



Futures of Education – Learning to Become 2021

Education for Sustainable Development and Sustainable Development Goals in the Anthropocene

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Book of Abstracts

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Abstracts are in alphabetical order by first name of the first author

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Ainoa Abella Garcia, Maria José Araya, Thomas Østergaard: Experiencing Emotional and Entrepreneurial Didactics for Sustainable Design Educations

Friday, April 23, CEST 01:30 PM – 02:00 PM (Session A13)

Students at Higher Educations face a world in need for help to create sustainable solutions for complex systems. But still, European design-graduates finish their studies with a narrow concentration in design skills and lack competencies in order to cope with the complex reality, as well as students lack attachment to the teaching in Education for Sustainable Development (ESD). In order to change this, educators need to acknowledge the students personal, motivational and emotional elements before designing the courses.

This article is based on two new discourses in both entrepreneurial and design didactic research and how they could be connected. The first is “emotional learning” and “emotional design” regarding how emotions impact the student’s learning process’ in Educations for Sustainable Development. Emotions affect the student’s learning process and their health and well-being (Pekrun, 2014). The other discourse is how the use of value-driven emotional entrepreneurial didactics, based on the connection between emotionally influencing actions/events and the development of entrepreneurial competencies can present a new emotionally based understanding of the value of (altruistic) sustainable outcomes within entrepreneurial educations (Lackeus, 2020).

Using one of the experimental methods – this presentation uses comparative design-research through two emotional tools: “Yggdrasil” from VIA Design, Denmark and “Emotional Analogous Data” from ELISAVA, Barcelona, Spain to investigate if the use of emotional and entrepreneurial didactics can enhance the students work with sustainable development.

The first results indicate an absence of emotions in design-educations, which has an impact on ESD and their development as professionals. For these reasons, both emotional tools presented above can contribute to empowering students and educators to improve Sustainable Design Educations.

Albert Fuster: The Future is Now - Reflections on Time, Place and Agents in the Learning Experience

Thursday, April 22, CEST 11:45 AM – 12:30 PM (Session C4)

Which should the role of a design school be, in facing the emerging ethical, social, economic and environmental concerns related to human activities? How do design communities interact with society at large, and the planet? What is the ultimate goal of the learning experience? What kind of training should be expected for a (future) designer?

A reflection is needed to update and position the role of design schools in relation to the learning experience.

Understanding and improving the students' learning experience relates directly to the time in which learning happens, where it is developed and which are the agents involved in this process:

+ Time: Breaking the chronological and incremental nature of learning.
Questioning the incubator and isolated nature of schools.
Promoting the sense of opportunity (Kronos vs. Kairos).

+ Place: The role of environment in learning process.
From Situated Knowledge (Haraway) to Situated Action (Suchman).

+ Agents: Design with both animated and in-animated agents (Wakkari).
Create the conditions for students to live meaningful interactions.

This leads to a positioning that balances the importance of Abstract knowledge with Concrete actions and experiences. The Concrete approach to learning promotes a circular process of awareness, reflection and action that leads to Sense making, both for the student and for any other agent involved.

A series of examples developed at Elisava, Barcelona School of Design and Engineering, will exemplify and visualize possible threads to promote meaningful learning experiences.

Anne Louise Bang: Oh No, Not another Framework!

Thursday, April 22, CEST 11:15 AM – 11:45 AM (Session C3)

The aim of this paper is to emphasise the relevance and importance of sensibility, contemplation and craftsmanship as a foundation for sustainable development in fashion and textiles. The paper looks beyond the frameworks and tools that often guide lecturers in higher educational institutions. How do we prepare ourselves and the students to critically work with, contribute to and reflect upon the SDGs?

First, I have to admit that I love frameworks, methods, tools and techniques that can assist and support structuring and operationalising my work as a researcher and educator in fashion and textiles design. Therefore, I began by getting an overview to identify a knowledge gap, but I quickly realised that there is a vast amount of exactly that and with lots of unreleased potential. It occurred to me that yet another framework might be obsolete. To exemplify, I found recently

published frameworks, reports and research such as Fashion Seeds (2019), Ellen MacArthur Foundation & Ideo (2017-18), Fletcher & Tham (2019) and Simonsen (2020).

One of the biggest challenges of working with sustainable development in design is that it is a rather complex subject area. No matter what you do it is always possible to identify some flaws or a fault, something crucial is missing or there is a tendency to greenwashing. This is caused by the complexity and an often-limited access to knowledge. A 'Sustainable challenge' can be characterised as a wicked problem in the sense that it is difficult or impossible to both formulate and solve and the solutions are not true-false but better or worse (Rittel & Webber 1973). However, we need to deal with that, and we need to acknowledge that sustainable development requires collaboration drawing on knowledge and action from many fields and professions in order to go 'full circle'.

So, how can we establish a good foundation for dialogue across fields and professions and how can we work with these wicked problems 'regarding fundamental changes in the relation between humans and nature' – to cite from the conference call that also emphasises that "These imaginations and valorizations of different futures might influence how we perceive the options for both acting in the present toward the future(s) and remembering the past". This paper is an attempt to address the need to learn from the past (in the form of craftsmanship) while we are living in the present, designing for the future.

In the 1980-90es 'The silent game' was used at a course at MIT called 'Learning to Design and Design for Learning' (Schön 1993). Basically, the game is played in complete silence by two active players and one observer. The game pieces are a selection of materials (it can be bricks, screws etc.). Player A makes a move by setting up some pieces according to a self-made rule and player B has to make a move that shows the understanding of the rule. And thus, the game moves back and forth between the two players while the players as well as the observer tries to understand what is going on. Considering that this takes place in complete silence it will inevitably show how difficult communication and mutual understanding is if you no common language exist. The players learn a lot about understanding other people/professions' ways of thinking and acting. Schön describes this as a 'conversation with the materials of the situation'.

Albers is not using the exact same phrase while arguing for the importance of tactile sensibility (in 1965) by introducing the idea of making 'tactile blueprints' – rapid prototypes – for weave patterns using corn, metal scrap, straw and other 'household' materials glued on paper instead of imagining the patterns or designing them on cartridge paper without any expressed concerns about structure and feeling of materials (Albers 2017). In this way, Albers demonstrates what might be termed as craftsmanship of the professions. A very recent example of this, is the way Astrid Skibsted is working with yarn winding (Skibsted 2020). Yarn winding is a common technique for planning colour ways and testing material for weaving projects. It is comparable to Albers' 'tactile

blueprints'. Skibsted is using them to establish a dialogue with the materials of the situation. Thus, the yarn winding experiments become more than threads around a piece of cardboard. They make us reflect on the bigger context. Even though Skibsted's focus isn't especially on sustainability her work points to existence, presence and the necessity to be in the world instead of just observing it.

Bridie Lonie: Art, complexity and sustainability in the Anthropocene

Friday, April 23, CEST 02:00 PM – 02:30 PM (Session A14)

This paper explains the thinking behind *The Complete Entanglement of Everything*, an exhibition of work by fifty local artists selected by curators Bridie Lonie and Pam McKinlay, with assistance from Marion Wassenaar. The curators' premise was that, taken as whole, the exhibition would demonstrate the emergence of an understanding of the Anthropocene as it is playing out in Otepoti/Dunedin, New Zealand. While that emergence is a collective one, we hoped that each viewer's understanding would be focused by art's capacity to offer open-ended and multi-faceted experiences through the polyvocal but collective space of created by the work of fifty artists. The term "entanglement" was drawn from Donna Haraway's argument that the wicked problems of our present predicament will only be intelligible if we understand that categorical distinctions are a problem in themselves (Haraway 2016). The curation sought to enable the viewer to experience the connections between , for instance, Vicki Evans's *Go Mine*, a card game designed to allow its players to role-play the ways that legislation designed to protect natural resources can be overturned and Michele Beevors's domestication of the notion of the Sixth Extinction in her life-size knitted skeletons of a boy and a girl wearing backpacks advertising gendered consumer products. Some artists' visualizations are apotropaic, that is, they hold horror in such a way that it can be contemplated and faced.

