

BILDUNG, EDUCATION AND SUBJECT DIDACTICS IN THE ANTHROPOCENE EPOCH, January 11–12 2022

Abstracts

Innehåll

A1 PARALLEL SESSIONS 12:30–14:00 TUESDAY	2
(A11) Michael Paulsen, Southern University of Denmark	2
(A12) Ole Andreas Kvamme, University of Oslo.....	2
(A13) Jesper Sjöström, Malmö University.....	3
B1 PARALLEL SESSIONS 12:30–14:00 TUESDAY	4
(B1) Lotta Dessen Jankell, Stockholm University	4
(B12) Niklas Gericke, Karlstad University	4
(B13) Paul Clucas, Malmö University.....	5
C1 PARALLEL SESSIONS 12:30–14:00 TUESDAY	6
(C11) Jesper Garsdal, VIA University College.....	6
(C12) Geir Skeie, University of Stavanger	6
(C13) Ingrid Grosse, Karlstad University	7
A2 PARALLEL SESSIONS 14:30-16:30 TUESDAY	8
(A24) Albin Gripe, Stockholm University	8
(A25) Kenneth Nordgren, Karlstad University.....	9
(A26) Carola Nordbäck Mittuniversitetet.....	10
(A27) Marianne Leth, Via University	11
B2 PARALLEL SESSIONS 14:30-16:30 TUESDAY	12
(B24) Güliz Karaarslan Semiz Ağrı İbrahim Çeçen University, Ağrı, Turkey; Stockholm University, Stockholm, Sweden.....	12
(B25) Torben Spanget Christensen, Jonas Teglbjerg & Ane Qvortrup, University of Southern Denmark	13
(B26) Emil Mörk Karlstads University.....	13
(B27) Merve Yavuzkaya, Malmö University	14
C2 PARALLEL SESSIONS 14:30-16:30 TUESDAY	15
(C24) Dorte Eggensen, VIA University College and Aarhus University.....	15
(C25) Jonas M. Hoeck, Karlstads universitet.....	15
(C26) Sofia Wijkmark, Karlstads universitet.....	16
(C27) Ola Uhrqvist & Simon Wessbo, Linköping University	16
A3 PARALLEL SESSIONS 10.45-12.15 WEDNESDAY	17
(A37) Hanna Sjögren Malmö University.....	17
(A38) David Olsson, Karlstad University	17
(A39) Raffaele Brahe-Orlandi, Via University College.....	18
B3 PARALLEL SESSIONS 10.45-12.15 WEDNESDAY	19
(B37) Gabriel Bladh, Karlstad University	19
(B38) Maria Deldén Högskolan Dalarna	20
(B39) Søren Witzel Clausen, VIA University College	20
C3 PARALLEL SESSIONS 10.45-12.35 WEDNESDAY	21
(C37) Jonas Lysgaard, DPU	21
(C38) Nathalie Popa, Karlstad University	21
(C39) Martin Gren, Linnéuniversitetet.....	22
(C40) Martin Stolare & Christina Olin-Scheller, Karlstad University.....	22
Presenters in alphabetical order	23

A1 PARALLEL SESSIONS 12:30–14:00 TUESDAY

(A11) Michael Paulsen, Southern University of Denmark

Pedagogical consequences of different relations to the Anthropocene

In this paper I present and discuss different understandings, interpretations and assessments of the concept of the Anthropocene. Especially I try to compare four different stances: (1) A natural and technical science based view, in which the main problem is humanity and its technically mediated resource consumption, (2) the ecological marxism view, that the main problem is capitalism, (3) the new materialism view, which holds that specific entanglements between humans and nonhumans are the problem and (4) the new idealism view, which argues that the main problem is the world view developed in the late-Holocene, that has marginalized life and dialogue with more-than-humans. I try to deduce and delineate the pedagogical consequences of each of these four theoretical interpretations, including their problem-articulations and their proposed solutions – and the basic assumptions and understandings grounding each perspective. The upshot is that despite the first three perspectives all has important things to tell, the fourth perspective is argued to be the only one, which takes living beings seriously enough and thus the only one, which have the potential to work out an adequate ethical foundation of pedagogical activities that seeks to encourage, support and cultivate 'a good life' across species and singular creatures in the shared life-critical zone.

(A12) Ole Andreas Kvamme, University of Oslo

Reconsiderations of Bildung in North European didaktik

This paper reconsiders North European didactic theory in current time of history. The historical context is conceived of as the era of the Anthropocene, referring to the massive and pervasive human impact on the earth is massive and pervasive, with devastating consequences for the conditions for life. Within various academic fields, this conception is employed. At the same time 'the Anthropocene' is discussed and criticized, concealing as much as it discloses. Humanity is not one, but many, and burdens and privileges are historically and in the present unequally distributed. Moreover, the human species partakes in a complex web of relations constituted by other species and the material world. The ethical and political dimensions here involved, are reflected upon in this paper. The paper is more specifically a part of an ongoing reconsideration of the Bildung theory of Wolfgang Klafki. Klafki is centrally positioned in the rethinking of North European didaktik in the 20 century, in which Bildung, formations of the self, plays a key role. In Klafki's later works, epochal key problems are integrated in his concept of Bildung, addressing environmental crisis, social inequity and threats to peace on earth, in a global outlook that transcends Bildung's traditionally national scope. I have previously examined Klafki's account as an expression of and an educational response to the Anthropocene. In this paper I further elaborate on the suggestion to see the mediating element of the common, crucial in Klafki's Bildung theory, not as limited to human interest, but including concerns for life on earth, and to conceive of historical situatedness as an aspect of the commonality of Bildung.

(A13) Jesper Sjöström, Malmö University

Didaktik for Bildung in our Anthropocene Epoch

Bildung is an old and complex concept with at least five historical elements (e.g. Sjöström & Talanquer, 2018; Sjöström & Tyson, in press). A socio-political dimension is the most recent. As an educational concept it emerged in Germany in the mid eighteenth century (Horlacher, 2016). Especially in Germany and Scandinavia conceptions of Bildung became the general philosophical framework to guide both formal and informal education. At least five versions/traditions of Bildung can be identified (Sjöström et al., 2017) and will be described in the presentation. Based on such previous conceptualizations of Bildung, I will elaborate on a contemporary understanding of Bildung for our Anthropocene epoch. A Bildung view is always connected to values, visions and worldviews as well as identity (e.g. Sjöström, 2018). In focus in the presentation will be what I and co-authors have called eco-critical-reflexive Bildung (e.g., Sjöström, Eilks & Zuin, 2016; Sjöström, 2018). It emphasizes especially the socio-political dimension of Bildung and can be seen as an educational meta-theory for (subject) education in our Anthropocene epoch (see also e.g. Kvamme, 2021; Taylor, 2017). Based on such a meta-theory it is interesting to discuss which consequences it has for (subject) Didaktik, didaktik models and educational practice more generally (see e.g. Sjöström & Tyson, in press; for chemistry Didaktik, as an example, see: Herranen, Yavuzkaya & Sjöström, 2021 and Yavuzkaya, Clucas & Sjöström, manuscript). Or formulated in other words: How does a Bildung-oriented Didaktik for our Anthropocene Epoch look like and which type of theory- and practice-based didaktik models (in a broad sense) need to be developed via Bildung-didactic modelling?

