

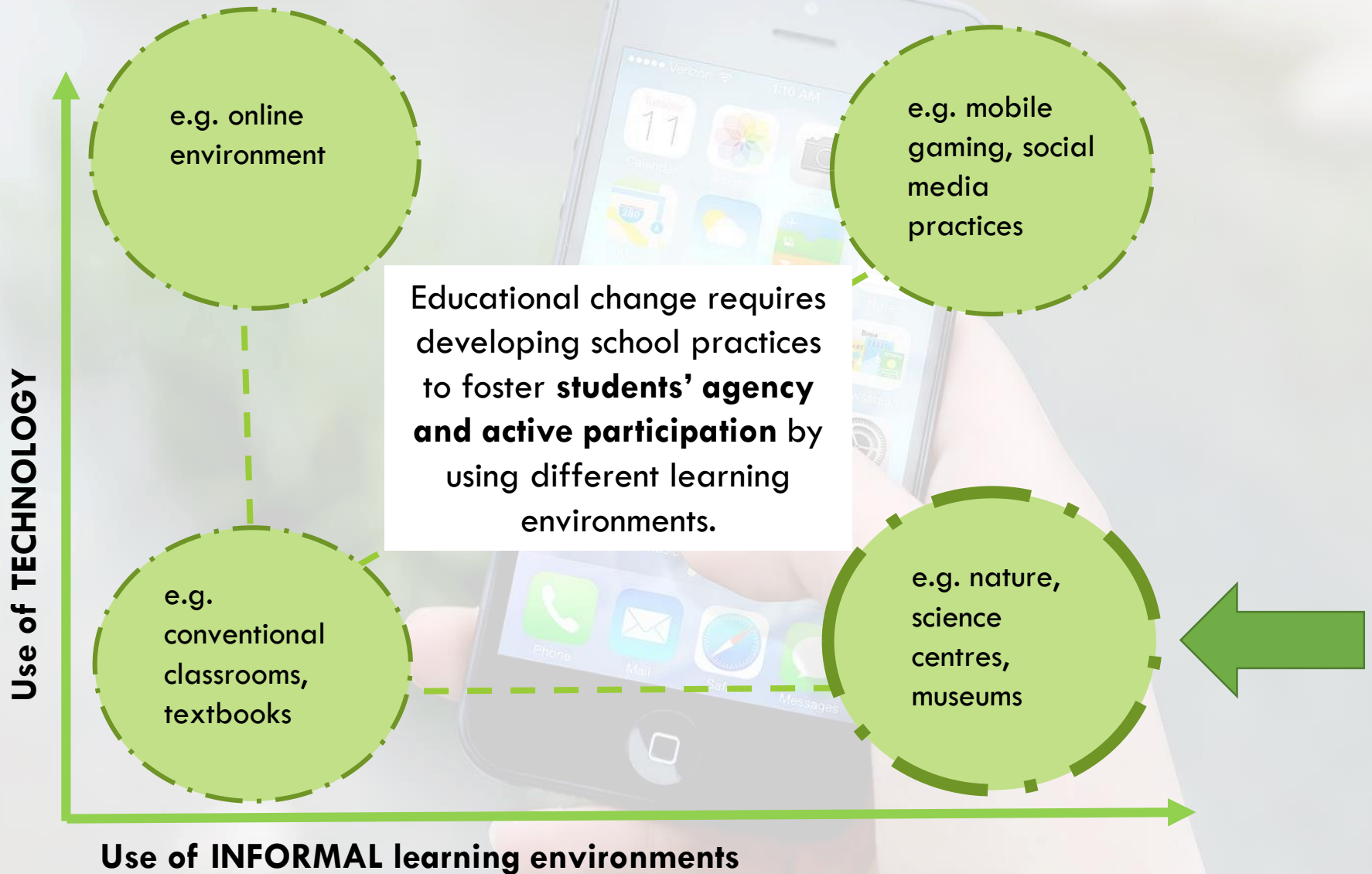


HIKING IN THE NATURE TO PROMOTE LEARNER'S AGENCY AND COMPETENCES

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INTRODUCTION, perspectives for learning environments



(Krokfors, Kangas, Kopisto, Rikabi-Sukkari, Salo, & Vesterinen, 2015).