Many but not all of the works were made by artists working in institutions that embed education for sustainability in their programmes. While some works were didactic, others, less obvious, drew on the power that art has to enable conceptual understanding in such a way that it is experienced by each viewer as their own. The genre of conceptual art offers such experiences: theorist and art historian Gregory Minissale in *The Psychology of Art* characterizes it as a kind of bundling of affect, cognition and emotion that extends the development of understanding. (Minissale 2013).

Curatorial projects can in themselves operate as conceptual art.

In its totality, the exhibition sought to elicit the combination of cognition and sensation that is the primary characteristic of the artwork, in order to assist viewers to process and internalize the complex interdisciplinary understandings that underpin the concept of the Anthropocene and its cognates. Such projects require active viewing. They are not science communication, because they include quite explicitly the artist's own response to the data or information they convey. An empathic space is offered: the viewer is held for a period of time within the act of making sense, and consequently owns the sense they have made.

The argument that culture is the fourth pillar of sustainability is strengthened when artworks are viewed as holding patterns, containers or vehicles, for emergent and complex scenarios. In that

way, artworks can assist as much with acknowledging the forces -such as grief and the sense of impotence -that restrain us from action, as with gaining new approaches and new strength for engagement.

Caroline McCaw, Education for Sustainability: Learning from and with living systems

Friday, April 23, CEST 10:45 AM – 11:15 AM (Session B10)

In this paper I will propose an approach to teaching and learning that reflects the idea that to undergo systemic change we need to learn from and with living systems. I will draw upon two projects to illustrate small steps towards this emergent practice and draw upon theories that may help to frame this ecological approach. Through drawing theory and design education projects together the paper considers useful metaphors, drawn from nature, to help understand education for sustainability as embedded in productive learning relationships, involving thinking reflectively on our messages and actions.

According to the UNESCO Policy Brief (2018, Education for Sustainable Development and the SDGs) Education is a crucial element of a sustainable development agenda and needs to be holistic and transformational.

“Systems thinking in practice encourages us to explore inter-relationships (context and connections), perspectives (each actor has their own unique perception of the situation) and boundaries (agreeing on scope, scale and what might constitute an improvement).” (Allen, n.d. <https://learningforsustainability.net/systems-thinking/>)

This paper considers the practices of taking education outside of the classroom (holistic), through examples of project-based learning in a Communication Design degree programme at Otago Polytechnic in Dunedin New Zealand in partnership with local environmental groups (potentially transformational). It is a case study for learning that reflects SDG’s #4 (Quality Education), #11 (Sustainable Cities and Communities) and #15 (Life on Land).

The first project involved a group of design students working with a local stream. Using a range of different social, cultural and environmental histories and perspectives students learned to see, hear and understand the stream as a living system with mauri (life force).

The second project involved a pair of design students working with a local eco-sanctuary and a flock of endangered parrots. Both projects required empathy including and beyond human-centred design. Design students were compelled to listen and learn carefully, working with the needs of others, including the non-human.

To work in this way it was necessary for students and teachers to leave the comfort of the classroom and engage directly with the natural environment, in relationship with the world around them. I will outline how design experiences led to design prototypes, thinking tools, or ways for both students and partners to communicate sites, experiences and opportunities with each other and with others, towards thinking beyond human perspectives.

I will consider reflections from educators in the 'Forest Kindergarten' movement to identify useful connections. I will also draw on theories outside of design, such as Donna Haraway's (2003) challenge to question our separate wholeness as beings, drawing upon "co-habitation, co-evolution and cross-species sociality" in order to refocus on ourselves as always in dynamic, co-operative systems equally biological and social. Canadian geographer Juanita Sandberg's (2015) 3 step process of performative walking and dialogic practices that require a "path to social change that must be walked and talked" will be considered as another form of collaboration with the environment.

Through the paper I will propose questions to educators and students from other disciplines and countries that may help to see this emerging pedagogy as transferable and potentially transformative.

Christian Chrstrup Kjeldsen: Global Attitudes and Perceptions of Social Justice among Youth: How the International Large Scale Assessments (ILSA) can inform the 2030 agenda for sustainable development and learning to become

Friday, April 23, CEST 11:15 AM – 12:00 AM (Session B11)

By means of a secondary analysis of the IEA International Civic and Citizenship Education Study 2016 (ICCS 2016) in combination of the World Values Survey (WVS) and the European Values Study (EVS), this presentation will offer an analytical and statistical change in perspective. The presentation seeks to highlight the many similarities in attitudes and perceptions of issues related to social justice and diversity among youth - despite quite different (national state) cultural contexts and political landscapes and provide an example on how International Large Scale Assessments (ILSA) may inform how socialization towards "learning to become" may be investigated empirically. Theoretically guided by a Marxist inspired perspective; combined with moral philosophically insights of Amartya Sen's Capability Approach and furthermore empirically informed by analysis of data from the Civic and Citizenship Education Study this presentation seeks to question if no - or minimal - differences among youth attitudes and perceptions in regards of social justice should rather be interpreted as a slight hope for the future global society in times of crisis.

Christian Ydesen: Reconciling Paradigms and Agendas for the Realization of Education for the 21st century

Friday, April 23, CEST 11:15 AM – 12:00 AM (Session A11)

Today, education policy hinges on projections, future goals and the achievement of internationally defined benchmarks and standards. National and local education operate in a global space which to a large extent is defined by International Organisations (IOs), philanthropic foundations, private edu-businesses and powerful governments. In effect, modern education is defined by a host of

programs, technologies, data, and agents each claiming to make education a steppingstone and a catapult for a better, more effective, more competitive, richer, and/or more sustainable society. Yet, rarely do these programs, technologies, data, and agents come with a label defining or flagging their historical ingredients in terms of ideas, assumptions, preconditions and the possibilities and limitations of the vision they offer for the future. In other words, their ideological nature is cloaked. The result is that much education policy and practice navigate in a chaotic landscape consisting of incomplete, limited and incommensurable knowledge paradigms and sometimes even conditioned half-truths. In this presentation, I will present an informed and balanced revisiting of paradigms and agendas in order to identify paths of reconciliation.

Daniel Ross: Dare to Think Past the Anthropocene: What is to be Done with Education?

Thursday, April 22, CEST 01:15 PM – 02:30 PM (Keynote)

To refer education to the dates 2030 and 2050, as the UNESCO has done via its “Education for Sustainable Development” and “Futures of Education – Learning to Become” initiatives, is to place it in the context of the IPCC’s two key deadlines for the reduction of carbon emissions...to zero. Yet this immediately leads to a paradox: how can we even begin to conceive or imagine education after 2050 without first recognizing that the current dismal failure to approach these targets stems in no small part from an inability to foster the collective knowledge and will required to take care of this biospheric emergency – and that remedying this inability absolutely depends on a transformation of the conditions of intergenerational transmission, that is, on a critique of contemporary education? Rather than being paralysed by this paradox, we must inhabit it as the vector of a new dynamism directed towards the transformation of the way education is conceived and undertaken in the nihilistic depths of the Anthropocene, and this will require a renewed understanding of the meaning of both sustainability and diversity, the relationship these bear to reason and technics, and the way this ultimately yet unavoidably calls for a new economic model.

David Kergel: Digital Diversity within the educational Field – towards an integrative approach

Friday, April 22, CEST 12:45 PM – 01:30 PM (Session C12)

Education and learning are central guiding concepts of pedagogical theory and practice. This educational practice is undergoing a far-reaching transformation process: Against the background of cultural diversity and the ongoing media change, the challenge arises in discussing the concepts of education and learning theory and fathom their requirement profiles anew in the context of pedagogical practice. With reference to this horizon of knowledge, the following heuristic key questions can be identified:

- o What demands does the change in the media place on a diversity-sensitive pedagogical practice?
- o To what extent does digitization open up new spaces for innovative, diversity-aware inclusion strategies?
- o Does the digitization process favor exclusion dynamics to which it is necessary to react in a targeted, diversity-aware manner?

These fundamental questions stand for an integrative perspective that analytically addresses diversity in the context of digitization. This integrative perspective will be presented within the talk.

