NoFa5
27–29 MAY 2015
NORDISK ÄMNESDIDAKTISK KONFERENS
NORDIC CONFERENCE ON SUBJECT EDUCATION
BOOK OF ABSTRACTS
UNIVERSITY OF HELSINKI
POWER OF THOUGHT
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A1
CHANGING PEDAGOGIES AND DIVERSITIES IN CRAFT AND SLOYD1

Chairs: Sirpa Kokko and Mia Porko-Hudd
Room: K218

What is the meaning of handicraft in the Swedish school subject sloyd? Teachers’ perceptions of content and teaching methods in relation to the syllabus
Åsa Jeansson (Umeå University)

In Sweden we have a new curriculum since 2011, with new syllabuses for all compulsory subjects in primary school. In this study, 13 teachers in textile sloyd was interviewed about how they relate to this syllabus, in relation to their own experiences and perceptions regarding the subject content and purpose. They describe how they through their teaching and individualization, handle requirements on students’ documentation and reflection on the work process, related to their work with handicraft. The teaching is nowadays based on the knowledge requirements and the purpose of this study is to contribute to the understanding of how the work with handicraft finds or retains its place in the subject sloyd. There is an old approach to the school subject sloyd as a "doing" activity, which needs to be problematized, not removed. The subject sloyd has changed and teachers' own voices gives knowledge of the implementation of this.

Keywords: sloyd, handicraft, interviews, teachers’ perceptions, teachers’ experience, implementation of curriculum

Enhanced focus on creative and innovative design processes – didactical challenges from a teacher’s point of view
Bolette Kremmer Hansen and Lissi Wiingaard Thrane (Metropolitan University College)

With the new Public School Reform in Denmark implemented in 2014 there are new Common Objectives for all subjects. A consequence is that the subjects ‘sløjd’ (wood and metal work) and ‘håndarbejde’ (needlecraft) have been replaced with a new subject: craft and design – in Danish: håndværk og design. In society there is an enhanced focus on creative and innovative competences and implementing craft and design is an attempt to strengthen these competences. Craft and design is a subject where the pupils work with a combination of craft and design processes and create products with esthetical, functional and communicative value. This new subject places new demands on the teacher, and especially to teachers who have been qualified in teaching ‘sløjd’ and ‘håndarbejde’. In an action research project we will examine what potentials and challenges teachers face with this change regarding materials (all materials, primarily wood, metal and textile) and methods in particular (enhanced focus on design processes).

Keywords: creativity, innovation, design processes, didactical challenges
Crafts versus visual arts – experiences in basic education in Finland
Ulla Kiviniemi (University of Jyväskylä)

This presentation contrasts two subjects in the national curriculum: Crafts and Visual Arts. Both the subjects approach expression and making through a certain subject specific way. Crafts education tends to focus on the know-how in making and self-standing working processes whereas visual arts stresses understanding of visual culture and developing artistic expression. The subjects have integrated the culture and the practices of the backing disciplines delineating the present discourses, activities and relationships as well at material environments of the subjects. Two data sets of memoirs written by teacher trainees were collected on the theme how the informants experienced the two subjects at school. The text were analyzed by open reading that concentrated on both external and internal factors of the experiences seeking for clues of contentment and distress. In this presentation the subject specific analysis as well as the comparison between the two subjects will be presented.

Keywords: basic education, curriculum, crafts, visual arts

Diverse orientations in craft education: Student teachers’ perceptions and experiences
Tarja Kröger (University of Eastern Finland)

Craft and craft education is not one unity but various dissimilar approaches. Diverse approaches can be seen in concept analysis (Kojonkoski-Rännäli 1995; Ihatsu 2002), in teaching and learning materials (Kröger 2003), in paradigms and pedagogical models (Pöllänen & Kröger 2006; Pöllänen 2009) and in the subjectively construed meanings of craft (Rönkkö 2011; Kouhia 2012; Karppinen 2013). The multiple approaches and meanings of craft are acknowledged also in the new curriculum. It is therefore important to recognize student teachers’ prior perceptions and experiences in order to encourage them to use varied approaches in a versatile manner. This study focuses on primary student teachers’ perceptions and experiences of craft and craft education. An on-line questionnaire including closed and open questions was distributed to all classroom teacher students who enrolled on the course “Craft education” in the University of Eastern Finland in 2014. Results are reflected to diverse approaches and meanings of craft.

Keywords: craft education, meanings of craft, pedagogical models
How to renew language education in comprehensive school? Model for peer education in in-service and pre-service teacher education
Merja Kauppinen¹ and Pia Bärlund² (¹University of Jyväskylä, ²City of Jyväskylä, Basic education)

Language subjects are traditionally taught separately. There is the cross-curricular theme multiliteracy in the new national core curriculum however. The realization of multiliteracy in school practices demands co-operation between school subjects and teachers. The project named ActLib (https://peda.net/oppimateriaalit/kirja-arkku) binds together different subjects. It offers teachers possibilities to share teaching practices and to innovate collaborative learning. ActLib has many ways of working: one-line database for learning material, workshops, teacher/teacher–student-pairs and joint happenings. In this paper we discuss about 3 questions: 1. What kind of learning experiences does ActLib educating model offer to different kind of teachers / teacher students? 2. What is the value of thematic workshops, co-operation for planning exercises, co-teaching and common happenings for professional growth? and 3. How do these working models increase content (pedagogical) content knowledge of teachers / teacher students? The data has been collected from interviews and questionnaires of ActLib teachers / teacher students.

Keywords: language education, in-service teacher training, pre-service teacher training, peer teaching

The role of language and embodied practices in promoting basic arithmetic concepts
Friederike Kern, Sören Ohlhus, and Thomas Rottmann (University of Bielefeld)

In our paper, we want to present insights from an interdisciplinary research of mathematicians and interactional linguists. The aim of our project is to describe the changing linguistic and embodied practices in videotaped longitudinal remedial lessons, and to reconstruct their role for the development of basic arithmetic concepts. The lessons follow a four-phases-model in which the transition from manipulation with materials to mental operations is central. This process of abstraction is mediated by different material-bound as well as verbal and gestural practices. In our analysis, we want to shed light on this process from the perspective of alterations in use of the various semiotic resources the participants draw on. By this, we hope to get deeper insight into the general role of language and embodied practices in learning processes.

Keywords: interactional linguistics, semiotic resources, basic arithmetic concepts
Manipulatives in primary school mathematics classroom: Needs, benefits and limitations on equations teaching and learning
Daranee Lehtonen and Jorma Joutsenlahti (University of Tampere)

Several studies have indicated that students' low performance in mathematics is a consequence of their inadequate mathematical concept comprehension. Learning theories and research have encouraged the use of manipulative materials. Manipulatives can facilitate diverse learners' mathematical concept formulation through experiential learning, multimodality and languaging. Nevertheless, studies have revealed that teachers usually favor traditional textbook-based instruction over manipulatives. This paper empirically examines manipulatives' use context, advantages and hindrance to primary school equations classroom from students' and teachers' viewpoint. The study is the first phase of design-based research PhD work. The research aims to establish design principles for manipulatives developed during next phases. The study will be conducted qualitatively in spring 2015. Research findings and gained experience for future studies will be presented at the Nofa5 Conference. The implication derived from the research should assist in constructing knowledge of how to enhance mathematical concept teaching and learning with manipulatives.

Keywords: concept understanding, equations, languaging, manipulatives, mathematics, multimodality

Feedback criteria for multimodal texts
Ida Gyde and Jane Thygesen (VIA University College)

Multimodality is a relatively new semiotic approach to texts in primary schools. In Danish language classes teachers and pupils analyze and design multimodal texts. Nevertheless very little research on qualified feedback criteria to evaluate pupils' multimodal text competence is to be found. Through our research we have explored the problems and possibilities that teachers and pupils deal with again and again when working with multimodal texts. Findings from our research in two primary school classes (10 - 13 years) revealed that teachers made no explicit use of criteria for multimodal text building and so pupils' interpretations of their tasks varied. Students were confused and did not know what made their interpretation good or bad. As a result the pupils had problems identifying what they gained as a learning outcome. Creative activities need structural support such as quality criteria or models on how to analyze products to structure thinking and gain learning outcomes at a meta-level. We will present a feedback chart developed in response to this.

Keywords: feedback criteria, multimodal text, response
What is quality in drama teaching?
Tapio Toivanen (University of Helsinki)

Links between teacher–student relationships and academic learning have become the focus of increasing number of studies (Walker 2008, 2009; Pianta & al.; Kiuru & al 2012). These studies despite broad recognition the importance of teacher –pupil interaction to support learning and creating positive climate. The teaching excellence requires meeting students’ intellectual and social needs. How about drama that can be seen as a teaching that support also development of pupils’ creativity? Drama work offers possibilities for creative group processes and aims for deeper conceptual understanding by preparing students to create new knowledge. I try to find answer to the following research questions: Can quality drama teaching elements be defined theoretically? What are the elements of quality drama teaching? The study examined the associations between teacher actions and pupils group creative working in drama lessons. The sample consisted 16 process drama lesson taught by teacher trainees (8), class teachers specialized to drama (4) and drama teachers (4). Lesson were video analyzed with CLASS (the Classroom Assessment Scoring System) and the core principles of improvisation.

Keywords: pedagogical interaction, drama education, creativity, drama teaching qualities

Drama arts education in the frame of the theatrical event
Päivi Jyrämö and Pirjo Vaittinen (University of Tampere)

This paper focuses on a research-based drama and theatre education project, with student teachers mediating between a professional theatre and the university training school. From the point of view of developing teacher education, the goal is to plan and carry out drama exercises. The student teachers use their knowledge about drama and theatre, as well as the production involved, and take the fifth-graders to rehearsals of a production. The pupils signal to show agreement or disagreement, and enter the stage to mark a significant moment in the performance; they learn about creating a performance, and interview the director and actors. The pupils are then guided to build a process drama in the classroom with the drama teachers. Classes are filmed and analyzed using methods of conversation analysis. The frame of the research is a theatrical event where both performers and viewers bring their presence and activities to the event.

Keywords: drama arts education, teacher education, student teacher training, process drama
Influential human rights education in school: Comparative action study of various pedagogical models
Hannu Niemelä and Marja-Liisa Hassi (UNICEF Finland)

There is a general lack of comparative studies in human rights education. Yet, the need for knowledge about effective education models in human rights education has strongly increased in Finland as well as in other countries. This action study aims at exploring and revealing the impacts of three different instructional models (frontal teaching, functional methods, drama-based instruction) on the development of teachers’ competence in human rights education (knowledge, skills and attitudes) and children's knowledge structures in human rights. The study is related to the project on Child Rights Put into Action! (coordinated by Finnish National Committee for UNICEF) and its holistic and participatory model of human rights education applying a process drama method in the workshops for teachers, educators, and prefects. This action study compares the implementation and effects of the three instructional methods in regular school classrooms. It applies a mixed methods approach and collects data by interviews, observations, focus groups, and surveys. Findings of the study will provide evidence-based information on the pedagogy and impacts of human rights education for national and international education authorities, schools, and teacher education centers. The study also enables further development of the instructional models and recommendations for child rights education.

Keywords: child rights, drama education, functional methods, human rights education, impact assessment

Devising a performance, a participatory research method for climate change education
Anna Lehtonen (University of Helsinki)

As climate change threatens our survival and future, it evokes anxiety, fear and feelings of guilty. That is why climate change education demands relational, artistic, embodied, experiential, symbolic, and spiritual learning. Climate change challenges the relationship between adults and young people and calls for adults and children learning, creating and acting together for a better future. In this presentation the potential of drama as a method for learning for climate change education is exemplified and illustrated by a cross-curricular performance project about climate change conducted with an international class of 13-14 year old students. The goal of the project was to explore the theme of climate change together with a group of 13-14 year old students and engage and empower the young participants by letting them to tell the audience what they thought about climate change. This case study is a part of an ethnographic work based research project about applying the methods of drama for climate change education. In the collaborative performance-creating process the participants are emotionally involved and actively participating in collaborative creative process of social and aesthetic transformation. Via drama the students and the teacher are together constructing possible future solutions and learning successful collaborative practice.

Keywords: climate change education, drama, performance, transformation
Multimodal connections and practices in science education
Kristina Danielsson¹, Lay Hoon Seah² and Kok Sing Tang² (¹Stockholm University, ²Nanyang Technological University)

A language in a wide sense (comprising verbal language, mathematical symbolic language, visualisations, action, etc.) is at the core of science teaching and learning (Kress et al. 2001; Lemke 1998; Tang & Moje 2010). Appropriating the discourse of science would involve learning the academic literacy practices of using and combining multiple resources for meaning making. We will report on findings from projects in Singapore and Sweden/Finland, investigating science classroom practices at the primary and secondary school levels, focusing on language use. Theoretically we draw on social semiotics, including systemic functional linguistics (SFL) and multimodality (e.g. Halliday 1978, Halliday & Matthiessen 2004, Jewitt 2009). The data consist of video/audio recordings of classroom communication, lesson and student artefacts and recorded teacher interviews. Analyses were performed using the SFL-framework, focusing on how scientific ideas were communicated through different semiotic resources (spoken, written, images etc.). Here we focus on teaching episodes where teachers introduce new scientific concepts. We found that teachers in all settings tended not to explicitly highlight the connections which are necessary for the students to appropriate the scientific discourse and to grasp the content. Instead, we show how these connections were implicitly made in the classroom. The implication of such implicitness will be discussed.

