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Abstract for the Creative University Conference 2016, 18.-19. August, Aalborg, Denmark

Inventing Problems for Technical Solutions – The Co-production of Universities, Skills and Engineering Challenges

By Joakim Juhl and Anders Buch

Abstract:

Whether one gazes to high-level international politics, the general public opinion, or how we as individuals identify ourselves as contributors to society, the industrialized West has increasingly come to see innovation as its core obligation around which everyone is drawn together in universal appreciation. The widely held imagination of innovation is that of a process by which new developments in science and technology are transformed into new business applications. Higher education and professions are eager to impose their expertises onto, and claim authority within, the domain of innovation. In the recent two decades, universities and other engineering institutions that are typically identified with technology development have expanded their research and teaching activities toward the business end of innovation (Juhl, forthcoming 2016).

This paper investigates the new emergent trend in academic institution building where business and management competencies are incorporated to engineering curricula. By comparing experiences from early career alumni from educations that are results of moving engineering institutions into business, we analyze the consequences imposed by changing disciplinary demarcations within academic and professional engineering knowledges.

The paper draws on the theoretical frameworks of co-production (Jasanoff 2004) and sociotechnical imaginaries (Jasanoff & Kim 2009; Jasanoff et al. 2015) to analyze how academic institutions develop under changing social expectations of higher effectiveness, competition, and economic yield while new forms of expertise and governance principles, like New Public Management, place universities under pressure to reinvent themselves.

Our results indicate that the efforts to reorganize academic engineering knowledge-productions towards business operate after an accountability principle that at one and the same time improve on the academic institution's ranking while it presents a challenge to new kinds of graduates who face a professional job market that is ill prepared to adopt their novel forms of expertise.

The paper investigates how social scientists at the Technical University of Denmark in response to new demands for business-orientation within Danish universities invented the 'Design and Innovation' engineering program. The upshot of this endeavor is discussed in relation to ethnographic research about the competence profiles of the program's engineering candidates and how they fare in subsequent employment in industry.

The paper contributes to contemporary discussions of transformations within the university system by supplying empirical case material as well as conceptual resources for fathoming recent developments within the institutional reconfiguration of the university.

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Foucauldian Power/Knowledge Reading of Schooling: the Multiple Functions and Forms of Pedagogical Power

Anna Montana Cirell

The purpose of this conceptual piece is to use Foucault as an analytical tool for explicating how abstract fabricated as well as physical spaces of schooling intersect with various pedagogical practices to (re)produce various power/knowledge subjectivities of students. In doing so, I examine unexplored potential of framing schooling as a consequence of pedagogical power and also explore the affordances of mapping alternatives ways of knowing. As a conceptual piece, my goal herein is to capitalize on key Foucauldian theory and related analytical tools as well as empirical studies to investigate how various pedagogical powers and its related consequences/contradictions on which they are based may be stifling educational progress and reform.

The overarching perspective that informs this work and particular analyses draws on the work of Michel Foucault. Given the social sciences, generally speaking, take various ontological views of reality and what it means to know, this piece uses Foucault to historicize ontologies when locating the future and past within the present.

Methodologically, I bring the past and the future into the present through a genealogical analysis that traces the network of power relations as they move and converge across time and space. First, I collected and reviewed historical and empirical studies focusing on how productive tensions and modes of resistance materialized into various pedagogical sites. This helped to foreground my understanding of both the nature and function of various disciplinary instruments and educational practices. Then I applied a Foucauldian knowledge/power reading, leveraging various constructs such as *knowledge* (savoir vs. connaissance), *power* (structural and relational) and the *subject*, to analyze ways in which pedagogical sites become the pivotal point through which students' growth is fostered or resisted.

In leveraging various Foucauldian constructs, I locate the school as a pivotal institution in the formation and discipline of students' subjectivities. Additionally, results discuss origins and machinations of pedagogical power as it calcifies norms of the body, the institution, and finally the larger ingrained schooling practices of everyday life.

Unlike how quantitative research is highly valued in our current Neoliberal climate of austere and high-competition economic and social policies, I discuss how this more qualitative inquiry is underfunded and under attack. In this way, I am forthcoming in potential research/practice limitations. However, in privileging a different way of knowing, I also position these analytical

tools at the crux of an unforeseen opportunity and radical openness emerging from these present limitations.

Identifying core assumptions and various applications in practice may emphasize key insights to be elicited from the application of such analytical tools to empirical studies of pedagogical power/knowledge in other contexts across disciplines. I will promote these Foucauldian analytical tools as a means for developing a research inquiry that can address educational advocacy as well as social justice concerns. This is important because, regardless of route or approach, we share a commitment to engage in ethical work to make a positive difference in today's world. Thus, as critical scholars our task is to bring the past and the future into the present.

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Dr Anna Wach-Kąkolewicz

Constructivist Approach in Entrepreneurship Education with the Use of Virtual Games

The aim of the presentation is to show the importance of the method of virtual strategic games in teaching entrepreneurship from the angle of designing and teaching classes in accordance with the constructivist learning theory. The additional goal is to discuss the survey results concerning students' learning with games.

As teaching entrepreneurship should promote pro-active and creative attitudes, we discuss the issue of learning by doing, pointing out that active teaching methods, including electronic games, are proper educational strategies nowadays. We present the premises of the constructivist paradigm (Piaget, Wygotski, Bruner) in relation to the specific nature of entrepreneurial education, and give an overview of David Kolb's learning cycle that provides the framework for designing a teaching process. Then, we deal with the constructivism's proposal of teaching classes with the application of the method of electronic games.

We intend to use a case study to portrait the issue. We want to present virtual strategic games that were the outcome of two international teaching projects. We would like to discuss the use of electronic games as a teaching method and share the survey findings concerning students' opinions about learning with games.

The analysis of the use of electronic games in entrepreneurial education shows that this method has become a part of student-centered educational theories and concepts. Games activate students' pre-knowledge and involve them in an all-round way. They facilitate team learning and make students reflect while acting and reflect on their actions. They also make it possible to apply new solutions and allow learners to experience and construct knowledge individually in a social context. We formulate the results based on theoretical analysis, teaching experience with games and the survey findings.

The argumentation we would like to present puts emphasis on a few issues. Firstly, entrepreneurial education should involve active educational strategies. Secondly, teaching at university should be student-centered and should motivate students' multi-level activity. Thirdly, the electronic games under study are an interesting constructivist teaching proposal for teachers of entrepreneurship. It may also be a source of inspiration for all teachers who seek unconventional solutions in academic education.

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Transforming traditional undergraduate science education: integrating leadership and science worldviews

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Scientists and science students for the most part focus their energies, creative and otherwise, on their science. With the rapid evolution of scientific knowledge, most of us persist in covering this content in our teaching - at best together with measurement, quantitative analysis, and laboratory procedures. Our graduates will be faced with working in an increasingly global environment with technological advancements commonly outstripping our ability to process the implications of these changes at the pace needed for the betterment of society. These advancements offer exciting as well as challenging opportunities, and scientific understanding as well as innovation will be critical to creating a sustainable future. However, our future scientists are commonly ill-equipped to lead this change, even where an understanding of their science is critical to responsible decision-making. Developing leadership and communication skills is not on the radar of most undergraduate or graduate programs in science, yet most of our graduates will at some point be called upon to be leaders, and increasingly, effective communicators of their science to the public.

In response to this need, we have developed an undergraduate certificate in leadership and communication in science, in which students select a sequence of courses that equip them to reflect more deeply on the nature and responsibility of science, ethical issues and decision-making in the sciences, what it means to be an effective leader, and building and sustaining collaborative communities. Key components include a course in communicating science in which students learn and practice effective communication for a variety of audiences; and a capstone course in science leadership provides students with the opportunity to develop their leadership skills directly in the context of science. Students learn the theory behind what it means to be a leader in today's society, again in the scientific context. This presentation will serve to highlight the facets of the certificate, and focus specifically on the nature of the leadership course itself, as a creative response to the increasing demands and responsibilities of young scientists moving forward in the 21st Century. We discuss also the lessons we have learned as we implemented this course, together with the benefits and our plans moving forward. In particular, we highlight the challenges in transforming traditional thinking, as we integrate leadership philosophies and theories (Komives et al., 2013; Kouzes and Posner, 2014; Marquardt and Berger, 2000; Shankman et al., 2015), across a variety of scientific disciplines (Ferrett, T., 2013).

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Abstract: Knitting the Concept – the Use of Artistic Strategies to move the Knowledge Culture in Academic Teaching

By Anne Mette W. Nielsen, Ph.d., Assistant Professor, Aalborg University and Rikke Platz Cortsen, Ph.d., Postdoc, University of Copenhagen

Academic practices have been going through rapid changes in recent years in the way they operate, as well as their societal function (e.g. Hayles, 2012). University students are still expected to acquire new knowledge and think critically within their field of studies while facing new modes of thinking and a more unpredictable post-graduation future. For us it has meant to explore new ways of engaging students as independent thinkers and actors. The ambition has been to move the knowledge culture in the classroom from a reproduction of text-based knowledge to involve continuous inquiry, productive failing and new multimodal modes of critical thinking.

Our approach implies an extensive use of artistic strategies from mappings over re-enactments and different ways of curatorial practices. It is inspired by the French philosopher Bruno Latour's distinction between representation and re-presentation (Latour, 1988) and his development of the theoretical concept of *composition* (Latour, 2010). The emphasis here is that rather than trying to represent the world, theoretical concepts present it. Latour explores this re-framing of academic scholarship in several of his multimodal works by highlighting the aesthetic concerns it implies, e.g. the online mapping project *Paris: Invisible City* (2004), the art exhibition *Making Things Public* (2005) and the re-enactment *The Tarde Durkheim Debate* (2007).

Much in line with Latour's thinking we designed an MA-level theory course in Modern Culture at the University of Copenhagen in spring 2014 involving artistic strategies in order to rethink the knowledge culture in our teaching. The course combined theory, introduction to various art-as-research approaches by guest lectures, student inquiries (between them the *knitting of a concept*) and collaborative feedback sessions. During the last class the students selected and edited the produced material and turned it into a collaborative e-book using the online platform Booktype.

In our presentation we will describe four key components by which the students were able to access new areas of thought, i.e. both challenging thinking and pushing themselves further in their thinking: *Productive failing, extended and different modes of attention, material reflection* and *collaborative thinking*. We will provide examples of some of the assignments from our co-inquiry with the students in order to describe how we discussed their productions. We finish the presentation by analyzing how these new multimodal modes were qualified within the frame of the course, how they can be integrated in other courses and what the limitations might be.

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3. Debate/Panel discussion/Round table

Drawing perspectives for future Higher Education

- Creative epistemic encounters beyond discussion

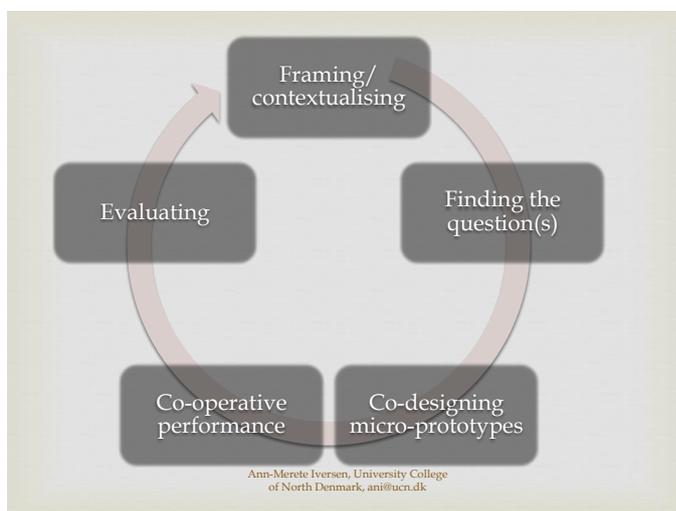
Ann-Merete Iversen, University College of North Denmark
Anni Stavnskær Pedersen, University College of North Denmark
Lone Krogh, Aalborg University
Annie Aarup Jensen, Aalborg University

We suggest transcending conventional conference formats to take academic encounters beyond discussion and into a dialogical space of creation.

The headline “Creative University” urges us to introduce a hands-on process designed on the backdrop of socio-epistemology, complexity theory, learning philosophy and design theory.

Focus is on learning processes taking place in the shared space between students and teachers. In some ways the methods suggested suspend the classical concepts of teaching and replace them with a structured generative dialogue within which knowledge exchange and knowledge production can take place.

The session introduces an ‘on the spot’ creative epistemic practice combining empirically based research presentations with an art based co-creative dialogue between participants exploring possible futures in higher education. We introduce co-creative process design as an approach to didactic design.