Elinor Bray-Collins, Nalini Andrade & Catherine Wanjiru: Gender Equality and TVET on the African Continent: Findings from the Scholarship

Thursday, April 22, CEST 3:00 PM – 03:30 PM (Session A6)

Abstract: This paper presents the findings of an extensive review of the literature on gender issues in Africa's TVET sector. We highlight a number of themes which emerge from the review and propose a theoretical framework for understanding TVET institutions as gendered spaces. TVET is talked about as holding potential for the advancement of the SDGs on the African continent as well as the achievement of Agenda 2063. What this review indicates, however, is that TVET institutions, like other educational sectors, are deeply gendered spaces and they produce unintended gendered outcomes. This suggests that in the absence of gender-responsive reforms that are rooted in a holistic understanding of why and how gender oppression persists, TVET institutions may tend to be sites of the reproduction of patriarchal dynamics as opposed to sites of their transformation. This paper will include examples of practical experiences by African experts to address gender issues in TVET and Polytechnic institutions

Faculty and Students, GPA: International Collaboration for a Sustainable Future: Faculty and Student Reflections from a Virtual Polytechnic Classroom

Thursday, April 22, CEST 4:45 PM – 05:30 PM (Session C9)

This paper will discuss a joint, educational, initiative between faculty and students from the Global Polytechnic Alliance (Humber College - Canada, Via Polytechnic - Denmark, Otago Polytechnic - New Zealand). Working across continents and time zones, students and faculty from these three institutions came together to learn about systems thinking and how it helps us to tackle complex global challenges. This initiative sought to nurture two of the UNESCO cross-cutting competencies needed to achieve the SDGs: Systems Thinking and Collaboration (see: UNESCO, 2018). Through on-going assessment and reflection by both learners and educators engaged in this process, we reflect on the value of a pedagogical approach which combines synchronous, virtual learning, •international teamwork and •collaboration and a global competition on systems thinking (Map

the System) for the development of these two •competencies. We hope to identify lessons for what makes “educating for the goals” truly effective and how to deepen learning for learners as well as faculty themselves.

NB! You can prepare beforehand, or after the session, by checking out the posters and the videos produced for this session by following this link: <https://cut.ly/OPrVVHV>

Felix Riede: The mandate of the Anthropocene and the collapse of disciplinary boundaries in education

Thursday, April 22, CEST 09:30 AM – 10:15 AM (Session A1)

Whilst scientifically debated, the key insights encapsulated in the notion of the Anthropocene are profound: First, natural and cultural history – the fates of climate and the natural world on the one hand, and of humankind and its many cultures on the other – are conjoined. Second, human history is not a history of progress but one towards potential catastrophe. These realizations are driven by the wicked perspectives of future climate change and the likelihood of dramatically negative consequences for life on Earth. Looking back into deep history, however, the same realizations also have implications for how we view the human past and what driving forces we view as causal. This, in turn, has implications for how we teach deep and recent history, how we articulate it with other disciplines, and how we display it in children’s books, school textbooks and teaching materials as well as in museums. With roots firmly in a specific academic discipline – archaeology – I examine in this presentation how the perspective of the Anthropocene turns the historical perspective upside-down and what implication this has for how we design contemporary, relevant and sustainable history teaching and teaching resources for the classroom and for learning spaces such as museums. In constructing this examination, I argue for a necessary collapse of traditional disciplinary boundaries and a rethinking of historical sensibilities in terms of sustainability. This is important, I argue, because history is part and parcel of identity construction and, by the same token, of the formation of actionable social capital. New visions for our future need, I suggest, new visions of our past.

Inge Andrew: Using Design Activism to Empower and Value a Community Group

Thursday, April 22, CEST 03:30 PM – 04: 00 (Session C7)

I have been working with a group of people that don’t generally have a voice in everyday discourse – perpetrators of domestic violence. Stopping Violence Dunedin is run by experienced facilitators who instead of placing blame on their clients, work to empower them with a sense of community and positive self-worth. These men are taught to appreciate and build on their own sense of worth

and my Masters project focused on creating a value object to enhance their journey of change towards a non-violent life. The value creation process involved using communication design as a tool to develop a social enquiry, working to understand this community and the challenges they face.

By looking at an entire system of interactions and experiences, I was able to develop a series of milestones for the men which led to the development of a key prototype. The first 'shift' key could be gifted to the men in the group who show a 'shift in their thinking' and are able to engage in the process of change. The second 'manhole cover' key to the men who develop leaderships skills and can mentor newer group members. The outcome of the object created a value proposition working to celebrate the milestones that these men reach. This sense of value and appreciation could also extend to the possibility of an alternative future for the men – a future without violence.

Jeppe Læssøe: Recent trends in re-thinking education in the face of an escalating non-sustainable world

Thursday, April 22, CEST 09:30 AM – 10:15 AM (Session B1)

This presentation will depart from the question about the purpose and role of education in a rapid changing, diverse, and increasingly complex and non-sustainable world. Rather than spending time on (once again) criticizing mainstream educational conceptions and practices, the focus will be on distinguishing and discussing different types of responses. This is indeed not a new exercise. However, the ambition is to outline an updated version distinguishing between 1) more or less regressive and progressive approaches – and, among the progressive, between 2) techno-science-innovative and socio-cultural transformative-transgressive approaches – and among the latter between sustainability and viability approaches. Rather than thinking these distinctions as either-or antagonisms, the presentations will conclude by stressing the tensions between them as productive dilemmas, which need attention, reflection, and competent coping in concrete cases.

Jesper Marius Als: The plurality of reality for global educational opportunities

Friday, April 23, CEST 02:00 PM – 02:30 (Session C14)

The heading of this conference, "Futures of Education - Learning to become, 2021", in its essence indicates that 'what is to come' can take many shapes. There is not one future and not one trajectory for the development of educational scenarios and opportunities. So what are, if any, these hallmarks of those futures globally?

Method: My approach and contribution to the discussion rest a mix of study and working with education and development for 20 years globally. I have seen education systems in a variety of sociopolitical contexts ranging stable democratic states to war torn and disaster ridden unstable semi authoritarian states. My examples are drawn from work in more than 40 countries. Work that

was centered around Human Rights, education, health and income generation (small scale business). In that framework education was portrayed as a harbinger of change for marginalized people. The hope that followed education was strongly linked to eradication of poverty. Education was, to a large extent, considered a tool to instigate capabilities and broaden opportunities, especially through links to markets and jobs in the formal economy. Some systems showed signs of the abovementioned prospects for those that were lucky enough to enter the system. However, many systems were designed in ways that left most graduates - if they made it so far - alienated from their own identity and caught between different realities and so-called futures.

Claim: My contribution to the discussions of this conference sets out the following claim: “uniform and large systemic approaches to knowledge generation and education have a hard time creating a sustainable framework for opportunities and neither does it necessarily support ambitions about learning to become.”

Conclusion: The balance between learning ‘towards future jobs’ and ‘learning to become’ (formation/building) is very important. Realities and opportunities are very dynamic and therefore it is essential that education prepares human beings to be grounded in their own identity (both professionally and personally) and being able to navigate interculturally. This may, from my point of view, be the only uniting feature of the futures of education.

Possible Thematic Headings:

- UNECSO - the importance of plurality of realities (universalism vs relativism)
- General challenges for education in developing countries
- Colonial legacies
- Quantity vs. quality
- Curriculum and context
- Global vs. local
- Intercultural competencies

Jonas Lysgaard and Sanne Hasse: Danish Higher Education institutions' strategies of Education for Sustainable Development

Friday, April 23, CEST 12:45 PM – 13:30 PM (Session A12)

Higher Education Institutions (HEIs) play a pivotal role in moving towards sustainable development (SD). Since the Brundtland report, different strategies and practices have emerged in order to include sustainability perspectives in Higher Education (HE) core activities (Wals and Jickling 2002, Rieckmann 2017, UNESCO 2017). The UN Sustainable Development Goals have only accelerated this process with explicit emphasis on the role of HE and a mounting political pressure to ensure the role of HEIs towards 2030 (Rieckmann 2017, Leicht, Heiss et al. 2018). Education for sustainable Development (ESD) research has also emphasized the importance of a deep transformation of HEIs and their culture in a holistic manner rather than more superficial approaches of adding a limited range of ESD oriented courses to an otherwise conserved curriculum (Mulà 2017, Sinakou, Boeve-de Pauw et al. 2019).