Keywords: science teaching and learning, multimodality, social semiotics, systemic functional linguistics, discourse of science

What is time? Multilingual students’ meaning-making in school physics
Monica Axelsson, Kristina Danielsson, Britt Jakobson, and Jenny Uddling (Stockholm University)

Scientific discourse comprises a specialized, lexically dense and abstract language, with a need for students to handle multiple resources for meaning making in parallel, e.g. verbal language, graphs, gestures, models, and symbolic language (Halliday & Martin 1993; Lemke 1998). This puts high demands on the learner, in particular for multilingual students as they learn science in their second language. We will present results from an interdisciplinary project on interaction in science classrooms, focusing on how science content is elaborated and negotiated through various semiotic resources. The project draws on i) social semiotics (Kress 2010) including systemic functional linguistics (SFL) (Halliday & Matthiessen 2004), and ii) practical epistemology (Wickman & Östman 2002). Data (video/audio recordings, digital photographs and texts collected in the classrooms) is analyzed through SFL-analyses, multimodal analyses and practical epistemology. We will concentrate on findings from a primary school classroom working with “time”. Here, the teacher uses a variety of semiotic resources in different semiotic modes, and students are engaged in small group work and whole class discussions.
Our analyses, made from different perspectives, reveal a need for interdisciplinary cooperation for researchers to be able to give a broader picture of what learning opportunities are given the students.

Keywords: multimodality, practical epistemology, systemic functional linguistics, meaning making, multilingual classrooms

Boys’ and girls’ strengths and weaknesses as readers
Astrid Roe (University of Oslo)

This paper is based on analyses of population data from the Norwegian national reading tests for 8th graders and data from the reading test in PISA 2000 and 2009. The background for the study is the big gender gap favouring girls that was found both in PISA and in the national reading tests. In-depth text- and item analyses from both studies show that the gender difference varies between texts and tasks, and that the variation shows a certain pattern. Language, style, text type, text format, content, reading aspect and item format are factors that seem to play a role. Familiarity and identification could also be an explanatory factor. The study combines quantitative and qualitative methods, including descriptive statistics, residual analyses, and text linguistic analyses. Pedagogical implications of the findings will also be discussed.

Keywords: reading literacy, gender differences, identification, engagement
Pre-primary and primary geography and education for sustainable development in Finnish school curriculums: Changing goals and contexts
Liisa Suomela (University of Helsinki)

The Finnish school curriculums are changing. The new curriculums should be in place in autumn 2016. National curriculums give the guidelines and every school should have their own curriculums as well. Pre-primary education in Finland means the education for six year olds. It is usually organized in day care centres and the teachers are mostly early childhood educators. This presentation is going to explore what kind of changes there will be in the new national curriculums concerning the goals, skills and contexts of teaching geography and sustainable development in the first three years of schooling. There will be a comparison of the aims and ways of learning between the old and new curriculums. From the perspective of children the possibilities to use and know wide (versatile) places and spaces are crucial and a part of wellbeing. Also to learn sustainable ways of living and how the biodiversity is taken into account are worthwhile skills for future global citizens in this shrinking world.

Keywords: geography, education for sustainable development, curriculum, goals of teaching

Climate change education in a pluralistic way
Andreas Grahn (Karlstad University)

In the Swedish curriculum for the upper secondary school is it clear that geography is the subject who has the responsibility for the education about climate change. This can be done in a number of ways. In a previous study I have identified three types didactic tradition, on fact based, one normative and one pluralistic. I my forthcoming thesis I´m looking further into the pluralistic tradition and how teachers are dealing with the special challenges that surrounds climate change education. These challenges are among others the scientific uncertainties, political disagreements and the ethical dimension of climate change. The study consists of interviews with three pluralistic teachers, classroom observations from a number of their lessons and discussions with focus groups of students. The theoretical framework comes from both Tomas Englund and his perspective on curriculum studies and Ference Marton with the tools from his concept “Learning Study”.

Keywords: climate change, geography, pluralistic education, learning study

Content changes in geography curriculum in Finland?
Hannele Cantell (University of Helsinki)

In Finland the new curriculum for basic education will be taken into use in year 2016. There will be remarkable changes in the contents of geography education. Until now the teaching has been
more or less based on different areas, such as Finland, Europe and some continents. In the becoming curriculum the contents are more value based, global and topical in character. Issues of both physical and cultural/human geography will be studied from local to global perspectives and from personal to universal perspectives. The six main content areas are: 1) The map of the world and its regions, 2) Topical, changing world, 3) The basic preconditions of life in our planet, 4) Changing landscapes and living environments, 5) People and cultures in the world and 6) Sustainable living and responsible use of resources. Along the contents there will be also a notable change in the attitude of evaluation. Previously the emphasis was to evaluate WHAT the students have learned. In the new curriculum the emphasis is HOW the students understand geographical issues, work, and create new ideas. One can say that the new curriculum will be more skills-orientated than nowadays. The aim of the presentation is to evaluate the changes of content and values of geography education in the new curriculum. I will especially concentrate on the issue of regional geography.

Keywords: geography curriculum, curriculum development, evaluation, global education

**Student teachers’ video inquiries: learning how to facilitate student discussion in Geography**

Birgitte Lund Nielsen (VIA University College)

Two cases of pre-service Geography teachers’ facilitation of lower secondary students’ exploratory talk about issues related to democracy, diversity and globalization are presented. Data is from research examining student teachers’ (STs) collaborative analyses of video from school practice. The STs meaning-making was analyzed based on repeated interviews and dialogue during video-analysis. Findings indicate that structured inquiries supported STs in understanding central aspects of geographical education. In general they emphasized insights gained by starting from a fine-grained analysis of concrete incidents before applying theory, and their dialogue exemplified the emerging character of their reflections. One ST – using authentic cases from Sudan - in retrospective highlighted being frustrated just after school practice because of lack of evidence to support theory about intercultural competence. Gradually she grew to understand how students gained from the narrative approach. The other case is about the use of various communicative approaches to support students’ discussions.

Keywords: classroom video, geography education, globalization, communicative approach
High achievers in the mathematical kangaroo compared to high achievers in the Swedish national test in mathematics
Elisabet Mellroth (City of Karlstad/Karlstad University)

The study is based on teachers’ observations of students who achieve highly in the mathematical kangaroo although they fail or almost fail in the Swedish national courses in mathematics. Some teachers suspect that these students may be gifted. Results of the study are presented on how two groups of students relatively activate their mathematical competencies in the mathematical kangaroo contest. The two groups of comparison are identified as high achievers (top 20%) in only one of two tests: the Swedish national test in year 6 (2012) or the mathematical kangaroo in year 7 (2013). The study indicates that the students who are high achievers in the mathematical kangaroo activate the problem solving competency to a greater extent than the high achievers in the national test. In total 264 students in grade 7 participated in the study.

Keywords: achievement, assessment, mathematical kangaroo, mathematics test

Gifted mathematics education in Sweden – for whom?
Attila Szabo (Stockholm University)

In Sweden there is an on-going pilot scheme for a national program for gifted education. The objective of the program is to allow students – in primary and upper secondary school – to deepen and broaden their knowledge in a subject area (e.g. mathematics, science, social science and modern languages) beyond what is required in the national curricula. Students from the whole country may apply to the program. The admission to the mathematics classes is based on student’s grades and on interviews with the students. The latest evaluation reports raise some issues related to the mathematics education within the program:

• Does the program allow students to deepen and broaden their knowledge in mathematics?
• Are we recruiting mathematically gifted students or high achieving students in mathematics?
• Is the program a truly nationwide program?
• Does the program fulfill its compensatory mission, by recruiting students with diverse socioeconomic backgrounds?

Keywords: mathematics, gifted education, high achieving students
Finalists in mathematics competitions: their social situation and the importance of task commitment
Verner Gerholm (Stockholm University)

The purpose of the study is to examine the importance of task commitment and some social aspects of mathematically highly able students. 16 finalists from the Swedish qualification competition of the International Mathematical Olympiad have been interviewed about their social situation and their relationship to mathematical problem solving. All students in the study were between 16 and 19 years old studying at the Upper Secondary School and approximately half of the students pursued their studies at programs with extra mathematics on the schedule. The interviews were analyzed according to Mönks’ Triadic model of interdependence, which focuses on the importance of social aspects in knowledge acquisition such as family, friends and school. The findings show that mathematics competitions had a strong impact on the students’ motivation and indirectly also affected the students’ mathematical development. The study indicates that the three social aspects highlighted in Mönks' model need to be supplemented or qualified.

Keywords: mathematics competition, mathematical highly able students, high achievers, motivation, task commitment

Studio 3 – focusing on students with the will to do something more
Jan Holmgård and Peter Kotkamaa (Sursik School, Pedersore municipality)

We have the last 3 years been working on a project in our school called Studio 3, a voluntary activity focusing on scientific method as a tool for finding information and to evaluate the information found, and to produce own material. The basic idea was to change attitudes towards learning and making it more socially acceptable to be a high achiever in our school. The role of the teacher in this process has mainly been to give guidance to the students. An important feature has been to make students aware of their own thinking process. A group of ninth grade students in primary education have each year chosen a subject of interest to immerse themselves in. The working period has been two thirds of the semester with at least one meeting with the teacher per week. The students themselves have had the freedom to choose the area of interest from the given subjects: science, mother tongue (Swedish), English, history and civics. The product has been a journal written in InDesign where each student has contributed with an article.

Keywords: curiosity, scientific method, voluntary activity
Towards a global citizenship? Finnish school textbook descriptions of globalization, global economy and tourism
Pia Mikander (University of Helsinki)

School textbooks in social science, geography and history all approach the global world and the challenges and possibilities it might withhold for the students, future world citizens. From a perspective of “us” Westerners and “them”, the rest of the world, the paper uses discourse theory analysis to see how the concepts of globalization, global economy and tourism are presented in Finnish school textbooks for grades 5-9, printed 2005-2010. Topics to be discussed includes the nature of globalization, is it presented as a competition between countries or continents or as a “world village” that can pull together? How do the textbooks explain global flows of capital related to trade? Finally, the concept of tourism is discussed as a way to approach the role that the reader (the student) is expected to play in the global world.

Keywords: textbook research, globalization, global economy, tourism, discourse analysis

Education towards individual or collective citizenship in a national and/or globalizing world, 1945–1985
Henrik Åström Elmersjö (Umeå University)

The topic of citizenship in education, its connection to the nation, and how it has changed in the course of the twentieth century is well researched. However, we do not know very much about how this was practiced within the framework of the concrete school subjects, and even less about how the concrete school subjects were discussed in relation to citizenship and the nation. Utilizing the discussions within the Swedish State Approval Scheme for Textbooks (Statens läroboksnämnd), this presentation will explore how history education and social studies were seen as potential sense-makers and providers of a perceived needed identity for a society of collectives and/or a society of individuals. The overarching question is: How does the relationship between the individual and the nation change within the discussions on history and social studies textbooks in Sweden between 1945 and 1985? Is the foreseen shift towards educating individuals a weakening or a strengthening of the nation? Regarding this as a weakening implies that educating towards a collective identity was/is the same as educating towards national citizenship. Furthermore, this presentation will problematize the concept of “state-nationalism” as a dichotomous contradistinction to “ethnic nationalism”.

Keywords: history, education, textbooks, individualism, nation
Intercultural historical learning: a conceptual framework
Kenneth Nordgren (Karlstad University)

In many countries history in schools has been rendered a new task in the national project: to foster citizens that can orient in a multicultural environment. In spite of these intentions, the meaning of intercultural learning, both as policy and practice, has remained unclear: How can different needs as well for stories of cohesion as for individual and differing stories of the past be made to interact in the classroom? This paper outlines a conceptual framework in order to systematically discuss the meaning of intercultural learning in history education and how it could be advanced. It brings together theories of historical consciousness, intercultural competence and postcolonial thinking. By combining these theories into one framework, we identify some specific and critical aspects of historical learning. The framework addresses the intercultural historical competence and also how it can be developed. This can be used by researchers to analyze the intercultural elements of historical learning, in schools and in society, and by educators to construct relevant learning activities.