Model 1: Progression in On the spot epistemic practice/didactical co-creation

To explore the form of communication that can facilitate co-creative dialogues between teachers and students, we turn to Shaw (2002) who takes her point of departure in complexity theory. Shaw (2002, 2005) describes a communicative approach to user-driven design, which could be transferred into an educational context, i.e. open and meaningful communication capturing participants’ interest, revolving around what excites or even frustrates participants. This implies a willingness to explore and improvise, and associations arise in a process of weaving in the actions to co-create the

future (Shaw, 2002: 70). The purpose of dialogue between students and teachers is not just to understand their existing approach to teaching but also to co-create new ideas for teaching design. The teacher becomes facilitator to encourage lively dialogue and encompass different views, even conflicts, regarding how and what is going to be taught. This requires teachers and students to be at ease with open approaches. Teachers must let go of fixed agendas and help students do the same. *“Leading becomes being able to articulate issues and themes as they emerge and transform”* (Shaw, 2005: 21). A learner-led approach requires the teacher/facilitator to be very conscious of the form of communication used in dialogues with students about content.

The implications for practice are new and constructive ways of working with students in order to co-create teaching and learning designs which motivate and enhance students’ learning processes, but at the same time may be daunting for teachers. Further research documenting the benefits of the principles, the learning processes and learning outcome as well as the pitfalls and challenges is needed.

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UNIVERSITIES BETWEEN MARKETIZATION AND SELF-BRANDING

Bente Elkjaer and Niels Christian Mossfeldt Nickelsen

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Recently, much emphasis on the study of universities has been focused upon strategic management and measurement (Czarniawska & Genell, 2002) due to their crucial role in contemporary knowledge based economies (Bleiklie & Byrkjeflot, 2002), which has led to a renewed scholarly interest in researching universities as organizations (Whitley & Gläser, 2014). The changes of universities have led to changed relationships between administrative and academic staff that is tied together through performance systems and other current technologies (Musselin, 2013).

It is, however, important to recall that university scholars are not only embedded in their home-university but also participants in worldwide competitive arenas of scholars driven by interests and passion for what they do as well as struggles for visibility, attention, recognition and even aspirations for celebrity (Van Krieken, 2012).

We particularly zoom in on an organizational practice, which both serves the marketization of the university and the well-being of university staff as a whole, the HR department (van den Brink, Fruytier, & Thunnissen, 2013). In the paper, we re-visit universities as organizations and focus upon how HR as an organizational practice may facilitate a mission of developing excellent teaching and research as well as look after the individual employees' well-being. Thus, we ask the question: Which role does HR practices play in the juggle between management for world-class universities and the well-being of academic staff embedded in world-wide communities of scholars?

The paper is informed by a pragmatist inspired understanding of organizations as 'people doing things together' and organizational learning and knowing as driven by tensions and passions. This means that we particularly look at HR practices where systems, HR administration and academic staff collaborate (and collide) around issues connected to developing universities and people. The paper is a literature review preparing for an empirical study of HR practices at Danish universities and will include the following themes: 1) universities as organizations (old

and new versions); 2) the role of HRM (very limited literature); 3) theoretical framing within the field of organizational learning based upon pragmatist philosophy, and 4) tentative methodological design.

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Learning Goals May Harm Understanding of Innovation and Creativity

Birthe Lund

The term “education” is gradually being replaced by learning, and hereby we risk that the content, the direction and *the purpose* of learning is being misinterpreted. Learning is a term that describes an individualistic process, in that you can't learn for others; learning is embodied (G. Biesta: 2010, G. Biesta 2013)

Educational goals are currently being replaced by specific “learning goals” for all students described in the guidelines published by the Danish Ministry of Education (2016). These learning goals are meant to be directly observable and consequently they are often described in action directed verbs (eg. “The student can”). All learning goals will be executed individually. This is also reflected in the “didactic” model which does not include the reference frame: content (Ministeriet for Børn, Undervisning og Ligestilling B (2016). Students must acquire “learning” in all subjects. To follow this guide seems to be a rather complicated transition, as teachers (and students) now have to relate to more than 3000 learning goals during school time. (Skovmand, Keld 2016) Subsequently this may also have an impact on concepts like innovation and creativity as they refer to issues, problems and transverse subjects in the general curriculum. Students do not have to deal with these “issues” in specific subjects, but they are reflected in all subjects. In the new guidelines they are therefore replaced by themes.

The directing authors of the new guidelines legitimize this transformation by referring to the empiric turn around as opposed to the previous speculative (normative) knowledge within pedagogy content knowledge. This paper discusses the didactical consequences of leaning directed goal formulation within the concept of entrepreneurship and innovation.

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ISBN: 978-87-603-3063-6 Elektronisk ISBN: 978-87-603-3064-3*

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More than Shiny New Spaces for Tinkering: Fostering Design Practices and Thinking in University Makerspaces

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Recently Makerspaces have made a bold appearance in universities as an effort to cultivate skills in innovation and creativity among tertiary students (Barrett et al., 2015). Makerspaces are open learning environments where Science, Technology, Education, and Math (STEM) educational tools and materials are used. Such design studios, also known under names such as makerspaces, hackerspaces, and fablabs, are creative, do-it-yourself (DIY) spaces where people can gather to ideate, create, invent, and learn with new technologies. Celebrated as being on the cutting edge of innovation, makerspaces are touted as providing students with creative opportunities. Yet, we contend that exposure to this learning environment with its technology is not sufficient to propel students into a creative mindset or a maker identity (Anderson, 2012).

The purpose of this paper is to provide a framework for pedagogy in university makerspaces. We argue that becoming proficient in design practice and design thinking is vital for makerspaces to realize their potential. Design practices and design thinking are central to these learning environments even though the tools, the characteristics of the spaces, and the technologies vary widely. Ames et al. (2014) argues that a common goal of makerspaces is the development of a making culture, founded on democratic notions whereby participants have equal access to building, sharing knowledge, and leading discovery. Toward this goal, makerspaces require staff and instructors to facilitate learning that contrast fundamentally from the didactic instruction of a lecture, or even laboratory-based instruction (Brandt et al., 2013). Using a theoretical framework based on learning communities (Lave & Wenger, 1991), we define design thinking as related to a set of practices: how to approach a problem, iterate ideas, prototype, and critique solutions (Schön, 1987). Design thinking is not always an intuitive process; it requires practice, training, reflection, and flexibility (Nørgård, 2015; Sheridan et al., 2014).

Yet, few STEM instructors or staff have experience in a design studio or understand what it means to facilitate students' learning and design thinking. Being technological literate and skilled in coding doesn't necessarily qualify a person to teach in a makerspace. This paper outlines practices that introduce students to the norms of particular design communities (Human Computer Interaction, Engineering, or Industrial Design, for example). To understand the cultural practices and construction of knowledge in the makerspaces, we use data from a two-year qualitative study of design studios at three US universities. Through the analysis of video data, design artifacts, and tools for tracking meaning making as it occurred in the studio between students and their instructors, we offer a framework for training instructors and support staff in ways to facilitate students' design work and building in university makerspaces. In this way, makerspaces can be a model for a different kind of learning in the university, one in which staff, instructors, and students co-create and innovate to solve pressing problems in their own communities.

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The Individual Difference of Creative Personality among Chinese Undergraduates: A Large-scaled Survey

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Abstract

Creative personality has been one of significant topics in the research about creativity since 1950s (Prabhu, Sutton, & Sauser, 2008; Hennessey & Amabile, 2010). In recent years, great changes have taken place in the living conditions in China with the rapid development of economy, which may bring about the remarkable difference in creative personality of Chinese undergraduates with different personal experiences and socioeconomic status. This study was to explore the individual difference in Chinese undergraduates' creative personality to better understand and promote the development of the creative personality. 4,912 undergraduates from six Chinese universities participated in the study and were assessed by Gough Personality Scale (Gough, 1979), Beck Depression Inventory (Beck, Steer, Ball, & Ranieri, 1996), and self-developed Personal Information Questionnaire was used to collect the information about their personal attributes and personal experiences. The results were as follows. Firstly, Chinese undergraduates from urban areas and families with better socioeconomic status scored significantly higher on creative personality than those from rural areas and families with poorer socioeconomic status. Secondly, those undergraduates with happy childhood experiences exhibited more remarkable creative personality than those with unpleasant childhood experiences. Thirdly, the undergraduates with good physical health and low level of depression scored higher on Gough Personality Scale than those with poor physical health and high level of depression. This implies that the development of undergraduates' creative personality can be promoted by improving their mental health and physical health in the university. In sum, the large-scaled study found the associations of undergraduates' creativity with their socioeconomic status, and physical and mental health, which further supported the previous findings, and the finding of the associations of creative personality with childhood experiences has important implications for early family education.

Key Words: creative personality; socioeconomic status; childhood experience; depression; physical health; Chinese undergraduates.

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How Ha-Ha Leads to Aha: Supporting a Playful Approach to Creative Climate

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Abstract:

This chapter will explore how the playfulness influences creative climate from a perspective of emotionality. It will take a departure of social-cultural theories that regards creativity as a situated-based activity. This is why social psychologists began to emphasize the “internal traits and capabilities” relating to creativity such as personality, cognitive style, sense of humor, attitude, and playfulness, etc. should be examined in a given culture context. “Climate” has been used to describe the recurring patterns of behavior, attitudes, and feelings that characterize life in organizational environment. It was also pointed out that these factors affect on creativity interactively within the context system. “Playfulness” has been discussed as main psychological characteristics influencing creative climate and one of the traits that personal tendency to freedom demonstrated in games or leisure activities. “Freedom” is embedded in nature of playfulness. As one of the relatively stable characteristics, it has been found with some positive impact on academic achievement, working performance and creativity development. Therefore, this chapter will suggest that students should achieve more learning experience with playfulness though pedagogical design, in order to developing creative classroom climate in education.

Keywords: Playfulness, Creativity, Creative Climate, Learning Environment

Creative University Conference 2016

Embodiment, Places and Relationships: Re-imagining creativity and innovation in the university

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Abstract:

This paper engages with building knowledge cultures through the politics and embodiment of educational spaces and places in the university. It examines complex conceptions of embodiment, situated and localised place, and relationships of these phenomena to learner subjectivities, through diverse engagements with the governed, ostensibly democratic space of the university. Set in times when goal-rationality, linear progression, employability and profit are prominent in the public discourse, it responds to conflicting demands on higher education, and students' and teachers' abilities to act and become.

Higher education historically and still now aims to educate democratic citizens with high-level academic knowledge and skills. This paper focuses on the university's intentions, as mediated and materialised in buildings and its wider place, through diverse pedagogical currents, ideological changes and economic priorities. These intentions are in turn mediated through legislation, policy documents, educational administration, teachers' professional goals and students' individual motives as learners. As a place, the university can create expectations and opportunities, invite creativity, innovation and inspiration, or the opposite, limiting openness and opportunities. Subjects and place mutually affect each other. We examine these subject/place entanglements as a choreography and place of creative, innovative learning.

This philosophical analysis is based on the work of Merleau-Ponty (1945/2002), Deleuze (2004) and Kristeva (1998). Merleau-Ponty's life-world approach supports a re-imagination of university places and spatiality through an ontological discussion of what a 'classroom' *is* and *can be*. This supports a Deleuzian philosophy of process and becoming, appreciating otherness, the unpredictable, and what has not yet come into being – expressed by Deleuze as human-becoming-child – offering an alternative conception of a specific space-time signified by intensity, affection, transformation and

movement. The university is examined alongside the student/academic subjects, as a space that is in fluid and constant construction, an unwitting occurrence *with* thinker and thought, within the space. Kristeva's work on the semiotic offers a reconceptualization of spaces/places of thinking, as spaces of life and relationships, arising between its various subjects, objects, matter, feelings and thought.

This paper re-imagines the concept of the university and university education beyond contemporary, outcomes-focused ideologies. It theorises affective, constantly shifting embodied possibilities of relationships, modes of existence, and senses ruminating within the university. Creativity and innovation are demanding on universities. This paper suggests alternative conceptions of university actors becoming-multiple-others: becoming-children, becoming-curriculum and becoming-agents-of-change. We argue that these conceptions of inevitable shifts and intrinsic/extrinsic affects offer innovative insights into the demands of and on the creative university.

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Bios:

Eva Alerby is Professor of Education and holds a chair at the Department of Arts, Communication and Education, Luleå University of Technology, Sweden, and a Visiting Professor of Education at the University of Tromsø, the Arctic University of Norway. Alerby's research interests are relations, identity and diversity in education, as well as philosophical and existential dimensions of education. Her works are mainly based on Merleau-Ponty's philosophy of the life-world.

Susanne Westman is a Senior Lecturer in the Department of Arts, Communication and Education at Luleå University of Technology, Sweden. She is mainly working with student teachers in early childhood education and masters students in education. Westman published her doctoral thesis in March 2014, in which she explores existential dimensions of teachers' work in an era of changing educational policies, drawing upon philosophical perspectives. Her special interests in education are linked to philosophy of education, globalization, teachers' work, time and place, as well as student/child engagements and influences, to mention some.

Sonja Arndt is a lecturer in early childhood education, an associate of the Centre for Global Studies in Education and the Early Years Research Centre, at the University of Waikato, New Zealand. Her research works with re-conceptualizing notions of foreignness and treatments of Otherness, with a particular focus on teacher subjectivities and the foreigner. Located at the intersection of early childhood education and philosophy of education, it uses philosophy as a method, and as its conceptual/analytical framework.