INTRODUCTION, Curricula and pedagogies

- The aim of new curricula is to focus on students' competences, positive dispositions and capacities. (Caena, 2014; Christie, Higgins, & McLaughlin, 2014)
- Learning outdoors allows student-centered and playful pedagogical methods (Aerila, Keskitalo, & Urmson, 2016; Brymer & Rensaw, 2010)



OUTDOOR LEARNING

(Beames, Atencio, & Ross, 2009; Dolan, 2016; Higgins, 1995)

1. In – outdoor activities
2. Through – social and personal learning
3. About – cross-curricular topics
 - 'place-based' engagement, where children can negotiate together
 - Nature, school grounds



'ADVENTURE'

in learning

- 1) Narrow interpretation with constraints: students will not be empowered, acquired skills are not relevant in real world, they have few opportunities to experiment and take responsibilities.
- 2) Broad definition with affordances: opportunities for confronting the world of change, unpredictability and complexity

(Brown & Beames, 2017; Gilbertson et al., 2006; Rubens, 1999; see also Hyvönen, 2008)

AGENCY

Traditionally, in classroom settings, students' role is to practice and repeat procedures that teachers demonstrate, and the teacher holds power and determines what is correct and acceptable (Boaler & Greeno, 2000; Gresalfi et al., 2009).

Students should be active agents, social actors and knowledge creators in their learning processes (Hyvönen et al, 2014; Hujala, Helenius, & Hyvönen, 2010).

Learning outside a classroom provides more possibilities to exercise AGENCY, often due to changes in the students' and teacher's role (e.g. Hyvönen, 2011; DeWitt & Hohenstein, 2010).



Student agency is considered a social action that emerges in relation to associating with other people (Engle & Conant, 2002)

Efficacious agency: resilience, self-regulation and self-efficacy (Hyvönen et al., 2014)

EFFICACIOUS AGENCY

(Hyvönen et al., 2014)

- Is build upon the theory of self-regulated learning: srl-learners use a a repertoire of strategies – cognitive, behavioral, emotional and motivational – to guide their learning process and enhance engagement (Winne & Perry, 2000).
- Consists of
 - Self-efficacy beliefs: childrens' confidence in their ability to succeed (Bandura, 1997)
 - Resilience (Masten, 2001): competence-building, protective factors, well-being (Johnson, 2008; Martin & Marsh, 2005) and positive attitude to learning (Tang & Butler, 2012).



Aim of efficacious agency is to support students' awareness of their potential for being and becoming competent.

Regulation skills grow from experiences: "We are agents of experience rather than simply under-goers of experience." (Bandura, 2001, 4)

AIM AND RESEARCH QUESTIONS

The aim was to investigate how nature, specifically a **hiking course** in Finnish wilderness can enable students to exercise their agency and how it promotes their competences.

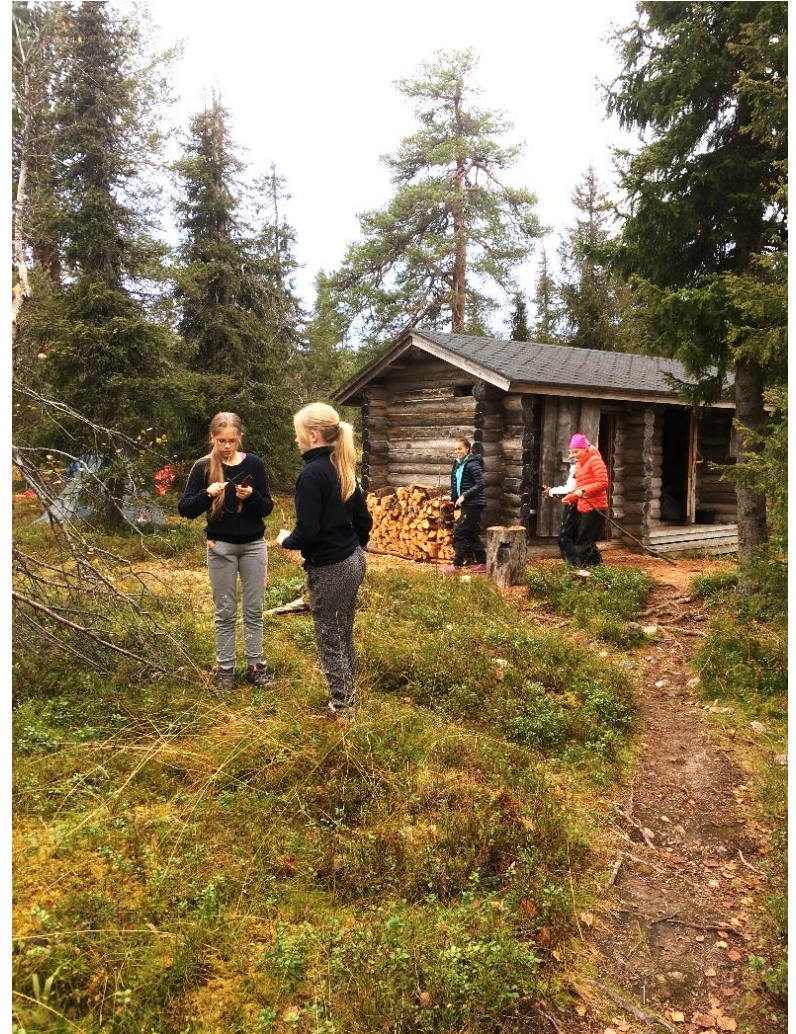
RQ1: In which ways students' agency emerges during a hiking course?