Keywords: history instruction, intercultural competence, multicultural education, cultural diversity, school history

Problematizing the concept of nation-building in history education
Bengt Schüllerqvist (Karlstad University)

This paper critically discusses goals for history education proposed by scholars at international conferences, and problematizes the understanding of the concepts of nation and nation-building often used. Frequently these concepts are seen in the perspective of classical historical theories of nationalism focusing on early periods of nation formation. This paper argues that the discourse of history education would benefit from using the understanding of nation-building common in political science, as an ever ongoing process, also among democratic nations. In this process different political parties and actors all put forward issues and perspectives that they see as in the interest of the nation, thus forming the ongoing political struggle. Such a concept of nation-building would encourage a more realistic understanding of the political pre-conditions for any history curriculum. A dominant version of national interest is normally included in school curricula. Empirically there are a number of examples when politicians act and change a history curriculum that they see as not in the interest of the nation. Such events are in the discourse of history education often labelled History Wars.

Keywords: nation, nation-building, history education, concepts, critical discussion
A8

DIVERSITY OF STUDENT CONCEPTIONS AS A BASIS FOR CHANGED SUBJECT EDUCATION

Chair: Anja Thorsten
Room: AUR 118

How can students’ ways of reasoning contribute to developing civic teachers’ pedagogical content knowledge?
Malin Tväråna (Stockholm University)

The aim of the presentation is to illustrate how a deeper knowledge of students’ conceptions of a specific subject content can be explored. A phenomenographic study that explores qualitative differences in upper secondary school students’ conceptions of justice, in the subject of civics, is presented. The presentation discusses how the understanding of students’ different ways of reasoning about justice in civics can contribute to developing pedagogical content knowledge among teachers. The study is based on empirical data from seven interviews and three Learning Studies focusing the ability to reason about the concept of justice. The study analyses students’ conceptions of justice, as well as students’ experiences of what it means to reason in civics. These ways of reasoning relate to each other and to the practice of civics. By focusing critical aspects of the ability to reason about justice in communicative actions that enable the students to discern the critical aspects, the teachers develop a better understanding of what it means to be able to reason well about justice. The teachers also develop an understanding of how this can be taught to students.

Keywords: phenomenography, civics, PCK, teaching and learning

How can students’ conceptions contribute to designing language teaching?
Anja Thorsten (Linköping University)

The aim of the presentation is to describe how a lesson design can be based on students’ conceptions and their prior knowledge. The topic/issue will be discussed by giving examples from an interventionist research study about how to develop 9-10-year-olds story writing. The theoretical framework is Variation Theory. According to this theory, learning requires the discernment of new aspects of an object of learning and we can only discern that which varies. Some aspects are critical to discern in order to see the object of learning in new and more developed ways. The critical aspects were found by analyzing differences in students’ conceptions in relation to the object of learning. The analysis is based on interview data, students’ texts written before and after the lessons and video recordings from the lessons. The lessons were designed to make the critical aspects visible by using patterns of variation as a didactical tool for teaching, based on the assumption that we learn new things by perceiving differences, not sameness. Examples of how critical aspects were found and how they were handled in the classroom will be presented.

Keywords: learning study, critical aspects, creative writing, writing instruction
How can diversity in students’ conceptions contribute to learning in the mathematics classroom?
Joakim Magnusson (University of Gothenburg)

The presentation will give examples from two intervention studies in mathematics that show how students’ diverse ways of reasoning during instruction can be used as a tool to enable students to experience content in new and more powerful ways. According to variation theory aspects of a phenomenon come into focal awareness through variation rather than sameness. Students’ different ways of seeing a phenomenon is a variation that can be used in instruction. However, highlighting students’ different conceptions has often been regarded as inappropriate by teachers and researchers, since there is a risk that conceptions that do not reflect underlying mathematics in a correct way might be memorized and learned. Results from one of the research studies that is presented indicate the opposite. The study showed that experiencing diverse conceptions enabled students to discern new aspects considered critical for learning. These results are in line with the theory’s assumption that you can only discern that which varies. The presentation will give examples of how critical aspects were made discernable for students when the teacher contrasted and compared conceptions that were expressed during instruction.

Keywords: learning study, variation theory, mathematics teaching

How can students’ conceptions contribute to teachers’ understanding of meaning-making processes in the history classroom?
Patrik Johansson (Stockholm University)

The aim of the presentation is to illustrate how processes of meaning making in history can be explored through upper secondary students’ conceptions when they engage with primary source materials. The topic will be discussed by using examples from research data that was collected through audio recordings of students’ group conversations when they worked with two primary source assignments in history. Previous research has used phenomenography to identify critical aspects of learning primary source analysis. Here, the critical aspects are used, in combination with a form of content-focused conversation analysis, to analyze the students’ conversations. The analysis suggests, for instance, that one of the aspects is discerned in a contrastive process between the present and the past in terms of values, ideas and societal conditions. Also, the analysis shows the vital role of the students’ life-world perspective in creating meaning while working with the primary sources. One conclusion is that the life-world perspective should be regarded in educational design. The examples from the analysis will be discussed in relation to the historical didactical concept of historical consciousness.

Keywords: phenomenography, meaning-making, history, teaching and learning
Obstacles encountered in giving a voice to pupils in research
Hille Janhonen-Abruquah¹, Edda Óskarsdóttir² and Hafdís Guðjónsdóttir² (¹University of Helsinki, ²University of Iceland)

When conducting research in schools and aiming to capture pupils’ voices many hindrances occur. This paper looks critically into the roles of various gatekeepers who protect their school from researchers. The researcher’s access into schools depends firstly on the official research permit authorities, secondly on the school leaders, such as principals, assistant head teachers and thirdly on the teachers themselves. The purpose of this paper is to critically look at how the research setting changed as the researcher and teacher worked together.

The theoretical framework builds on critical theory, inclusion and social justice. This was a qualitative study and data was gathered through interviews and observations. It derived from the Nordforsk project, Learning Spaces for Inclusion and Social Justice: Success Stories from Immigrant Students and School Communities in Four Nordic Countries.

Researchers noticed that in order to get the pupils’ voice heard in the study, interviews were not enough but a combination of research methods were needed. Methods like story writing, photo elicitation interviews, pupils’ project work and combinations of these were used. This required an active participation on behalf of the teacher and changed teachers’ role into being a co-researcher.

Keywords: voice, agency, power, positioning, co-teaching, trust building

A headmaster perspective on cultures and beliefs in multicultural schools - evidence from a case study
Mårten Björkgren and Mikaela Björklund (Åbo Akademi University)

The two-way dimension on integration highlights the fact that also the linguistic and cultural majority need awareness of, knowledge about and understanding of the new inhabitants arriving at kindergarten, school and work with a variety of languages and outlooks on life. Hence, the aim of the on-going research project ‘Vem integreras och på vilka villkor’ (VI VILL, Eng. Who is integrated and on what conditions?) is to survey, evaluate and develop integration processes related to languages and outlooks on life.

In the present paper the aim is specifically to present a headmaster perspective on cultures and beliefs in multicultural Swedish-medium primary schools in Finland. The data were collected within the VI VILL-case study in a multicultural community in Finland, and consists of qualitative interviews with headmasters (N=7). The analysis of the interviews brings forth several different perspectives on integration related to cultures and beliefs. Dimensions ranging from knowledge and administration to educational practices, feelings and levels of participation are represented
in the data and their relevance discussed in relation to how culture- and faith-related education could be developed into supporting factors in the integration process and in the development of intercultural competence.

Keywords: two-way integration, multicultural schools, outlooks on life, interculturality, case-study
The teacher role in classroom tandem
Michaela Pörn, Katri Karjalainen and Anna Korhonen (Åbo Akademi University)

The purpose of this paper is to describe the teacher role in classroom tandem within a co-located Swedish-medium and Finnish-medium school. Classroom tandem is used for second language instruction in mixed language groups in the subjects of Finnish and Swedish as L2. Tandem learning entails that two persons with different mother tongues form a tandem dyad and learn each other’s native languages in reciprocal cooperation. The students function, in turns, as a second language learner and as a model and resource in the native language. The target language is thus learned via authentic interaction situations with a native speaker of the target language.

The national curriculum (2016) points out both the importance of the students’ ability to interact in the target language in authentic situations and the teacher’s role more as a facilitator for learning than a traditional knowledge provider. The empirical data consist of video recordings of the teacher’s interaction with the tandem dyads in classroom tandem. The results show that the teacher orients both to the role of a coach and a language expert. The teacher facilitates the students in their tasks and roles and supports reciprocal cooperation, in addition to the formal teaching of language.

Keywords: tandem learning, classroom tandem, L2 dyad interaction, teacher role, video ethnography

Development of student self-study activities
Hilmar Dyrborg Laursen, Henrik Scheel Andersen, Lóa Björk Jóelsdóttir and Dorthe Ansine Christensen (VIA University College)

This paper is based on research that both identifies student teachers’ understanding of self-initiated study activities and intervenes through testing a design based prototype for teacher education practices. The prototype produced will be put simultaneously into play in several context of the teacher education and will aim at strengthening students’ motivation for choosing self-initiated activities. The motivation should for example be based on students´ perception of relevance and quality of their own initiatives and the possibility of guidance in self-selected activities. This paper will describe the production process and results of the intervention and will also refer to the paper “Student teachers’ interpretation of their independent learning activities”, which the design of the prototype is based on. The interpretation of data from the prototype study will aim to evaluate the possibility of developing educational theories for the teachers’ education in an effort to develop independence as a study skill.

Keywords: studieaktivitetsmodellen, selvstændige studieaktiviteter, kortlægning af studieaktiviteter
Co-constructing meaning and context in ELF based teacher education
Kaisa Hahl (University of Helsinki)

English as a lingua franca (ELF) has become the common means of communication in university programmes geared for international student bodies. Lingua franca is used for reaching common communicative goals without a strict adherence to certain linguistic norms or without affiliation to certain native speaker communities. However, interlocutors come to a communicative situation with their own history, past experiences and knowledge. In a learning situation knew knowledge needs to be constructed by building on prior knowledge in order to further students’ learning and develop their conceptions. This presentation looks at a transcription of a particular ELF university lecture in teacher education where a group of international students from diverse educational, cultural and linguistic backgrounds negotiate for meaning and common understanding with the guidance of the lecturer. Conversation analysis is used for a detailed perusal of the situation about an ethical dilemma where linguistic tools help overcome intercultural miscommunication. Co-construction of effective communication requires the participation of many to allow for the challenges of understanding less common varieties of English, interpret the context behind the utterances and find common ground for mutual intelligibility. A discussion of the impact of ELF on teacher education concludes the presentation.

Keywords: ELF, co-construction of communication, context, intelligibility, teacher education
Selection of teaching content in times of changing
Benedikte Petersen (VIA University College)

The educational system in Denmark is currently affected by changes, which can be generally characterized as a development going from input-control to output-control. Increasing research in classroom focuses on conditions for effective teaching, pupil learning outcome and classroom management techniques (e.g. Hattie 2013, Grøterud and Nielsen 1997, Nordenbo 2008, Meyer 2006, Hermansen 2007).

However little is known about teaching content during times of changing. Teaching to the test has been investigated (e.g. Nordenbo 2009), and it seems, that in the weeks before testing the teaching content is adapted to the tests. But what about the teachers didactic according to selecting teaching content in the time between the tests? Based on the overall development towards output-control in the school system, this project focuses on investigating whether content choices today have changed in general: What criteria are underlying the teacher's choice of teaching content?

Methodically the study will work with qualitative, individual interviews with teachers in Danish, observation in the process of planning the teaching and observation of actual execution of the teaching. The presentation will open the knowledge, so far, of the teacher's criteria for didactic choice of content.

Keywords: didactic changes, output-control, didactic choices, selection of teaching contents

Teacher education reform in Norway (2010-15): The gateway to professionalism?
Tobias Werler (Bergen University College)

Norwegian ITE was reformed in 2010. Main objectives have been in order to improve future teacher's professionalism the introduction of the subject Pedagogy & Student Knowledge (PSK, 60 ECTS), an intensified cooperation with the practice field as well as the introduction of the concept of research based education. At the same time and supporting the implementation process a follow-up evaluation was initiated (2010-15). It main task was to produce data on the implementation process and its challenges. The paper will report about findings from this five year long evaluation cycle. First, the paper will share general findings from interview research on typical barriers and creative solutions in the implementation process. Second, findings form the research (documentary study, content analysis) on the presumed function of PSK for teacher professionalism will be discussed. This happens in order to be able to understand presentation of results from a paper-pencil-study on teacher education students reporting on their experiences
with reform initiatives. The paper will discuss (im)possibilities of teacher professionalization by reform.