However, addressing sustainable development in a holistic and committed manner presents paradoxes and dilemmas to the HEIs. On the one hand, the profound impacts of sustainability and climate change resist easy and seamless managerial implementation into institutions that are to a growing degree output focused; on the other hand SD and climate change issues are becoming more important among students, teachers, researchers, and management alike (Mulà 2017) for which e.g. Greta Thunberg has been considered a catalyst and showcase of (Giesenbauer and Müller-Christ 2020).

Research focus

Our contribution will present a mapping of the entire Danish HE institutional landscape with respect to ESD/SD approach.

Our research questions are:

- How can strategic ESD/SD address of Danish HEIs be comparatively analyzed, mapped, and understood?
- How do the different contextual conditions of universities and university colleges in Denmark, respectively, entail different implications for ESD/SD strategies of Danish HEIs?
- And to what extent are implementation of ESD/SD policy implemented, operationalized and practiced at the HEIs according to their publicly available corporate communication?

The paper will thus provide the starting point for comparatively evaluating potentials for sustainable, structural change through HEIs.

Methodology

Our methodical approach is based on a stepwise empirical data collection procedure, where we examine the web presence of eight Danish universities and six university colleges to identify their institutional strategies and other publicly available institutional policy documents. We scan all of these documents for referral to sustainability, sustainable development, and sustainable development goals (in English and Danish).

By means of document studies, a comparative analysis of how the institutions address sustainability in their HE activity at a strategic, policy level is undertaken as well as a mapping of institutional differences and traces of implementation of operationalized institutional change.

Preliminary findings

Tentative findings indicate that ambitions to implement sustainability in educations at Danish HEIs are abundant (Rehling 2020, Lysgaard, Jónsson et al. 2021). The same holds for the number and variety of concrete examples of ESD-oriented practice. Whereas, some institutions choose a top-down strategy, others tend to value bottom-up initiatives that nurture from a sense of necessity or passion of individual educators. However, a consistent implementation approach in coherence with strategy is rarely if at all communicated.

Institutional solutions to assess and evaluate ESD practice are also sparse. Evaluating and documenting the course of the many different initiatives undertaken would provide a good source for qualifying future initiatives to advance ESD. However, the reflection on the impact of these initiatives holds a large potential for systematic attention, and we find hardly any empirical data-collection serving to knowledge-base further ESD strategy and decision-making.

Karen Bjerg Petersen: Global citizenship education for (unknown) futures of education

Thursday, April 22, CEST 04:45 PM – 05:30 AM (Session B9)

A recent 'World in 2030' survey carried out by UNESCO in the months May through September 2020 indicates that 'climate change and biodiversity loss' by far are the biggest concern of the around 15.000 participants, who at the same time indicate that education and multilateralism are seen as the most important solutions to global issues. In my presentation, I will discuss possibilities and limitations of global citizenship education in versions of soft or critical approaches as means of solving current global issues and concerns including (unknown) futures of education at local and global level.

Katrine Dahl Madsen, Nanna Jordt Jørgensen, Tejs Møller, Sustainability at the university college: Challenges, dilemmas and openings

Friday, April 23, CEST 01:30 PM – 02: 00 (Session B13)

This paper explores how institutions of further and higher education could become more actively involved in sustainability, not just through curriculum changes but also in everyday life activities at campus. Drawing on our involvement in setting up Green Campus at the University College Copenhagen, we present and discuss some of the challenges, dilemmas and opportunities that appear when we, as researchers and educators, involve in sustainability initiatives at a university college. Methodologically, our involvement in the Green Campus project at the University College Copenhagen started with concrete transition processes, which later attracted our research interest. How could our engagement in Green Campus contribute more systematically to knowledge production with relevance for our ongoing research in sustainability and education at the institute of social education? Inspired by action research, we engaged in cyclic processes between planning, action, observation and reflection (Wahr & Harpe, 2016; Husted & Tofteng, 2014).

Kenneth Nordgren: Subject-Didactics in the New Normality: Challenges and Possibilities in History Teaching

Thursday, April 22, CEST 10:15 AM – 11:00 AM (Session A2)

What can a subject-didactical response be to the epistemological dilemmas that arise from understanding and acting in the Anthropocene? The possibility of subject teaching needs to be understood as a reciprocal relationship between explanation and what is to be explained. As specialised knowledge is a 'powerful' way to structure and re-examine knowledge about the world (Young & Muller 2016), generic skills and instructions for sustainable development cannot replace

disciplinary boundaries. However, exploring what is powerful knowledge in this new normality comes with a transformative influence. As the Anthropocene is unprecedented, it also follows that many past and current ways of thinking are not helpful and need to change.

In this presentation, I will relate some of these challenges for subject-didactical thinking to the example of history teaching: the Anthropocene epoch carries a fundamental grid for a new master narrative. It also stirs up binaries in historical explanations, such as between the universal and the particular. The Anthropocene is a different kind of periodisation. It does not start with an embryonic trajectory of empires, nation-building modernity or information technology. Instead, it begins with a wicked problem. It first identifies a reluctant and divided humanity as a geological force. Then it reintroduces the earth as a historical actor, disrupting the notion that culture has overcome nature.

The need to acknowledge human diversity and the Anthropocene exposes limits and dangers in the Western humanistic tradition. Nonetheless, based on human dignity as a universal value, according to Rösen (2017), humanism can reshape. Rösen is right that education always has socialising and normative goals. However, human dignity, as in the enlightenment tradition, might be too limited in its anthropocentrism.

To discuss one possible didactical direction forward for a historical 'Bildung' in the 21st century, I will draw from Williston's (2015) conceptualisation of three virtues in the Anthropocene: truthfulness, justice and hope.

Truthfulness points outward in two distinct ways: on the one hand, the need to trust science and see through fake news, and on the other, the need to re-think and deconstruct knowledge regimes that are obsolete. Justice is a form of social outwardness. It looks specifically to other people, their vital interests, and the institutions constructed and maintained to safeguard those interests. The ways out of poverty, we know, come with higher energy consumption, but it is also true that injustice, poverty and migration are drivers of the Anthropocene. Rather than collapsing the narrative, the distribution of resources and power is a thread that can combine the geological and historical. Hope is a form of temporal outwardness. It is directed at the future but in a way that is constitutively lucid and active. A historical perspective can oppose both wishful thinking and a cynical or apathetic retreat.

Kerstin von Brömssen: In the Context of Migration – the Swedish Nation's selfnarration through Civic Orientation Courses

Friday, April 23, CEST 12:45 PM – 13:30 PM (Session B12)

This paper is initiated by discourses on migrant's social integration, which has become a key policy objective of significant public discussions across Europe. A general trend towards civic integration requirements and stricter policies is seen in many migrant-receiving societies, through citizenship acquisition rules, integration programs and education policies critically

discussed as the “civic turn” in Europe. Civic orientation courses for newly arrived adult migrants were implemented in its current form in Swedish municipalities in 2010. In this paper I will give examples from the project “Citizenship and democracy education for adult newly arrived migrants? – A policy-ethnographic study of Civic Orientation in three metropolitan municipalities” which builds on data from ethnographic fieldwork in one bigger city in Sweden where the course has been followed in Arabic and English. The findings will be discussed by using theories on “good” and “bad” nationalism which problematizes education and the self-narration by the Swedish state.

Laura Cléries Garcia: A framework for innovating through design: Design Attitudes

Thursday, April 22, CEST 9.30 AM - 10.15 AM (Session C1)

Design is a discipline that can generate impact in many areas. It materializes new ideas and has therefore the potential for innovation. The discipline of design has been traditionally approached into different specialties, such as product design, graphic design, interior design, and so on. In recent years, and driven by the current changing and complex environment, design has been adopting new roles and has expanded its field of action, being also implicated in more strategic responsibilities [1]. The purpose of design and the role of designers is being redefined, and a new framework for innovating through design needs to be established. How design solves and brings innovation depends on the purpose, on the attitude towards innovation.

Qualitative trends research methodologies have been used in design management to explore future scenarios and respond to near-future consumer needs [2]. Through these methodologies it is possible to detect patterns that can shed light on directions for innovation through design, identify the innovators and also the impact areas.