B1 PARALLEL SESSIONS 12:30–14:00 TUESDAY

(B1) Lotta Dessen Jankell, Stockholm University

Learning to use systemic ideas and geographical concepts to understand complex sustainability issues

The article presents a practice theoretical design study which explores what students can learn about complex sustainability issues in upper secondary school geography when they use systemic ideas as tools to organise a complex subject content. One focus of this subject didactical study, is to explore what dimensions of knowledge become possible for students to discern when using systemic tools to organise content that involves relationships between human activities and the processes of nature. Another focus is how system modelling can support a learning process that enables abilities to synthesise and integrate complex and diverse content, while at the same time enabling explorative and analytical work, without simplifying issues. Through an intervention with a designed system geographical model task, the process of emerging system geographical knowing is explored and analysed through content analysis. A tentative result show two models that explain: 1) what dimensions of knowledge that become actualized through the students' reasoning and modelling actions, and 2) what characterises a qualitative learning process that enables the learning of systemic geographical knowing about sustainability issues. The presented model task can be used by teachers to organise geography teaching activities based on systemic and geographical ideas to support students' abilities to integrate human activities and processes of nature in sustainability issues. In addition, the analytical models can be used to raise awareness about what students can learn with these geographical tools. The results also shed light on what seems to hinder and support a qualitative system geographical learning process

(B12) Niklas Gericke, Karlstad University

Bildung-oriented education for sustainable development in a subject-specific curriculum – A teaching approach for the Anthropocene

Human caused environmental changes have become so extensive that the current geological era is known as the Anthropocene. To meet the existential challenges Anthropocene poses to humanity, policy-makers and research have promoted the concept of Education for Sustainable Development (ESD). According to this idea, the overarching objective of education should be to develop students' action competence for sustainability. The underlying idea of ESD is to start teaching from authentic complex phenomena in students' everyday lives rather than the school subjects. This raises questions about the role of subject-specific teaching in curricula that aim to foster action competence. Like ESD, the concept of Bildung has a broader educational goal than learning specific content but contrary to ESD, Bildung embraces subject specific teaching. In this study, parallels are identified between ESD and Bildung. Subsequently, I compare the results of an analysis of the contributions of Swedish secondary level science, social science and language teaching to ESD, to discuss how multidisciplinary, subject-specific teaching may complementarily contribute to developing action competence, by adopting a Bildung orientation.

(B13) Paul Clucas, Malmö University

Using a posthuman understanding of Bildung to address the challenges of realizing an interdisciplinary STEM teaching in the Anthropocene.

By relating ideas of Anthropocene, Bildung, interdisciplinary pedagogy, and sustainability-oriented action, a core question this conference seeks to approach is 'how ought education be shaped in our contemporary times?' Recently Sjöström and Eilks (2018) called for a Bildung-oriented STEM teaching, which is a teaching that more deliberately seeks to develop student's reflective awareness for the ethical and philosophical dimensions of the STEM subjects, and which represents a pathway through which the development of student's proactive participation in transforming the risk society in the direction of sustainability can be promoted. Of significance in this regard is a desire to move towards an interdisciplinary or integrated STEM education (I-STEM) in order to open a pathway through which real-world problems can be addressed (Ortiz-Revilla et al, 2020). The drive however to integrate the STEM disciplines today is dominated by interests whose values are neoliberal (Hoeg and Bencze, 2017; Erduran, 2020; Aikenhead, 2015), a fact that has led to the emergence of some difficult to resolve issues in relation to the idea of an integrated STEM teaching. As an example, a neoliberal ideology cannot resolve the epistemological differences between the STEM disciplines (Reynante et al., 2020; McComas and Burgin, 2020). Building upon a diffractive reading through of Karen Barad's agential realist ontology (2007) and Iain McGilchrist's divided brain hypothesis (2009), we are theoretically trying to develop a novel posthuman understanding of Bildung (Clucas and Sjöström, manuscript in preparation). By situating such a concept in relation to an integrated STEM teaching, we are trying to show theoretically that a posthuman STEAM teaching (Colucci-Gray, 2019) is a promising pathway through which the issues currently associated with the idea of an integrated STEM teaching can be resolved (ibid).

C1 PARALLEL SESSIONS 12:30–14:00 TUESDAY

(C11) Jesper Garsdal, VIA University College

Bildung in the Anthropocene', etheric imagination, worldphilosophy, and the futures of education

This presentation is a first take on a couple of ideas and an incomplete work in progress, and I am looking forward to your comments. Depending on how things develop, it will be organized around three themes. I will briefly present education as a phenomenon involving thinking, feeling, will, various forms of knowledge and presence, memory, attention, discipline and care. I might also touch on how the complementary dynamics between survival and meaning in various phenomena might inspire 'self-transformation' (Lefebvre reading of Bergson). Finally, I will come with a few remarks regarding how 'Bildung' relates to 'images' and 'imagination.' I will then reflect on a specific form of attentiveness, namely Matthew Segall's idea of etheric imagination. Segall developed this concept (the phrase initially coined by Steiner) in his discussions of the concepts of 'ether' in the philosophies of Kant, Schelling and Whitehead, the latter developing an 'ether of events' inspired by developments in non-Euclidean geometry and projective geometry. I hypothesize that it might be fruitful to reflect on this form of attention concerning the idea of Bildung in the Anthropocene. However, I also connect these reflections to intercultural and - perhaps - transcultural philosophies of education. I am especially interested in the role 'world philosophy' might play here, not only because of more abstract concerns regarding epistemic recognition but also more concretely by considering 'homomorphic equivalences' to 'Bildung in the Anthropocene' concerning an idea of various 'Futures of Education.'

(C12) Geir Skeie, University of Stavanger

Mellom moralsk imperativ og eksistensiell motløshet? Hvordan kan skolens religions- og livssynsundervisning arbeide med bærekraftig utvikling som tverrfaglig tema?

I norsk skole er «bærekraftig utvikling» et av tre tverrfaglige tema i den nye læreplanen som ble tatt i bruk fra 2020. Det innebærer at bærekraft presenteres som en viktig samfunnsutfordring og som et særlig sentralt tema som alle skolens fag skal arbeide med. Dette paperet drøfter på et overordnet plan hvordan skolens religions- og livssynsundervisning kan og bør forholde seg til bærekraft som tema, og hevder at læreplanens vekt på etiske og eksistensielle spørsmål spiller en viktig rolle. Dette utdypes ved å trekke inn tekster fra pedagogisk filosofi om antropocen (Straume 2019) og «mørk pedagogikk» (Lysgaard m.fl. 2019) og det konkluderes med at religions- og livssynsfaget kan ha en særlig viktig rolle i arbeidet med bærekraft ut fra et dannelsesperspektiv.