Keywords: teacher education reform, professionalism, pedagogy

Teachers’ social and relational competencies – theoretical understandings and practical implications. Can relations be taught?
Else Skibsted, Merete Munkholm, Helle Vilain, Birgit Mogensen, Søren Fanø and Mette Vedsgaard Christensen (VIA University College)

Research (Nordenbo et al. 2008, Mitchell 2008; Hattie 2009) and practitioners emphasize the importance of teachers’ social and emotional competencies (Elia et al. 2003; Jennings and Greenberg 2009) and abilities to establish relations to students (Juul and Jensen 2002). However, little work has been done to further explore how and to what extent personal abilities such as empathy, tolerance and respect for the students can be understood and taught explicitly like other teacher competencies in the context of teacher education.

This presentation reports the insights and preliminary results from a development- and research project at the teacher education program at VIA University College in Aarhus, Denmark, where teacher students, teacher educators and teachers from municipality schools are trained with explicit focus on understanding and developing relational competencies. The project investigates how teachers’ specific relational competencies can be developed and gain actual significance for pupils’ well-being and learning at school.

The aim of this presentation is twofold:
1) The theoretical framework underpinning the project
2) How are relational competencies actualized in teacher’s practice and how can they be taught?

Keywords: teacher education, student teachers, relational competencies, empathy
A view into school-based outdoor learning: How teaching practices and pedagogical foundations in Udeskole support inclusive education?
Charlotte Østergaard and Karen Vesterager (Metropolitan University College)

A school reform is about to be implemented in Denmark. The intention is to improve inclusive education and to enhance the academic standards for all pupils in the public schools. One of the main changes in the reform is a longer and more varied school day involving more physical activity and an intention to open the public schools towards society. This calls for pedagogical and practical changes.

Udeskole (school-based outdoor learning) fits the criteria of the school reform. Based on international and Scandinavian studies of Udeskole it is hypothesized that teaching and learning in an outdoor setting is a beneficial supplement to education in the classroom. The key focus in this study is the teachers’ practices and pedagogical foundations. The objective is to analyze how Udeskole affects the teachers’ work with inclusive education. The teachers and their classes are selected from ten different schools. The research method is a combination of applied video observations and focus-group interviews (Second Order Phenomenological-Hermeneutical Observation Scheme). The data analysis is inspired by Self-Determination Theory. The expected outcome of the analysis is a deeper insight into how and to what degree teaching practices and pedagogical foundations in Udeskole support inclusive education.

Keywords: outdoor learning, inclusive education, video observation, Self-Determination Theory, school reform

Students’ opinions on out-of-classroom learning with mobile devices in class teacher education
Tomi Kärki, Marianna Hoikkala, Heli Keinänen, Hanna Maijala, Eila Matikainen, Hanna Niinistö and Anu Tuominen (University of Turku)

TAZ ActionTrack is a platform for location-based activities, where participants travel through a route guided by a free ActionTrack application available for mobile phones and tablets (Team Action Zone 2013). Activity checkpoints can contain, for example, images, text, sound, interactive challenges, questions and route choices. For education purposes, one of the benefits of using this kind of software is the possibility to make exercises in authentic and concrete environments outside the classroom.

During the years 2013–2014 the ActionTrack software has been used for different kind of purposes in the Department of Teacher Education at the University of Turku. University teachers have created ActionTrack events for subject-based integration and for social development of the student groups, for outdoor exercises in mathematics, geography, health education etc. and, for example, for a revision before an exam. Research indicates that there is a link between student
satisfaction and the effectiveness of teaching, and student ratings are a qualified source to examine the quality of learning experiences (Theall & Franklin, 2001). In this study we want to investigate students’ opinions on the usefulness, benefits and disadvantages of using ActionTrack tasks in class teacher education. The data is collected through a web questionnaire.

Keywords: teacher education, mobile learning, out-of-classroom learning, educational technology
Perspectives on design-oriented learning in extended learning environments and communities
Henriikka Vartiainen, Sinikka Pöllänen, Petteri Vanninen, Anu Liljeström, and Jorma Enkenberg
(University of Eastern Finland)

Learning in a world of constant change the use of diverse knowledge resources, tools, and network connections are essential aspects when solving complex, emergent problems and creating situation-based solutions. It emphasizes the creation of new kinds of learning spaces that people can change, design, and experiment with, as well as use in a variety of ways. To enhance such connected learning we propose Design-oriented pedagogy (DOP) as enterprise for co-creative activities in which the learners actively design the specific network of objects, artifacts, tools, community and other information resources in terms of the shared design task and their own specific research questions. The DOP framework offers a pedagogical model and process, together with the underlying conceptual system embodied in the design. The presented research-based design perspectives, instructional model and examples derived from craft teacher education may help educators in different institutions to facilitate connected learning across spaces and communities.

Keywords: design-oriented pedagogy, connected learning, collaborative designing, extended learning environments, craft teacher education

Promoting knowledge-creation through collaborative designing in elementary school
Kaiju Kangas (University of Helsinki)

The new national curriculum of Finland emphasizes the use of investigative methods for socializing students to productive and creative use of knowledge. Pedagogical models are needed that will guide and structure teachers’ efforts to implement knowledge-creation practices at school. The general aim of the present study was to apply the pedagogical model Learning by Collaborative Design (LCD) to the elementary level of education, in order to examine how knowledge-creation exemplified by collaborative designing could be promoted among young students. Video data from a lamp designing project constitute the main data source of the study. The findings indicate that elementary students are able to engage in and learn creative knowledge-creation and design processes, and that these processes can be structured and promoted using the LCD approach. The implications of the study link with the emerging maker culture, which may provide new prospects for knowledge-creation through collaborative designing.

Keywords: knowledge-creation, collaborative designing, elementary school, maker culture
Teacher reflections on the use of Talking Tools in sloyd
Kasper Hiltunen, Juha Hartvik, Marléne Johansson, Annika Wiklund-Engblom, and Mia Porko-Hudd (Åbo Akademi University)

The use of information and communication technology (ICT) in education has reached a new level with the use of smartphones and tablet computers. As learning is not automatically improved with new tools, teaching and learning processes must change as well - which is stressed in the drafts for a new national core curriculum for the comprehensive school in Finland. In early 2012, sloyd education researchers at Åbo Akademi University initiated collaboration with IT company UpCode. The aim of the collaboration was to develop a smartphone application, Talking Tools (TT) that focuses on utilizing the educational potential of portable devices. TT helps visualizing learners individual sloyd processes, encouraging reflection, peer learning, collaboration and self-assessment. This presentation reports how teachers describe their first experiences of using TT in sloyd education during an eight week sloyd project. In-depth interviews were used for collecting a wide range of user experiences of how TT can affect and play a role in teacher activities in sloyd.

Keywords: sloyd, smartphone application, teacher reflections, learning

Modern sloyd education – assignments with diverse and contemporary content
Lotta Hermansson (University of Gothenburg)

In 2011 a new curriculum was introduced for the Elementary school, grade 1-9, in Sweden. There now is a clearer connection to the subject’s core. The core of the school subject sloyd contains more than just traditional handicraft and the content may seem challenging. The skills that the pupils should be given the opportunity to develop in sloyd education contains for example the ability to choose and give reason, the ability to analyze and evaluate, the ability to interpret expressions. These are skills that are not dependant on what material they use. A variation of assignments could be crucial for the pupil’s possibility to pick up the diversity of skills that sloyd education offer. The presentation includes a background to the curriculum and examples of diverse assignments.

Keywords: assignments, sloyd, education, diversity, contemporary
Multi-material design on the basis of authentic user-orientation – AuttiDesign-project as an example of multi-material craft
Eila Lindfors, Panu Hatanpää, and Matti Pirttimaa (University of Turku)

Holistic design and making/manufacturing processes are acknowledged important for personal growth. From societal point of view crafts (craft, design and technology) as a school subject is criticized been traditional and not responding technological future and user-orientation. The dichotomy of crafts tradition as teaching textile work and technical work separately has restricted students’ competence to solve authentic problems in 3-dimensional multi-material world in basic education as well as in teacher education. In Turku university craft teacher students have studied multi-material craft since 2005 in order to get competence to solve user-oriented problems by using both soft and hard materials and to learn to teach students in multi-material world. AuttiDesign project is a context for teacher students to acquire experience knowledge and skills on how to learn and to teach contextual design in authentic problem solving environment by inventing and developing innovative multi-material solutions: products for autistic students. This study explores teacher students’ experiences (N=40) in the project. A goal is to study and to promote user-orientation and multi-materiality as parts of subject didactical knowledge.

Keywords: craft design and technology, multi-material design, user-oriented design, teacher student, basic education

The pedagogical methods of the entrepreneurship education as a part of students’ craft process. The experiences of the 7th-grade students during holistic craft process.
Marja-Leena Rönkkö and Jaana Lepistö (University of Turku)

The central task of the crafts as a subject is to increase the student’s craft skills and craft knowledge so that he can design and produce craft products, access the whole process choose materials and technologies, appreciate craft heritage, and apply theoretical knowledge to the practical work. Crafts offers both technological information and craft expression, but the teaching of the crafts can also support the active participation to the matters of students, problem solution, and practical applications. The innovativeness, toughness, dissidence, and desire to solve are connected to the studying of the crafts. In this kind of teaching the holistic approach, understanding of the whole process, and developing of the creativity is emphasized. In this study we define the entrepreneurship education as a holistic learning process, which is based on the learning by doing in which the pupils’ participation, interaction and problem-solving skills are developed. The study was conducted in an upper secondary school. The data consists of interviews of students, in which they define the solutions made during the craft design and production
process. In this study the main focus is on the 7th-graders’ decision-making during one study module of craft. On the basis of the research results one can state that the studying of the crafts contains risk-taking, the utilizing of the inventiveness and dialog.

Keywords: crafts, entrepreneurship education, holistic approach

**ImproStory – storytelling and social improvisation as pedagogical tools in teacher training**
Ari Poutiainen, Seija Kairavuori, Seija Karppinen, and Sinikka Rusanen (University of Helsinki)

This study discusses applications of storytelling and improvisation in teacher training. Whilst improvisation has been broadly employed in music, we explore its applicability in regard to visual arts education and crafts making. We understand storytelling as a phenomenon that can be applied as an approach or a tool. We apply improvisation in “warming up”, experimenting, producing material, interaction and social or individual action. We focus on social improvisation (i.e. collaboratively created activities). The data consists of surveys in the basic studies of music, visual arts and crafts making of primary student teachers (N=120). Additional data (portfolios) contains of a group of kindergarten and primary student teachers with a focus in visual arts (N=15). The data is collected at the University of Helsinki during the academic year 2014-2015. The study results in methods of storytelling and improvisation in arts education. Furthermore, we analyze how student teachers’ experience these methods and how they potentially profit in those as future teachers.

Keywords: storytelling, social improvisation, arts education, teacher training

**English as an affordance in the multimodal CLIL classroom: Teachers’ perceptions, values and practices**
Ylva Sandberg (Stockholm University)

Disciplinary communication in the Content-and-Language Integrated Learning (CLIL) upper secondary school classrooms investigated in this study proceeds with more or less clarity and ease, depending on subject/subject content, community of practice and timing. These are some of the tentative results of the on-going PhD study in which Swedish content-and-language teachers in three school subject disciplines were interviewed about their views and experiences of teaching their content-and-language lessons through the medium of English. In the mixed-method research design, the semi-structured 1:1 interviews with teachers were complemented with focus group interviews with students and observations of lessons. The material is currently being analyzed through qualitative content analysis, where the themes from the teacher interview guide have been employed as initial keys.

Keywords: disciplinary communication, CLIL, social semiotic theory, community of practice, language alternation
The concept of face-work as a pedagogical resource in drama education

Tuija Leena Viirret (University of Jyväskylä)

In every face-to-face encounter we get some kind of impression of the other. If the encounter is continuing we form an idea of the line of the other’s behavior. This line, as we have interpreted it, gives a face to the other. All this occurs mutually and by face-work we do different kinds of acts that aim to save face of the other or ourselves. When we are creating drama and living it through in roles, there is a huge interactional face-to-face network in continuing change. In this study the interaction of certain phases in one process drama is elaborated with special focus to the acts of the teacher, also in Teacher-in-Role. By using conversation analysis and content analysis, firstly the structure and frames and secondly the face-work, the pedagogical procedures and the teacher’s reasoning in the interaction will be studied. Exploring the interaction in process drama through the lenses of face-work affords deeper understanding of the risks and challenges in teaching. This will hopefully be a resource for the future teacher in drama education.

Keywords: face-work, drama pedagogy, process drama, Teacher-in-Role

Drama teacher’s body awareness and pedagogical interaction

Miia Kaasinen (University of Helsinki)

Drama teaching includes the complex relationships between the teacher’s understanding of content (subject knowledge), the pedagogical actions (relation to students, group management) and the actual teaching actions (interaction, instructions, directions, teaching methods and lesson structure). The challenges of pedagogical interaction in drama are related to the teacher’s nonverbal communication, presence and use of the body and space in an educational situation. The teacher’s presence and multimodal behaviour play an important role in drama teaching but when the teacher concentrates in teaching drama, his or her own bodily state may be the farthest thing from his or her awareness. The meaning of the presentation is 1) to introduce theoretical connections between the work of actors and drama teachers in the field of body awareness and 2) to consider which teaching qualities we can have an effect on when we are teaching interaction skills by using psycho-physical exercises of actor’s.