By identifying the different design attitudes will allow us to foresee how to train the next generation of designers and to create meaningful impact strategies within design management roles.

This essay proposes a framework for innovating through design by exploring the attitudes and concepts that shape and define the future role of design and designers through a qualitative trends methodological approach.

Lene Rachel Andersen: How big are the changes for which we need to prepare and educate?

Friday, April 23, CEST 11:15 AM – 12:00 AM (Session C11)

Technology has evolved at an exponential rate since the invention of the stone axe. Since the emergence of modern humans, civilization has been going through several major epistemological shifts due to technological development, not least due to the development in communication

technologies. Andersen will take a big history perspective on the interplay between technological development, humans' impact on the environment and our need for education and bildung in order to handle the current civilizational transformation to the Anthropocene and the age of Bio-, Info-, Nano-, and Communication technologies. She will also introduce the Bildung Rose, which may guide us as we develop education that can allow us to handle the transformation, which is happening faster than any of the previous transformations, and which is therefore so much the more demanding.

Lesley Brook: Evaluation of art research for sustainable development

Thursday, April 22, CEST 03:30 PM – 04:00 PM (Session B7)

An exhibition of environmental artworks in 2020 created value for members of the public. The artists were responding to climate change and wider issues of human-caused changes to the planet. This study, undertaken for the researcher's Master of Professional Practice, evaluated the emotional impact of that exhibition on visitors.

Each participant was asked to complete a Q sort of photographs of the artworks according to the strength of their positive/negative emotional responses to the artworks. This was followed by a semi-structured interview. Interviews were audio-recorded and transcribed.

This paper presents the results of analysis of the transcripts of answers by 24 participants to three of the questions asked in interview. In the first two of these three questions participants were asked to describe how they feel about the effects of human activity on our world, and to identify which artwork or artworks most closely represented how they felt about that. Their answers suggest that a values-driven approach is suitable for improving human and institutional capacity on climate change mitigation.

The third question covered by this paper was whether participants thought or felt differently about the effects of human activity on our world after experiencing this exhibition. Half the participants reported that the exhibition either reinforced what they already thought and felt about the environment, or encouraged them because there was such a large community of local artists addressing environmental issues. Environmental art has a valuable role to play, to maintain awareness about climate action and to encourage public support for environmental initiatives.

Ljupco Kocarev & Jasna Koteska: Ethics of Digital me (AI agents and Futures of Education)

Thursday, April 22, CEST 04:45 PM – 05:30 PM (Session A9)

The paper addresses ethics of an AI agent called digital me. We define digital me as autonomous, decision-making, and learning agent, representing an individual and having practically immortal own life. It is assumed that digital me is equipped with the big-five personality model, ensuring

that it provides a model of some aspects of a strong AI: consciousness, free will, and intentionality. As computer-based personality judgments are more accurate than those made by humans, digital me can judge the personality of the individual represented by the digital me, other individuals' personalities, and other digital me-s.

We describe digital me with seven ontological qualities, and we argue that with the advancement of AI's sciences and technologies, there exist two digital me thresholds. The first threshold defines digital me having some (rudimentarily) form of consciousness, free will, and intentionality. The second threshold assumes that digital me is equipped with moral learning capabilities, implying that, in principle, digital me could develop their own ethics which significantly differs from human's understanding of ethics. In the presentation, we discuss the implications of digital me metaethics, normative and applied ethics, as well as the implementation of the Golden Rule in digital me-s, where we suggest two sets of normative principles for digital me: 1) consequentialist and 2) duty based digital me principles as part of the digital me ethical principles, both of which are central regarding the Futures of Education.

Machiko Niimi, Mary Butler: Designing education that makes a difference: the spectacles story

Thursday, April 22, CEST 04:15 PM – 04:45 PM (Session B8)

The Vision 20/20 project endeavours to meet the commitment underpinning the UN Sustainable Development Goals, which is to leave no one behind. The SDG for health (Goal 3: Good Health and Wellbeing) links with the World Health Organisation Global Action Plan on Universal Eye Health, which calls for access to comprehensive and equitable eye care services for all, with an emphasis on vulnerable groups. Early detection and effective management of eye health conditions in children can also contribute to the SDG on Education (Goal 4), by reducing drop-out rates and improving academic excellence. Correction of refractive errors (that is, using spectacles), can make a great difference to learning and general education.

People who wear glasses always have stories to tell about the moment they put on their first pair of prescription glasses. They describe being able to see individual leaves on trees, realising the blobs outside the class room windows were trees, and realising why the joke on the board was funny because now they can see and read the words. A single pair of spectacles can change a child's life. Yet, there are huge issues of equity in relation to access to eye care. It is estimated that there are a billion people worldwide who are visually impaired because they lack spectacle (WHO, 2019).

This paper describes how students at Otago Polytechnic came up with a concept that aimed to address the need for children to get spectacles. The initial idea was generated by final year occupational therapy students on a fieldwork placement. They came up with the hypothesis that a

child's vision could be tested by their peers, rather than only by health professionals. They could see the potential for this approach to empower both children and teachers, while also engaging the children in scientific method. They also hoped that the project would raise awareness in the families of children, which might create greater incentives to visit optometrists.

The initial concept was deemed successful enough to develop further. At this stage a final year product design student was given the task of developing a prototype vision screening toolkit that could be used by the children. This student collaborated with an optometrist to ensure that the toolkit was fit for purpose. He also collaborated with an occupational therapy student who helped to enable a co-design approach, where children and teachers were involved in developing the vision testing kit. The occupational therapy student also developed an eye-health education module. Together, they also visited the partner school a dozen times, and each time with a revised version to get more feedback from school pupil and teachers. This was done as a STEAM topic and one offshoot of the relationships created by the project was the mounting of an exhibition at the polytechnic of STEAM projects by primary school children.

This article discusses how a student led project exemplified a genuine citizen science approach, which eventually went on to attract funding from Participatory Science Platform New Zealand. An interdisciplinary research team was formed to support the students, and then continued to work together to ensure the ongoing sustainability of the project. The team consisted of researchers and practitioners from three institutions: Otago Polytechnic, the University of Otago, and Tahuna Intermediate School (10-13 year olds). It was made of occupational therapists, optometrists, product designers, teachers and learners (at multiple levels)

The original vision screening toolkit has been through several more rounds of development, and the original educational material supporting the toolkit has also been developed further. The material is now situated on the Science Learning Platform, which is a New Zealand based online platform funded by the Ministry of Education and Ministry of Business, Innovation and Enterprise. The platform is accessed by 7 million unique users, and the intention is to continue to make the vision testing kit and teaching materials freely for teachers to use in class.

The project exemplifies how students at all levels can do real work that makes a difference in the world. There is considerable scope for this project to continue to develop in ways that will feed our long term goal of ensuring that no child is left behind because of poor vision.

Marianne Leth, Michael Vogt: Sustainability – Local investigation – Global awareness. 'Bildung'-making for the Anthropocene in an inter-disciplinary teacher education course (nature and technology/history)?

Thursday, April 22, CEST 11:15 AM – 11:45 AM (Session A3)

This conference presentation contributes to the conference themes, as formulated in “Call for papers”: part 2): Examples of concrete cases of ESD and HPE.

Our case is an interdisciplinary course at the Teacher Education in Aarhus, a collaboration between the school subjects nature and technology, and history with focus on sustainability - local investigation - global awareness.

The purpose of the course is to engage and encourage the student teachers in investigating and acting local with a global perspective and to unfold the possibilities and capabilities for, not only developing competences and skills in the school subjects, but also in ‘Bildung’ processes for the future communities in what is named The Anthropocene.

When creating a collaboration between subjects from science and humanities in the frame of the concept of sustainability, climate changes and global warming, it seems obvious to include the skills and concepts of nature and technology and the other natural science subjects. History seems not obvious connected to the problem complex of climate changes, global warming and development of global citizenship. However, wanting to explore and understand the complexity and inconsistencies of the human impact of the local and global environment, the history subject is central with focus on concepts as human society, nature, culture, spirituality, technology, time and space, continuity and changes, development and backlash, just to mention some. By this interdisciplinary course we want to challenge the specialized subject related themes and concepts by investigating sustainable issues in the frame of functional interdisciplinary concepts, but on the basis of the specific substantial knowledge and skills. The challenge of concrete problem solving in ESD and ‘Bildung’ making needs both.

