattered over the place, and dens of varying shapes and sizes bear witness to animated activity.

I argue that children’s places on the school grounds are growing (Ingold, 2013) in an ever-becoming meshwork comprised by human and non-human intra-actions, and that agency or vitality can be ascribed broadly to the material world. I suggest that the child-nature relationship should not be understood through pristineness, naturalness or beauty, but rather through notions of temporality, growability and open-endedness.
References


Sail-training, Intercultural Learning and Youth: Preliminary Observations

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ABSTRACT

The international tall ship sail training experience itself acts as a potential cultural union by allocating multi-national participants on board. As a site of intercultural learning, sailing provides a pathway to forging international understanding and friendship in an adventurous context, especially among young people. This study aims to explore “How, if any, the intercultural learning outcome is perceived during and 6 months after the cross-cultural sail training voyage?”

In terms of the theoretical framework, this study employs Dewey’s learning theory of experience to analyze the integrated learning experience of sail training and cross-cultural interactions. In addition, this study also refers to Goffman’s total institute concept and dramaturgy to interpret the participants’ intercultural behavior during and after the sail training voyage.

An ethnography approach is applied to investigate the impact of sail training on intercultural learning. Precisely, the study consists of the on-site participatory observation and on-site interviews during a 2-week exchange voyage; and follow-up interviews six months after the voyage. By the time I draft this abstract, I have finished most of the second round of data collection in Sweden, meeting the participants to have had 10 follow-up interviews.

The preliminary finding indicates that the context of sailing at sea creates a semi-total institute structure for the learners because of the confined space of freedom and the unavailability of connecting with the outside world. Especially the fact of social media detox facilitates the young people’s intercultural learning by forcing the participants to interact with each other. Nevertheless, due to the difficulty of physically distancing the sail trainees and the crew members as well as they are expected to work together, the relationship between them tends to be less hierarchical compared to the relationship in the total institutions defined by Goffman.
Outdoor Learning and Oral Production in English Second Language Teaching
– Acknowledging the Value of Learning English Oral Communication beyond the Classroom.

Background
Despite focus on outdoor education in Norway, little research has explored outdoor learning in second language acquisition. This study aims to examine if outdoor learning beyond the boundaries of the classroom helps students increase their oral proficiency in English. Bringing students out of the formal classroom settings, learners will explore various oral English communication activities, which will put them outside their comfort zone. This is both desirable and beneficial (Berman & Davis-Berman, 2005; Brown, 2008; Davis-Berman & Berman, 2002; Leberman & Martin, 2003). Beames (2016) argues that learning through adventure is something we should aim for as taking risks creates uncertainty of outcome. Risk-taking has shown to be an effective learning strategy (Beedie, 1994; Beedie & Bourne, 2005; Brown & Fraser, 2009; Bunting, 1999, Wolfe & Samdahl, 2005), and one would think this also applies to second language acquisition. There are also studies suggesting that outdoor learning improves the students’ agency in their learning (Kangas, Kopisto, Lofman, Salo, & Krokfors, 2017) and that education beyond the classroom in a natural environment could increase both motivation and curiosity about an academic topic (Canaris, 1995; Dewey, 1966; Dewey & Dewey, 1915; Fiskum & Jacobsen, 2012b).

This study will focus on 15-16 year old students at a lower secondary school in Norway and will apply a mixed method approach.

Research questions:

Overall research question: How might outdoor education help students increase their oral proficiency in English?

RQ 1: How can outdoor education help students become active participants (agents) in their own learning of oral English?

RQ 2: How does outdoor education help different learners become active participants (agents) in their own learning of oral English?

RQ 3: What characterizes changes in English oral production when the learning takes place outside the classroom?

RQ 4: Does outdoor education help different learners improve their oral proficiency in English?

Design:

I am planning an intervention study with a control group. Half of the students in the five classes at the school will get the intervention; the other half will make up the control group. The students will be chosen at random. Each class consists of about 30 students.
The study will consist of a pre-test planned in September 2017, an intervention in September-October and post-tests in November and December.