Supporting natural scientific literacy in ECEC: Developing students' professional competencies

Eva Born-Rauchenecker

Purpose

The project LuPE intends to create an instruction concept for professional schools, which are the main training institution for future kindergarten teachers. The teaching material will be used in subjects like "Natural Sciences" or "Mathematical-scientific Education" in specialization of Early Childhood Education and Care (ECEC). With the principal purpose in mind – supporting children's scientific inquisitiveness in everyday situations –, the project's main aim is to find ways to allay students' fears of this issue and to encourage them in their role as a future coach to children's scientific interest and learning process. In order to win the students over to a subject area often experienced to be abhorrent, the concept focuses methodically on a variety of approaches to scientific topics potentially relevant in kindergarten and emphasizes a biographic attachment to these topics, e.g. by eliciting the students' everyday knowledge about plants, animals, scientific phenomena.

Conceptual/Theoretical framework

Empirical studies point out the relevance of ECEC professionals' attitudes.

The support of learning processes in everyday situations requires ECEC professionals' reflection skills and analytical competencies. Their attitudes towards natural sciences are decisive.

Design/Methodology

A specific questionnaire examined students' (N=420) self-concept of natural sciences. In addition, teachers and students will evaluate the LuPE concept based on further questionnaires and group discussions.

Results

Students' little interest in and fears of natural sciences are often a result of former school experiences and claim a (re-)discovery of the presence of natural sciences in their own life and a low-level (re-)start at professional schools. Variegated methods in class help them to enjoy studying science again and to strengthen their professional competencies as future kindergarten teachers.

Limitations

The first project phase ends September 2017. Research into effects of the LuPE concept on attitudes during apprenticeship and on coaching in kindergarten is planned.

Research/Practical Implications

The first modules of teaching material are offered to a small network of professional schools and implemented in the current year of apprenticeship. At the end of the school year, the joint

experiences of teachers and students with the new concept will be asked about. With regard to the current state of research, their judgments will promote the further design of the LuPE material.

Originality/Value

Successfully developing an innovative modular concept of natural scientific literacy and its implementation in professional schools will yield a professional support of natural scientific learning in everyday situations in kindergarten.

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Conceptual Description of Inductive Meaning Constructing in Constructivist Interactions between Teacher and Student

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Constructivism as a philosophy appears in a variety of guises, some of them pedagogical, some epistemological and some in complex combinations, see [6, 4, 5]. In this research constructivism is considered as a learning philosophy and as a pedagogical theory of learning. I will focus on the fact that, a student based on her/his pre-structured knowledge, on pre-conceptions and on personal knowings, could actively participate in an interaction with her/his teacher in order to construct knowledge and to develop that construction. Thus, the most significant objective could be realised and interpreted as the construction of the personal knowledge and its development, and producing the own understanding of the world (universe of discourse). In this research, I will focus on conceptual description of *Inductive Meaning Constructing* (that is my own approach) as a significant product of constructivist interactions between students and teachers, see [1, 2, 3]. I will conceptually describe the logical background of my approach in order to express and to analyse the formal and semantic terms within the progress. Additionally, I will employ some fundamentals from language of concepts in order to specify concepts, conceptions and conceptualisations within the model. This research has been designed over my semantic model of meaning construction within constructivist interactions [between teachers and students]. The semantic basis has been analysed over a loop that the student and the teacher move through, and organise their personal constructed conceptions, construct meanings and produce their individual meaningful comprehensions. The main idea that will be proposed is based on a new scheme for 'interpretation' based on 'semantics', on 'interaction', and on 'induction'. Interpretations will be analysed in order to provide a supportive background for conceptual structuring of meaning construction in the context of teacher-student interactions. This research will show how a student organises her/his individual constructed concepts and her/his conception-based statements within constructivist interactions.

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A Constructivist Model of Knowing based on Teacher-Student Dialogues

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Constructivism is an effective learning philosophy and a pedagogical theory of learning. Furthermore, it could be understood to be an epistemology and a supportive model of knowing. In the framework of constructivism, a student with insights based on her/his background knowledge, could actively participate in a dialogue with her/his teacher in order to develop her/his knowledge of multiple subjects. The central focus of this discussion is on knowledge construction and on developing the constructed knowledge in the framework of constructivism. Accordingly, knowledge construction will be analysed in the context of teacher-student dialogues. The main reference to dialogue [and conversation] theory is [4]. Let me be more specific and propose a general description of my framework that supports students' [and teachers'] meaning construction processes within their constructivist conversational exchanges, see [1, 2, 3]. The framework represents a semantic loop. The students and the teachers move through this semantic loop and organise their personal constructed conceptions in order to construct and produce their individual meanings, to exchange the constructed meanings and to produce their meaningful comprehensions. This framework has been structured following the developmental processes of personal world constructions over students' and teachers' conceptions and concept constructions. What could be offered by knowledge construction within the developmental processes of personal world constructions is 'a body of thought' and 'a semantic model' to account for the emergence of the domain of the students' and of the teachers' [factual, procedural, conceptual and meta-cognitive] knowledge. It can express how the produced meanings based on human beings' constructed concepts could support them in constructing their personal worlds and in creating and in developing their [constructed] knowledge. This research has been designed based upon constructivist conversational learning. A constructivist conversation could be seen as a radical constructivist account of the students' [and the teachers'] comprehensions. Regarding Piaget's developmental theory of learning, constructivist learning is concerned with how the individual human being goes about the construction of knowledge in her/his own cognitive apparatus, see [5].

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CREATIONS: Promoting STEAM to Engage Science Classrooms

Theoretical framework: The CREATIONS scheme, a three-year European supported-action research project with 16 partner institutions, involves science teachers and classroom students in inquiry-based initiatives by linking science with art (from STEM to STEAM). The framework combines schools and research infrastructures with the intent to spark young people's interest in science by using different channels. It centres upon effective community-building between researchers, teachers and students and empowering the latter to use, share and exploit the collective power of unique scientific resources (research facilities, scientific instruments, advanced ICT tools, simulation and visualization applications).

Design/Methodology: Consequently, the strengths of formal schemes (educational field trips, virtual visits, school based master-classes) and informal (games and student generated apps, hangouts, related artworks like science theatre or student generated exhibits, junior science cafes) are harvested to promote creative inquiry-based learning and appreciate science works.

Results & Discussion. The 16-partners project started working in October 2015. Therefore, of course, just preliminary results exist within the frame of Art@CMS with its intent to translate high energy physics at CERN (a partner of CREATIONS) by using art as tool. Science&Art@School portrays an education and outreach initiative of the CMS experiment at CERN that seeks to act as an inspiring springboard for engaging the youth in particular in the excitement of scientific research. It thus aims to promote a long-lasting dialogue between the scientific community, the art world and educational communities for a greater appreciation and understanding of particle physics research and its contribution to education and society. An effective integration of science education with infrastructures supports monitored-for-impact innovative activities in supporting feedback for the take-up of such interventions at large scale. A roadmap assures guidelines for implementation of innovative educational and outreach activities that could act as a reference in both, scientific research outreach and science education.

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How PBL pedagogical at the university leads to creative learning in working life

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The purpose of this paper is to apply viewpoints from primarily experiential and social learning theory to argue for a positive relationship between pedagogy based on problem-based learning (PBL) (Barge 2010) at the university and participants opportunities to engage in creative learning processes in their working lives. In addition, we give a concrete example of PBL pedagogy in a master program for continuing education at the university level.

It is a recognized challenge to create transfer of knowledge acquired in an educational context to the use of this knowledge in working life. Based on scholastic learning theory and practice learning theory (Fox 1997), we will describe two different contexts for learning in adult life: education and work. Research in transfer focuses on the problems associated with the transfer of knowledge between these two different contexts (Keller et al 2011). In an educational context it is crucial to organize learning processes not only for achieving academic goals, but also for the purpose of adding value to the participant in his (future) working life. This is in line with recently changes in political discourse that education should not only be of high quality, they must also be *relevant* to society.

A master program for continuing education at the university teaching typically includes theories, methods and models within different themes, and the approach is typically multi theoretical and concepts and ideas are often discussable. This means, that the knowledge students are taught typically are not as easily transferable to practical problems as e.g. mono theoretical approaches and evidence based models. It requires dialogue, reflection and practical experiments to convert theory and method to knowledge that creates value in practice. This process of transfer can be understood as a creative process. Creative in the sense, that if the process completes, then education helps the person understand his work in a new way, and enables him to initiate and participate in *development-oriented* learning processes at work. The creative part is to translate knowledge from one context to create development in another. We therefore understand creativity as something that occurs 'on the edge' of the persons professionalism and not as an independent inspiration where the person must think 'out of the box' (Tanggaard & Stadil 2012).

In the presentation we will argue that problem based learning (PBL) as an educational model is a pedagogy that supports creative processes, understood as the ability to put academic knowledge into play in a practice situation with the aim of developing it. There are three elements of PBL to support this:

1. Problem based
2. Project organized
3. Cooperation

The three elements will be discussed from the viewpoint of experiential learning theory (Kolb 1984, Illeris 2007) and social learning theory (Lave and Wenger 1991, Wenger 1998) and they will be related to the specific design of PBL pedagogy in one of our master programs.

Abstract til CREATIVE UNIVERSITY CONFERENCE

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Creative Production as a Pedagogical Strategy – examples from Theory of Science

Purpose

The purpose of this single abstract is to present and discuss results coming from a pilot study exploring *how creative production can be used as a didactic framework for teaching theory of science* at BA level at the university. The data consists of observations during talks and evaluations, log books of reflections, and the students' productions.

Conceptual framework

The BA in Communication and Digital Media at AAU is based on an interdisciplinary approach involving a wide range of scientific positions of communication. Hence, the teaching of theory of science plays a central role even from the first semester to support the students' development of not only theoretical, but also meta-theoretical awareness and agency.

As part of a new application-oriented strategy we use *creative production* in exchange for students passively listening and taking notes as the only mode of production during Theory of science classes. Through the making of small, digital productions the students gain personal and material experiences with meta-theoretical perspectives such as a hermeneutic notion of gaming, the phenomenological perceptions of things and social construction of meaning. Through this rather unorthodox approach to a classic, contemplative subject, Theory of Science is turned into an active and experience-oriented discipline.

Theoretical framework

We understand *creative production* in the light of design thinking (Ejsing-Duun & Skovbjerg, 2016). The production is a form given by using a digital tool, using text and

theoretical concepts. Learning through production has an important functional aspect as it makes it possible to reflect upon one's own learning afterwards and to discuss it with others.

This point of departure is based on a pragmatic learning perspective provided and inspired by Dewey (1976), Schön (1999) and by an understanding of learning design framed by Sørensen & Levinsen (2014). In a pragmatic understanding of learning the students must first and foremost *do* something with the concepts – in this perspective concepts coming from theory of science. In their forming a production the students are not only getting to know concepts of science, but they are applying them to a actual scientific practice.

Results

Our results show indications that production: 1) can facilitate knowledge sharing between students, 2) be a guide for making theoretical and abstract concepts understandable for students, when they are asked to work with them in a concrete and practical way.

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Arts-based pedagogies and development of innovative, professional identities in social education studies

Julie Borup Jensen, associate professor, Aalborg University, Department of Learning and Philosophy

In the wake of several Danish school reforms in the period 2012-2014, social educators' professional role in schools in Denmark have changed radically. Previously, their role in schools have been quite autonomous and separate from teaching by being timetabled after the school day, whereas social educators now, as a consequence of a longer school day, are expected to contribute to classroom teaching during the day under supervision by teachers. Consequently, social educators experience a pressure to express their professional competences, as the social educational professional core traditionally is focused on relational development, supportive environments for play and learning, and well-being of the pupils, rather than on teaching academic subjects. In order to 'survive' in the present school climate, it calls for new professional identities and identifications.

A specific professional university in Denmark answers to this challenge by focusing on development of *innovative* professional identities in the students. The term innovative professional identity encompasses an approach to education, where students are encouraged not only to adapt to and reproduce the professional culture and its theoretical and practical frameworks for thinking and acting, but also to contribute to it with their own personal ideas in relation to both practice and theory. However, the innovative approach seems challenging for the students as well as for the educators, which results in a need for new pedagogies and approaches to contain the emotional and bodily aspects of innovation within identity development. This is even more required, if pedagogies seek to avoid illegitimate and oppressing manipulation of the students' emotional and bodily integrity in the effort of encouraging creative and innovative processes.

Within a socio-cultural framework, based on Bruner's concepts of cultural production, a recent action research-based study indicates that arts-based pedagogies and methods are well suited to express, contain and process the students' emotions in innovative identity building processes. Arts activity and production seem to offer democratic and personalised opportunities for participation and individual identity development within a collective framework of understanding that allows for expressions of individual and collective knowledge, values, attitudes, interpretations, experience, and the appertaining emotions.

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Arts and learning in social education studies -

Chairperson: Julie Borup Jensen, associate professor, Aalborg University, Department of Learning and Philosophy.

This symposium invites the symposium participants in exploring the creative potential of arts-involving teaching. The creative potentials of arts involvement are from an ongoing action research project within social education studies in Northern Jutland, Denmark.