In interdisciplinary groups the student teachers chose a sustainable connected issue with perspectives to the past, the present and the future, locally investigated with global impact. They make investigations, contacts, interviews, visits, more investigations ect. They present their projects in a portfolio for the class.

Examples of student projects:

- “From earth to table” - sustainable food production locally/national scale/global scale
- Sustainable clothes production - from cotton to t-shirt
- Plastic Fantastic - production, re-use, reduction and replacement of plastic.
- Sustainable settlement - how to build sustainable houses and homes?
- Sustainable living? Examples of proclaimed sustainable communities.
- Following a “colonial” commodity from production to customer i.e. a banana or other tropical fruits and vegetables, tea, coffee, cacao ect.
- Sustainable fishing

In all these mentioned projects, it is necessary to investigate how, what, when, where, who, and why human history has the overwhelming effect on earth, and thus to perceive and acknowledge this as an internalized self-understanding in time and space. The concepts of the humanities and the natural sciences are simply interdependent for the investigation and communication.

The focus at this presentation and the paper will be a discussion of the double binary dilemmas between the subject specific skills in nature and technology and in history, and the

interdisciplinary skills on the one hand, and the developing of measurable competences and 'Bildung' for the real future on the other hand.

Our inquiry question:

Education for Sustainable Development in teacher education: Possibilities, capabilities and dilemmas in educating teachers to handle the complex of climate changes and global warming through interdisciplinary and outdoor didactics. How can the relation between skills and specific substantive knowledge be formulated into 'Bildung' projects for teachers in the future?

The presentation will present and discuss the possibilities, capabilities and dilemmas of:

- The ideas and ideals of this course theoretically and in practice as an integrated interdisciplinary part of a Teacher Education with focus on measurable competences
- The societal impact and relevance, and the development of responsible global citizenship as part of 'Bildung' processes in the Anthropocene
- In both perspectives: educating student teachers learning to become teachers in the Anthropocene world.

Megan Brasell-Jones, It takes a Village: Communicating a campus compost project as a local case study of sustainability education

Thursday, April 22, CEST 11:15 AM – 11:45 AM (Session B3)

Our relationship with waste has been tumultuous and at times dysfunctional, but it has come a long way. This paper outlines a project involving staff and students at Otago Polytechnic (in Dunedin, New Zealand) and traces the development of communication design systems and strategies aimed at on-campus behaviour change. Targeting the campus community, these communication strategies imply that people take personal responsibility for personal waste. This project was an opportunity for students to align their practices with the Sustainable Development Goals and use research to explore processes for user engagement. In the New Zealand context, this also required a consideration of bicultural thinking to inform outcomes.

Michael Paulsen: Onto-sympathy, embodied beings and pedagogy in a (post) Anthropocene age - about the possibility of pedagogically mediated dialogue with more than humans

Thursday, April 22, CEST 11:45 AM – 12:30 AM (Session A4)

We have entered a new age - the Anthropocene. It is argued that the Anthropocene has two basic meanings: first, that we now live in a time when human activities affect the earth to such an extent that the Holocene climatically stable period in which all human civilization came into being is replaced by a climatically unstable period. Secondly, it means that the worldview that has dominated the late Holocene, has been shaken, and today therefore a new different worldview is opening up. Where the old worldview has been scenic and human-centered, the new one is dialogical and zoe-centered. These two basic meanings call for and evoke two corresponding

movements in thinking. First, a new materialism movement that create new ways of mapping how we humans affect and are affected by everything else in the earthly spheres we are a part of. Secondly, a new idealism that develops new ways of understanding spirit as not only immanent to the human sphere, but to all life creatures pointing at new possibilities of inter-creature dialogue. The presentation discusses from such a philosophical sketch two models for understanding what dialogue between humans and other beings can mean, firstly a new materialist' model developed by Jane Bennett under the banner "onto-sympathy"; secondly, a new idealistic model, that is proposed as a complement to Bennett's model, under the banner "dialogue between embodied beings". In continuation of these models, I suggest what consequences these thoughts may have for pedagogy, school and the way we practice education; based on the thesis that the school should be rethought and transformed, so that dialogue with both humans and other beings, becomes the focal point, rather than simply mastery of resources.

Mirian Vilela: Cultivating human shared values and sparking social transformation; the greatest challenge of education of our times

Friday, April 23, CEST 02.45 PM – 04:00 PM (Keynote)

This presentation will offer some reflections on the importance of cultivating human shared values in the ESD practice and through the Futures of Education efforts. It will reflect on the purpose and role of education to current times, especially its role as an instrument of social transformation and its challenges to fulfill this role. In addition, it will share how the Earth Charter has been used as an instrument to cultivate human shared values of sustainability and global citizenship, and why such efforts are to be seen as priority and as drivers to the necessary civilization shift.

Nanna Jordt Jørgensen: Education for Sustainable Development and social justice: Global and local challenges and educational openings

Thursday, April 22, CEST 10:15 AM – 11:00 AM (Session B2)

'While connections between social justice and environmental sustainability have for long been obvious in parts of the world where environmental problems have affected people in highly unequal ways, only recently have these connections become (partly) recognized in educational policy, practices and research. In this presentation, I explore and discuss how social justice concerns emerge in environmental and sustainability education practices in specific empirical contexts and situations, how educational practice could address social justice in relation to environment and sustainability, and how educational research may contribute to this. The presentation draws on empirical examples from ethnographic research in two rather different contexts; on the one hand, the study of environmental knowledge forms in a community in Northern Kenya, in particular paying attention to young people's navigations of environmental knowledge, and, on the other hand, the study of social inequality and inclusion in nature pedagogical activities in Denmark. First, I discuss how hierarchies of knowledge forms are created

and strengthened in curricula and educational practices, resulting in the marginalization of non-dominating forms of knowledge about and ways of relating to nature. Second, I consider how these processes relate to global knowledge hierarchies as well as to locally situated forms of social inequality, linked to e.g. class and ethnic minority positions, which are reproduced within school systems. Last, I argue that overcoming the reproduction of social inequality and dominating knowledge hierarchies in environmental and sustainability education demands a stronger attention to engaged scholarship and collaborative research.

Natalie Mossin: Architectures interaction with the Sustainable Development Goals; reaching for sustainable development, in teaching and practice

Thursday, April 22, CEST 10:15 AM – 11:00 AM (Session C2)

The UN 17 Sustainable Development Goals represent the aspiration of the people of the United Nations for a more sustainable future. The Goals define the challenges we need to address in order to achieve a sustainable future for all. They address the global problems we face together, including those related to poverty, inequality, climate, environmental degradation, prosperity, health, peace and justice. The Goals are deeply interconnected, and, to avoid environmental break-down and to leave no one behind, the world must move significantly towards achieving each Goal by 2030.

The built environment, planning, architecture and design interact with every goal. Architectural solutions are already there, everywhere, contributing to sustainable communities and quality of life. However, the built environment is also a part of the immense current challenges – a major consumer of energy and natural resources, and a producer of waste. Furthermore, how we build can exacerbate inequalities and affect health.

That is why the Royal Danish Academy – Architecture, Design, Conservation, have committed candidate students to integrate solutions to the Goals in all student projects. To reach markedly different, sustainable practice in the building industry, we must integrate in teaching not just the studies of current sustainable solutions, but also prepare students to contribute to emerging sustainable practices not yet formed. That is in itself an emerging and developing effort, key learnings of which will be explored here. Examples discussed will include teaching at Royal Danish Academy – Institute of Architecture and Technology, partnerships with practice and the “An Architecture Guide to the UN 17 Sustainable Development Goals” volumes (2018 and 2020).

Niels Larsen, Teacher Education addressing Sustainable Development in the Anthropocene time – Partnerships and Co-learning

Thursday, April 22, CEST 03:00 PM – 03: 30 PM (Session B6)

In a time where transformative and structural changes and technology can synchronize time and space may young and coming generations look for views and more alternative ways for the future. Teacher Education are one of the key educational institutions in the societies because she will deliver the coming teachers for the coming generation who will live under the premises of the Anthropocene time.