The pre-test will consist of a questionnaire and ten minutes individual interviews. The questionnaire will have questions about how motivated the students are for learning English, if English is important to them, the students' attitude regarding oral English, which methods do they benefit most from etc. In the following interview, the students will be asked to retell a text that they have read beforehand, and afterwards they have to answer several questions similar to the ones in the questionnaire. The interviews will be recorded using specific phonetic programmes to measure the students' oral proficiency (articulation rate). The linguistic variables to be focused on would be such as language flow, tempo and pauses. The higher the articulation rate, the higher the student's language proficiency will be.

The intervention will last approximately 6 weeks. I will plan and teach the outdoor communication activities myself which will take place twice a week (two hours per week per class).

In post-test 1, all the students will be given the same questionnaire once again and go through the same interview. This is to see if an increase in the attitude towards learning English can be detected and to check any increase in oral proficiency.

After post-test 1, all students will have “normal” English classes for about 6 weeks before taking a second post-test to see if any positive changes have lasted over time.

I plan to do a pilot study at the same school after Easter to test my interview techniques.
Recovery in everyday life - nature-experiences of persons with eating disorders

Objectives and background
This research project aims to offer a perspective on friluftsliv and nature as eating disorder recovery in everyday life.

The last decades there has been a growing amount of international research supporting the hypothesis that natural settings have multiple beneficial effects. Among this were the findings that interactions with nature enhance psychological well-being, contribute to recovery, reduce mental fatigue, has a broad range of physiological effects and increase social interaction and cohesion (Keniger, Gaston, Irvine, & Fuller, 2013; Mayer, Frants, Bruehlman-Senecal, & Dolliver, 2009). In Norway, friluftsliv (outdoor life) is emphasized as an arena that can facilitate coping strategies on an everyday basis, and it is an important source of wellbeing for the Norwegian people (Baklien, Ytterhus, & Bongaardt, 2015; Bischoff, Marcussen, & Reiten, 2007; Gelter, 2000; Kurtze, Eikemo, & Hem, 2009; Miljødepartementet, 2001).

The factors that support a person’s recovery process are typically related to developing coping strategies for everyday life such as participating in meaningful activities and healthy environments that are experienced as nurturing recovery (Borg, Karlsson, Tondora, & Davidson, 2009; Drake, Wallach, & McGovern, 2005; Rogers, 1979). Understanding recovery in an everyday life perspective offers an insight to view people experiencing mental health challenges as not only defined by their symptoms or diagnosis. The focus then, is on how the person can learn to live with the situation (Borg & Davidson, 2008; Davidson et al., 2005; Davidson & Roe, 2007). This research project explores recreation in nature based upon a person-in-context centred approach where the focus is upon fostering positive health through recognizing peoples potential, strength and abilities, rather than diminishing negative health (illness) (Dewar, McBride, & Sharp, 2016, p. 119; Mezzich, Botbol, & Salloum, 2016).

Research questions
1. Establish the theoretical foundation: What is the knowledge base about friluftsliv and nature-experiences as part of the recovery processes in everyday life of persons experiencing eating disorders?
2. How do persons with eating disorders experience friluftsliv and nature in everyday life?
3. In which ways can nature and friluftsliv be facilitators and/or barriers in person’s recovery processes?

Methodology
This research project is inspired by a hermeneutic-phenomenological approach (Van Manen, 2014). The hermeneutic-phenomenological approach emphasize lived experiences as being meaningful to a person and being interpreted from their point of view (Bryman, 2012; Kvale, Brinkmann, Anderssen, & Rygge, 2009). Phenomenological research is aiming for an in-depth understanding and new insight in human experiences. It is a way of connecting research to society and the praxis field (Natvik & Moltu, 2016). Hermeneutic phenomenology is based on the assumption that meaning occurs and knowledge is developed in a context in which both the participant, the researcher and the research project as a whole takes part (Finlay, 2011; Laverty, 2003).