(C13) Ingrid Grosse, Karlstad University

Bildung in ecological ethics: possibilities and challenges from sociological perspectives on pedagogy

Bildung is understood as both the knowledge of facts and capabilities, on one hand, and as a process of personality formation and humanist enlightenment, on the other hand. The first understanding is regarded to be dominant in Sweden today, while the second understanding originates in German understandings. However, despite these different understandings of Bildung, this paper argues that Bildung in ecological ethics faces some challenges in nowadays societies. Sociological theories highlight that the conditions for Bildung have changed considerably during the last decades. The increase of tertiary educated peoples, service- and knowledge-oriented occupations, modern IT technology, wealth and affluence in OECD countries, and globalization, are social features that gave rise to new forms of social behavior and social structures. Sociologists have depicted these changes frequently as both individualization and the rise of anonymous systems: individuals are making their own choices about education, occupation, partners, localization, et cetera, without much interference of families, churches or other norm setting authorities. The lack of social standards and the demand and opportunity to create ones own live is regarded as creating both a sense of freedom and high demand on individuals. Thomas Ziehe highlights the tensions for young persons to develop a sense of identity and the relevance of school education to be of help in the process. Antony Giddens points to the interplay between school education and the development of a self-reflective, mature individuality for young persons. Regarding the rise of anonymous expert systems, Michel Foucault depicts the rebellion of young persons against oppressive educational control systems. The question this paper will adress is how and if Bildung in ecological ethics is possible and what challenges it faces under todays societal conditions for young persons.

A2 PARALLEL SESSIONS 14:30-16:30 TUESDAY

(A24) Albin Gripe, Stockholm University

Conceptualizing history teaching for the Anthropocene

It is well established that history can help people orient themselves temporally and to make sense of contemporary issues in ways that support their attitudes, opinions, and actions. The philosopher of history Jörn Rüsen, among others, has argued that the use of history in this way is especially pronounced in times of great change and crisis. Consequently, history teaching can support the development of several more general competencies and may help students deal with daunting societal challenges. However, people's use of history in relation to the present environmental crisis has gained little attention from the field of history didactics. And the potential of history as a subject to help students deal with the sustainability challenges of the Anthropocene has hardly been discussed. Moreover, several environmental humanities scholars, such as historian Dipesh Chakrabarti, warn that some traditional aspects of history as a discipline may in fact limit our capacity to handle these issues. This paper/presentation is an attempt to explore what a history teaching that responds to the Anthropocene could mean in practice. It starts off by briefly discussing some opportunities and obstacles of teaching history that support action-oriented learning for environment and sustainability in the context of Anthropocene and history as a school subject. Drawing from the fields of environmental didactics, history didactics and the environmental humanities, it then outlines what a historical environmental- and sustainability competence may encompass, and how it may be supported through teaching. Fitting this concept to the framework of Rüsens narrative theory, it is here defined as the ability to experience and interpret the past in a way that provides orientation, in support of positions and actions, in relation to issues concerning the environment and sustainability. Finally, the paper provides a brief illustrative example of what such teaching could mean in practice

(A25) Kenneth Nordgren, Karlstad University

Lära historia i antropocen; hur kan den historien berättas?/ History curriculum in the Anthropocene; how should we tell the story

Mänsklig aktivitet har en betydande inverkan på planetens klimat och ekosystem. Det finns en livaktig diskussion om hur denna insikt bör påverka skola och undervisning, ofta med fokus på hållbar utveckling och ämnesövergripande projekt. I denna artikel diskuterar jag förutsättningar för en fortsatt ämnesundervisning i historia i antropocens tidevarv. Genom att ta utgångspunkt i antropocen som geologiskt och historiskt begrepp diskuteras förutsättningen för en reciprok didaktisk process där historia skulle kunna bidra med kraftfull kunskap (Young 2013) om antropocen (komplext men möjligt att förstå), men att ett sådant bidrag skulle kräva förändringar av ämnets traditionella förklaringsgrunder (Chakrabarty 2018). En sådan förändring kan peka i flera riktningar, dels mot nya tidliga uppdelningar, men också mot nya sätt att förstå vad och som skall betraktas som historiskt viktigt. En fråga är vad som kan hålla samman en sådan historieundervisning. Med stöd av Seixas (2000) diskuteras undervisningsstrategier, men också vilken roll som olika narrativa strukturer kan spela.

This paper aims to discuss history curricula as educational projects in the Anthropocene epoch. Human activity significantly influences the Earth's climate and ecosystem. A lively discussion has debated how this insight should affect school and teaching, often focusing on sustainable development and interdisciplinary projects. In this article, I discuss the conditions of a history curriculum in the Anthropocene era. As a school subject, history is formed around a specialized body of procedural and conceptual knowledge. Possibly, history teaching could contribute a historical gaze on the Anthropocene—as a predicament that is complex but possible to understand. However, such an educational ambition would challenge the subject's traditional epistemology. A historical outlook from the Anthropocene points toward new temporal divisions and new ways of understanding historical significance. From a curricular perspective, the question of how to story the Anthropocene is related to teaching strategies and historical master narratives.

(A26) Carola Nordbäck Mittuniversitetet

Temporalisering i vår tid: Antropocen som utgångspunkt för historiskt meningsskapande på museer

Epokbegreppet antropocen rymmer förklaringar av de pågående globala miljö- och klimatförändringarna och förankrar dem i ett historiskt narrativ. Begreppet har på så sätt en betydande historiedidaktisk relevans (Nordbäck 2020). Föreliggande paper tar sin utgångspunkt i antropocens potentiella inverkan på människors sätt att uppfatta samtiden, det förflutna och framtiden. Utgångspunkten är ett nyligen avslutat historiedidaktiskt museipedagogiskt utvecklings- och forskningsprojekt som heter "I skuggan av antropocen". Det studerade bland annat svenska etnografiska och kulturhistoriska museers pedagogiska praktiker ur ett historiskt och ett samtida perspektiv (Nordbäck & Rotbain 2022). Projektet utgick från epokbegreppet antropocen och frågan om museer kan utveckla sin pedagogiska verksamhet i ekokritisk och miljöhumanistisk riktning för att bidra till lärande för hållbar utveckling. I fokus var Världskulturmuseet i Göteborg och Etnografiska museet i Stockholm. Syftet med föreliggande paper är att presentera ett par av projektets resultat och diskutera dem mot bakgrund av konferensens tema "Bildung och ämnesdidaktik i antropocen". Den fråga som diskuteras är: på vilka sätt utmanar antropocen etablerade föreställningar kring historia, historiedidaktik och Bildung? Denna fråga diskuteras mot bakgrund av den pedagogiska praktik som bedrivs vid museer (Nordbäck 2018). Museer kan beskrivas som ickeformella lärmiljöer med stor historiekulturell betydelse. Museerna konstruerar och reproducerar historiska narrativ och förmedlar dem multimodalt genom bland annat utställningar. Samtidigt sker en viktig del av museernas pedagogiska verksamhet i samverkan med skolan och museerna anpassar ofta i samband med detta sitt arbete till läroplaner, ämnesinnehåll och kunskapskrav. Det innebär att det sker en form av ämnesdidaktisk anpassning där museipedagoger tolkar skolans styrdokument och försöker utveckla pedagogiska aktiviteter som både utgår från museets specifika förutsättningar och samtidigt möter skolans behov

(A27) Marianne Leth, Via University

Historiedidaktik i det antropocæne? Projekter og perspektiver i læreruddannelsen.