Keywords: pedagogical interaction, body awareness, psycho-physicality, teaching qualities

How do music and drama scaffold understanding, and creating multimodal art environments

Mirja Karjalainen-Väkevä (University of Helsinki)

The Finnish national core curriculum is to be reformed as more collaborative, creative, and multimodal. Interdisciplinary learning is increased, and schools are obligated to organize interdisciplinary projects. These aims are already familiar to arts teachers, but in the future, they
need increasingly improvising skills in organizing multimodal learning environments. There is also a need for exploring and updating interdisciplinary arts education taking into account contemporary multimodal art forms and each disciplines’ special ambitions. Music and drama are used widely together in theatre, movies, installations, and videos. In schools, improvisation and collaboration are basic elements to both. This article explores how music and drama can be learned via improvisation and collaboration so they can scaffold understanding of contemporary multimodal environments. I also contemplate how improvisation promotes teacher’s skills in organizing interdisciplinary learning environments. A concluding discussion aims to benefit the arts teachers in interdisciplinary arts teaching.

Keywords: improvisation, interdisciplinary arts education, music education, drama education
Developing classroom assessments for subject area literacy
Henning Fjørtoft (The Norwegian University of Science and Technology)

It has been claimed that our conceptions of literacy practices must shift from a print-centric understanding to a reconciling of home and school literacies. However, new multimodal and digital literacies pose challenges for teaching and classroom based assessment in the subject areas.

As part of a R&D project, a teacher educator cooperated with two teachers and an educational software specialist in a Norwegian lower secondary school during one year. The aim was to create a more diverse repertoire of literacy practices while ensuring the validity of the assessment. The project investigated how formative interventions into the design of assessment tasks in selected subject areas affected learning processes. Artifacts used include hand-held video cameras, iPads, and learning management systems. Findings include increased teacher confidence in developing performance assessment tasks, time management in foreign language lessons and a wider set of evidence of student learning.

Keywords: assessment design, multiliteracy, validity, formative intervention, educational technology

Learning by the book
Sara Routarinne (University of Helsinki)

This presentation focuses on the role of textbooks in the production of lessons in mother tongue education. In an ongoing debate in pedagogic discourse, scholars take up cudgels for and against teacher-centered, student-centered, and lately also learning-centered pedagogy. Emphasis on one of these pedagogic points of departure is claimed to produce differences in the classroom conduct and learning. What this discussion has ignored, at least to some extent, is the role of textbooks in the production of classroom conduct. To fill the gap, I will analyze the ways in which textbooks instruct the lesson content. The data derive from a series of video recorded lessons from mother tongue education in Finland in grade six in basic education. In these data literacy events will be identified and analyzed where textbooks instruct the conduct. The method is Conversation Analysis. As a result, I will outline textbook-centered pedagogy where learning takes place by the book. The research contributes to the project TextMix that aims at understanding the use of textbooks and literature in Finnish and Swedish mother tongue classroom in Finland.

Keywords: literacy, textbooks, mother tongue education, classroom interaction, conversation analysis
Studying the use of texts as a reflection of classroom discourse
Liisa Tainio (University of Helsinki)

Inspired by Bakhtin, researchers of classroom interaction have identified two patterns of discourse, namely, the monological (authoritative) and the dialogical (internally persuasive) (Bakhtin 1981; Skidmore 2000). Monological discourse norms refer to interaction with a small proportion of student contributions considered as reflecting student agency (Lipponen & Kumpulainen 2010) while in dialogically-organized instruction the rights for turn taking are more equally distributed, and the students are able to display verbally and non-verbally their agency as learners (Nystrand 2006). Engaging in initiative, agentive activities, encouraged by teachers, are often considered as central to student learning (van Lier 2008; Waring 2011). Treating this as my reference point, I will analyze two classrooms where the teaching is oriented to learning literacy through L1-grammar. The focus of the analysis is the use of different texts during the instruction. The analyses are deepened with the study of teacher and student interviews. Through the analyses of video data, conducted by using conversation analysis (e.g. Sidnell & Stivers 2013), I will show that the teachers’ practices of treating the text as the fundamental source for information and instruction versus a possible source of pedagogic tasks have consequences on the ways in which classroom interaction is organized, how students are motivated in learning, and how the relationship between the teacher and the students is realized and evaluated by the participants.

Keywords: classroom interaction, textual events, monological and dialogical discourse, student agency, conversation analysis
Why physical geography? An analysis of justifications in teacher magazines in Britain and Germany
Péter Bagoly-Simó and Anke Uhlenwinkel (Humboldt University of Berlin)

School geography is often quite different from academic geography and there are good reasons for that, as school is preparing young people to be able to lead the life they value instead of just training them to learn specific subject contents. In some countries school geography is understood as being mainly a social science. Nonetheless physical geography often plays an important part in textbooks and in everyday teaching in these countries. This presentation will examine how physical geography topics are justified in specialist teacher magazines in two of these countries: Britain and Germany. Are they justified by simply pointing at the value of the academic knowledge itself? Are they justified by claiming students’ special interest in these topics? Or are they justified by showing the value of physical geography in promoting social such aims as sustainable development, freedom or equality? And: Are there differences in argumentation between the two countries?

Keywords: physical geography, teacher magazines, argumentation, international comparison

Exploring children’s sense of place and promoting equity in geography education
Bryan Wee, Tomas Torbjörnsson, Linda Oldebring, and Cecilia Lundholm (Stockholm University)

This study investigates how cultural factors shape children views of the environment in Sweden. In a geographical context it focuses our attention on children’s sense of place, that is, how people inhabit spaces. This deepens our understanding of society and sustainability to create an inclusive education. Specifically, we ask: what does the environment mean to children and what attachments, if any, do children have with the environment? Drawings and interviews are used to elicit children’s responses to these questions. Study participants consist of 150 children in year 6 drawn from two schools in Stockholm and Sodertalje, each reflecting different communities. After establishing inter-rater reliability, we conduct content and thematic analysis of drawings as well as open coding of interviews to generate interpretive findings. Visual methodology and social constructivism are lenses that frame this study and validate children’s sense of place. Implications for equity in geography and education are discussed.

Keywords: sense of place, children, visual methodology, equity
Implementing equity, diversity and social justice in the national test in geography, year 6 and 9
Lena Molin, Ann Grubbström, Hanna Karlsson, Andreas Alm Fjellborg, Jonas Faxell, and Britt-Maria Holtz (Uppsala University)

The curriculum introduced in Swedish compulsory schools in 2011 has, in addition to revised aims, skills and central content, new knowledge requirements. In the Geography syllabus this involves the ability to formulate geographic reasoning that addresses solutions to different environmental and development issues, based on considerations concerning ethics and sustainable development. Within this theme we have highlighted Equity, Diversity and Social Justice. Reasoning in such matters involves, for example, contrasting and looking at different perspectives and this must be tested in constructed responses. It is therefore a challenge for the creators of the National Test in Geography to design questions that distinguish between students’ ability to reason. Earlier studies emphasize low reliability in the assessment of constructed responses in tests. This paper deals with the benefits and challenges with using constructed responses, from the perspectives of teacher assessment and student achievement. It also addresses the strategies used by the constructors of the test to overcome the challenges. The methods used are teacher surveys, observation of teachers’ assessments, focus group interviews with students, analysis of student responses, and inter-rater agreement. The study shows that the inter-rater agreement is rather low for constructed responses. The three strategies for encouraging reasoning are: keywords that give focus and structure for reasoning; illustrations such as photos, maps and graphs to support reasoning; and written guidance to students before the test on what to think about when answering questions with constructed responses.

Keywords: national test, geographic reasoning, values, constructed responses

Is there fair testing in Swedish schools? Students’ experiences of the national test in geography
Lena Molin, Ann Grubbström, Hanna Karlsson, Andreas Alm Fjellborg, Jonas Faxell, and Britt-Maria Holtz (Uppsala University)

Despite the introduction of several education reforms, international tests such as PISA and TIMSS have shown decreasing results for Swedish students. To support equal and just assessment and grading a new curriculum has been introduced (Lgr11). In addition, National Tests in Geography have been introduced during 2013/2014. The National Agency for Education states that all students have the right to equality of educational opportunities and to a high quality education, regardless of where they live or their parent’s socioeconomic background. This study, based on observations, focus group discussions with students and a survey of teachers, discusses equity in the light of how the National Test in Geography is performed in different schools. We focus on how preparations, provisions for students with special needs, and the actual test situation can influence how students perceive their chance of achieving good results. Our results reveal that many teachers lack adequate education in geography and we argue that these teachers probably teach, to a great extent, according to the selective traditions within the subject. Students that are prepared for questions addressing knowledge about place names and countries have difficulties with reasoning in geography. The information given to students before the test is sometimes lacking or imperfect. We also conclude that provisions for students with special needs differ between different schools, which endanger equality of opportunity.

Keywords: national test, equality of opportunity, selective traditions, preparations, provision
The mathematical talents in school – what do we do for them?
Einar Jahr

I want to discuss what kind of knowledge – subject knowledge and didactical knowledge – a teacher needs in order to be an appropriate guide for the mathematical talented students in school. Here we talk about both quantity – the teacher has to know much, and quality – the teacher must have a deep understanding the mathematics the students are working with and of how the talented students think.

Taking care of the talents in school can be done in many levels:
1. Discover the talents early, preferably in primary school
2. Make students discover their own potential by giving them stimulating tasks
3. Make teachers realize that everybody can learn to think mathematically

The talented students make a very heterogeneous group. Some are introvert brooders, some are creative troublemakers, and most are something in between. Many become bored and perform less than their potential, and many follow the lessons while they enjoy themselves with deeper thoughts about what the others are working with. I am in favour of a teaching based on enrichment rather than speeding up for the talented students.

Keywords: talents, enrichment

Prospective class teachers’ attitude profiles toward mathematics
Harry Silfverberg and Tomi Kärki (University of Turku)

According to a report Adding it up published by National Research Council (2001) one of the basic components of mathematical proficiency is the productive disposition which refers to the tendency to see sense in mathematics, to perceive it useful, to believe that steady effort in learning mathematics pays off, and to see oneself as an effective learner of mathematics. In our study, we measured prospective class teachers’ disposition toward mathematics by a test developed by Wong and Chen (2012). The test measures attitudes toward mathematics at six components: Checking solutions, Confidence, Enjoyment, Use of IT, Multiple solutions, and Usefulness of mathematics. In addition to this, we compare the students’ attitude profiles in two class teacher programs from which the other one has long had as part of its entrance examination also the test of the mathematics and science skills and the other have not had it.

Keywords: prospective class teachers, attitudes, mathematics
The presentation focuses on the following problems: 1) how university students could use natural and pictorial languages beside mathematical symbolic language in solutions of mathematics exercises and 2) what do students think about written languaging as a tool in learning of university mathematics. In this presentation, by languaging mathematics we mean the idea to express mathematical thinking by natural or pictorial language in addition to mathematical symbolic language. The goal of the study is to find new kind of exercises which help students to understand mathematics meaningfully. We introduce five models, which show how a student can answer to word problems using diversely languages and we present also new kind of exercises, which lead to the use of written languaging in their solutions. In our research project we used these new kind of exercises at two Finnish universities (Tampere University of Technology and University of Turku) and we asked how the university students experienced the written languaging in the mathematics exercises. In Tampere there were 115 students and in Turku 48 students who answered to our questionnaire.

Keywords: languaging, mathematics, learning, university
Citizenship education, national identity and political trust: The case of Sweden
Hans Lödén (Karlstad University)

The challenging effects of globalization upon the nation-state have been a recurrent theme in the social science discourse since the 1990’s. Nationally organized education is also seen as challenged by new demands originating from globalization. In this article it is argued that ‘nation-state’ and ‘national identity’ are highly relevant concepts when discussing a citizenship education that seeks to develop a civic ethos with, potentially, a global reach. It is further argued that the understanding of such an ethos would benefit significantly from incorporating the role of political trust since trust has been identified as a main feature of the social capital that makes democracy work. Three themes are brought together: national identity and identification, the importance for democracy of political trust and the challenges citizenship education face when carried out in a national context but intended to manage issues that go far beyond the reach of the nation-state. The importance of citizenship education is discussed using recent research on the Swedish citizenship education classroom.