Method
Research question 1 will be explored according to a systematic literature review. To answer research question 2 and 3, a qualitative method based on fieldwork, the go-along method (Kusenbach, 2003), field notes, log and individual interviews (Fangen, 2004; Kvale et al., 2009) will be applied. The participants will mainly be recruited through the Norwegian NGO Rådgivning om spiseforstyrrelser (ROS), 6-10 persons.
What I plan to do next: continue the review-process, do the pilot and start recruiting participants.
References


Out-of-School Learning in Hungarian Primary Schools

Background

Hungary is one of the countries where education policy has not integrated well-out-of-school learning (OSL) into public education. Neither does Hungary have a network of outdoor learning centres assisting and complementing public education as in Scandinavian countries. This is not to mean that Hungary has no suitable natural or built environments – we have several national parks, educational trails, zoological gardens, museums, etc. and student science centres are being built throughout the country. That is, there is no problem with the supply but how about the demand? It is of crucial importance to map it since in the absence of education policy support, it is mostly the teacher and headmaster attitudes towards the applicability and educational use of out-of-school learning on which the participation of school groups hinges. Therefore in 2016 an online questionnaire was sent to Hungarian primary school students, their class teachers and schoolmasters as a part of a complex OSL research project. The present study aims to discover (1) the method of use and frequency of OSL spaces by Hungarian primary schools, (2) the attitudes of schoolmasters, class teachers and students toward the outdoor class visits or field trips in general.

Method

The data collection was carried out between May and June 2016. Participants included students in Grades 3 to 8, their class teachers and schoolmasters with a total of 4892, from 76 Hungarian primary schools that volunteered to participate. Table shows the four sections of the teachers’ questionnaire. The schoolmasters’ and students’ questionnaires were similar.

<table>
<thead>
<tr>
<th>Structure of the Questionnaire</th>
<th>Number of Items</th>
<th>Sample Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Organizational Structure of the School</td>
<td>7</td>
<td>What type of instruction is in your school? What kind of employees are supporting the education in your school?</td>
</tr>
<tr>
<td>II. The Use of OSL Spaces Questionnaire</td>
<td>4</td>
<td>How many classes visited an average class visit the location of the last school year? What was the main topic of the OSL? In your opinion, have you used the OSL to achieve the following aims: social experience, cultural heritage, etc.</td>
</tr>
<tr>
<td>III. Attitudes toward Specific OSL Programmes</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>IV. General Attitudes toward OSL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. The OSL programme as a learning tool</td>
<td>12</td>
<td>Learning in the classroom is more effective than learning during an OSL activity. OSL raises students' interest and encourages them to search for additional information in the literature.</td>
</tr>
<tr>
<td>B. Individualized learning as learning method during OSL programme</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>C. The social aspect of OSL programme</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>IV. Organizational Conditions of OSL</td>
<td>2</td>
<td>How often did you participate in OSL program compared to the previous full year?</td>
</tr>
</tbody>
</table>

Selected Results

The data were analysed using SPSS; descriptive statistics and correlations were computed and factor analyses and t-tests were performed. The most frequently visited places for out-of-school activities were theatres and concerts with educational trails/national parks, museums/art galleries and libraries/archives not far behind. The least popular places in the student questionnaires were science centres and laboratories. The classes participated in an OSL programme 1-2 times on average during the semester. 34% of the OSL activities took place as a part of the annual class trip, the second most frequent occasion (15%) was the subject matter of a given school subject. The most frequently used methods of instruction and learning were presentations and guided tours (24%) followed by group work (22%). Other recurring forms of activity were individual work (15%) and competition (12%). However, the intention to future participation (Diagram) was outstanding in all the three subsamples, and both boys' and girls' general attitudes toward OSL were significantly higher than attitudes toward learning in the classroom.