Del 1: Et praksisstudie med lærerstuderende. Læreruddannelsen i Århus har siden 2014 gennemført et tværfagligt specialiseringsmodul med fagene natur/teknologi og historie i udeskole pædagogik under temaet bæredygtighed, hvor de studerende udvikler undervisningsprojekter, arbejder teoretisk, praktisk og tværfagligt. De konkrete projekter, samt ikke mindst, de faglige og didaktiske refleksioner over grundskolens og de kommende læreres rolle i og viden om menneskers handle- og dannelsesmuligheder i en bæredygtig fremtid, har i årene udviklet sig i takt med den globale klimasituation, FN's verdensmål og begreberne om bæredygtig udvikling og den antropocæne tidsalder (igen) er blevet en del af den daglige retorik. Dette oplæg vil diskutere konferencens fokus spørgsmål med udgangspunkt i de praktiske og teoretiske erfaringer med dette modul (jf. oplæg på "Futures of Education" konferencen april 2021) baseret på vejledning og samtaler med de studerende, projektvurderinger, samt semistrukturerede fokusgruppesamtaler med det seneste hold historiestuderende med fokus på følgende problemstillinger:

1. Hvilke historiedidaktiske begreber er i spil og hvorledes arbejdes med disse i fælles/tværfaglige projekter om bæredygtighedsemner og -temaer? (Historiebevidsthed, historiebrug og historisk tænkning som de helt centrale anvendte begreber, men også begreber som kontinuitet og forandringsperspektiver, samt hvilken betydning disse har i grundskolen (Nordgren: 2019, Leth: 2020)).
2. Hvilken slags historisk viden er nødvendig for at bidrage til udvikling af fælles/tværfaglige projekter om bæredygtighedsemner og -temaer? (Et nyt nødvendigt historisk indholdsrepertoire (Schüllerquist: 2014))
3. Hvorledes kan historiefaget bidrage til udvikling af ansvarligt bæredygtigt medborgerskab som dannelsesideal? (Nye dannelsesidealer i 'den nye normalitet' med fokus på fælles handlekompetence (Nordgren: 2019/2021. Poulsen: 2021, Barton: 2005/2021))
4. Samtaler om bæredygtighed og fremtiden i grundskolen? Begreber for etik, håb for fremtiden og fortidens ressourcer som byggeklodser for bæredygtige fremtidsperspektiver, samt hvilke samtaler med eleverne, dette fordrer (Williston: 2015/2021)

B2 PARALLEL SESSIONS 14:30-16:30 TUESDAY

(B24) Güliz Karaarslan Semiz Ağrı İbrahim Çeçen University, Ağrı, Turkey;
Stockholm University, Stockholm, Sweden
Per Sund, , Stockholm, Sweden

How green schools in Sweden and Turkey are ready to transform their education in the Anthropocene?

We are living in the crisis age such as climate crisis, energy crisis and economic crisis. This crisis of age is called as Anthropocene which is accepted as undeniable reality as human altered biological, geological and chemical process on Earth (Crutzen & Schewagerl, 2011). The question is arising that how education responds to changes in the Anthropocene era. Are schools ready to mitigate and adapt to the impacts of climate change and to rethink and change education in the Anthropocene ? Education in the Anthropocene needs participatory approaches as people should learn to work together, deal with climate change and other environmental crisis and also working across cultures and genders in addressing sustainability issues (Gough, 2020). Current education in the Anthropocene literature argues about the conceptual and practical shifts that are needed in education in these precarious times. These are described as a) interdisciplinarity, cross-disciplinarity and transdisciplinarity, b) participatory and community based approaches and c) alternative modes of thinking such as indigenous modes of thought (Lloro-Bidart, 2015). ESD focuses on these dimensions as supporting transformative, cross-curricular and systemic approach and plays an important role to change education in a better way. In this study we are going to examine three ESD active schools from Sweden and Turkey to understand in what ways they are ready to transform their education in the Anthropocene. We will present different subject group of teachers' perspectives, ideas working in these green schools in each country and reveal how teachers approach to ESD in two different cultures.

(B25) Torben Spanget Christensen, Jonas Teglbjerg & Ane Qvortrup, University of Southern Denmark

Student voices - insights from a current Danish vocational upper secondary school project: Global Goals as Subject Goals

RQ: What do the students think about sustainability? How do they think about sustainability (fragmented, linear – cause and effect, complex)? What solutions to the sustainability problem do they see (technical instrumental, ethical, political)? What bildung perspectives do students thinking about sustainability raise? Based on UN Global Goal 12 (Sustainable Development Goal or SDG no 12) on "Responsible consumption and production", the overall purpose of the Danish project Global Goals as Subject Goals is to empower students to participate in a society characterized by responsible consumption and production. The assumption is that Global Goals must be integrated in subjects to ensure in-depth work with climate problems (Straume 2015). Basic elements are whole school development, bildung, sustainability and didactic analysis (Klafki 1962:14-18). Various concepts of sustainability including democratic and economic bildung (Engartner 2010), scientific knowledge (Dolan 2002, Holt 2012, Govindan et al 2018, Hassini et al. 2012) and students' attitudes (Lundholm 2019) are applied. Students' attitudes are included with reference to on the one hand studies pointing to the need of social sciences to become deeply engaged in understanding the human dimension of global environmental change (Kollmuss & Agyeman 2002; Lorenzone et al. 2007; Nawrotzki 2012; Smith, Kim & Son 2017). On the other hand, student attitudes are included with reference to Scheunpflug's (2021) transformativ bildung. To catch student voices, we applied a Video Club method which consists of recorded on-line video meetings in groups of four students physically separated. The groups discussed questions about sustainability following a question-guide and without an interviewer present. The idea is that students need to explain themselves in more detail when sitting apart compared to a physical group discussion.