Intro

Teacher Education have always been under a loop during the modernity and in the welfare state, especially related at least a couple of perspective: The broader aim with some philosophic question like: what life are we educating for? What is the aim? How can the coming teachers understand learning and the meaning of life? Another perspective is also: Education of teachers for/in the market economy and have a job. In the continental educational philosophy, we use the term: Bildung for the first perspective and education (uddannelse) in English will be used about the other perspective.

Policy papers from UNESCO and research on Teacher Education for social and ecological transformation has been published during the last 2 centuries, but it seems not to have been included or been reflected or implemented in a more practical way in different part of the world.

All though different initiatives and projects can bring some seedlings into a broader perspective on how we can do teacher training in a future sense.

The GLAD ("Global Learning – Advanced professionalism – Dialogue") project can be views in a critical and reflective way for the purpose of developing new transformative learning for teacher training students to become more sustainable and global in their views on teaching and learning.

In my paper and presentation, I will refer to the GLAD case where a Kenyan Teacher Education institution collaborated with a Danish Teacher Training Institution working with co-learning between teachers from the Colleges in different subjects and teacher-students worked together with teachers both in Kenya and in Denmark.

The Case

The purpose of the GLAD project was to develop information about developing countries and intercultural pedagogy / didactics in connection with the new teacher training education. This will occur through, among other things, working with a developing country, and through a strengthening of the trainee teachers' intercultural skills.

The aims of the GLAD programme were:

- Professional development, both in relation to individual subject (e.g. geography), and in the area of basic professionalism

- Pedagogy and didactic theory combined with practice (advanced module)
- Conveying and communicating global themes with experience from visiting developing countries, and communication with students and teachers in developing countries
- Topics that have global perspectives such as sustainability, health care, climate, etc.
- Work placement and exchange with a global view where both students and teachers visit a developing country
- Cooperation with local state schools (Holluf Pile school and Hunderupskolen) and a Primary School in Kenya
- Active use of IT, where such media as Skype / blog dialogues will be included in the process
- As well as the above, culture studies and mutual exchanges for example in connection with work placement, where students will be able to use their experience and knowledge from the project in the final Bachelor project (BA), and in connection with profession projects (1st-3rd year students).

Discussion

I will address the sustainable development related to different key concepts and specific goals in the SDG. Sustainable partnerships formations that links Nord and South more and make it possible to collaborate not only between people and institutions, but also between local community in a whole-school approach. Co-learning is an integrated understanding on how different views in curriculum about sustainable living and life conditions can be discussed and reflected on, regardless time and space. New technology can be useful as a working tool when we combine online and physical dialogue and discussions and especially as a part of co-learning.

In the paper and in the presentation, I will reflect on how Education and Sustainability at the teacher training Centre can be viewed either 'About' (information approach), 'with' (part of a subject), 'for' (as a vision and mission for the Teacher Training Institution) or 'In' (as a whole school approach).

Noah W. Sobe, UNESCO's Futures of Education initiative

Thursday, April 22, CEST 05:45 PM – 06: 30 PM (Keynote)

This presentation will include an overview of the ambition, design and initial accomplishments of UNESCO's Futures of Education initiative. Launched in 2019, UNESCO has convened an International Commission that will issue a report on the Futures of Education at its general conference in November 2021. The initiative relies on a broad public and expert engagement and is intended to catalyze an ongoing global debate on the futures of education to continue

well beyond the report launch. Dr. Sobe, a program officer in the Secretariat that is supporting the work of the International Commission, will discuss the work undertaken to date which includes consultation analyses, research background papers, and two publications from the Commission, a June 2020 report Education in a post-COVID world: Nine ideas for public action and a Progress Update which was released at the start of March.

Poul Erik Christoffersen, A little less conversation, a little more action

Friday, April 23, CEST 01:30 PM – 02:00 PM (Session C13)



The Danish UNESCO Network of SDG schools - shares inspiration, ideas, and practical ways – how schools can work with the SDGs.

*Poul Erik Christoffersen, National UNESCO Co-ordinator for Danish SDG Schools.
Former Leader of The Youth Town & The Innovative Centre for General Education.*
<https://unesco-asp.dk/english/>

Rune Thorbjørn Clausen, Kasper Trolle Elmholdt, To count or not to count, that is the question? Evaluative practices in Higher Education

Thursday, April 22, CEST 03:00 PM – 03: 30 (Session B6)

Due to the emergence and prevalence of 'quantification cultures' and the ensuing 'audit society' (Power, 1999), higher education institutions are increasingly faced with demands of performance measurement and rituals of quantification. University ranking is but one example of the 'control by numbers' (Lynch, 2015) that has institutionalized the educational landscape and actively informs political institutions such as OECD and EU in educational policies and strategies. Citation indexes and numeric 'impact factors' working as proxies for the quality of academic work is yet other practices that is highly political (Lawrence, 2007) and might lead astray (Todd and Ladle, 2008), or blur professional and administrative commitments (Christin, 2018). Likewise, teachers and

researchers at universities of applied sciences in Denmark are required by law to account for working hours on daily basis.

In this regard, numbers and benchmarks create transparency and a verifiable argument (March 1994; Power 2004), by which managers and organizations are able to compare and evaluate decisions and thereby manage future allocations of resources. By ranking higher education institutions or making academics 'work' visible either by counting 'impact' or 'hours', the institution and its workers become measurable and hence comparable and in the end 'objects of evaluation'. As research on sociology of valuation points out, dominating calculation regimes prosper under such conditions. Espeland and Stacy (2015) argue for how such regimes categorize and label in order to make visible and thus comparable, by which control of behavior is made possible. Making certain aspects of work visible while other aspects are left invisible is however highly problematic (Kornberger et al. 2015). A too narrow focus on only what we see on behalf of what we don't see' (Espeland & Stacy, 2015) may devalue otherwise valuable work taking place 'in the shadows' (Star and Strauss, 1999). This aspect of higher education evaluation is often overlooked in the public debate as well as research (Lynch, 2015).

In the full paper, we study two illustrative cases of calculative devices used by a Danish higher education institution. Each device enables the existence of evaluative infrastructures (Power, 2015) that guide, instruct and control the behavior of employees. We have selected the two cases as they represent conflicting calculation devices. While BFI is a system for and indicator of research quality, SmartKLIK is an IT system for time recording that accounts for hours spend on work activities and projects, which has to be balanced by the end of each term. The former makes research output visible, while the latter makes the research input visible. However, they are rarely aligned in terms of what 'counts' and what 'not counts' or what is clear and visible as a number and what is in the 'shadows' of the number. In the full paper, we show how numbers have become key in modern rituals of control both facing higher education institutions as well as driving them. We conclude by discussing the future role of evaluative practices in higher education institutions, and why we need to ask the question of whether to count or not to count?

Sara Denise Narciso, Project Based Learning in Communication Design: Creating value for learners and communities

Thursday, April 22, CEST 03:00 PM – 03: 30 PM (Session C6)

In Communication Design at Otago Polytechnic we employ Project-based Learning methodologies extensively in the second half of our degree, working with up to 50 community organisations in any year. We find that this is great way to engage learners with live projects, and helps learners to see a place for themselves in the world as designers.

Our mostly young learners need to work with others – outside of their peer group – and develop professional communication skills in the course of their study. The benefits to the

community groups we work with are wide-ranging, and they come to better understand their own needs, as well as how to work with a designer.

Design education around the world has employed a Project-based Learning (PBL) approach to improve the quality of education and to enhance learner's development and understanding of specific skills and knowledge. PBL also enhances relationships with the community through enquiry, collaboration and innovation. The benefits to this approach are broad and this has been evidenced by a community project I will use as a case study for this paper, when we worked with a local community that are caretakers for a small island in Otago Harbour: Quarantine Island Kamau Taurua (QIKT).