Conclusions

The data show that our hypothesis was correct: we can only speak about local school initiatives rather than about a national trend, since the classes visit the OSL places just once or twice a year on average. Looking at the responses of headmasters and teachers, the main cause appears to be an over-demanding curriculum, which leaves little room for out-of-school activities. Other problems include financial constraints and difficulties organizing such an event. OSL programmes are most likely to be organized in the context of the annual class trips, which typically have relatively low educational relevance. A second problem is that when students do participate in a programme, they tend to have a passive role as a spectator, which carries little educational value. Maybe that is the reason, why students' attitudes toward OSL programmes' effect on their learning motivation and science learning are significantly lower than teachers' and headmasters', opposite our hypothesis.

The particularly high attitudes toward OSL suggests deeper examining on effectiveness with concrete, small-sampled and mixed-methods designed study, which data analysing is on progress now.
Teaching outside the classroom:

The influence of regular Outdoor teaching in the school surroundings on self-concept and integration (social participation) of pupils, especially of refugee children - a case study

Dissertation project by Gabriele Lauterbach

Problem
⇒ the school’s current challenge to integrate the school aged refugee children into the class and school community and finally into the society.
This results in the following research object:

⇒ Determination of the influence of regular Outdoor teaching (OT) in interdisciplinary education on the integration (IN) of pupils.

Theory framework
⇒ constructivist educational theory
⇒ pedagogy of participation

Hypotheses
⇒ regular outdoor teaching contributes to the integration (IN) of pupils with different cultural backgrounds.
   ⇒ Subhypothesis 1: Outdoor teaching affects the self-concept of the (refugee) children (I; self)
   ⇒ Subhypothesis 2: Outdoor teaching influences the social acceptance of the (refugee) children (we; position in the group, social networking)
   ⇒ Subhypothesis 3: Outdoor teaching influences the relationship to the (new) home ("space"; place-based learning theories)

Design
⇒ prospective longitudinal study at one intervention school
⇒ n = 44 school children, 2nd + 3rd class at the elementary school of Bernried (3 refugee children, 1 integration child with Downsyndrom, 2 non-escaped children with migration background)
⇒ case study [gender questions, religion: Christian / Muslim, possibly refugee child / child with migration background]: I am hereby primarily concerned with understanding and recognising patterns.
⇒ mixed methods: Qual -> [(Qual -> quan) + Quan]

Methods of data collection
⇒ Qual:
   ⇒ ethnographic method, participating observation
   ⇒ guided interviews with pupils, single and group
   ⇒ guided interviews with 2 former schoolgirls (refugees from Syria)
⇒ expert interviews with teachers, as well as the school attendant for the integration child
⇒ focus interviews with selected parents due to pupil observation
⇒ photo-documentary method
⇒ Qual -> quan:
⇒ "Questionnaire on Social Participation (SPQ)".
⇒ teacher observation is recorded numerically on 5-values-Likert scale and stored in three levels (outsiders, acceptance, friendship), three measurement times, Schwab, S. & Gebhard, M. (2016)
⇒ Quan:
⇒ short version of the "Questionnaire for measuring the dimensions of integration of pupils FDI 4-6 ", three measurement times, Venetz, M., Zurbrüggen, C. & Eckart, M. (2014)

Methods of data analysis
⇒ creating logs from the field notices; concentration into memos and regular reflection with "expert team" in order to linking the empirical findings with theories and text production
⇒ linear mixed-effects model (due to the small sample number and due to epistemological beliefs Bayesian computational method)

Contextualization and hierarchization of different data sets: elaboration of patterning and understanding of individual cases; possible end result: empirically-based recommendations for best practice - outdoor schooling concepts

First impression
⇒ Self-concept scales from Harter not suitable for target group (Pre-Test from July 2016)
⇒ I also encountered difficulties with the other two questionnaires
⇒ The design and effectiveness of the DT is strongly dependent on the respective teaching staff
⇒ integration by DT does not happen by itself (it needs to be pedagogically targeted)
⇒ topic of integration of refugees alone has so far produced little empirical evidence; social integration affects all pupils and can not be reduced to the refugee children
The Role of Outdoor Education for Child Development in Italian Nursery Schools

Laura Fabbri: Postgraduate student in Psychology, Research Assistant Department of Psychology, University of Bologna, Italy.