Keywords: citizenship education, national identity, political trust, democracy

Transnational issues on the political agenda?
Kjetil Børhaug (University of Bergen)

Transnational governance is expanding rapidly. From a political education perspective, an important question is to what extent and how these issues and processes are included in the political universe that adolescents are being prepared for. Political education is a complex process, and one important component is to contribute to an informed citizenry which makes qualified political judgments. Teaching and discussing current issues so that students may develop political opinions are therefore important. By introducing transnational/global issues as controversial and debatable, such issues are politicized and put on the agenda. On the other hand, issues may be framed as objective truths, linear progress or inevitable globalization.

As far as global issues are politicized, is the international level also a level for participation? And if so, is such participation related to notions of influence, power and conflicting interests? Or are notions of participation based on classical idealism, which is to some extent renewed in theories of global education and cosmopolitan citizenship? The research method will be an analysis of social studies textbooks in upper Norwegian secondary education. Textbooks are not assumed to determine teaching, but they are assumed to frame the field within which teachers develop their practice.

Keywords: Political socialization, globalization, international politics, social studies, Norway
Constitutional "Memory boom" vs globalized history and civics education?
- The case of the Norwegian Constitutional Commemoration 1814-2014
Svein Ivar Angell¹ and Brit Mari Hovland² (¹University of Bergen, ²University of Oslo)

The Norwegian Constitutional Bicentenary was celebrated in 2014. The commemoration of the 1814-constitution fits into a general picture of a “memory boom” in western societies. It is however reason to claim that the celebration in Norway was more extensive than similar celebrations elsewhere. The Norwegian 1814-jubilee was widely celebrated throughout the country and throughout the year.

Children and young people were defined as the most important target group for the commemoration of the Norwegian constitution. The subject of history has always played a major role in Norwegian national identity, and 1814 points at the democratic and constitutional basis of the nation building process essential to the struggle for national autonomy and democratization in the late 19th century. History textbooks and education has been a major force in sustaining this collective identity as basis of Norwegian culture and citizenship. The constitutional jubilee must be understood within this Norwegian epistemic historicity.

Our paper will analyze some of the material aimed at school children and young people in relation to the jubilee. What narratives of Norwegian history were told? In what manner were concepts such as national identity, globalization and democratization reflected and dealt with in these narratives?

Keywords: commemoration, national identity, education, narratives

The war in 1864 and Danish National identity
Harry Haue (University of Southern Denmark)

In the autumn of 2014 the Danish state television broadcasted a film in eight parts about the war in 1864 between Denmark on the one side and Prussia and Austria on the other. The Danish parliament had supported this emission with 100 mio. Kr. and it is the most expensive film made by the Danish broadcasting company. Expectations were high and for a number of reasons one might expect criticism.

The debate has been extensive and can roughly be divided in two main categories: The political conservatives and liberals are complaining about the authors and instructors artistic freedom, which in the film changes the traditional nationalistic heroically picture of the war. The other category consist of center-left oriented people, who are less occupied with the correctness of events and explanations, but focus on the artistic elements and the authors endeavors to relate the 1864-war to nowadays Danish military activity in the Middle East. In my presentation I shall discuss the differences between the two interpretations of the film and relate this debate to the aspect of history didactics with references to my article in Nordidactica 13.1 about national and global history in textbooks.

Keywords: historical films, new nationalism, global perspectives in textbooks
Children’s perception of disability: reactions to guided visits of exhibitions Ignorance = Darkness = Obstacle
Kristina Desman (University of Ljubljana)

Persons with disabilities are those who have a long-term physical, mental, intellectual or sensory impairment according to the United Nations. It is estimated that roughly 80 million or one in six people in the EU have a disability. Among European Commission priority areas for action Equality and Accessibility are listed. Many of the experts claim unawareness and ignorance of general public are the most important issues faced by persons with disabilities. We prepared a public exhibition Ignorance = Darkness = Obstacle, focusing on persons with disabilities on physical and sensorial level (i.e. wheelchair users, blind and partially sighted and deaf) and addressing the issues of accessibility of public spaces and equality of all users of public space. The exhibition emphasised that users of public spaces are different from one another by drawing attention to perception of space through different senses and different conducts in space. During the course of the exhibition several elementary school classes participated in guided tours of the exhibition. In our study we observed behaviours and reactions of 127 pupils, aged between 5-8 years, in order to assess their perceptions of disability.

Keywords: disability, public space, accessibility, equality

The school staff’s perception of their ability to teach special education students in inclusive settings in Finland
Birgit Paju (University of Helsinki)

Recent studies have suggested that the professional training received by general educators does not adequately prepare them to properly implement inclusion-based practices. The idea of inclusion in practice has not significantly changed the situation of teaching students with special educational needs (SENs) in mainstream classes. Although the ideological basis of ‘school for all’ is stated at the legislative level in Finland, the number of SEN students is still quite high and it is essential to keep reducing it. This study’s primary intent is to examine the factors that identify the school staff’s ability to meet the needs of SEN students in their daily teaching situations. A total of 187 elementary school teachers, principals and paraeducators in a Finnish city completed a structured questionnaire that used a self-evaluation method. Two components were generalized according to answers concerning the respondents’ confidence in and knowledge of teaching SEN students. The results indicate that teachers’ qualifications constitute the main reason affecting their ability in this area. Pedagogical and practical knowledge, as well as collaborative skills in teaching SEN students, are focused on special educators. These findings reveal the need for additional and in-service training and more effective cooperation between special and general education to share the knowledge of teaching SEN students in practice.

Keywords: inclusive education, inclusive practices, teacher education
Inclusive teaching practices with compensational IT Tools
Anders Henrik Bendsen and Majbritt Breum Nielsen (VIA University College)

Inclusion of pupils with reading and spelling difficulties in ordinary Grade School classes takes didactic design, to make pupils learn to learn by means of compensational IT. In a municipality in north-western Denmark, a group of pupils received these tools, and went through a 12-week intensive course in an IT class in a separate school. The class was small, and the didactic focus was on using IT technology for learning. How can teachers succeed in scaffolding and motivating these pupils into using their newly-won competences from the IT class, on their return to the learning environment of the classes they came from? This study is based on classroom observations of pupils’ inclusive learning strategies, and on semi-structured qualitative interviews with pupils and teachers. Findings are that to make pupils learn to learn by means of IT tools, their competences must be supported and developed by teachers in inclusive classes. If pupils are not supported in the use of their IT competences, they will not be able to make use of them in their future learning.

Keywords: SEN education, inclusion, compensational IT, scaffolding
Intercultural historical learning – Balancing models of theoretical conceptualizations and applied practice
Kenneth Nordgren and Maria Johansson (Karlstad University)

This paper investigates the process of balancing theoretical conceptualizations and applied practice when implementing a complex learning goal. Taking a systematic approach we focused diverse and critical aspects that need to be considered when teaching intercultural historical learning. The resulting conceptual framework consisted of history education theories (historical consciousness, narrative competence and historical thinking), intercultural competence and postcolonial theories (Nordgren & Johansson 2014). The next step was to put the conceptual framework up for empirical testing, which was done in two “research circles”, where groups of teachers and researchers collaborated to translate theory into practice in several series of lessons. The results show that the framework helped teachers to adapt their lessons in an intercultural direction. However it didn’t function as a self-explanatory planning tool and there was a risk that simplified applications of the model reduced the complex intercultural learning goal too much. This balance is fine and needs to be explored further.

Keywords: history education, intercultural competence, instructional design, multicultural education

Are they ready to teach ‘global issues’? A comparative research of students in teacher education in Finland and Japan
Kiyoko Uematsu (University of Oulu)

While societies are undergoing unprecedented changes in an interconnected world, future teachers play crucial roles in cultivating socially responsible citizens in the current educational climate. The purpose of this study is to examine perceptions held towards becoming ‘globally oriented’ teachers at University of Oulu (Finland) and University of Hiroshima (Japan). Finland and Japan both have traditionally been considered as homogenous societies which are now facing ‘new’ challenges to accommodate growing diversity, thus such comparison will lead to an engaging academic dialogue between the two contexts. The literature from global citizenship education support the reflections on various discourses contesting conceptualization of ‘global citizens’ and a sequential mixed methodology is applied encompassing quantitative content and qualitative thematic analysis. The practical implications of the study will demonstrate the readiness of future teachers to engage with ideas of differences, diversity and global citizenship education. The findings will also contribute to discerning areas, which can be critically reflected upon by teacher educators in an effort to foster socially responsible global educators.

Keywords: global citizenship education, Finland, Japan, teacher education, global perspectives
Literature and literature education as a mirror and motor of diversity
Judith Leiss (University of Cologne)

Starting out from the question how literature education can not only reflect but also shape diversity, my topic is situated at the interface between the domains of literature education and diversity education and thus connected to the realms of aesthetics as well as those of politics.

I understand diversity to be a social reality as well as a social utopia. As a consequence, two general aims of diversity education can be identified: On the one hand, diversity should be experienced and perceived as something given that can pose a problem in certain contexts and therefore requires certain social competences to be dealt with. On the other hand, diversity should be experienced as something essential and valuable with regard to the development of individuals as well as societies - and therefore as something that needs to be cultivated. I would like to argue that due to the aesthetic and social competences required by the act of reading as well as the communication following the personal reading experience, literature education provides learning contexts in which both aims can be addressed.

Keywords: literature education, diversity education, human rights education, social change, aesthetics
Finnish foreign language teachers’ views on teaching and study reality in their classes: The KIELO project’s rationale, method, and research findings
Pirjo Harjanne, Jyrki Reunamo and Seppo Tella (University of Helsinki)

The national and international KIELO project (2009–) is a research and developmental project in foreign language (FL) teaching, studying and learning. The starting point for the project was an interest in getting deeper understanding of the reality of FL classrooms in Finland, to have more research-based knowledge to develop FL teacher education. The research aim is to describe, analyze and interpret teaching and study practices in FL classrooms: the ways in which foreign languages are taught and studied, how the ways are justified by the teachers and perceived by the students.

The Finnish KIELO research covers, so far, dozens of theses and a national survey. The survey was conducted as an online questionnaire that is based on self-report items designed to assess a number of issues concerning FL teachers’ conceptions of and orientations to FL teaching, studying and learning. 20 sum variables were identified in the quantitative data (115 statements) through exploratory factor analysis and reliability analysis. In our presentation we deal briefly with the societal, didactic and methodological premises of the KIELO project and the research methodological procedure of the Finnish survey. The main part of the presentation focuses on the findings of the survey.

Keywords: foreign language teaching, foreign language studying, KIELO project

Change and stability: Genre patterns in the EFL subject 1995-2014
Sigrid Ørevik (University of Bergen)

This paper will present and discuss changes in genre patterns in EFL material for teaching and testing in Norwegian upper secondary school from 1995 to 2014. The study compares the distribution of genres for reception and production in two curriculum periods, Reform 94 (1994-2006) and the Knowledge Promotion 2006 (2006-present) and discusses changes in genre distribution with a particular view to factors brought on by the increased digitisation of EFL classrooms. Exam questions, course books and educational websites constitute the corpus material on which the research is based. The theoretical framework of the study draws on Australian genre theory as well as studies within New Literacies and multimodality.

Preliminary findings show conspicuous changes in genre patterns for reception, whereas the range of genres for production has remained comparatively stable. This raises questions relevant to EFL teaching and testing, for example, with regard to students’ text competence and writing development. Should the relative discrepancy between genres for reception and production be a
point of concern, or should an extended text repertoire be embraced as an asset enhancing students’ potential for expression and representation?

Keywords: EFL genres, digitisation, multimodality

Toward diversity in foreign language teaching in Japan
Misuzu Toba (Kwansei Gakuin University)

In this presentation, we consider the educational situation of French as one of the second foreign language in Japan. The number of Japanese students who learn this language always changes depending on the popularity of other optional languages. And then, why do some students select French out of four or five languages? According to the research realized by the presenter, the interest in France especially in Paris is the main reason to choose French language. Needless to say, French isn’t used only in France. However, many French textbooks published in Japan are full of images of France and of Paris. We see the centrality of French of France there. In this situation, it is hard for students and teachers to have an interest in francophone countries other than France. We need to introduce different French languages as well as Englishes in order to consider the diversity of language, in other words, the diversity of people.

Keywords: Englishes, foreign language education, French education in Japan
Making connections between theory and practice using role-play and forum theatre
Anne Eriksen, Annelise Brox Larsen and Tove Leming (University of Tromsø)

In this presentation, the authors explore the benefits of using theatre methods to enhance the reflective practice of teacher students. A theory of transformational learning is applied to enlighten the question of how practical experience from school placements acted out in various theatre modes may empower the students in their professional performance as future teachers. Practice-based experience, in our case referring to students going into schools to act as teachers, provides the opportunity for students to integrate experience and classroom based theory, and involves them in translating basic concepts derived from their practice experience into a more profound understanding of such concepts. The question we want to explore is: How can the practices of reflection, which aims to help students make connections between theory and practical action, be enhanced through student engagement in theatre based methods in education? The methodological approach is based on systematic observations over several years, of learning processes the authors have initiated, where theatre techniques have been used. Video filming, interviews and several dialogues about learning, where role-play or forum theatre is used, represent our data material, together with reflection notes and evaluation forms.