By engaging in live projects, students get the relevant design skills and literacy to equip them for future work. Client meetings, research and user-testing also allowed them to become more aware of clients' needs but more so appreciate history, cultural diversity and global citizenship through their design process, thus, aligning with SDGs 11. In this project, a group of tertiary students took on design briefs that address the Island community's multi-faceted enquiry. The island has a rich history; and community members are determined to protect and enhance its ecology, heritage and cultural relevance to locals and visitors alike. This goal has led the QIKT community to collaborate with our students and ensures an inclusive and equitable quality education for our students as identified in SDGs 4.

The QIKT community design project has produced a number of design outcomes – logo design, campaign collaterals, web design, 3D models, and a social media campaign. Learners reported having a deeper, more meaningful understanding of their impact as designers when meeting with people. The QIKT community as clients enjoyed the focus that the students have given them. The research, experimentation and unique perspectives identified by students helped the QIKT community better understand and appreciate their own values and goals.

The kinds of PBL we identify when working with local communities clearly reflects Biesta's (2009) three purposes of education – “qualification”, “socialisation” and “subjectification” (p.33) which offers a multidimensionality of education purpose, thus adding high value to all stakeholders. We have identified a unique opportunity to provide a value chain to our communities through PBL, where stakeholders – including students – learn, share and work interdependently towards a common goal.

As this practice has grown quickly, an initial framework is developed to further enhance the delivery of PBL in Communication Design. This framework offers a collaborative approach to planning, delivering and managing projects with communities. I reviewed literature, applied for ethics, interviewed a range of stakeholders, reflected on my findings and have begun developing a clear framework. This paper outlines my methods, identifies stakeholders (students, lecturers and organisations), offers a summary of results as a set of identified needs. I also demonstrate the work that I have done on developing an initial framework that

responds to these opportunities or needs. I still need to test my framework at Otago Polytechnic and seek feedback from others in the sector who may be working in similar ways.

Shelley Sacks: Education as a Connective Practice for 'making Social Honey™'

Friday, April 23, CEST 09:15 AM – 10:30 AM (Keynote)

The holistic integration of skills, information, and awareness for working toward a humane and eco-social future...

What has the inner culture of the human being got to do with learning?

What is the difference between information and awareness?

Why is it useful to understand this for the Future of Education in a world of immensely challenging intersecting global crises?

What does all this have to do with imagination and the aesthetic dimension?

With these questions as guides, this presentation will introduce my 'Connective Practice™' approach inspired by my work with Joseph Beuys' social sculpture ideas and proposals as well as Paulo Freire's Education for Transformation, Illich's De-schooling Society, Ngugi wa Thiong'o's 'Decolonising the Mind', James Hillman's Imaginal Thought, Joanna Macy's Great Turning, Val Plumwood's 'Ecofeminism'; my studies in Vedantic Philosophy and meditation in action; years of 'education for democracy' and 'cooperative development' in the South African liberation struggle, and the illuminating insights in "A Basic Call to Consciousness", from the Sioux 6 Nations Conference.

All these streams of questioning, inspiration and commitment to shaping a cooperative and interdependent way of living in the world are woven into the 'Connective Practice' approach that emphasizes with Joseph Beuys that 'every human being is an artist', as well as 'a philosopher' and 'a researcher'. I will share a few practices piloted with young change makers in many countries, and ready to be scaled out. These 'Connective Practices' highlight a perspective on learning that links imaginal work and reflexivity, and reinforces the inextricable connection between personal change, social change and system change: between freedom, aesthetic imagination and responsibility as an ability-to-respond.

Students from Humber College, Map the System to Crack the System: Student Systems Thinking Research on Issues Related to the SDGs

Thursday, April 22, CEST 4:15 PM – 04:45 PM (Session C8)

In this session undergraduate students from Humber College's international development degree program will showcase their Systems Thinking work on issues related to the SDGs. Students have

used systems mapping to understand and visualize the interconnected and complex nature of both local and global problems related to the SDGs. They will explore topics related to: Gender, Food Security, Indigenous Arts and Ownership, Social Exclusion and Underemployment. The systems maps will be displayed while students discuss their work and answer questions.

NB! You can prepare beforehand, or after the session, by checking out the posters and the videos the students have produced for this session by following this link: <https://cut.ly/UXiSu1U>

Thomas Østergaard et al.: Learners Learning to Become – Exploring experiences with developing educator's ESD-competencies across sectors in Higher Education

Thursday, April 22, CEST 11:45 AM – 12:30 PM (Session B4)

A huge variety of Higher Educations (HE's) have been working on and documented the implementation of Educations for Sustainable Development (ESD's). Research often shows case studies of faculty or university specific transformation processes' in changing curricula and the efforts being made to enhance the students' competencies for Sustainable Development. But lately, research strongly indicates promising opportunities when building and focusing on developing transdisciplinary ESD competencies among academic staff in HE's to provide change in both curricula and "Whole-insitution" approach to ESD's.

In this way, facilitating "lifelong learning processes" amongst educators can improve the overall ESD learning, interacting with the surroundings and teaching competencies, as well as this could even provide a new power of "meaningful reason" for management, educators, collaborating companies and in the end; the students. [1] [9] [16] [19]

This presentation describes an entrepreneurial, transdisciplinary and transformative ESD competencescourse at VIA University College, Denmark, from 2018-2021, involving 100 educators from a wide variety of faculties. It analyses to what extend the effects on transformative changes towards a sustainable Higher Educational institution have been and how these experiences with "learning the learners to become" can be implemented at other HE's.

The presentation analyses four levels of impact of the competencies course; (1)impacts on the values in managerial and organisational levels; (2)changes in the individual educators approaches to teaching practices; (3)impacts on individual competence development; (4)impacts on the personal and institutional interaction with surrounding communities, business' and society.

The results of this case study demonstrate the potential of initiating ESD competencies-courses and confirms the notion, that the competence development of academic staff is an "essential prerequisite for a sustainability paradigm shift in higher education". [4] In this way, the program started out with an ambition to enhance curriculum redesign (creating ESD's) but ended up making organisational alterations and created a four-component loop of learning and interventions

between educators, external specialists, the institutional organisation (management), collaborating companies and the students. [11] [12]

Due to the use of co-creational, interventional-action research methodology the results are time,- space,- and person-related to the case-studies and cannot be generalized, but hopefully, the different courses provide an insight and reflection over a period of four years which can be used in comparable settings of professional competencies development within ESD's in the future.

Torben Albertsen, Strange animals and what to do with them

Thursday, April 22, CEST 04:15 PM – 04:45 PM (Session A8)

In Chile, intercultural education, at least ideally, is concerned with the learning from indigenous people, and as such, anthropology is at the center stage. One of the aspects learning might learn from anthropology has to do with plurality, and more specifically, how to embrace plurality without reducing it at the same time. If sustainability has any stake in this, it would have to do with learning how to continually sustain plurality. Viveiros De Castro is a founding part of a relatively recent anthropological tradition called recursive anthropology, sometimes also referred to as the ontological turn. His ethnography consists of a proposal for Amerindian cosmology (1992, 1998) and his methodology proposes a way to sustain plurality (2004, 2010, 2013, 2014). I propose to treat both aspects. First, we would like to describe his Amerindian cosmology, and we are specifically here interested in its different approach to nature. Secondly, we will describe his methodology in its relation to his ethnography, and here we will be specifically concerned with thinking his method as a pedagogical project involved with intercultural learning.

Tsewang Lhundup, Gross Local Happiness - Future of the Past!

Thursday, April 22, CEST 10:45 AM – 11:15 PM (Session A10)

FabLab Bhutan is a network platform for makers, inventors, artists, researcher, entrepreneurs, and creative people who are willing to exchange knowledge, ideas and technology to collectively empower people of all age, diverse backgrounds and abilities to experiment and invent (almost) anything to solve real-world problems at local, national, and global levels; thereby creating opportunities to improve lives and livelihoods.

At the practical level this means that innovators and entrepreneurs will be empowered to create and build items, from self-powering radios to laptop computers, to furniture, right through to the fabrication of the built environment. At a community level this means that they can create items that uplift and assist communities in need, such as designing and 3D printing parts for plumbers, farmers, or fixing the broken toilets, windows, or doors. As an educational and incubation platform, it has been proven to be a critical catalyst for applied STEAM learning and innovations.