Theoretical framework

Outdoor Education (OE) is an educational approach, characterized by action centered and thematic learning processes frequently involving outdoor activities and its specific aim consists in promoting learning through the interactions among emotions, actions and thoughts (Dahlgren & Szczepansky, 2004). OE provides experience of exploration connected with knowledge as in open-ended play (Cutter-Mackenzieand Edwards 2013). A growing body of research has given evidence that nature has deep effects on wellbeing, above all for children because of their greater neuronal plasticity (Wells, Evans, 2003). Current research demonstrates that Outdoor Education improves peer work, facilitates leadership development, problem solving skills and has positive effects on motor, language and cooperative skills; it also brings a reduction in antisocial and deviant behavior in school contexts (Fjørtoft 2001; Malone and Tranter 2003; Pyle 2002).

Research questions

This longitudinal study aimed to investigate the influence of Outdoor Education on different areas of development in 3 year-old children attending Italian nursery schools across a time range of 3 school years. The study was conducted between January 2014 and May 2016 with the general objective of exploring if OE significantly contributed to a higher increase in development in children attending schools based on OE approach, in comparison with children attending schools whose teachers and educators were not trained in OE.

Methodology

Participants and Procedure. The study was conducted between January 2014 and May 2016 involving 2 nursery schools in different areas of Emilia Romagna region (North of Italy). A sample of 169 toddlers was recruited and the teachers of the schools agreed to participate to the study. For 3 consecutive years, at the beginning and at the end of each year, for a total of 6 assessments, the teachers compiled Kuno Beller Development Tables, for each class of the schools. In addition, for each outdoor activity or tour done throughout the year, the teachers of each school compiled the Diary of Trips.

Measures. The research involved the administration of the following instruments:

a. The Kuno Beller Development Tables (Italian translation and adaptation by Mantovani, 1995) are an instrument for measuring the child development and planning educational activities. They are used to detect the perception and relations among different developmental area in order to promote activities, which could foster child development in family and group situations. It is not a diagnostic tool, but rather reports what children do in everyday situations of interaction, according to the parent’s or teacher’s perception, and it is particularly suited for analyzing the child development in the first three years of life. Eight areas of child development are considered: Domain of Body Function, Awareness of the Surrounding Environment, Social and Emotional Development, Play, Language, Cognitive Development, Gross and Fine Motor Skill. In our study they were compiled by the teachers.

b. The Diary of Trips/Outdoor Activities was specifically created for this study and used by the teachers to record, after each trip, the following items: Date; Daily Weather; Group (small, max
5 children, big, max. 10 children, whole class); Place (school garden, public park, urban space); Duration; Activity.

Findings & Conclusions: As data collection has been completed only recently, the study results are still being worked out. In a recent preliminary study, which investigated, across one school year (from January to June), the influence of Outdoor Education on different areas of development in 1-3 year-old children, the findings highlighted that outdoor activities, compared to indoor activities, offered greater opportunities for the child development, specifically in the following areas as detected by Kuno Beller: awareness of the surrounding environment and motor skills. We expected to replicate the same results on a larger sample and to get also new findings.
Health Promoting Nature for People with Mobility Impairments (PMI)

Research questions: 1. What kinds of health benefits does nature have for PMI? 2. What are their preferences and perceived barriers for the use of nature? 3. How to design nature for the use and health promoting purpose of PMI? 4. How to combine nature with the health of PMI in an interdisciplinary perspective (Landscape architecture, rehabilitation, sociology and public health, etc)? 5. And what is the best way to disseminate this knowledge to the public and different professions?

Theoretical Framework: Nature can be a resource for our health and quality of life. Over the past decades, research on nature and human health relations has shown evidence that visual and physical contact with nature provide health benefits. The health benefits are identified at cell, individual, and population levels.