Social Education Studies aims at developing competent social educators, who not only engage professionally in an established professional practice, but also contribute to development in the profession. The study program involves both theoretical and practical elements. The theoretical parts aim at equipping students with academic, research-based and theoretical knowledge. The practical elements involves internships, aimed at developing qualifications to *practice* the profession (Bakkenes, Vermunt, & Wübbels, 2010). The students therefore experience how local practices, language, cultures, logics and ways to use knowledge, experience, emotions and body, relate to theoretical knowledge, and vice versa (Austring and Sorensen, 2006). However, the study program in Northern Jutland has an intake of highly diverse students, which again calls for the educators' creative pedagogical skills in order to meet the diversity in student needs in relation to learning. This project has experimented with and studied if and how arts-based approaches to teaching and learning can support the development of diverse learning environments. The assumption is that artistic processes and products can put into play students' experiences in ways that relate to and reach out beyond cultural-professional habits and theoretical concepts – that art can be an active agent in creating new learning possibilities for students and teachers.

The project framework is action research, in which the social education teachers function as co-researchers in collaboration with the researcher from Aalborg University. The teachers collect data from own arts-involving teaching practice, and the university researcher contributes with theories and concepts capable of deepening the understanding of creative learning dimensions of the arts-involving teaching activities. This qualification happens at monthly dialogue-meetings between researcher and co-researchers. The research design allows for development of arts-involving teaching practice as well as for development of theoretical concepts (Beyes, 2011; McCormack et al., 2008).

In line of this co-researcher-approach, the social education teachers will communicate their research findings by facilitating arts-based activities with the symposium participants. The activities are based on results from their sub-projects. The facilitators are as follows:

- Julie Borup Jensen: Overall project frame: arts-based teaching and learning in social education studies.
- Elisabeth Mølholm Andersen: Drama and play as a personalizing teaching tool
- Heidi Bang Oxlund: Poetry as a conceptual learning tool
- Felicia Bech Lillelund: Physical and psychological room and space in learning processes
- Peter Abrahamsen: Music as social learning environment
- Pernille Sams and Holger Kjærgaard: Art Festivals: building citizenship and democracy

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Abstract for the conference 'KNOWLEDGE CULTURES, CRITICAL CREATIVE THINKING AND INNOVATIVE LEARNING PROCESSES' AAU 18-19/8 2016

How can students portfolio support and capture the aesthetic learning processes and lead to reflection and learning outcome?

By Pernille Sams, Kirsten Kofod Hyldahl and Karen Stine Egelund, University College Northern Denmark – Campus Hjørring, Social Education

The effect of the competitive state on the educational thinking – also in the profession as social educators, has brought an increasing upgrade of teaching, which is targeted as a learning outcome that can be measured and evaluated and easily documented. In the social education there has been an academisation where theoretical knowledge is preferred at the expense of learning related to develop personal knowledge and identity. Since the education reform in 2014 changed the basic of the social education the students are required to create portfolios both as individuals and in study groups. In this context the portfolio must contain a systematic collection of student's work relating to their skills, knowledge, projects and should show evidence of self-reflection and development. The purpose of the portfolio is to illustrate the student's development and sharpen their professional profile. Very often the outcome of these portfolios ends up representing the students theoretical and analysis writing abilities and rarely illustrating any esthetic expressions to tell their story of the professional identity of profession.

On the basis of this we will withdraw an understanding of the esthetic learning process framed as a holistic learning perspective via Hohr's three learning approaches: empirical (experience, senses, awareness), esthetic (cultural-symbolic understanding and communication) and discursive (analysis, reflection involving theory) in which students can develop personal knowledge and an identity of the profession' (Hohr/Austring and Sorensen 2006). As teachers we will use art-based approaches in learning the relevant theory and practice starting from Hohr's three learning approaches. Through the art-based approaches the students get involved with their senses, bodies and emotions and there occurs and increased opportunity to develop embodied personal knowledge. The learning process offers the students a possibility to experiment and a contemplation that with the right support can lead to reflection about themselves and the world.

This leads to our research question: **How can students portfolio support and capture the aesthetic learning processes and lead to reflection and learning outcome?**

Inspired by this we are researching in how the student portfolio potentially can capture the students aesthetic learning process leading to possible self-reflection and clear learning outcomes. The subject area for the research is the social education, where we will focus on two classes of first year students and their training in doing portfolio work (spring 2016). We will gather empiricism in the shape of the student product portfolios, statements and observe their work process. Our research process is thought to be a transparent and systematic analysis of the gathered information made in the light of more general theoretical terms (Jerome Bruner, Etienne Wenger, Lev Vygotski, Hansjörg Hohr, Bennyé D. Austring og Merete Sørensen and others) in order to heighten the probability for recognition, also in other contexts.

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Sprogfitness

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Abstract

This small-scale action research project explores the impact of a pedagogical-aesthetic approach to the language stimulating activities on the preschool language and literacy environments.

The pivot of the project is Sprogfitness, an annualized one-day event combining language awareness, physical activity, and play. Each year approximately 2000 children from local institutions in Northern Denmark including approximately 100 students from UCN come together in a park where they engage in physical language games and activities.

The first Sprogfitness event took place in 2013 on the initiative of Aalborg Bibliotekerne and was a collaboration between the local libraries, a day-care institution, a primary school, and UCN. The collaboration between the local libraries and UCN has continued, and today the students from the social education at UCN design the games and activities with the aim to facilitate aesthetic and collective learning processes. During the annual event they get to test these in practice.

Evaluation of the Sprogfitness event indicates an increase in interest and motivation among the children as well as the preschool-teachers.

Collaborating with students from the social education at UCN and teachers from two local preschool institutions, I set out to explore how the increased motivation resulting from a pedagogical-aesthetic approach can contribute to increasing the quality of preschool language and literacy environments.

My tasks in this project are twofold. On the one hand I work together with students and preschool-teachers in workshops focussing on the strengthening of children's language development through aesthetic and collective learning processes. On the other hand I study the effect of this aesthetic approach on motivating the adults who facilitate the language games and activities.

Taking an interactionist perspective on children's language development, I weigh the interaction between children and their environment. In the workshops focus is on the child's intercultural communicative competence, which includes both grammatical and textual competence, and pragmatic competence. Out of this focus comes a pragmatic framework applying Bruner's cultural psychology as a theoretical foundation for analysis.

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Creating the university for the future? Digital technologies, an open laboratory and creative learning spaces

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Over the last few decades the university has developed from an institution that produces commodifiable educational products to a corporate park, where academics are lured to sell their academic expertise, to a being a site that promotes national interests in the form of the knowledge economy (Shumar, 1997). However even the present understanding of knowledge economies is contested and the university comes once again under fire to become more creative and innovative, to produce students who are more creative and innovative for a society that faces some serious global problems (Peters, Marginson & Murphy, 2008). With the increase in diverse forms of digital technologies and learning management systems, the university faces challenges, not only at the philosophical level; what its role is, but also at the practical level; how it can meet these varied demands and equip students for jobs and careers for a future that is unpredictable. Our interest in this paper is on the practical level. We ask *how can institutions establish structures and strategies that lead to supportive practices to nurture students who will be activists in their own lives and can contribute to societal change?* We regard such students as being entrepreneurial. In this paper we present the 'open laboratory' to establish experimentation, exploration and reflection and support the notion that learning spaces can be anywhere, anytime and take many forms (Gauntlett 2015, Gauntlett & Stjerne Thomsen 2013). There is not a 'one size fits all' recipe for establishing 'open laboratories' as learning in this way is context dependent. This means that the local context influences what can be achieved, how it is achieved and who it is achieved with. Drawing on data from an ICT-based Educational Design course with Masters' students we give examples of educational practices that foster and nurture an entrepreneurial mindset and demonstrate how the students achieve not only a different understanding of themselves as professionals but also how they develop their own skills collaboratively and co-create value for others (Robinson & Thestrup 2016). We suggest that establishing these practices in the meeting between students/instructors requires both the students and instructors to re-evaluate their own roles and identities. Not only do they have to question their own and other's positioning but the physical environment in which learning takes places also shifts. If these practices can become embedded in institutions there is a real chance that they may be able to nurture a new generation of students who are entrepreneurial activists in their own lives and equipped to co-create a better society.

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Panel discussion on Creativity: A new vocabulary

Lene Tanggaard, Professor in Creativity
Vlad Petre Glăveanu, Associate Professor
Charlotte Wegener, Assistant Professor

In this panel discussion we will explore, in dialogue with the audience, the value of a new vocabulary for creativity. Today's discourses of creativity, both in science and everyday talk, commonly invoke related concepts such as innovation, invention, improvisation, giftedness, talent, intuition, emergence, combination, genius, eminence, divergent thinking, openness, etc. Most of these notions refer back to the creative person and rarely take his or her context into account. Indeed, our current vocabulary of creativity has the tendency to institute and maintain sharp dichotomies between creator and content, product and process, genius and 'ordinary' people, etc. What would happen though if we were to formulate a new way of talking about (and thus thinking and, consequently, doing) creativity?

Drawing on a broad background of sociocultural psychology, situated learning, and distributed cognition, we will propose and discuss new keywords for creativity. Among them: affordance, craft, difference, perspective, mess, mirroring, pathways, reflexivity, rhythm, stumbling, things, translation, upcycling, and others. Many of these terms are absent from our current vocabulary when it comes to creativity. What would happen if they took center stage? The three speakers and their audience will address this question in an attempt to think outside the box of an old vocabulary.

ENHANCING STUDENT LEARNING THROUGH INQUIRY-BASED READING

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Charlotte Baarts, Lektor & Studieleder, Sociologisk Institut, Københavns Universitet

The purpose of this paper is to draw attention to reading as a scientific method and a hitherto underdeveloped potential for transformative and meaningful learning experiences. We suggest that student learning can be enhanced by altering students' reading practices to become more research-like and thus encourage scholars of inquiry- and problem-based pedagogies as well as practitioners to engage in a targeted exploration of the potentials of reading

Reading is generally overlooked as a scientific methodology in its own right. In the literature on inquiry- and problem-based learning reading is usually ascribed a marginal position as a supplement to more out-going and visible methods of inquiry. Reading is often presented as a practice relating to either preparing or communicating one's research, but seldom as a practice through which research actually unfolds. Reading is likewise omitted from mentioning in both courses and teaching books on method. Also in journal articles, researchers rarely account for how they have gone about reading or how this process has influenced their results. Reading is consequently not construed as a significant research practice with significant effects on research outcomes and chances that students will be acquainted with reading as a method of research and learn to practice it as such, thus appear minimal. Nevertheless, reading is a practice undertaken by all researchers and students and in some disciplines even likely to be the one practice taking up most time and energy.

The empirical material that this paper is based on is gathered from researchers and students in the humanities and social sciences. We have interviewed 20 experienced researchers about their reading, thereafter transcribed and coded the data in in-vivo. The material on students is collected from 20 students doing extensive auto-ethnographic studies of their own reading practices (approximately 600 pages,) which we likewise coded in in-vivo.

Our analysis shows that reading plays a pivotal part in the learning of both researchers and students. Nevertheless, how they read and what they hereby learn differ noticeably between the two groups. We find that to the researcher reading constitutes a creative space for dialogic interaction between her own and the text's thoughts, furthering not only understandings of her subject but furthermore transforming her into a better thinker. Meanwhile, as we find that reading in the case of the student is most often a matter of comprehending and gathering, but not so much creating knowledge, he is largely not benefitting from the transformative potentials of reading as the researcher is. Describing more thoroughly how and on what basis the two groups engage with and learn through reading, we argue, that we need to develop curricular frameworks that enable student reading to become more research-like and point to the pedagogies of inquiry-based learning as guiding devises. Considering the variance in students' and researchers' circumstances both in terms of qualifications and requirements for learning, we finally discuss what challenges relate to developing frameworks for inquiry-based reading and propose a number of ways to confront these.

Non scholae, sed vitae: Activity-based, reality-infused academic teaching

Line Revsbæk & Søren Willert

Background

- During first half of 19th Century Danish scholar-poet N.F.S. Grundtvig (1783-1872) harshly criticized what he termed the *Black School* for delivering only formal, but no vital (socially, existentially useful) inspiration to pupils – thereby paving the way for the Danish Folk High School movement.
- During the first half of the last century John Dewey pronounced ‘doing’ as an indispensable prerequisite for ‘learning’.
- During the entire last century lack-of-transfer – from classroom settings to life settings – has been studied as a major problem for mainstream educational practice.

Cases

The paper presents case-examples covering a period of 45 years and suggesting how academic institutions may ‘walk the talk’ of voices like Grundtvig’s and Dewey’s and deal constructively with transfer issues – namely by offering students reality-infused, activity-based teaching-learning. All five sub-cases have been embedded in ‘normal’ academic study programs within psychology/social science.