(B26) Emil Mörk Karlstads University

TEACHING SUSTAINABILITY IN SCHOOLS IN THE ANTHROPOCENE: Input on my project idé

The Swedish curriculum with its intention for sustainable development is formed around the presumption that sustainability is possible and something to preserve or obtain. However, this presumption is challenged in the new geological epoch, i.e. the so called "Anthropocene" or human dominated epoch, which is sometimes perceived as the end to the possibility of sustainable development. Consequently, school curriculums face contradictions about when and how they should educate about sustainability while how much of the dreadful truth should be included. For example, fear of climate change (atmosfear), as one of the biggest Anthropocene challenge, can lead to a paralyzed state for individuals and policy makers to take actions. This creates a paradox where true knowledge about adverse climate change impacts could lead to the inability of action. In turn, this raises some of the most fundamental questions in didactics, i.e., what is the purpose of education, and what power education holds? Civic (Samhällskunskap) is both a normative/progressive and a descriptive subject taught in schools, and the paradox between both facts and actions and between sustainability and the Anthropocene will likely be more present here than in most other subjects. I argue that disentangling the challenges that the Anthropocene brings to the curriculum of the Swedish subject Civic regarding teaching sustainability, require new forms of knowledge and curriculums. This requires research on several interlinked arenas, for example the curriculums formulation, transformation, and realization arenas

(B27) Merve Yavuzkaya, Malmö University

Name of abstract: Rethinking Chemical Knowledge in the Anthropocene: Bildung and Didaktik as Theoretical Underpinnings

Given the state of our planet in relation to human impact on nature, the era of our unsustainable ways of living was declared as the Anthropocene. As Biesta (2022) writes, instead of centering education on learnification or curriculum, education needs to be world-centered, which encourages students to engage in questions of nature and be aware of the ways they can be in and with the world. When it comes to disciplinary education, in our case chemistry education, the risk is – as an extreme – to reduce education only towards developing students' conceptual understanding of disciplinary knowledge in an isolated way for a market thinking interest in education for economic growth. Mahaffy (2014) called for rethinking chemistry education in the complex societies stemming from a noticeable human impact on the nature and issues of socio-ecojustice (Sjöström & Talanquer, 2018). To address this call, a doctoral project is being conducted which aims for exploring and discussing the role and legitimacy of chemical knowledge in our new age and implications for subject Didaktik. To do so, a series of theoretical and empirical studies are being conducted. The focus of this specific contribution is a theoretical discussion on the construct ChemoKnowings as examples of powerful knowings (Carlgren, 2020). This construct was proposed in (Herranen, Yavuzkaya, Sjöström, 2021) in relation to Environmental and Sustainability Education and eco-reflexive Bildung (Sjöström et al., 2016). Together with co-authors (Yavuzkaya, Clucas, Sjöström, manuscript in preparation), we develop the construct further, based on what Bildung could mean in the Anthropocene, Bildung-oriented Didaktik, and knowledge transformations (for example, Deng, 2021; Kvamme, 2021).

C2 PARALLEL SESSIONS 14:30-16:30 TUESDAY

(C24) Dorte Eggersen, VIA University College and Aarhus University

Place-based reading. Literary didactics in the Anthropocene

Place-based reading (Eggersen, 2016) is a specific four-staged literature teaching method that includes learning activities in physical spaces in the school's neighborhood. Based on place philosophic (Greve, 1996; Casey, 1993) and literary (Mønster, 2009) assumptions, respectively on pedagogies of outdoor (Bentsen et al., 2009) and place-based (Gruenewald, 2003) education, place-based reading is developed as a mean to conduct an explorative and learning-oriented literature teaching outside the classroom. The overall Bildung-aim is to enhance students' place awareness through literature as well as their literary awareness by learning in, from and about places. In my presentation, I will present the four stages of place-based reading to discuss how place-based reading could eventually contribute to a more world-oriented literature teaching in school. Awareness of the place where you live and learn is here seen as fundamental to a more general place awareness and as a way to learn to care for other people's places. I am here inspired by Sobel's idealistic claims from the nineties: "What is important is that children have an opportunity to bond with the natural world, to learn to love it and feel comfortable in it, before being asked to heal its wounds" (Sobel, 1996).

(C25) Jonas M. Hoeck, Karlstads universitet

Making literature mater again as an active tool of education in the Anthropocene epoch

Litteraturen var en central del af undervisningen, sådan er det ikke længere. Som Anders Johansson diskuterer i sin nyeste bog *Litteraturens slut* (2021), så må vi erkende, at litteraturen har mistet sin status, og at den mange steder spiller en mindsket rolle. Eleverne har svære og svære ved at læse og holde koncentrationen, og flere og flere undervisere og skoler taler i disse år om muligheden for at helt at erstatte det støvede gamle bogmedie med nye film eller smarte VR-produkter. I forhold til den allestedsnærværende klima og naturkrise mener jeg dog, at dette er en fejl, som ikke skyldes litteraturens generelle potentiale, men en fejlslået forståelse og brug af en traditionel type litteratur, som ikke formår at aktivere elevernes kreative bevidsthed. Jeg vil derfor på denne konference give et stærkt forsvar for brugen af den type litteratur, som faktisk formår at belyse den antropocene tidsalder og de problemer, som vi står overfor på en mere interagerende måde. Jeg vil mere bestemt vise, hvordan den nymaterialistiske forfatter Amalie Smiths værker bevidst bryder med læsernes forventning til form, stil og indhold for derved at skabe en friktion eller modstand, som aktiverer læsernes interesse og kreative tænkning. Målet for enhver nymaterialist er at skabe en større bevidsthed om verden og naturens sammenhænge, og dette kan kun ske, hvis litteraturen bryder læserne ud af deres vandelig og antropocentriske- hverdagstænkning. Som blandt andet Mark Turner og Tom McLeish har beskrevet, så adskiller den kreative tænkning, som skabes under læsning af kunstnerisk eller eksperimenterende litteratur sig ikke ret meget fra den evne til at tænke innovativt, som eksempelvis ingeniører eller økonomer bruger, når de skal opfinde nye måder at løse klimaudfordringerne på. Derfor skal vi aktivt bruge litteraturen i undervisningen, som et redskab til at vække de unges øjne for en ny ontologi og bevidsthed om verden.

(C26) Sofia Wijkmark, Karlstads universitet

Att gräva där man står: Den regionala litteraturen och Antropocen

I detta paper undersöks den didaktiska potentialen i ett regionalt perspektiv på litteratur med utgångspunkt i begreppen "space" och "place" så som de används av Timothy Morton (2016). I relation till ett planerat didaktiskt fortsättningsprojekt till det nyligen avslutade litteraturvetenskapliga projektet "En värmländsk litteraturhistoria" diskuteras hur ett fokus på det lokala och platsbundna i litteraturundervisningen kan fungera som ett sätt att utforska och förhålla sig till de livsvillkor som Antropocen ställer människan inför. Den regionala litteraturen gestaltar ofta natur och landsbygd och sätter av förklarliga skäl det lokala och perifera i centrum, och kan på så vis skala ned ett sammanhang som ter sig ogripbart och ohanterligt. Den kan skapa igenkänning och konkretisera frågor om hållbar utveckling i relation till den egna vardagen. Men att zooma in och titta nära kan också verka på ett annat sätt, det kan skapa en kreativ förvirring och vilsenhet och låta oss möta det myller av varelser som vi samexisterar med utan att vi tänker på det. Det lokala är långt från synonymt med det väl kända och fullt begripliga, menar Morton. Det är välbekant, men rymmer också en främmande aspekt genom att det möjliggör för oss att förnimma och tänka på hyperobjekt som global uppvärmning och kapitalism, fenomen som annars sträcker ut sig så vitt och brett i tid och rum att de inte går att observera i sin helhet.