However, there is a large group of people who do not have as good access to nature's many benefits. People with mobility impairments face a number of barriers that make it difficult for them to be active in nature and thus deprive them of the great health benefits that nature offers. And PMI is already a group that has worse health than the able bodied population. Physical disabilities and the other chronic diseases created perceived burdens for their family and caregivers. So when it comes to PMI, the research previously mentioned is insufficient.

With the development of the society, there is a general consensus that their HRQOL should be improved and many countries have adopted this view as an official policy, passing laws like the Disability Discrimination Act in order to offer persons with disabilities the same rights to public services. Consequently, the health benefits should be offered to people with mobility disabilities with an accent on their healing and recovery. And this knowledge should be studied and disseminated to varied audience by different education means.

Methodology:

1. The knowledge collection will use the methods of literature research and experts consultation for evidence and experiences. And Snowball methods for a more wide range of knowledge and best practices like the good example of green spaces and how they use nature for PMI all over the world.
2. Interviews will be made using open-end questions with PMI and their caregivers and using means-end methodology to analyze the data to find out their attitudes, preferences and barriers.
3. Using a typology methodology in the case studies to find out what kinds of nature contributes most to the health of PMI.

Findings: Now, there are some findings from the knowledge collection. Nature and different kinds of nature-related activities have different categories of health benefits including physical health benefits, psychological health benefits and social health benefits based on the review of scientific literature from different research fields like rehabilitation, landscape architecture and public health etc. PMI do have some different preferences and perceived barriers regard their use of nature. This should be considered carefully when designing to make a more accessible, usable and enjoyable health-promoting nature for them.

What to do next:

1. Analyze data from the interview with the target group to understand their preferences and perceived barriers.
2. The feather that a health promoting nature should have based on the expert experiences and the inspiration from good practices.
3. Summarize some design guidelines for health promoting nature in the view of people with mobility impairments. And if possible, test the guidelines with target group in an outdoor lab for the efficacy of the different items and modify the guidelines base on the results from the experiments.
4. Find a proper way for the dissemination of knowledge. This is what I would like to discuss in this summer school.
How is *udeskole* understood by teachers?

Karen Barfod, PhD project 2013 – 2017, VIA University College and Copenhagen University

**Research Question(s):**

The title is operationalised into five questions, each being discussed in a separate article.

1. What is the prevalence of *udeskole* in Denmark? (published) (1)
2. What is the pedagogical and theoretical background for *udeskole*? (Book chapter, in Danish, submitted)
3. Can *udeskole* support inquiry-based education in Mathematics and Science? (In Danish, submitted)
4. Experienced Teachers’ Perceptions of *Udeskole* (in prep - rejected, rewritten, being proofread, in English)
5. The art of teaching *udeskole* (in Danish, draft)

**Theoretical framework**

Framed by critical realism (2), this study include both quantitative and qualitative methods. The research questions are related to a complex inquiry, *udeskole* as a pedagogical practice from the teacher's point of view. The thesis encompass studies of the spread of education outside the classroom, the teacher's pedagogical practice and teacher's experience of everyday life with *udeskole*. This multi-perspective understanding of *udeskole* requires a background that include a versatile study of teachers' approaches to outdoor education.

**Methodology**

1. Nationwide telephone survey, Pearson’s Chi-square test in SPSS 18
2. Examination, contextualization and theoretical analysis of contemporary Danish *udeskole* practice and background.
3. Ten interviews of experienced outdoor teachers thematic analysed (3) in open coding, and observations (28 days) analysed in terms of degrees of meaningful choices during the incidents (4,5)
4. Ten interviews of experienced outdoor teachers, thematic analysed (3) according to their motivation, framed by Self Determination Theory (6)
5. Ten interviews of experienced outdoor teachers, thematic analysed according to utterances concerning children’s outcome and intentions to practice, case study of one *udeskole* day analysed according to three didactical approaches (7,8,9)

**Findings**

Even if *udeskole* is increasing in prevalence, it still seems to be a lonely crusade for tenacious teachers. The *udeskole* practice entails potential for inquiry based education, and is claimed to rely on a progressive, critical and experienced based learning paradigm with attention to formational aspects. The ‘importance of the present’ (8) in *udeskole* is connected by the teachers to children’s motivational and social aspects, whereas the ‘importance for the future’ seems to be connected to normative, formational goals. (Not easy to boil results down to one paragraph).