- Reality- centered introductory teaching program for psychology students (1970-75)
Discipline-orientation (psychology of learning, cognition, personality ...) was replaced by reality-orientation: “This is Denmark – where and how may psychology help us understand and deal constructively with Danish realities.” A teaching-learning organization was constructed.
- Counseling and professional team processes (1980-85)
Student teams (M.A. level) were trained in mutual real-life counseling and at the same studied their own team development ...
- Center for System Development (1985-2005)
Students (M.A. level) were trained in basic professional competencies by having them (1) offer their unpaid, supervised services to organizations; (2) act as apprentices to their teachers in the context of real-life consultancy projects
- Master’s programs for experienced organizational practitioners (2008-?)
Mature students are invited to do action research in their own organizations ...
- Reflexive Learning of Organization Theory in Large Student Cohorts of Higher Education (2015-?)
255 students in Business Economy are organized in a simulator organization to inquire into the organizational life of interview respondents employed in local private firms/public institutions. Students are invited to view themselves as organizational members who collaboratively produce case material for their own oral exam ...

Assessment

All sub-cases have been implemented by the authors. The paper will provide material for two sort of informal assessment

- (1) Quality of student learning
 - Facilitating transition from studies to practice

- Learning reflexivity concerning own practice

(2) Quality of University life

- Furthering reciprocity between theory and practice
- Integrating teaching, research and practice

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Right Hemispheric Advantage of Novel Semantic Association in Chinese

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Abstract: Formation of novel association is an important process of creative thinking. There is a considerable controversy about whether right brain dominates in associating novel semantic information. In the current study, Chinese two-part allegorical sayings are used to certify the role of right brain in forming novel semantic association. In Experiment 1, participants were asked to comprehend the allegorical sayings with novel or common association without reaction. fMRI results showed that the right superior temporal gyrus was more activated in novel semantic association condition. In Experiment 2, participants were required to estimate the type of association between the two parts, novel, common or no association. ERP results showed that novel semantic association condition elicited a more positive ERP deflection than common semantic association condition between 650 and 900ms over the frontal and temporal scalp sites in right hemisphere. These results support the right brain advantage in forming novel semantic associations.

Keywords: allegorical sayings, novel semantic association, brain mechanisms

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Roleplaying as Participatory Inquiry for Research and Learning

By Lone Hersted

Working from within the theories and movement often called the *dialogical* or *relational turn* my paper throws light on the development of a participatory research inquiry based on roleplaying. The inquiry is particularly inspired by action research, and aimed at enhancing dialogical and relational skills among leaders and employees in an organization. The inquiry had the aim to develop and refine a dialogically based collaborative learning practice. The practice is based on the assumptions that central to organizational collaboration and the development of fruitful relationships are processes of dialogic coordination, which are at work in the continuous process of organizing. The important challenge is whether our ways of communicating can, for example, bring diverse people or groups into productive coordination, ease or eradicate conflict, motivate and inspire people, or handle the emotional dynamics that bring people together or push them apart. Often we tend to communicate in repetitive patterns and construct scenarios that can either move in a degenerative or generative direction. In the project we worked from a transformative approach where alternative ways of communicating and relating as living, responsive, embodied beings were explored in a playful, collaborative learning setting.

In my paper I will unfold our findings and the methodological aspects of this approach. The project is rooted in a constructionist stance toward research where qualitative research inquiry is considered a collaborative effort for generating change oriented insights and knowledge (see also McNamee & Hosking 2012; and Gergen 2015). In this context the researcher is seen as a change agent. As a researcher with a professional background from theatre and consultancy I defined my role as that of a *reflective inquirer* as opposed to an “objective observer”, which historically has been the research ideal in the positivist tradition. The aim of the reflexive inquiry was to develop skills in dialogue,

relational awareness, meta-reflexivity and collaboration among leaders and employees in an institution caring for neglected adolescents between the ages of 13-18. The duration of the project in practice was one and a half years.

The project had the aim to explore and refine an entirely collaborative learning practice (see also Wenger 1998) and Dewey's (1916) term: Learning-as-practice) for the enhancement of relational and dialogical skills. The idea was to enhance the competences among the participants as *reflective practitioners* (Schön 1983). The practice should pay special attentiveness to the use of language and as well the bodily dimensions of communication and therefore the inquiry was based on roleplaying with reflecting team in a *dialogical* based setting.

Furthermore the project draws on the heritage from drama (in particular Augusto Boal's writings on forum theatre and forum play 1979, 1995) and systemic inspired supervision methodology (Gianfranco Cecchin 1987, Tom Anderson 1991, and Karl Tomm 1987-88, 2014) and, as well, on the theories of dialogue developed by Wittgenstein and the Bakhtinian school, which have been taken further by Kenneth Gergen, John Shotter and Ann Cunliffe.

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Reconfiguring the Creative University and its Lecturer-Subjects

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This paper recognizes and confronts the impact of the knowledge economy on academia and on university academics. It reconceptualizes the lecturer-subject and re-constructs notions of governmentality in the public and private sphere, of truths and binding ideologies, such as that of the knowledge economy. To do this, it re-examines normalities, everydayness and lecturer subjectivities, and their new ecologies and connections with the government/industry/public systems. Havel's theory of the production of ideological subjectivities, as victims, supporters and rebels, and his notion of 'living within the truth' are juxtaposed with contemporary neoliberal academia and its boundaries to theorise the examination in this paper. It is told through the narrative of the ordinary, everyday life/work experience of a university lecturer.

In a Havelian sense, the lecturer questions his 'irrepressible impulse to acquaint the public with his ideals' (Havel, 1985, p. 27). This university lecturer-subject publicly behaves as is expected of him; he does not do anything extraordinary, and carries out his work expecting that the University system will take no notice of him. He participates in the public domain, attends all required meetings, sends the right emails to the right people, and uses ideologically correct and sensitive language. He does all of this to remain untouchable by the University. This produces what Havel refers to as the "social auto-totality" (Havel, 1985, p. 36). The social auto-totality means that every citizen is drawn into the sphere of power. Havel (1985) notes a change in human beings, in citizens' subjectivities, as they may now "surrender their human identity in favour of the identity of the system" (p. 34), or in other words they will become part of the "automatism and servants of its self-determined goals, so they may participate in the common responsibility for it" (p. 34). This shapes the subjectivities of those who are comfortable with their positions and capacity for public involvement, and feel uncomfortable with those who opt not to participate. By making all citizens participate, the system then produces everyone as instruments of a mutual totality, or the auto-totality of society. Following Havel then, every citizen and lecturer is becoming and is unbecoming the victim, supporter and rebel of the globalised conditions of the contemporary ideological University. This shapes, and at the same time is shaped by the boundaries of neoliberal academia. Using Havel's work and production of the subject and its subjectivities, post-structural thinkers and M. A. Peters' interpretation of the university in the knowledge economy, this presentation interrogates and theorizes the production of contemporary tertiary lecturer subjects.

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Fostering a culture for transformative entrepreneurial learning

Purpose:

To conceptualise a Nordic adult learning model, by testing and developing “Transformative learning circles with in-service training”. The aim is to facilitate co-creation of challenges from the participant’s daily practices, and inspire, develop and implement new practice. Thereby enable learner-participants to adopt a more entrepreneurial role and contribute to transformations within their organization and in society.

Conceptual/Theoretical framework:

Nordic Council of Ministers (NCM) has a special focus on maintaining a sustainable Nordic welfare system. NVL- Nordic network for adult learning, a program under NCM, initiated in 2013, a network on entrepreneurship, entrepreneurial learning and innovation. During 2013 and 2014, the network mapped and analyzed innovative practice¹. Based on this work, the network decided to test and develop “Transformative learning circles” as a learning model². The participants in the three transformative Nordic circles come from cross-sectorial organizations in six Nordic countries, representing Universities, Private Organizations, Municipalities and Networks. The themes are “Inclusion in working life”, “Entrepreneurship in formal education” and “Newly arrived - migrants”.

Design/Methodology

The key idea is to develop new knowhow and perspectives together with the other participants (regarding the theme of the learning circle). Between the meetings, the participants, will implement new ideas into practice in their organizations and networks, obtain new information from various sources and reflect what they have learned. The participants will meet in the Nordic circles during 2016 (some of the meetings online), and we will measure how they can turn the new ideas and knowing in to practice during the process. This will be done through a specially developed evaluation design (based on action research) for this project. We are developing a learning model where facilitation, co-creation, high degree of participant involvement, and challenges from the participant’s daily practices are principles for learning processes³.

Results

The conceptualisation of the learning model will consist of a handbook describing the theoretical frame for transformative entrepreneurial learning, general principles in the work with learning circles and implications for effect. A report will suggest possible ways of continuing the work.

Research/Practical Implications

Evaluation reports will be used as learning tools during the project, the reports will be analysed and published to be used by participants, and others interested.

Originality/Value

Key features in transformative learning circles are: Transform/ develop entrepreneurial mindsets and culture, Diversity as increased potential for learning (practitioners, teachers, students, researchers...), learning in reality – not about reality and facilitate co-creation. Maybe these elements are not unique or new, but the combination of these features is underrepresented in adult learning models. The network has experienced these features all the way – “The project has walked the talk”.

¹ Ref: Alasoini, T m.fl (2011) “Linking theory and practice. Tykes Reports 75, Helsinki 2011 and Darsø, Lotte (2011) *Innovationspædagogik, kunsten at fremelske innovationskompetence*. F. Samfundslitteratur

² Inspired from Lahdenperä, Pirjo (red) «*Forskningscirkeln – en mötesplats för samproduktion*» M. högskola

³ Ref: Aakjær, Marie (2015). «*Samskaping (Co-Creation) for å møte fremtidige Velferdsutfordringer*».

Involving communication for children – Through art based methods

Mary Anne Kristiansen, Felicia Lillelund

Motivation and purpose

This project focusses on new ways of communicating and designing networks between cultural institutions and knowledge institutions. The purpose is to facilitate participatory cultural experiences with the aim of inspiring and motivating children and youth to actively participate in developing and testing various cultural activities. The project is a collaboration between The Art Museum, The Historical Museum and Theater, and University College Nordjylland (UCN) represented by Social Education Studies and the Natural and Cultural Education program, and furthermore a district school and daycare institution. All are situated in the municipality of Hjoerring. The purpose of the project is to develop pedagogical designs supporting a participatory pedagogy that include children and youth.

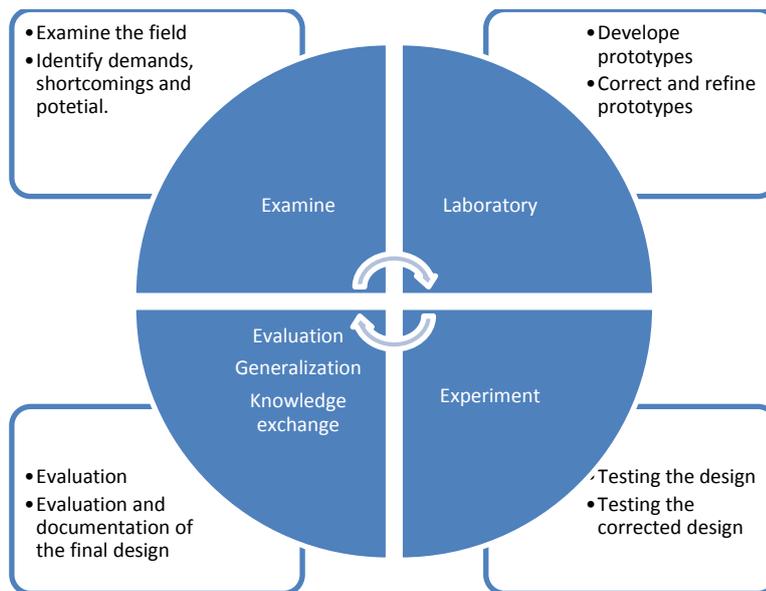
Content

The purpose of this design is to qualify the practical methods that the cultural communicators and social educators require while working with *children meeting art and culture* and hereby allowing the involved parties to actively contribute in reflective processes using their senses, dynamically creating esthetic knowledge. Children`s access to cultural institutions can hereby be improved by working together through network and cooperation. Furthermore, the results of the project will be implemented in the educational curriculum for pedagogues.

Bases of the project:

Due to the fact that social education studies is Denmark`s largest education, and that social educators are professional communicators of culture in all corners of Denmark, it only seems natural and expedient that the University College participate in collaboration with cultural institutions. Over the years, artistic and cultural subjects have been reduced in social education studies, and this has created a need for more collaboration with professional artists and cultural institutions. This collaboration can ensure that the experience of presence and “magic” that children meet, when they are exposed to arts and culture, is maintained and processed, strengthening personal growth, moral education and learning in children.

Design



Theoretical approach:

The theoretical approach for the project is based on Jerome Bruner's cultural understanding and inspired by the following which has been freely translated:

"It is first and foremost through our narratives that we construct a version of ourselves in the world and it is through our narratives that a culture gives its members models for identity and action."
(Bruner 1998: 43) The Culture of Education

and Austring and Sørensen's three ways of knowledge understanding as the foundation of learning:

"These three ways of learning (the discursive, the esthetical and the empirical) are to be thought as equals and are hereby just as important." (Austring and Sørensen, 2010: 86)

The news value of the project:

The innovative approach of the project is that of the formalized networking and cooperation between UCN, the pedagogy education, daycare and schools and cultural communicators. The designs that are developed in the project are also expected to have news value.