(C27) Ola Uhrqvist & Simon Wessbo, Linköping University

Bildung for Sustainable Development - and the potential for the teaching of Swedish

This paper shows how stories and storytelling can be used within the framework of what we call Bildung for Sustainable Development. This concept may contribute to the school subject of Swedish by providing it with a more prominent role in interdisciplinary teaching. The first part of the paper shows how the well-known and ambiguous concept of Bildung has several similarities with basic ideas in the emerging field of Education for Sustainable Development. The article argues for the benefits of these concepts in making the core of Learning for Sustainable Development visible and relevant to a wider spectrum of teachers. At the same time, the content of Bildung is brought to the fore in the light of the new role of humankind and our responsibilities in the Anthropocene era. We believe that Bildung for Sustainable Development is characterized by complexity, openness, meaning-making and commitment. The second half of the paper challenges and concretizes the proposed concept, Bildung for Sustainable Development, with the help of three examples where stories and narration are considered to be at the center of a learning aiming for self-reflection, critical thinking and broader perspectives that include the imagination of possible futures.

A3 PARALLEL SESSIONS 10.45-12.15 WEDNESDAY

(A37) Hanna Sjögren Malmö University

Childhood in the Anthropocene: On the Education of Children in the New Geological Period

In late 2021, United Nations International Children's Emergency Fund reported that “almost every child on earth is exposed to at least one climate and environmental hazard, shock or stress such as heatwaves, cyclones, air pollution, flooding and water scarcity” (Unicef 2021: 4). The present situation calls for new ethical and political understandings of the very meaning of childhood, and relatedly one of its central institutions: education. This study analyses representation of what an educated child is and ought to be in the Anthropocene, a geological epoch caused by the activities of the human species on the Earth's geology and ecosystems including but not limited to anthropogenic climate change. As such, the study zooms in on three practices of the Anthropocene childhood with pedagogical implications: climate fiction for children aged 6-12 years old, academic knowledge production in the field of early childhood education, and the Friday for Future-movement. Specifically, I focus on how the value-laden relation between children, nature, and education is (re)configured in the Anthropocene. Childhood and nature are intimately and culturally linked, and the meaning and values associated with nature and culture have ethical and political consequences that need to be address within education. I argue that the intersection of the temporalities of childhood and the Anthropocene presents new pedagogical implications which reconfigures both the very meaning of childhood and education.

(A38) David Olsson, Karlstad University

Professional Learning Communities for Transformative Education: Facilitating Student Learning for Problematizing and Engaging with Unsustainable Actions

The UNESCO-led Global Action Programme on Education for Sustainable Development emphasizes the need to improve teachers' capacities to facilitate education that transforms our actions. From the perspectives of pluralistic and transformative education, such capacity building should enable teachers to facilitate democratic education processes through which students learn to problematize and engage with unsustainable actions from different perspectives. However, education research indicates that transformative education often is reduced to behavioral perspectives that set the focus on attitudes, choice and behaviors at the expense of systemic critique. To offset this blind-spot, research suggests that social practice theories provide a basis to develop transformative learning to problematize and engage with systemic issues. In this paper, I argue that the collegial and collaborative approach of professional learning communities has much to offer in this regard, both to develop teachers' capacities for such transformative education and to increase the chances that it improves student learning. To substantiate this argument, this paper employs a participatory action research approach to create professional learning communities in which I, as a researcher, carry out collaborative inquiries with teams of teachers in upper-secondary civics education. The purpose of this is to develop processes and content that increase teachers' capacities to facilitate transformative student-learning underpinned by social practice theories. Importantly, these processes and content could then be adapted and used in schools beyond the particular contexts of this study. The processes and content developed here could thus contribute to improve teachers' capacities and student learning in ways that answer UNESCO's call for an education that transforms our actions.

(A39) Raffaele Brahe-Orlandi, Via University College

Towards sustainable futures in L1-Education in secondary school

The question this paper wants to address is why should and how can long term democratic and ecological sustainability (UNESCO) be at the core of any curriculum for L1-education in secondary school in the Anthropocene. The point I want to make is threefold: 1. We need to redefine core competencies for L1-education. 2. We need to elaborate on teaching and learning methods that regard transformative learning aiming at core competencies for L1-education. 3. We need to elaborate on new definitions for what we mean by Bildung in L1-education. In this paper, I primarily want to address the second bullet above: For people to engage in society, they must experience themselves and their contribution as valued and valuable. L1-education is about learning to communicate in a meaningful way. This involves basic skills such reading, writing, analyzing and evaluating all sorts of texts. Teaching practices towards these skills remain traditional (Bremholm et al., 2017) although studies have shown how student centered transformative educational designs can lead to both subject related skills and to a deeper understanding of the role and the function of these skills when it comes to take action and gain influence on how the world works (Lackéus & Middleton, 2018) (Brahe-Orlandi, 2019). When looking at future challenges, as expressed through UNESCO's sustainable development goals (SDG), the aim of teaching and learning communication could be to engage and empower (Freire, 2014) more people to actively participate towards the SDG. And, In the end to secure democratic and sustainable societies (Dewey, 2005). The paper draws on data from interventions in 5 different classes in which students worked towards communicative skills through entrepreneurial and transformative methods, looking for signs of pupils deeper understanding of the role of communication in the Anthropocene.

B3 PARALLEL SESSIONS 10.45-12.15 WEDNESDAY

(B37) Gabriel Bladh, Karlstad University

Geografiämnet i den antropocena tiden – miljödeterminism 2.0 ?

Relationen mellan "natur" och "kultur" har varit en central komponent i konstitueringen av geografi såväl som vetenskap som skolämne. Syntestraditioner formade kring relationen mellan människa, miljö, regioner och landskap formade basen för ämnet såväl som universitetsdisciplin som skolämne i början på 1900-talet. En syntestradition kring "environmentalism" framträdde som en idémässig brobyggare i relation till mera specialiserade systematiska disciplinära perspektiv. Geografins innehållsliga kärna skulle ligga i studiet av det samband som framträdde mellan "det mänskliga kulturlivets företeelser" och "dess betingelser i ... naturens förhållanden". Ämnet kom därigenom att hamna i ett spänningsfält mellan naturdeterministiska och mera historiska "possibilistiska" förklaringsmodeller kring relationerna mellan människa och miljö. Relationerna som formade syntesidéerna hade dock i hög grad formats i ett "vertikalt" bondesamhälle som under seklet var under snabb förändring mot ett alltmer "linjärt" urbaniserat industrisamhälle. I perspektivet av den "moderna konstitutionen" formades nu en specialiserad och renodlad disciplinär natur- resp. kulturgeografi såväl innehållsligt som vetenskapsteoretiskt. Här blev studier av naturgivna processer respektive samhällsteoretiska perspektiv på rummets funktioner centrala tematiker i de uppdelade disciplinerna. Skolämnet delades på motsvarande sätt i den svenska gymnasieskolan, och blev en del av ämnena samhällskunskap resp. naturkunskap. Miljöfrågor blev viktiga i samhällsdebatten från 1960-talets slut, och var en bakgrund till att geografiämnet åter kom tillbaka i gymnasiet 1994. Relationerna mellan geografi och miljöfrågor har, trots starka idémässiga kopplingar, dock varit komplexa. Det är först genom läroplanerna 2011, som diskursen kring hållbar utveckling format en ny grund för ett bredare miljögeografiskt perspektiv på skolämnet. Diskussionen kring antropocen, människan som planetär agent i jordsystemet och jordsystemets gränser innebär dock att gamla frågor kring synteser, specialiseringar och människans naturrelationer återkommer i nytt ljus, och geografiska kategorier behöver omdefinieras. En framträdande utmaning är att hantera relationerna mellan människa och miljö och olika tids- och rumsliga skalperspektiv i tanke och handling