**Plan to do next**

I am really struggling with the overall introduction to the thesis, and the literature review, as the focus is too broad. Should I do a literature for each field - ? more than I have done in each of the articles?
Sources:


Military Outdoors – Exploring the Psychosocial Benefits of Outdoor Recreation and Education on Danish War Veterans

Background

From 1991 to 2016 the Danish Armed Forces have deployed a total of 67,371 soldiers to conflicts around the world (Danish Defence Ministry, 2016). It is estimated that as much as one in five suffer injuries of a psychosocial nature upon coming home and in the years following deployment (Danish Health Authority, 2010; USPER PSYK, 2009, 2010, 2013). These injuries can lead to marital issues, social isolation, substance abuse, Post-Traumatic Stress Disorder (PTSD), depression, anxiety and other psychosocial issues if untreated (Hoge, 2007; Seal, 2009). A Danish study suggests the future can see an increase in psychosocial injuries among Veterans (Vedtofte, 2016).

Objectives and relevance

The traditional and accepted treatment to these injuries is visitation to pharmacological and cognitive treatment or counselling through The National Health Care System. Relying solely on this approach can be problematic, as studies in the USA show that up to 50% of military veterans ignore symptoms and never report injuries, due to the stigma associated with it (Ewert, 2014; SAMHSA, 2012; Hoge et al., 2004). Therefore it seems important and useful to explore less stigmatizing alternatives to supplement the traditional treatments. The use of Outdoor Recreation and Education to improve psychosocial factors is an almost unexamined field in Denmark that shows several areas of promise for the veteran population. This approach is supported by the following:

- Ten Danish Veterans diagnosed with PTSD responded well to a 10 week Nature Based Therapy Program in a Therapeutic Healing Garden (Poulsen, 2015)
- The unique camaraderie, training and experiences associated with military service translate into a willingness to open up and engage in outdoor relational and recreational activities with other Veterans (Blok, 2017)
- Outdoor Recreation is already a large and important part of Danish culture and everyday life (Jensen, 2014)
- Participation in Outdoor Recreation Programs predicts improved psychosocial well-being among Veterans in the USA (Vella, Milligan, Bennet, 2013; Kaplan, Duvall 2014)
- In the USA many popular Outdoor Recreational Programs exist focusing on building up the body and mind for the participating veterans (Outward Bound for Veterans, Sierra Club, Warrior Expeditions et al.)

Methods

To examine the objectives using a context dependent and in depth Case Study design (Flyvbjerg, 1998) collecting data from multiple methods to better secure understanding and allowing new information to be incorporated in process.

1. To review existing literature on War Veterans and the use of Outdoor Recreational and Educational activities
2. Investigate, synthesize and build a theoretical framework with the aim to support and improve Veterans Outdoor Recreational patterns and the organizations that support and govern Veteran policies
3. Investigate and analyze the effect and impact of Outdoor Recreation on the Danish Veteran population through a series of semi structured in depth qualitative interviews (Kvale, Brinkmann, 2009)
4. Measure the impact of Outdoor Recreation on Psychosocial factors by sampling Danish Veterans before and after participation in extended Outdoor activities by quantitative methods (Kaplan, Duvall, 2014)
5. Publish the information and conclusions from bullet 1-4 in relevant journals and magazines

Niels Blok, Center for Outdoor Recreation and Education, Forest and Landscape College, University of Copenhagen. M +45 20 84 12 12 E nbl@ign.ku.dk
The effect of different bike rim diameters and somatic characteristics to the energy expenditure of the organism

Theoretical framework:
Based on the research of accessible data resources and different studies with similar research field (e.q.):

we consider this topic interesting, useful and beneficial to commercial sports field. The aim of the study is to determine the difference in energy expenditure (EE) of the body when using different types of bike rim sizes. The results of the study will be used for other studies, and as a support or recommendation in a different bike selection. The data can serve as a basis for development of bike technology or as an interesting sign for cyclists’ trainings.