Evaluation of the project:

UCN will evaluate the pedagogical development possibly in cooperation with the University of Aalborg along with follow-up research in relations to the project.

The University as Institution with an Idea A Symposium

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(Discussant to be announced)

Abstract

Higher education is a global phenomenon. It is found in almost every country of the world: some two hundred million people are directly involved. It consumes billions of dollars in some countries alone. It is engaged with economic and social institutions and is a matter of public and political debate both nationally and internationally. Under neoliberalism, it has recently become central to debates concerning the engine of innovation and its contribution to the economy. Disputes over higher education have even played a significant role in leading to the overthrow of governments. Every major town looks, it seems, to have its own university. *As an institution*, therefore, higher education has to be considered a major force.

Separately, there is *the very idea of the university*, the idea that generated the university's modern development, an idea furnished by around two hundred of literature. However, this literature is seldom a point of reference in the contemporary debates over higher education. University systems have mushroomed and universities have been established and developed with very little consciousness that there is a long-standing literature with a vested interest in the fate of the subjects of this debate. There is a blankness towards this literature. The university *qua institution* takes little heed of the university *qua idea*.

The symposium will engage this problematic through highlighting what the history of the idea of the university might contribute to current debate on the role of the university. New and complex questions need to be posed about the meaning of innovation, the role it plays in guaranteeing the production function which the institution has been made to serve, and how this apparatus might be dismantled and transformed in relation to ways of learning that might be more congruent with the demands of the future.

Key words: The idea, university, innovation, problematic

This symposium follows the recent publication of:

Peters, M. A., & Barnett, R. (Eds.) (2016). *The Idea of the University: A Reader*. New York, NY: Peter Lang.

Enhance creativity in teacher education through interdisciplinary approach and co-teaching techniques

Mohammed A. Gamal

Teachers play a key role in fostering creativity in society but a useful question to ask is 'Do teachers receive creative higher education while they are studying so that they, in turn can pass this on to their students?'

This paper will attempt to answer this question aiming to examine the different perceptions of creativity in teacher education. At the same time, the study attempts to reconceptualize and reinterpret the creativity concept in teacher education programs. Furthermore, It indicates to the need for an interdisciplinary approach in teacher education programs to cultivate teaching for creativity among graduate teachers. Finally, it argues that the incorporation of an interdisciplinary approach and co-teaching techniques into teacher education could provide prospective teachers with the skills needed to cope with 21st Century educational challenges. Ultimately, this study will articulate that an interdisciplinary approach and co-teaching techniques allow creative teachers to be able to critique the educational status quo and strive for emancipatory pedagogy.

The study will utilize qualitative research design to answer the research questions. Additionally it employs critical approaches to reinterpret the concept of creativity in teacher education.

A limitation of this study was the scarcity of literature on interdisciplinary studies in teacher education programs and vagueness of the term 'creativity concept' in teacher education.

Conclusions and suggestions

This study has shown the need for a paradigm shift in schools of education to develop creativity among our prospective teachers. The principal theoretical implication of this study suggests that an interdisciplinary approach and co-teaching techniques between lecturers and professors across different departments at a university could produce creative teachers and produce creative schools. For example, philosophy enhances teachers' critical thinking

skills and cultural studies can hone teachers' intercultural skills to teach creatively in international schools.

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Ecological Perspectives on Learning, Development & Achievement: a fresh perspective on personal creativity

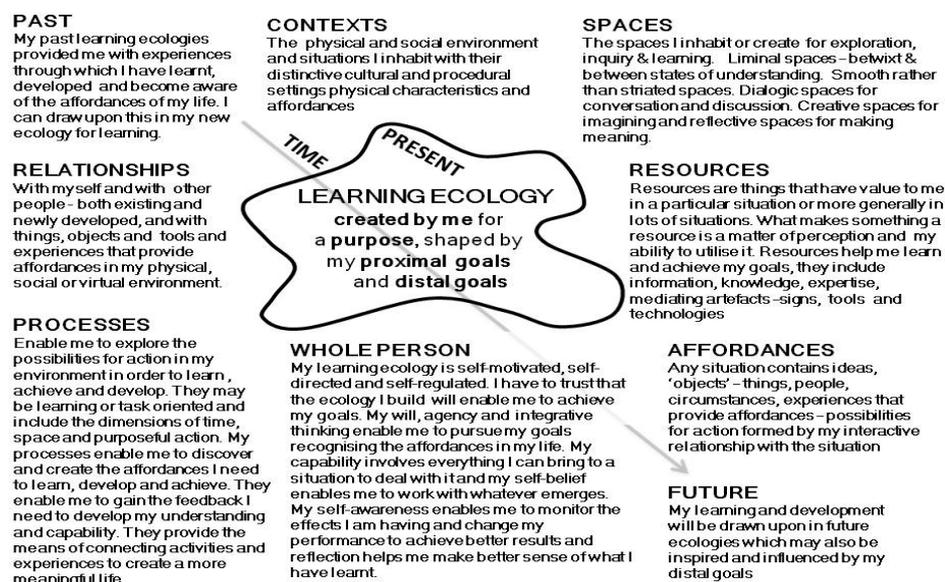
Norman Jackson
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Purpose: The goal is to develop new understandings of the way personal creativity emerges in the everyday doings of people through an ecological perspective on the way people interact with their life world to achieve the things they value.

Problem/opportunity: Universities might argue that they have always been important in the learning and knowledge ecologies of people and society, although ironically they have, in their designs for learning, generally failed to recognise that learning is fundamentally an ecological process. Developing and applying the idea of ecology to learning, development and achievement has the potential to provide a more holistic and dynamic perspective on learning than is normally considered in higher education.

Conceptual framework: A model of a learning ecology has been developed by analysing narratives of the learning and doings of people of all ages and in a range of contexts (Jackson 2016). Nine components are identified in the model (Figure 1) namely - the person with their will, attitudes, agency, imagination and creativity, their experiences of the past, involvement in the present, their present contexts and affordances, their spaces, relationships, processes, resources and their imaginings of their future selves, which provide them with distal goals that encourage their becoming. Together these components comprise the person thinking and acting in the circumstances and environments of their current life, influenced by the past and mindful of possible futures.

Figure 1 My learning ecology (Jackson 2016)



Creativity: A self-determined ecology to learn and achieve something significant, is brought into existence by the individual. It is a product of their imagination, intellect and agency and it is the vehicle for creative thinking, action and self-expression in the manner envisaged in Rogers (1961) 'creativity is the emergence in action of a novel relational product growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his life':

where product means an achievement such as the making of a physical or virtual object, or making something happen through a process, performance or set of relationships or even a person's own learning and development.

Value/Practical Implications

Conceptual: The concept provides the means to visualise the dynamics of a complex self-determined and self-organised learning process and to appreciate how the different elements of the ecology fit together to achieve a goal.

For learners: The concept encourages them to see learning as a process and appreciate the ways in which they create processes that utilise and develop relationships and resources in order to do what they have to do in order to accomplish things they value.

For teachers: The concept may open up new possibilities for contexts, relationships and interactions as they appreciate that the learning ecologies of their learners' extend beyond the ecology they have created for their learning.

For universities: The idea offers great affordance for universities to visualise themselves as ecological entities enabling learners to create their own ecologies for learning, development and achievement.

By sharing these ideas with higher education teachers and researchers my intention is to encourage discussion about the value and practical consequences of this idea for the design and facilitation of learners' higher education experiences.

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Paper proposal for Creative University Conference, Aalborg University August 2016

Creative university 101 - the Aalborg University integrated first year study programme

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From its start in 1974 Aalborg University (at the time named 'Aalborg University Centre') had integrated first year study programmes in all its three faculties. In principle, each programme covered all study programmes in a given faculty. These programmes were an innovation introduced together with the educational principles of 'problem oriented project work' (which is now mainly referred to as PBL). Aalborg was not the only Danish university to introduce these innovations; they were also an integral feature of Roskilde University, which had started 2 years earlier. The idea of starting university study with such integrated programmes had been developed by government task forces as one way to cope with the massive rise (often called an 'explosion') in higher education enrolments. Two main arguments for the model was (1) that the traditional scientific disciplines with their increasingly narrow specialization had to be supplemented or even replaced by transversal, interdisciplinary types of knowledge and skills and (2) that a broad first year programme would allow students time and experience to choose the right study programme, and thus reduce the risk of dropping out.

At Aalborg University the integrated first year programmes were abolished relatively early in the humanities; but in the two other faculties, engineering/science and social science, they were continued for many years. After the turn of the century, however, they came under increasing pressure from different forces in the university and its national environment, and today they are more or less gone.

In this paper I will discuss the experience of the integrated first year programme in the social sciences. I see this as an innovative attempt to introduce creative and interdisciplinary study work as a foundation for university study. The idea that students themselves can, from the first day they start at the university, locate important issues in social life and investigate them, working together and drawing on methods and knowledge from different disciplines, reflects a high degree of trust in the creative abilities of students – and also high ambitions on their behalf. I will not dwell too much on the origins of the integrated first year model and 'problem oriented project work'. Rather I will try to characterize teaching practiced and the creative learning processes that could take place in this framework, and their potentials as well as their limitations. Further I will try to trace the factors that gradually led to the erosion of the social science integrated first year programme and discuss whether the model is still relevant and could be practiced today (which I think is the case).

I will draw on existing sources, including studies of the first year programme and its students carried out over the years by Aalborg University colleagues. The theoretical framework will draw on Habermas's theory of communicative action but also include other elements.

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The University and its Students: Innovation and the Innovative Subject

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Abstract

While innovation in the university can be thought of as taking place across a number of ambits that involve an array of identities – executive, management, teaching staff, external stakeholders etc., – the least acknowledged of these identities is that of the student. Any concern for the future of the university must bring into sharp relief the situation of students and their status as actors in the institution. Of course, there exist strategies for the inclusion of students through engaging them as economically valued consumers, through the application of innovative teaching pedagogies, and in collaboration with teaching staff but to what extent are these students able to transform these premeditated initiatives in function of what they want to learn? This application of innovation systems, while including the student in number, as a consumer and as a trainee worker, does not acknowledge their capacity to transform the provision of their learning. The student is assumed to have already been coerced on account of how information and communication technologies supposedly make them participants. However, student innovative subjectivities might also be of a social, political and religious nature and, as such, suppose ways of thinking, learning, participating and contributing to the way the world's problems are understood that might go otherwise unacknowledged.

This paper involves a theorization of the situation of the innovative student, and explores how collaborative co-construction of new ideas might redefine how we consider the university produces knowledge as a public good. This will be done through allegorical use of works by Drucker (1959), Godin (2015), Johnson (2012), Leadbeater (2008), Levy (1997), Mulgan (2015), Peters (2015) among others, with respect to how innovation might be thought of when considering the experience of the *already innovative student* from the perspective of their own situation.

Key words

Innovation, static, dynamic, open, closed, black box, innovative subjects

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Open and Social Innovation: Interdisciplinary Participation in Understanding and Addressing Significant Problems

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Abstract

Education now has a responsibility to name the problems it addresses and, what is more, to illustrate the progress it is making in addressing these problems. While students are already working to develop their understanding of this task, the education sector and its institutions, including policymakers are lagging behind in understanding the importance of acknowledging student participation as actors in open and social innovation. This development can be understood in terms of how the introduction of networked information economies and the use of social media platforms produce student actions not anticipated by neoliberal notions of the curriculum. This student use of information and communication technologies can be seen right across the global panorama of the learning experience, of which plurilingual learning (Maslo, 2015) is but one example. Individual methodologies and methods used for accessing and *combining* open sources challenge both human capital theory and endogenous growth theory to provide an account of these subjective developments. The authors of this paper argue that the reason the significance of this development is largely ignored is that it exposes the closed and static disposition of educational institutions in confronting the problem of including students not just as commercial subjects but also as collaborative actors in the naming and addressing of significant problems.

In this paper, we will explore how two multilingual individuals construct their learning spaces through a process of combining different life experiences. The empirical material comes from an ongoing study of plurilingual learning experiences (Maslo, 2015), where learning stories are constructed on the basis of conversations with individuals who have learned three or more languages. As experienced learners, these people share unique stories about learning styles and strategies, learning biographies and changes in identity when learning new languages. The educational value of this approach to learning languages is that it illustrates how such heuristic learning provides new understandings of what it is to be entrepreneurial, where the *combining* of learning experiences that produce new ideas for addressing significant problems.

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Improvisation in a pedagogical context (*the obscure professional competence of pedagogues*)

Dorthe Riis Kristensen and Sarah Leegaard - Drama teachers at the pedagogical education, UCN.