RQ2: How the competences needed in the activities are manifested?



THE ANNUAL HIKING COURSE

- The hiking course is an annual curriculum-based activity linked especially to geography and biology.
- The goal of the course is to promote students' personal growth, collaboration skills, and self-esteem, as well as to provide them with authentic learning experiences in nature.
- The hiking trip lasts for three days, including two nights outdoors in Pyhä-Luosto National Park, total length 35 km.



PARTICIPANTS

- Eighth-grade students (N=21) and their subject teachers (N=2)
- The teachers had a long experience in nature-based teaching and hiking.



Each student took care of and carried his/her own items needed in the trip.

Students, teachers, and a researcher hiked 35 kilometers in total.



DATA

PROCESS DATA

1. Student's digital diaries

Students were instructed to take photos and write notes during the trip and to reflect on their experiences.

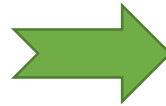
2. Participant observation

- Audio-recorded field notes and photos
- Students' and teachers' interviews



DATA ANALYSIS

- The data were analyzed with the use of qualitative inductive content analysis (Schreier, 2012)
- In the first cycle of analysis, the focus was on the descriptions and representations of activities that **reflected agency**.
 - A unit of analysis varied from one sentence to a multi-paragraph excerpt
- In the second cycle of the analysis, the focus was on the various competences needed for the learning activities.



- Analysis produced **four categories of students' agency**:
 - 1. Responsibility**
 - 2. Resiliency**
 - 3. Collaboration**
 - 4. Feeling of success**

TENTATIVE FINDINGS

RQ1: In which ways students' agency emerges during a hiking course?



Students' agency emerged as collective (co-operation, collaboration) efforts and contributions, which became evident in reciprocity and equality.



The students were responsible for their own and others' needs and well-being; they carried food and all camping equipment, such as tents and sleeping bags; they cooked, and they set up a camp when arriving at a new location along the path.



Despite of a variety of negative feelings and challenges the students were persistent, and highly satisfied. They were very satisfied for discovering the nature and surpassing challenges along the way.



“The trip felt like never ending...and we were near a nervous brake.”

Feeling of success: Students' agency emerged as a shared feeling of joy and satisfaction resulting from their success. *“We all are so proud of ourselves!”*

TENTATIVE FINDINGS

RQ2: How the competences needed in the activities are manifested?



The three-day hiking course provided students' opportunities to exercise collaboratively

- Social and negotiation skills
- Problem-solving
- Personal and social responsibility

Pedagogically, it is important provide freedom, ownership and trust for students, which can enable a sense of agency for them.



CONCLUSIONS



- The results provide evidence that outdoor learning environment is a rich contexts for exercising agency and practicing competences: it is an affordance, not a constrain.
- Results encourage to develop teacher education programmes to include nature and other out-of-classroom settings in potential learning contexts.
- Teachers' pedagogical thinking is a key – how teachers give room for students' agency and autonomy.

FUTURE RESEARCH

is needed to give more evidence
e.g. on

- 1) How nature-based learning activities and agency can promote learning and competence development?
- 2) How competences are assessed in different out-of-school contexts?
- 3) Which are effective triggers for building efficacious agency?
- 4) How gamification and digital technologies can be used for promoting efficacious agency?