(B38) Maria Deldén Högskolan Dalarna

Icke-formellt lärande i den formella lärarutbildningen och utbildning för hållbar utveckling i Colombia

Tidigare studier uppmärksammar det icke-formella lärandets relation till och möjliga betydelse för det formella lärandet i ett hållbarhetsperspektiv (Wals et al. 2017; Zeichner et al. 2015). I denna skärningspunkt söker detta konferensbidrag att utforska Bildningsbegreppet och det svarar an mot konferensens önskan att synliggöra utbildningens betydelse för att bygga demokratiska och ekologiskt hållbara samhällen. Syftet är att belysa hur inslag av icke-formellt lärande kan ha bäring för det formella lärandet i lärarutbildningen, med fokus på utbildning för hållbar utveckling. Detta görs genom en fallstudie av en kurs i multimodalitet vid universitetet Surcolombiana i staden Neiva, Colombia. Bakgrunden finns i ett samarbete mellan Universidad Surcolombiana och Högskolan Dalarna. Under 2020 deltog jag som lärare i en kurs i multimodalitet för lärarstudier tillsammans med fil dr Nercy Gutierrez. Utifrån ett kursupplägg som Gutierrez redan hade utformat, utvecklade vi kursen mot utbildning för hållbar utveckling. Vi bjöd även in den idéburna organisationen Ajovec att delta med workshops för att stimulera den formella lärarutbildningen med inslag av icke-formellt lärande. Under kursens gång har vi dokumenterat genomförandet (som skett i virtuell form). Vår metodologiska utgångspunkt är practice-based research där vi studerar vår egen undervisning (Stensland 2003). Teoretisk utgångspunkt för formellt / icke-formellt lärande är Freire (1998, 2017) med bl a begreppen epistemologisk nyfikenhet och autonomi i undervisning och lärande samt Mezirow (2003) med begreppet transformativt lärande. Genom denna teoretiska ansats utforskas bildningspotentialen i projektet. Multimodal teori baseras på Jewitt & Kress, 2003, Pardo, 2016 och Janks 2014 med koppling till språkdidaktiken. Vad gäller utbildning för hållbar utveckling används bland annat Pacis & van Wynsberge, 2020 och Wals et al., 2017. Studien är ett bidrag till ett utforskande av bildningens roll för en demokratisk och hållbar utbildning, och till forskning om utbildning för hållbar utveckling i ett internationellt perspektiv.

(B39) Søren Witzel Clausen, VIA University College

Centrale forhold i bæredygtighedsundervisningen

Med Stockholm deklARATIONEN fra 1972 blev fra FN's side rettet fokus på undervisning i bæredygtighed. Siden da, er undervisning bæredygtighed blevet et vigtigt element i folkeskolen men også på læreruddannelsen, som skal forberede de lærerstudierende til at danne og uddanne fremtidens borgere. Imidlertid kan det ofte være en svær opgave at undervise i bæredygtighed - bæredygtighedsproblematikker er både komplekse og kræver stor sammenhængsforståelse af både underviser og elever/studerende da de ofte er "wicked problems" uden entydige løsninger. Når man arbejder med bæredygtighedsproblematikker kræver det ofte også forståelse mange nye fagbegreber samt forståelse for i hvilken skala at fagbegreberne indgår - fra det lokale til det globale. Desuden kan det være svært at forstå hvad den valgte bæredygtighedsproblematik er eksemplarisk for, og hvad der er den/de centrale faglige pointer som er vigtig at fastholde. På den baggrund har vi, når vi har arbejdet med bæredygtighedsproblematikker i geografiundervisningen på læreruddannelsen i Aarhus, udviklet den såkaldte Øko-STRAKS model, der sætter fokus på 7 centrale forhold. I præsentationen vil Øko-STRAKS modellen blive præsenteret og diskuteret, med henblik på at videre-udvikle modellen.

C3 PARALLEL SESSIONS 10.45-12.35 WEDNESDAY

(C37) Jonas Lysgaard, DPU

Education at the end of time: Ragnarök Now!

This presentation centers on the role and potential of education in a society facing and experiencing a range of social, environmental and climate-related crises and collapses (Lysgaard, Bengtsson, & Laugesen, 2019; Wallin, 2014). By drawing on the Norse Mythology concept of Ragnarök we question how to navigate crises that are not only something that awaits us as an ultimate end, but something that defines our past, present and future. Education is often leveraged in order to address societal problems (labour market shortages, global competitiveness, social issues etc), mostly with limited success (Lysgaard & Bengtsson, 2020). The ecological crises we now face does, however, not represent demarcated challenges to well functioning societies, but marks wholesale critique of existing structures and demands fundamental changes to the way we live as individuals and together. The argument of the presentation centers on how education has and can deliver visions of crisis and “the end” that allow us to engage with the future in the face of radical change and societal transformation. By opening up concepts of Bildung, transformative learning and critical engagement the presentation draws on ideas from continental philosophy, critical bildung perspectives and new materialist theory in order to outline in an accessible form of narrative how to move beyond anthropocentric perspectives that we face and increasingly are expecting to face in the onslaught of the Anthropocene (Mannion, 2020; Saari & Mullen, 2018). The presentation indicates a series of key ideas to open up thinking about what it means to be coming-of-age and to live in “current” society that is facing its potential imminent end. The presentation will emphasize the concepts of death, life and education by rethinking the temporality of this relation by appealing to the notions of strange loops (Heijden, 2007; Hofstadter, 1979).

(C38) Nathalie Popa, Karlstad University

The concept of survival in reorienting curriculum for the Anthropocene

This presentation focuses on a background paper published by UNESCO for their recent Futures of Education initiative. This publication, entitled Learning to become with the world: Education for future survival, argues that we need a "fundamental break with humanist education (new or not)" and articulates seven visionary declarations whereby education will have accomplished this break by 2050. I begin the presentation by describing who the authors are, what the paper consists of and what it represents. I then discuss the notion of survival that is central in this publication and relate each of the seven speculative declarations to the question of how curriculum development can navigate the demands and needs of a education for survival. I conclude by drawing implications of Learning to become with the world for the debate about Bildung and the Anthropocene.