Research questions:
How will the different sizes of the rim diameter (26", 27.5", 29") effect the functional response of the cyclists organism during repeated measurements in real conditions?

How will be effected the functional response of the body when biking on the rims of different diameters in interaction with different cyclists body height?

Aims :
A comprehensive summary of existing knowledge relating to this research.
Determine the difference in energy expenditure when using different sizes of bike rims
Methodology:
This project consists of few isolated experimental studies. The research group will be chosen from students of Charles University, Faculty of Physical Education and Sport, man of age 20 – 35 years, active athletes, recreational and performance mountain bike cyclists, with an average of 2500 - 4000 km per year. Dependent variables will represent a physiological response of the organism (heart rate, oxygen consumption). Independent variables are different technical components of the bike (rim sizes 26", 27.5", 29"). The anthropometric characteristics (body height, the length of the femur and the fibula, foot length) will be involved as a covariate.
The aim of the pilot study will determine the reliability of measuring energy expenditure of mountain biking in laboratory and real conditions. Model performance will be measured under laboratory conditions and actual performance will be measured in real outdoor conditions in two separate measurements to determine what will be different functional response of the organism.
Experimental study with an intra-group design will be completed on the terrain circuit, with a different terrain profile lines (plane, downhill and uphill with a combination of different types of terrain surfaces). It will be an endurance test with a duration of 15-20 minutes, performed submaximal loads below the anaerobic ventilation threshold. Heart rate will be monitored by sporttester RS400, oxygen consumption will be measured using a metabolic analyzer 3B Metamax. Each participant will go repeatedly (using different sizes of wheel rims 26", 27.5", 29" on the same round of the same circuit at the same rate as measured using the tachometer while driving and continuous checks at specified time periods.
Abstract

Research questions
In China, carbon sequestration by forest plantations is an important component of climate change mitigation plans. Based on its reported growth rates, our hypothesis is that *M. glyptostroboides* plantation forests in Shanghai should have a noticeable capability for carbon sequestration under the optimal management prescriptions similar to other of its companion species, such as the also fast-growing conifer Chinese fir (*Cunninghamia lanceolata* (Lamb.) Hook). However, the ideal combination of planting densities, thinning intensities and thinning time to reach such optimal carbon sequestration is unclear. Therefore, the objective of our research was to identify the management prescriptions for *M. glyptostroboides* plantations that maximize net primary production (NPP) and at the same time are both ecologically sustainable and suitable for Shanghai urban forestry in the long-term.

Methodology
To achieve this object, the effects of tree densities and thinning treatments on the net primary production of the *M. glyptostroboides* plantations were explored through simulating different combination of management with the FORECAST ecosystem-level forest model, based upon the monitoring data of permanent sample plots gathered by long-term observation over the urban forest ecological system in Shanghai.

Conclusions
Initial stand density is the most important factor defining further management actions during the rotation. If initial stand density is lower than 3000 stems ha⁻¹, intra-specific competition is low and hence thinning is not necessary. However, applying moderate thinning seems to be a suitable way to maintain or even increase net primary productivity in densely stocked *Metasequoia glyptostroboides* stands (initial density equal or above 3000 stems ha⁻¹). In spite of this, some productivity loses over consecutive rotations seem to be inevitable unless fertilization, deposition or alternation of planted species such as legumes compensate for the reductions on N availability. Finally, the use of an ecosystem-level forest model has been proven as a suitable way to assess the sustainability of alternative management regimes of a tree species for which no long term data on growth and yield neither from natural stands nor from plantations exist.