Keywords: teacher education, transformational learning, theatre methods

Teachers’ professional judgement in real teaching situations
Anne Søndberg, Kirsten Rosholm, Jesper R. Pedersen, Lise Sommer and Peer S. Daugbjerg (VIA University College)

Teachers’ daily work is complex consisting of teaching, dialogue with pupils, principals, colleagues, parents besides a variety of daily supervision tasks. This entails that the teachers’ workdays are loaded with judgements, evaluations, reflections and actions founded on reasonable considerations. Teachers' capability to make sensible judgements in pedagogical situations and moments are based on their personal norms and knowledge. Norms and knowledge that makes it possible for them to make well-considered decisions regarding good teaching. Teachers' planned changes in teaching are typically well-prepared, well-rehearsed, and experience based. Disturbances, unexpected ruptures or deviations from plan demand that teachers improvise regarding which actions to carry out. The considerations the teachers make in these situations are not directly available for investigation. The actions can be conscious as well as unconscious and they are expressed bodily and verbally. The presentation will discuss methodological approach on how to investigate teachers’ professional judgement. We will use
video recordings of actual teaching situations to generate dialogue with the participating teachers. The dialogue will focus on their verbalisations and reflections regarding selected situations in their teaching and the decisions, they made along it.

Keywords: teachers, professional judgement, complex workday, actions, reflections

**Student teachers’ management of autonomous learning activities**  
Henrik Balle Nielsen, Chung Kim and Anja Madsen Kvols (VIA University College)

We present findings from a study of student teachers’ management of autonomous learning activities. In recent years emphasis on teacher students’ self-initiated and autonomous learning activities has grown in the teacher training discourse in Denmark. The framing of these study activities poses a special challenge for teacher educators. We have investigated how students interpret the concepts of initiative, independence and agency in managing their autonomous activities. Thus our main research question is: How do student teachers interpret and manage autonomous learning activities in a teacher training program? The project is designed as a design experiment. We present findings from a survey and focus group interviews with students. Our main conclusion is that students experience a need for support - encouragement, inspiration and feedback - in conducting their autonomous, self-initiated learning activities. We have used these findings to design and test a prototype for facilitating students’ autonomous learning activities. Results from this intervention will be communicated in another presentation.

**To develop PCK for teaching the school subject Swedish**  
Ingrid Mossberg Schüllerqvist and Pia Berg (Karlstad University)

In the teacher training program for the school subject Swedish in Secondary School, students meet different subject constructions and disciplines and their studies close with a professional oriented student thesis. Few studies describe and problematize how student teachers convert different course content into PCK-related understanding of Swedish and develop awareness of how pupils learn Swedish. During their teacher education the students transform their subject understanding twofold by learning the contents and methods of the different disciplines combined with knowledge of subject didactics in literature and linguistics and also by realizing and grasping how these are integrated in their future profession as teachers in the school subject Swedish.

This study explores how PCK (Shulman 1986, Nilsson och Loughran 2010) develops among the subject students. CoRe including Big Ideas as well as Stimulated Recall is used methodically. The intention is to study how prospective teachers in Swedish perceive, understand and distinguish important areas of knowledge in literature and linguistics, furthermore to study how they reason and see their future teaching situation. This study is longitudinal and follows four students during and after completion of studies. The results from the pilot study and the continuous part two will be presented at the conference.

Keywords: CoRe, literature, linguistics, PCK, teacher education
B12
CIVICS EDUCATION 1

Chair: Jan Löfström
Room: K112

Competencies in social studies education in lower secondary schools - a theoretical view with examples from the Danish folkeskole (samfundsfag 2014) and Germany (Politische Bildung)
Anders Stig Christensen (University of Southern Denmark)

The European Qualifications Framework (EQF) has legally institutionalized the movement towards expressing curricular content, or aims of school-subjects, in terms of competencies. In Denmark the curriculum for the folkeskole was rewritten in 2014, also with the aim of expressing the aims of the subjects in terms of competencies. The paper discusses how learning aims in social studies education are expressed in the curriculum for samfundsfag (social studies) from 2014. I take as point of departure a discussion of competencies in the German Politische Bildung that has evolved since 2004 when the GPJE (Society for Civic Education Didactics and Civic Youth and Adult Education) put forward a proposal for national standards in Politische Bildung (civic education), which both has spurred a widespread academic discussion and has inspired curricula in several states in Germany. The German discussion is compared to the way competencies are expressed in the Danish curriculum, and preliminary results from an empirical study of the teaching of samfundsfag in a Danish folkeskole are included in the discussion.

Keywords: civic teaching, social studies education, citizenship education, competencies, learning objectives

Teaching practices in social studies in the Norwegian ground school
Siv Eie and Marit Storhaug (Oslo and Akershus University College)

In the last decade, social studies have received less attention compared to “test-subjects” such as mathematics and language. Our recent survey among 1350 teachers in social studies indicates that this is the case. The survey explores to what extent teachers vary teaching approaches and learning activities as well as forms of evaluation. We also question how the teachers justify their choices of teaching practices. In 2006 a new curriculum (L06) was introduced into the Norwegian ground school. It came with a new educational policy that stresses measurable learning outcomes. As a result, a kind of testing regime emerged.

Compared to an evaluation study of the former curriculum (L97), our study shows a decrease in variation of teaching practices. There is however a great variation among teachers concerning teaching methods. Certain categories of teachers, sharing common characteristics, emerged from our data. Some teachers offer their students varied learning activities and problem oriented methods according to the current curriculum. In our presentation we will discuss possible explanation of the differences in teaching practices and the implications connected with the current status of social studies.

Keywords: teaching practices, social studies, Norway
Social studies education in ethnically diverse classrooms
Katarina Blennow (Lund University)

The present paper will discuss preliminary findings from an ongoing doctoral project. The project investigates how social studies education can be accomplished and how it is understood by teachers and students in ethnically diverse classrooms. The study focuses on questions about content, controversial and emotive topics. The preliminary findings discussed in this paper stem from classroom observations and video-stimulated interviews with pupils and teachers at two upper secondary schools in the south of Sweden.

The project analyses changes in social studies education and aims to initiate a discussion that reaches beyond the national perspective. Hence, this paper will also give a brief contrast of social studies education in Sweden and Germany. The study analyses similarities in the process of adapting education to major changes in society, but also differences related to the national and cultural context, e.g. the understanding and organization of the education.

Keywords: social studies education, citizenship education, civics teaching, diversity
**B13**

**TEACHING AND LEARNING OUTSIDE SCHOOL 2**

Chair: Anna-Liisa Kyhälä  
Room: K114

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**Measured physical activity (24/7) of Finnish 1-7-year-old preschool children**  
Anna-Liisa Kyhälä (University of Helsinki)

This study is part of the international Orientation Project and the purpose is to measure the PA (physical activity) levels of preschool-aged children at day care and at home in the evenings and in the weekends. The previous studies in the Orientation Project showed that preschoolers are not sufficiently physically active. Their MVPA (moderate to vigorous activity) was 23 min in the forenoon. This study is to find if the recommendations of the Ministry of Social Affairs and Health’s suggestion of daily activity for children to be at least two hours of brisk or MVPA are fulfilled. (Ministry of Social Affairs and Health, 2005). The activity is measured during 7 days around the clock. The data is collected by Polar Electro activity monitors and questionnaires in which the parents are asked about the activities of their children. Merging of these two data helps to better study of the processes of PA. The data is collected during January–March 2015 and the participants are 200 Finnish 1–7-year-old children from 21 day care centres and preschools.

Keywords: preschool aged children, physical activity, activity monitor, childcare center, home

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**Sixth graders experiences concerning pharmacy: Medicine education intervention**  
Sirpa Kärkkäinen, Sirpa Kontturi, Jari Kukkonen, Nea Nikkanen and Tuula Keinonen (University of Eastern Finland)

Pupils’ perceptions about medicines were previously studied two years earlier during their participation in an Internet-based intervention that promoted the proper use of medicines. It was found that pupils were familiar with a lot of medicines, but less with the function of pharmacy and the role of pharmaceutical healthcare professionals as important contributors to health related knowledge. Here pupils participate in an intervention based on the society oriented context-based approach; pupils are asked to investigate medicines and other health products and design a cartoon using tablet computers (IpadS). The aim is to examine how pupils experience the intervention and the issues related to it. Data collection is diverse: pupils’ writings and cartoons before and after the intervention, observations in the pharmacy, also group discussions and group interviews. This paper aims to clarify sixth graders’ (N=18) experiences concerning the function of pharmacy. We describe the intervention and present the preliminary results concerning pupils’ experiences about pharmacy. Before intervention, despite having knowledge of pharmacists’ work, pupils do not recognize the role of pharmacy in promoting health awareness e.g. medication disposal. As before, pupils are very knowledgeable about the proper use of medicines. Results support the further development of medicine education, using teaching methods that concentrate particularly on both critical search for information and co-operation with health experts.

Keywords: health education, medicine education, proper use of medicines, pharmacy
**Authenticity in school-industry partnership**
Anders V. Thomsen (Metropolitan University College)

The project describes students’ perspectives of authentic science after participating in a long-term school-industry partnership and a framework for teachers and employees in industry to plan one-day-visits and long-term partnerships. The project uses a theoretical framework developed by Falk and Dierking with the use of a personal context, a sociocultural context, and a physical context. By the use of mixed methods the project seeks to detect different outcomes of school-industry partnerships. The methods were semi-structured interviews, concept maps, survey, and video recording.

The project followed a class in a three year partnership with a big company in the diary sector. During visits to the company students looked at production processes, laboratory work, and visited the research and development section. They talked with employees about their work with scientific methods and concepts and they discussed possibilities for future education within science and technology. The students were video recorded during visits and interviewed before, during, and after visits. The emphasis was on studying students’ view on authentic science and investigate differences between visits to museums and visits to a company that uses science in dairy production.

The project concludes that long term partnerships provide students with a higher feeling of transfer between school science and real science than short-term partnerships. In particular the data indicate that the students develop a better understanding of science after being in an authentic science environment and make better use of concepts, laboratory equipment and methods. Furthermore the possible future choice of an education or a job with science seems to be more qualified after long term partnerships among schools and industry. The results could have a potential influence on future curriculum in terms of more focus on bridging the gap between school science and applied science.

Keywords: science education, authenticity, school-industry partnership, out of school
Mapping concerning newly arrived students' knowledge in sloyd
Emma Gyllerfelt and Peter Hasselskog (University of Gothenburg)

Skolverket is developing a mapping* material for newly arrived students** concerning their knowledge in all subjects. The assignment concerning sloyd (and art), is located at Göteborgs Universitet. The assignment includes many challenges. We will present our way of working with this material and how this will be implemented. We would like to discuss:

- Is it possible to map skills if students does not know the Swedish language; will this be an obstacle for learning and performing the subject?
- If it’s possible for the student to show his or her knowledge and abilities will this mean that the student is able to participate in further education? Or does this require skills in the Swedish language, social or cultural skills that is not included in the curriculum?

Is it possible that a creative subject like sloyd can be a resource for newly arrived to integrate and master the Swedish language faster?

*Mapping (kartläggning): Mapping is a form of assessment, the intention is to capture students’ knowledge in relation to current curriculum for each subject in Swedish elementary school.
**Newly arrived students (nyanlända): students arriving to Sweden, for example as refugees, and attend their schooling when compulsory school already has started.

Keywords: sloyd, newly arrived students, mapping

Textile sloyd as emotional practice. Students’ experiences and changing descriptions of the subject’s emotional dimension
Stina Westerlund (Umeå University)

Students’ emotional experience of doing sloyd is an important aspect of the subject sloyd and influences students’ learning. The emotional dimension of the subject has been visible, and sometimes prominent, in Swedish curricula and syllabus since sloyd entered school until the latest curricula was introduced in 2011. How emotional aspects have been formulated varies over time and aspects stressed are highly related to current political and ideological movements and seems to have a legitimizing function. Development shows that emotional aspects have been intellectualized and reificated. National evaluations of compulsory school describes students’ perceptions of sloyd as fun and enjoyable. This is problematized in a study where students’ emotional expressions and textile sloyd as emotional practice is investigated. With empirical examples as starting point students’ experiences are discussed. Diversity among students when it comes to attitude and positioning in practice is stressed to show opportunities and challenges when it comes to learning sloyd.

Keywords: textile sloyd, emotional practice, positive and negative emotions, experience, expressions of learning
History based live action role play (LARP) in an authentic surrounding as an option to teach and learn crafts
Outi Sipilä (University of Eastern Finland)

In the spring 2015 the students of Craft Science - future textile craft teachers - shall plan and organize medieval based craft workshops in Olavinlinna Castle in Savonlinna as a task in the course of Cultural Crafts. Primary school pupils as well as the students participate in craft workshops as role players in medieval context. This paper studies how the students experience organizing craft lessons in authentic medieval surrounding as a part of a role play. The focus is in how the roles as well as their outfit such as clothing and other props affect the experience of teaching process. Furthermore, the ability of the students to make the pupils to participate simultaneously in both role playing and craft making is discussed.