To improvise is a basic discipline in all communication and interaction and thereby an important factor in the pedagogical line of work. Especially considering the ongoing reform in the Danish school system since 2012. This project is motivated by a preliminary study examining the cooperation between and the differences of the professional roles of teachers and pedagogues. It was found that the pedagogues presence in practical situations and their ability to form ad-hoc relations in a teaching situations meshes well with the teachers role as a communicator of academic content. This view is backed by Finn Thorbjørn Hansen in the article 'Det sprog, vi har talt, trænger til at fornyes' (which translates to 'The language we have spoken, needs renewal):

"(...) I see an obvious opportunity for co-operation between the pedagogue who has a specialized knowledge about relational matters and bodily processes (the way we harmonize amongst each other), and the teacher, who has particular attention towards professional skills (the concepts and the knowledge about what makes us professionally wiser on the concepts that harmonize us)". (Hansen, 2015, s. 385. Free translation).

We believe that the pedagogues ability to improvise is essential in their ability to seize, be present in and enter into dialogue with the moment. We use the dramapedagogical theories of Janek Szatkowski's 'Æstetisk fordobling' (The aesthetic doubling) and Keith Johnstone's 'Improvisation' to understand pedagogical improvisation.

Based on an action research-study the project will examine and define pedagogical improvisation in cooperation with a public school. We propose using aesthetical forms of expression such as movement, dancing, photo documentation and such to give words to pedagogical improvisation. Additionally qualitative interviews will be used to gather data.

This project serves to render the obscure professional competence of pedagogues visible and to formalize pedagogical improvisation defined as the pedagogues ability to intuitively resolve the pedagogical relation. In a smaller perspective we are doing this to develop a didactic to strengthen the consciousness and readiness of UCN students in relation to using pedagogical improvisation in practice. In a larger perspective the purpose is to emphasize and highlight this unique competence and to serve as an entry in the discussion of the pedagogues special role in practice.

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The Play-Space of the University

Sean Sturm (The University of Auckland)

The entrepreneurial university, to borrow from Pierre Bourdieu on the ludic logic of the field, can be described as a game in which “[p]layers agree, by the mere fact of playing, ... that the game is worth playing” (Bourdieu & Wacquant, 1992, p. 98). Driven by the stakes of aspirational careerism and audit-driven restructuring, academic and professional staff, students, and other workers collude in this social illusion. While academic and student protest at the University of Auckland (2011-14) moved the administration to play within the rules of the university game by adjusting its program of casualization, myself and others in the Liveable University project want to change the rules by playing the university game differently, by making the rules the object of collective deliberation and “deformance” (after McGann & Samuels, 1999) and making the endgame of the university about more than credentials and cultural capital.

Taking our lead from Paolo Virno (1998), we would argue that *play* forms the decisive link between rules and their application. Play is not just the deliberate exercise of rules that constitute a game; it is the pliability or “give” – the *play value* – of an operation or organisation. The play university – one which has give, or “freedom of play” (Derrida, 1983, p. 19) – allows for both the value of its workers/learners and the value that they place in their work/learning and in the university, and gives room for new possibilities in the “play-space” (Heidegger, 1996, p. 75) of the university. It responds to Jacques Derrida’s (1983) call for a university that is more than a means to an end, a university that aims to “to transform the modes of writing, approaches to pedagogy, the procedures of academic exchange, the relation to languages, to other disciplines, to the institution in general, to its inside and its outside” (p. 17).

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Knowledge Work and Knowledge Creation – the Impact of Instruction

Susanne Dau

The purpose of this paper is to address how instruction influences the creative knowledge work.

Based on different perspectives on instructions and the actions followed, this paper reveals how educators, having different competencies of ICT-instructions, influence students' creative knowledge work, and students' knowledge creation.

The paper's contribution to the existing knowledge is founded in a metaphorical phenomenological-ecological approach to learning as wayfinding inspired by Ahmeds' (2006) phenomenological theory of orientation and Ingold's (2000) ecological concept of wayfinding. According to Ingold, all wayfinding is mapping and "in wayfinding people do not traverse the surface of a world whose layout is fixed in advance" (ibid. p. 155). Moreover, wayfinding is related to narratives of journeys previously made (ibid.). Learning, understood as wayfinding, addresses the environment, the social and the relational elements in knowledge creation. Knowledge creation is a dynamic interplay of tacit and explicit knowledge including four modes of knowledge conversation that take place in socialization, externalization, combination and internalization (Nonaka & Takeuchi, 1995)

The research question addressed is; how do instructions in respectively teacher and radiography undergraduate educations influence the student's creativity and knowledge creation in the use of virtual media?

The paper is based on a longitudinal case study of two classes of teacher and radiography students' wayfinding within blended learning environments at University College North. The case selection obtained information about various approaches to instruction and revealed dominating various narratives. The empirical data has been retrieved from a larger study investigating students' orientation within different learning environments including classroom, internship, home and virtual environment. The sampling consisted of 18 focus group interviews including students, teachers and internship supervisors. The sampling was carried out among the informants. Focus group interviews were carried out three times and observation studies four times in the period 2012-2015. The focus of interviews and observations was students' knowledge orientation and knowledge creation under the circumstances of blended learning.

The overall findings revealed how the students were subject to learning as wayfinding. Furthermore, less regulated instructions were revealed to generate more creative thinking than well-planned instructions. The teachers' ICT competencies and the instructions they carried out highly influenced students' creative knowledge creation. Highly structured instructional designs seemed to decrease students' creative knowledge work and limit their knowledge creation. In contrast, low structured, but goal oriented instruction, deliberated more creativity in students' study activities and knowledge creation.

One significant implication of this study is that didactical reflections must include facilitation of students' self-directed engagement if creative thinking and knowledge creation are to unfold their potentials. Moreover, sociality, interactionality, spatiality, mobility, emotionality, structures and identity seem to play a crucial part in the creative knowledge development.

The study's empirical foundation is limited to two bachelor degree education. Thus, there is a need for more cross sectorial and quantitative studies to uncover and test the reliability and validity within other educational environments. However, the findings illustrates a connection between instruction and creative knowledge work which is missing from other studies. The purpose of this paper is to address different kinds of instruction and how these influence the creative knowledge work.

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Academic Heterotopias: Envisioning Students as Possibilists and Future Designers

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The Creative University has been addressed in the notions of “being” a university by Ron Barnett (2011). How can this “being” as a practice be set up in our Higher Education practice (Weber 2013a) as a practice of “becoming”? How can critical thinking, crossing boundaries, sense of possibility and design-ability become a living educational imaginary in Higher Education (Weber 2013b)? Discussing the “creative university” in a Foucauldian perspective, institutional discourses can offer subjectivating and as well transformative (em)powerknowledge (Weber 2009). Academia in this sense can become a Heterotopia envisioning students as possibilists and Future Designers. Integrating a Bourdieudian perspective, the “limits of the brain” (Bourdieu 1987) have to be addressed, in order to develop professional reflexivity, to develop critical designability and to grow by ethical dilemmas.

Connecting to a transformative philosophy of engagement and a vision of cosmopolite citizenship, the contribution in a second step discusses a framework for transformative education for the transition into Higher Education. The framework suggested here a) theorizes transitions and trajectories; b) uses habitus-theoretical perspectives for opening towards reflexivity for seeing possibilities; c) refers to social innovation strategies and sustainability methodologies and d) applies individual and collective models of “Design-Ability”.

In a third section the presentation shows empirical results of three years of training students’ self organization to become a Change-Agent and Future-Designer (Weber 2015). The goal of the program “Future-Designers” is the purposeful shaping of one’s own strategies for professional paths for sustainable futures. With that, the Network Coaching Program centrally aims at enabling sustainability in higher education by self-education, peer leadership training and social innovation development as well as strategy development. The empirical analysis of the program (Brake 2011; Brake/Bremer/Lange-Vester 2013) shows, that the program helps shaping strategies for futurability and sustainability innovation regarding social, ecological and economical sustainability.

Finally, the contribution in a self-reflexive turn asks for the possible underlying shift from “knowledge” to “ethos”, to be found in an academic Higher Education approach like this. Heterotopia then might be made of mixtures between romanticism, entrepreneurship, politics and reform-pedagogy.

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Contemporary Universities and the Production of Value

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Today, contemporary universities are encouraged to be innovative, creative, and foster knowledge production and knowledge transfer. These are a set of values, but they have a very specific meaning within the context of neoliberal capitalism. They encapsulate certain free market economic values that universities are encouraged to cultivate. In this way we can think about universities as being commodified—their core mission has become focused on creating greater economic value for the individual, for corporations, and for the society. In this focusing of the university mission on the economic there is a tendency to ignore other values that are important to a society including some which are important for a healthy economy. This paper will argue that making economic value superior to, rather than subservient to a broader understanding of value not only undermines the university but it undermines citizens and society in general. Contemporary large-scale societies, and indeed our global society, need individuals who are creative, reflexive and imaginative. They need to address a host of daunting problems that are environmental, political, economic and social. This work requires a different set of ideas about value and a different conversation about creating new value.

By drawing on Ronald Barnett's philosophy of higher education we argue that universities are much occupied with their 'acting' and 'knowing' efforts, while they forget the dimension of 'being' - who they are and what they want for themselves. By strengthening the voice of 'acting', universities take serious the socio-political demands for orienting themselves towards society. By sustaining the voice of 'knowing', universities also focus on the knowledge and learning outcome of teaching and research for the benefit of society. However, the voice of 'being' seems to have become muffled along the way in the effort to increase the volume of the other two voices. How does the voice of being sound for universities of today? 'Who' are they, and what do 'they' want for themselves? We reclaim the reality of the university itself – not with the aim of building up new ivory towers or receding into a secluded college withdrawn from everyday life and society. However, we do argue that the entrepreneurial potential of the university lies exactly in its own 'existential' reflection – what does the university care for, and how may society and the university engage in a joint project to increase the value potential of our future societies.

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Non scholae, sed vitae: Activity-based, reality-infused academic teaching

Line Revsbæk & Søren Willert

Background and purpose

- One of Denmark's cultural treasures is the so-called Folk High School movement, originally inspired by N.F.S. Grundtvig's (1783-1872) harsh critique of what he termed The Black School, meaning a school that delivered only formal, but no vital (socially, existentially useful) inspiration to their pupils.
- During the first half of the last century John Dewey pronounced 'doing' as an indispensable prerequisite for 'learning'.
- During the entire last century lack-of-transfer – from classroom settings to life settings – has been studied and discussed as a major problem for mainstream educational practice.

Purpose of the paper is to provide inspiration for talks about how the academic institution in a practical manner may pay heed to voices like Grundtvig's and Dewey's and go some way towards a constructive handling of the transfer issues – namely by offering reality-infused, activity-based learning to their students.

Case contents

The paper presents a segmented longitudinal case study stretching over a period of 45 years. All five sub-cases presented have been embedded in 'normal' study programs within psychology / social science.

- Reality-centered introductory teaching program for psychology students (1970-75)
In a newly established study program it was decided that discipline-oriented teaching (psychology of learning, cognition, personality ...) should be replaced by reality orientation: "This is Denmark – where and how may psychology help us understand and deal constructively with Danish realities." A teaching/learning organization was constructed.
- Counseling and professional team processes (1980-85)
Students in teams (M.A. level) were trained in mutual real-life counseling and at the same studied their own team development ...
- Center for System Development (1985-2005)
The Center trained students (M.A. level) in basic professional competencies by having them (1) offer their unpaid services (contract-based observation → feedback) to organizations; (2) act as apprentices to their teachers in the context of real-life consultancy/action research projects
- Master's programs for experienced organizational practitioners (2008-?)
Fully employed, mature students are invited to do action research in their own organizations ...
- Reflexive Learning of Organization Theory in Large Student Cohorts of Higher Education (2015-?)
255 students in Business Economy are organized in a simulator organization to inquire into the organizational life of interview respondents employed in local private firms/public institutions. Students are invited to view themselves as organizational members who collaboratively produce case material for their own oral exam. This helps them become reflexive about their own course participation as *organizational behavior* that may be relevantly explored through the course-based theoretical curriculum.

Informal assessment

All sub-cases have been implemented by the authors. The assessment presented below is mainly a reflection of the specific value clusters we see as supported through the described educational endeavors.

First assessment perspective: quality of student learning

- Facilitating transition from studies to practice
- Learning to be reflexive about own practice

Second assessment perspective: quality of University life

- Furthering mutual enrichment between theory and practice
- Transgressing the institutional boundary lines between teaching, research and practice

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Arts-Based Methods in Higher Education

A Proposal for an Invited Symposium submitted to the **Creative University conference**

Aalborg 18-19 August 2016

Description

Alison Phipps (2010) argues that creative elements from the arts and humanities are in exile from higher education. The presence or absence of creativity in higher educational settings is exemplified in the diverse cases presented in Peters and Besley (2013). Both scenarios –the absence of arts and humanities or the presence/absence of creativity- have direct consequences and implication for the ways educators design the higher educational offers of the future.

The benefits of arts-based methods (Steven S. Taylor & Ladkin, 2009) are looked at with interest in several higher educational contexts, especially in management and leadership. The interconnection between arts/humanities and creativity in higher education will be the main topic of the present symposium. The dissemination approaches will be arts-based and will include hands-on exercises or experiences.

In this symposium, we will explore a variety of arts-based methods as they are currently being applied in order to enhance creativity in higher and adult education. This will include theatre and performance, play/games based on storytelling and communication skills, art as equality tool, dance and poetry.