(C39) Martin Gren, Linnéuniversitetet

What about the planetary climate and ecological emergency and Bildung in the Anthropocene ?

According to science and the world community (UN) we now face a climate and ecological emergency. This introduces a completely new geo-ontology for all education and all disciplines. At the same time, this existential threat also calls for a historically unprecedented climate action (transformation of societies) that has to be geobiophysically effective at planetary scale. The aim of the presentation is to open up a space for reflections on what this means for Bildung in the Anthropocene

(C40) Martin Stolare & Christina Olin-Scheller, Karlstad University

How should we teach now? The Anthropocene, didactic practices and history and literature education

The Anthropocene points towards a dissolution of the Cartesian divide. The accelerating utilization of resources and its consequences show, with desired clarity, that humans are part of the ecosystem. This change of perspective, which can be characterized as an awakening, leads not only to inquiries about how the present and future situation for individuals, groups and societies should be handled, but also how it should be understood. The Anthropocene implies that questions about what it means to be human are asked and that existentially impregnated notions of identity and culture are challenged. The latter are topics central to the humanistic school subjects, important not least in history and literature education. The Anthropocene questions the anthropocentric foundation of these subjects expressed in the educational traditions that have prevailed since the modern school system was established in the middle of the 19th century. In this paper, we primarily focus on the educational practice when teaching history and literature. This practice contains a didactic practice concerning how teachers transform content to make it possible for students to learn. The transformation processes are related to the perspective of what to teach- the process of selecting content – as well as the question of how to teach a specific content. With both these perspectives in mind, we here address teachers' transformation of content when teaching history and literature. The overall research question is twofold and reads: how do the Anthropocene challenge didactic practices in literature and history education, and how can the teacher handle these challenges?

Presenters in alphabetical order

B37	Gabriel	Bladh	KAU	Geografiämnet i den antropocena tiden – miljödeterminism 2.0 ?
A39	Raffaele	Brahe-Orlandi	Via University College	Towards sustainable futures in L1-Education in secondary school
B25	Torben	Christensen	University of Southern Denmark	Student voices - insights from a current Danish vocational upper secondary school project: Global Goals as Subject Goals
B39	Søren Witzel	Clausen	VIA University College, Dept. of Teacher Education	Centrale forhold i bæredygtighedsundervisningen
B13	Paul	Clucas	Malmö University	Using a posthuman understanding of Bildung to address the challenges of realizing an interdisciplinary STEM teaching in the Anthropocene.
B38	Maria	Deldén	Högskolan Dalarna	Icke-formellt lärande i den formella lärutbildningen och utbildning för hållbar utveckling i Colombia
B11	Lotta	Dessen Jankell	Stockholm University	Learning to use systemic ideas and geographical concepts to understand complex sustainability issues
C24	Dorte	Eggensen	VIA University College and Aarhus University	PLace-based reading. Literary didactics in the antropocene
C11	Jesper	Garsdal	VIA University College	Bildung in the Anthropocene', etheric imagination, worldphilosophy, and the futures of education
B12	Niklas	Gericke	Karlstads Universitet	
C39	Martin	Gren	Linnéuniversitetet	What about the planetary climate and ecological emergency and Bildung in the Anthropocene ?
A24	Albin	Gripe	Stockholm University	Conceptualizing history teaching for the Anthropocene
C13	Ingrid	Grosse	Karlstad University	Bildung in ecological ethics: possibilities and challenges from sociological perspectives on pedagogy
C25	Jonas M.	Hoeck	Karlstads universitet	Making literature mater again as an active tool of education in the anthropocene epoch

B24	Güliz	Karaarslan Semiz	Ağrı İbrahim Çeçen University, Ağrı, Turkey; Stockholm University, Stockholm, Sweden	How green schools in Sweden and Turkey are ready to transform their education in the Anthropocene?
A12	Ole Andreas	Kvamme	University of Oslo	Reconsiderations of Bildung in North European didaktik
A27	Mariann e	Leth	Via University <college	Historiedidaktik i det antropocæne? Projekter og perspektiver i læreruddannelsen.
C37	Jonas	Lysgaard	DPU	Education at the end of time: Ragnarök Now!
B26	Emil	Mörk	Karlstads University	TEACHING SUSTAINABILITY IN SCHOOLS IN THE ANTHROPOCENE: Input on my project idé
A26	Carola	Nordbäck	Mittuniversitetet	Temporalisering i vår tid: Antropocen som utgångspunkt för historiskt meningsskapande på museer
A25	Kenneth	Nordgren	Karlstad university	Lära historia i antropocen; hur kan den historien berättas?/ History curriculum in the Anthropocene; how should we tell the story
C40	Christina	Olin Scheller	Karlstad university	How should we teach now? The Anthropocene, didactic practices and history and literature education
A38	David	Olsson	Karlstad University	Professional Learning Communities for Transformative Education: Facilitating Student-Learning for Problematizing and Engaging with Unsustainable Actions
A11	Michael	Paulsen	Southern University of Denmark	Pedagogical consequences of different relations to the Anthropocene
C38	Nathalie	Popa	Karlstad University	The concept of survival in reorienting curriculum for the Anthropocene
B25	Ane	Qvortrup	University of Southern Denmark	Student voices - insights from a current Danish vocational upper secondary school project: Global Goals as Subject Goals
A37	Hanna	Sjögren	Malmö University	Childhood in the Anthropocene: On the Education of Children in the New Geological Period
A13	Jesper	Sjöström	Malmö University	Didaktik for Bildung in our Anthropocene Epoch

C12	Geir	Skeie	University of Stavanger	Mellom moralsk imperativ og eksistensiell motløshet? Hvordan kan skolens religions- og livssynsundervisning arbeide med bærekraftig utvikling som tverrfaglig tema?
C40	Martin	Stolare	Karlstad university	How should we teach now? The Anthropocene, didactic practices and history and literature education
B25	Jonas	Teglbjærg	University of Southern Denmark	Student voices - insights from a current Danish vocational upper secondary school project: Global Goals as Subject Goals. Three presenters: Jonas Teglbjærg, Ane Qvortrup and Torben Spanget Christensen
C27	Ola	Uhrqvist	Linköping University	Bildung for Sustainable Development - and the potential for the teaching of Swedish
C27	Simon	Wessbo	Linköpings universitet	Bildung for Sustainable Development and the potential for the teaching of Swedish
C26	Sofia	Wijkmark	Karlstads universitet	Att gräva där man står: Den regionala litteraturen och Antropocen
B27	Merve	Yavuzkaya	Malmö University	Rethinking Chemical Knowledge in the Anthropocene: Bildung and Didaktik as Theoretical Underpinnings