In **Theatre and play as communication** the consultant firm Klods Hans (actors and facilitators Henrik Krogh and Pernille Bandholm Jacobsen) will present their storytelling game Snapstories. Snapstories is a fun, easy-to-play game that coaxes real-life stories out into the open. When you play Snapstories, the stories come automatically. Many more than you might have imagined. Some are humorous, others spooky. Some are happy, others sad. Some are down to earth, others plain bizarre. And we all have these stories to tell – it just takes the right tool to bring them out! The game helps to create joy in telling, quality in listening and arouses the senses. We will also introduce our game Stories of Strength and the App “Fortæl!” Lets play!

In **Art as equality** Allan Owens and Anne Pässilä will describe the project, which is an ongoing sub study of a larger research project and focuses on the use of Arts Based

Initiatives in leading the multi-professional co-creation of public services for young people aged 16 – 29. This research has been undertaken as part of the ArtsEqual –project funded by the Academy of Finland’s Strategic Research Council from its Equality in Society –programme (project no. 293199).

We use the term ‘Turning to Learning’ to highlight the emphasis in this approach on relational, educational processes rather than short-term, tool-box solutions so often used to design public services in Nordic countries. Instead of reaching directly for existing methods to apply to complex problems, Arts Based Initiatives are used to formulate questions that begin to identify the problems; this is done primarily through making visible the assumptions held about self, other and organizational infrastructure.



Photo Maiju Saari

Our question: how is equality assumed in terms of leader identity, practices and social relations in the every day work practices of co-creation between the leader and team members, leader and stakeholder, leader in the role of service provider and customer as service-users. In our presentation-workshop we would like to introduce how we are using critical reflection and ethnodrama as research methodology as well as arts based action learning method. So we warmly invite you to our multi-modal practice of ‘Work Story & Work Journey’.

In Working with sensory experience and dance Claus Springborg will introduce the concept of Deutero learning. In neuroscience there is mounting evidence that abstract concepts are grounded in reactivations in the sensory-motoric centers in the brain, i.e. sensory experience. In other words, the way in which we understand abstract concepts, such as, communication, freedom, choice, learning, society, research, and creativity are structured specific sensory experiences.

Since Bateson introduced the concept of Deutero learning (learning to learn), scholars have looked at how some learning frame what can be learned later by framing the learning process itself. Inversely, the learning process can be potentiated by starting to asking questions about how the learning process is framed in specific situations. Therefore, it is important to begin questioning how we use sensory experience to learn. To do so, we need media through which we can work with sensory experience. Two media, useful for this purpose, are *vocabulary created to describe sensory experience and dance*.

In Poetry and authorship practices Per Darmer and Louise Grisoni will look at how poetry offers an approach for reflection and reflexivity; reflecting lived experience and reflexively engaging both the conscious and unconscious into the interior life of

workplaces for personal and organizational renewal. Cunliffe, (2004) defines reflexive practice as “questioning the relationship between ourselves and others: how we see the world, our assumptions/what we take for granted and the impact, our responsibility for ‘constructing’ life/self/social.” Self awareness and self insight operate together as key elements of reflexivity. However as Bolton (2010, p.16) states when reflecting upon the jump from reflection to reflexivity “A creative leap is required to support widening and deepening of perspective, and the effective ability to mix tacit knowledge with evidence-based or explicit knowledge”. This is where poetry has a part to play, acting as a bridge between reflection and reflexivity; the conscious and the unconscious; transforming existing knowledge into new knowledge and the ability to apply theory into practice. The writing and reading of poetry can be used to aid sensemaking, facilitating understanding and insight at individual and organizational levels. Against this backdrop, poetry facilitates conversation, discussion and dialogue; creating a platform for exploration and engagement.

The **Closing Discussion** will clarify concepts and emphasize critical connections through the different contributions in the Symposium.

Organiser:

Tatiana Chemi tc@learning.aau.dk

Presenters:

- Tatiana Chemi (IT/DK)
- Henrik Krogh + Pernille Bandholm Jacobsen (DK)
- Allan Owens + Anne Pässilä (UK/FI)
- Claus Springborg (DK)
- Per Darmer + Louise Grisoni (DK/UK)

Workshop Schedule:

- **Introduction** to symposium on arts-based methods in higher education (5 minutes) – Tatiana Chemi
- **Theatre and play as communication** (30 minutes) – Klods Hans (Henrik & Pernille)
- **Art as equality** (15 minutes) – Allan + Anne
- **Working with sensory experience and dance** (15 minutes) - Claus
- **Poetry and authorship practices** (15 minutes) – Per Darmer + Louise Grisoni
- **Closing Discussion** (10 minutes)

Total Time: 90 minutes

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A slow reading [of] notes and some possibilities of liberated, open, becoming universities

Mirka Koro-Ljungberg & Teija Löytönen

Background and purpose

University similar to church is one of the oldest institutions passing and preserving cultural heritage. In addition, universities are active societal contributors and influential communal contingences also in our contemporary societies. However, recently increasing number of these traditional and historical functions of universities have become hijacked by neoliberal practices and values. Oftentimes alternatives to the restructured and liberated universities are considered as unwanted exceptions. Furthermore, potential higher education anomalies cannot be fully materialized or practiced due to the limited resources, paralyzing normative practices, market-driven beliefs, and capitalistic values of dominant higher education systems and structures. Many neoliberal universities have also a totalizing function or highly stipulated position as Biesta (2011) notes “as if there is no alternative” (p. 36). In fact he called for imagination, a response that shows that there is always an alternative to the logic of competition and the culture of fear. He would like to see more “smaller gestures” and “creativity that is political in that it seeks to insert other ways of being and doing into the university” (p. 45-46).

Rather than continuing neoliberal discourses we would like to take a step forward, discuss, dream, and image diverse possibilities or universities to come, to open up “spaces of difference where new possibilities might emerge from the previously unthought or unknown” (Davies & Bansel, 2010, p. 12).

Design

In this paper stepping forward, discussing, and visioning will be done through hesitation and slowness. We draw from Wittgenstein's (1980) notes and his experimentation with slow reading and writing. Wittgenstein emphasized how a text should be read in the right tempo and sentences ought to be read slowly. More specifically, we follow Wittgenstein's aphoristic style (notes, short and individual thoughts, and paragraphs separated by spaces) to make readers think more than read (fast) especially since speed and need for speed could also be seen as one symptom or outcome of ever ticking and producing neoliberal higher education machinery. Hesitation and slowness as a research practice follows also the fragment(ed) note by Fichte (2012) who writes that "[W]hy do scientific findings have to be more complete than the first outline? Voids, mistakes and gaps reformulate the question of freedom and change" (p. 416). Similar to first outline we imagine, ponder alternatives, and write notes about fragile futures of liberated, open, and becoming universities, and suggest some potentialities for inserting other ways of being and doing into the university systems.

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Exclusion and Erasure as Variables in Cultivating Critical Thinking and Innovative Learning for Formerly Incarcerated College Students

Terrence McTier

The presence of diverse bodies on college campuses has gained more attention as professionals seek to provide space for individuals who reflect gender, racial, and sexual difference (Quaye & Harper, 2014; Butler, 2004). Amid this attention is a need to better understand the experiences of another diverse group—formerly incarcerated individuals (FII) enrolled in college. Despite the statistics about the acceptance and attrition rates for FII, more discussion is needed to better understand the influence their formerly incarcerated status may have on their college experience (Strayhorn, Johnson, & Barrett, 2013). Using findings from a preliminary study I conducted on formerly incarcerated students, I pose several questions to the conference: In what ways might our policies and faculty/student interactions with FIIs' enrolled in college classes serve to silence and erase their perspectives and narratives from the discourse of education? In what ways are we creating societal changes by silencing and erasing FIIs' perspectives and narratives as it exist on college campus? How can we cultivate critical thinking and innovative learning if we constantly silence FIIs' perspectives and narratives on college campuses? In this presentation, I will provide implications for how the education profession might challenge current exclusionary behaviors of the educational stakeholders. Furthermore, I provide implications on how to creatively construct knowledge and ways of assessing teaching, learning, and research for FIIs'.

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SINGLE ABSTRACT

Creative University Conference 2016

Associate prof., Ph.D. Tine Lynfort Jensen, University of Southern Denmark

A holistic competence-based approach to student engagement in innovation processes at the humanities

Purpose:

This paper presents a holistic based approach to an integration of a variety of competences into innovation courses as a way to enhance student engagement in learning processes in higher education.

The paper argues that 'The Creative University' demands engagement at the personal level from students and that a more holistic approach to competence development can foster the personal engagement because students can apply competences from both their personal and professional lives to create new ideas and thereby act as whole 'persons-in-the-world' (Lave & Wenger 2011).

Theoretical framework:

The connection between personal engagement and personal points of departure for creativity and innovation is documented in research in the fields of innovation and entrepreneurship education (Sarasvathy 2001, FFE-YE 2013, Lynfort 2014, Blenker et al 2014) and in relation to professional work life and student learning in general (Bakker et al 2011, Evans et al 2015).

Holistic approaches to competences are elaborated in several fields (Sundberg 2001, Beckett 2008, Lynfort 2014) and definitions of concepts of competence in relation to student learning and teaching have been developed in recent years (Field 2006, Le Deist & Winterton 2007, Oganisjana & Koke 2012, Jones & Warnock 2014, Stecher & Hamilton 2014, Seal et al 2015). The paper draws upon different perspectives of competence concepts to describe and discuss the specific holistic approach.

Methodology:

Through educational action research as teacher-researchers, data were collected through a mixed methods research project at five innovation classes in 2014 at the University of Southern Denmark (Mandrup & Lynfort 2016). For the purpose of this paper, I will focus on a selected part of the data from two of the five classes: 47 personal so-called competence cards made by students at the beginning and after the course, qualitative observations of student innovation processes in class and student-team business plans. The three types of data illustrates the students' activation of holistic competences and personal engagement in their efforts to generate innovative ideas.

Implications:

- The possibility for students to break down the silos between their everyday life and their student/professional life and apply this method in their way through the educational system as a source to engagement in learning processes
- the possibility to transfer the approach to other disciplines than innovation and entrepreneurship education
- New demands for students and teachers at the Creative University: involvement and personal engagement – ethical and realistic goals to set?

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Re-imagining Entrepreneurship for a Creative University: What Universities Can Learn from Craft Brewing

Wesley Shumar, Drexel University, Philadelphia, PA, USA
Sarah Robinson, Aarhus University, Aarhus, Denmark

This paper will argue for a progressive view of entrepreneurship that can support a broader sense of value and play a critical role in bringing new worlds into being. As neoliberalism has become a central ideology within the global economy pushing wealth upward into the hands of a smaller and smaller group of people, it has also had the effect of fragmenting universities into skills credentializing entities for the knowledge economy. Neoliberalism has become more than an ideology it has become a practice evidenced by the shifting roles and identities throughout higher education and the organizational frameworks that support the rationalism of audit and accountability. For the people who inhabit academia, whether student or teacher, these shifts are evident in the fragmentation caused by an accreditation fetish that reifies qualifications and attainment of measurable skills and competences.

At the same time, the advanced economy pressures for more creative people who envision a world that values more than the bottom line. Innovation and entrepreneurship have become buzz-words for society. Innovative people, creative industries, and entrepreneurs are idolized to fit the ideology and practice of neoliberalism. However an interesting development out of this dialectical contradiction is the craft economy. Drawing on data from the study of the craft brewing community in Philadelphia, we map out some of the ways that community sustains a broader range of values. Using the Internet and other high tech communication tools, craft producers and consumers develop skills, bring markets into being, blur the line of business and pleasure, embracing values beyond but not excluding the bottom line The craft industry population seem to be able to offer an alternative life-style to capitalism and entrepreneurship takes on a different meaning with a more robust social outcome. As the university is a central institution in a global educated society, this more progressive view of entrepreneurship could play an important role in the revitalization of higher education, moving it to support the development of both the individual and the community. We suggest that there are already re-imaginings of entrepreneurship in some universities, particularly in the Nordic countries, and that by nurturing these, a new vision for the university that is more creative, pro-active and able to support societal change may be possible in the 21st century.

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The Effects of Teacher Leadership Style on Students' Creative Problem Solving: Mediation of Approach Motivation and Academic Emotions

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Abstract : This work explored the effects of teacher leadership style on students' creative problem solving. In study 1, 102 middle school students in classrooms of different headteacher leadership styles, democratic or authoritative which was assessed by the method of expert evaluation, finished two creative problem solving tasks, brainteasers puzzles and Remote Association Tests (RATs). In study 2, 230 middle school students that were primed using contextual stories about democratic or authoritative teachers, finished the surveys of approach motivation and academic emotions and the same two creative problem solving tasks. Study 1 found that the accuracy of brain-teasers puzzles in democratic style was higher than that of authoritative, but there was no significant difference in RATs. Study 2 showed that both approach motivation and academic emotions had the partial mediation on the relationship between leadership styles and brain-teasers puzzles but no mediation effect between leadership styles and RATs.

Keywords: teachers' classroom leadership style; creative problem solving; approach motivation; academic emotions

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