Keywords: LARP, craft teaching process, craft workshop, medieval castle
Hometown culture experienced by the child – A holistic approach to pre-school’s cultural education through craft and literature education
Juli-Anna Aerila, Marja-Leena Rönkkö and Satu Grönman (University of Turku)

In this study, pre-school age children are introduced to their home town’s cultural history in an authentic learning environment and using literature and craft education methods. The starting points and the basis of the experiential learning project are a home museum called the Kirsti’s house in Rauma, and a children’s picture book based on the history of this home museum. The children described their experiences by telling stories with the story crafting method and making craft products based on the concept of holistic craft. Some of the children’s stories were implemented with iPad’s BookCreator application. The aim of this study is to test the holistic approach to learning in line with the theory of experiential learning model in pre-school education. According to preliminary results, it appears that the different learning environments and art-based, experiential activities contribute to the construction of learning in a child-centered way and may concretize children’s understanding of their own past and culture, to the teacher, the child himself and other learners.

Keywords: cultural education, holistic approach, crafts, literature, pre-school education

Colour-oriented walking as a learning environment
Anne Keskimäki (University of Turku)

Colour-oriented walking provides a specific learning environment in art education while also teaching colour theories. It offers participants a bodily and multisensory space for thinking and perceiving. In this respect, the colour-oriented walking is linked to walking pedagogy. In this study, I explicate the theoretical frame of walking while also contributing to the discussion of walk-based art. The research data of this teaching experiment consist of evaluation forms submitted by students who participated in the lecture on the colour-oriented walking. As a method, the colour-oriented walking is suitable for teaching at school, because it activates the senses and sensory knowledge. The colour-oriented walking contributes to our understanding of how contemporary art practices can be incorporated into practices of school teaching.

Keywords: walking pedagogy, colour theories, sensory knowledge, contemporary art practices
In this study the development of literacy skills are connected to playfulness, Earth Art and Thinking Skills -method. In the teaching experiment student teachers from the University of Turku used the methods of Earth Art and Thinking Skills while teaching letters to first class pupils. Teaching experiment consists of playing with shapes of letters, creating the forms of letters and trying to find them by observing the environment and photographing the observations. To enhance children’s motivation in learning to make and remember the forms of letters the activities were planned together by using the Thinking Skills -method. The preliminary results show that the methods used in this experiment brought child-centeredness and playfulness to learning. Holistic approach helps the children to be more active and able to learn different learning goals simultaneously and effectively.

Keywords: emergent literacy, primary education, Earth Art, Thinking Skills
The postdramatic turn – Recasting the dramatic curriculum
Charlotte Fogh and Jan Mikael Alstrup Fogt (Metropolitan University College)

Today’s educational landscape is characterized by a deculturalization of humanistic and esthetic subjects. In this climate Drama as a discipline mostly legitimizes itself with reference to its contributions to literacy, social skills, innovative competencies etc. In many ways this discourse continues the classic agenda of the Reformpädagogik that primarily sees Drama as a catalyst of personal and social development. Our paper recasts the dramatic curriculum for the future in the light of the postdramatic turn within contemporary theatre with new esthetic forms, new production practices and a new understanding of drama as a fictional representation of reality. In our view this must also bring far reaching consequences for Drama as a discipline in today’s educational institutions, not least with regard to our understanding of how Drama can (still) contribute to personal Bildung and social competencies. By means of the curriculum thinking and cases and examples from student productions at the Master Programme in Theatre Pedagogy at the Metropolitan University College Copenhagen we will elucidate and exemplify these points. The presentation will include a concluding discussion in which the participants will have the possibility to be participants in a collective performative reflection.

Keywords: the postdramatic turn, new drama pedagogy, new esthetic forms

How to understand fiction
Crister Nyberg (University of Helsinki)

Understanding fiction can be taken to mean understanding all representational arts. Fictitious beings in stories, movies etc. raise various philosophical problems like the questions on their ontological status, truth in fiction and our emotional responses to fiction. For example possible world semantics, fictional worlds and the idea of make-believe have given fruitful tools for giving answers to these questions. However, something concerning the understanding of fiction is missing in those constructions. In my opinion they don’t take sufficiently into account the constant interplay between fiction and reality and the impact of intertextuality in understanding fiction. The theory I construct takes the use theory of meaning and the minimal theory of truth as tools in dealing with the problems of understanding fiction. Besides the solutions offered to philosophical problems of fiction, my approach also gives a description on how the concept of truth works in understanding fiction. From the perspective of drama education this means developing the skills to recognize intertextual links and connections in both fictional and scientific texts. These metacognitive and creative activities are also essential in studying cross curricular themes and drama education can give significant contribution to using them.

Keywords: fiction, truth, understanding, make-believe, intertextuality
Thinking with the body – the drama teacher being alive during the development of a pedagogical design
Kristian Nødtvedt Knudsen (Norwegian University of Science and Technology)

The article investigates how the drama teacher develops a pedagogical design that stimulates to bodily reflection or embodied reflection. In this article, the author works from the premise that, by exposing himself to the same practice, as the participants have to go through, he will gain a new understanding of his practice. Researching your own practice is at risk of being self-indulgent. In the study the author uses the reflective practitioner approach (Schön 1983) and varies between different roles; practitioner, researcher and designer. The empirical material is based on video recordings and through a narrative inquiry (Bresler 2006; Craig 2007; Savin-Baden & Major 2013) the author examines how reflection is expressed in/through the body.

Keywords: reflective practitioner, performativity, pedagogical design, drama

Why a drama teacher gets worn out in the job as drama teacher
Rannveig Thorkelsdottir (Norwegian University of Science and Technology)

The aim of this study is knowledge contribution regarding drama teaching in an Icelandic context. The backdrop for this research is that a subject called ‘dramatic art’ has been added as a key learning area in the Icelandic national framework curriculum. I have conducted an ethnographic study of the culture and context for drama in two primary schools in Reykjavik following two-drama teachers’ work throughout the school year 2013-2014. I have used observation, video observation, interviews, teacher’s diaries, and researchers’ log in order to generate material for narrative analysis. In this paper I elaborate the following research question: Why does a drama teacher persist in or quit the job as drama teacher? In this paper I present two stories, one about persisting, the other one about getting worn out in a job both teachers are passionate about. I scrutinize the school cultures through the practice architectures, formulated by Stephen Kemmis.

Keywords: drama teacher, worn-out, ethnography, practice architecture, narrative analysis
Developing academic literacy: Teacher students’ writing and revision of academic essays
Helena Wistrand (Jönköping University)

University students often have to struggle to acquire a sufficient level of academic literacy and feel that they mainly achieve this through feedback and supervision while writing essays (Ask 2007). This presentation concentrates on students with non-sufficient academic literacy. More precisely, it is based on an analysis of the text writing process of teacher students aiming at working in primary school. The texts were written during courses in Swedish, in which the students also study Swedish grammar, where metalinguistic terminology is included. The study encompasses, firstly, texts that have failed to pass examination on account of their form, secondly, written metalinguistic feedback from the teacher and, finally, the students’ revisions before submitting a new version. The analysis focuses on disposition, coherence, cohesion, use of paraphrases and quotations, grammatical correctness and choice of words, as well as the changes that have been made before re-submission of the texts. The study raises questions concerning the students’ development of literacy and metalinguistic awareness in connection to their future profession as teachers in primary school.

Keywords: academic literacy, feedback, metalinguistic awareness, revision, teacher students

Multimodal literacy in English as a school subject
Ingrid Jakobsen (University of Tromsø)

What role does multimodality play in English teaching in Norway? Do pupils obtain the English language literacy they need to become active members of our digital and multimodal society? My case study (to be conducted during the spring of 2015) will look at literacy events in English in lower secondary schools, combined with interviews with children and teachers. Research in early years of Norwegian school in several subjects (not English) has shown that teachers use a number of multimodal approaches in the pre-reading stage of teaching, when they wish to invoke the pupils’ curiosity and draw on their pre-existing knowledge (Smidt, Tønnessen, & Aamotsbakken, 2011). Written mode, is, however, still dominant when pupils are assessed, and a similar situation is plausible for English, and should be researched.

Keywords: multimodality, literacy, English, digital texts, graphic novels

Performance literacy (Lire le théâtre, Ästhetik des Performativen)
Pirjo Vaittinen (University of Tampere)

This paper wants to make a statement that performance literacy should have an organic right to existence inside the definition of ‘new literacies’. The term performance is broad, it includes artistic performances like concerts and theatrical events, but also sporting, social, political and
religious events, rituals and ceremonies, and multiple ways of expressing and narrating ourselves and our understandings. Performance literacy instruction and research is interdisciplinary, drawing from theories of philosophy and linguistics, anthropology and sociology, theory and practice of theatre and performing arts, plus theories of education. This paper wants to reflect on the Finnish school mother tongue curriculum, and drama and theatre education as performance literacy. The empirical study proceeds from the theatrical event, created by the producers and the audience present, which is enriched with drama workshops. The context for the study is student-teachers working with the classes, and collaboration with a professional theatre.

Keywords: literacy, performance instruction, drama education, mother tongue teacher education
Teaching geography and biology by using new mobile software outside the classroom
Arja Kaasinen (University of Helsinki)

One of the most important questions has been how to use new technology in teaching. It has been shown that technology can help and motivate pupils to learn. Most of the Finnish pupils have mobile phone in their pockets and schools have iPads. Problem has been that teachers do not know how to use tablets, mobile phones or different programs. Problem has been also that there are not very much suitable softwares for geography or biology which are easy to use, free, inspiring or educational.

Teacher students used and tested mobile phone application called Spots Tracker in their geography and biology lesson. Program draws the way where you have been walking to the map and if you take photos, photos are added to the map as well. It is free and easy to use. Program was used outside the classroom. In this presentation I will introduce this practical experiment.

Keywords: geography and biology teaching, out of the school learning, technology, teacher students

Visual literacy and geography textbooks
Yvonne Behnke (University of Potsdam)

A key aspect of geography education is working with, describing and analyzing visualizations. Consequently, the ability to decode and analyze visual inputs as well as to relate images and text to each other are vital prerequisites for successful teaching and learning in the field of geography. This led to the research question: How exactly do students link different visual inputs on a geography textbook spread? Spreads of geography textbooks were evaluated by observing students’ textbook usage via Eye Tracking.

Eye Tracking, which is a visual method of data collection and analysis, was used to precisely monitor the eye movement. It was, for example, asked in which chronological order and with which intensity the test subject observes elements on a geography textbook spread. The focus of the study was first on recognizing strategies for general content comprehension and second on connecting visual inputs and texts in order to answer a given question. To improve students’ picture text comprehension, the research results will form the basis for the development of design based strategies, which could then be applied in geography textbooks.

Keywords: geography education, geography textbooks, eye tracking research, visual literacy
Approaching the diverse city by mapping the geographies of hanging out
Noora Pyyry (University of Helsinki)

In this presentation, I talk about learning that happens via meaningfully engaging with one’s home city in a collaborative process of mental mapping. I will approach the topic by discussing two research projects that were carried out with 7th grade students in San Francisco and 9th grade students in Helsinki. Mental mapping was a creative tool that inspired re-cognizing everyday spaces and routine practices. By discussing the mapping, I will show that emphasis on the process of working together can open up novel ways of conceptualizing learning. The topic of hanging out fostered an atmosphere of friendship and playfulness, and naming familiar places with youth vocabulary gave the students means of re-visualizing their positions in the city. A playful atmosphere can inspire thinking and reduce the fear of failure in a school project. Reflecting on taken-for-granted, everyday things and spaces generated new associations and strengthened the students’ geographical skills.

Keywords: friendship, hanging out, learning, mental mapping, play

Challenges set by the media: How to interpret media images from a geographical perspective?
Markus Hilander (University of Helsinki)

A Finnish professor Janne Seppänen approaches photos as “visual arrangements”. In my presentation, I will give three examples of media images and of the ways in which they can be interpreted as “visual arrangements”. First of them is a jeans commercial by Diesel. It depicts a man and a female on a rooftop of a skyscraper in Manhattan. In the background, the whole city is under water as if the sea level had risen that much. This advertisement is an effective example of how we cannot take advertisements as banal representations. In the second example, I will demonstrate a procedure that is called a “commutation test”. With this method, it is possible to analyse, which elements of a certain media image affect the most to the meaning-making process. The third example is a Finnish cartoon strip, Viivi & Wagner. It demonstrates how certain institutions produce certain types of visual illustrations.

Keywords: geography education, interpretation of photos, media images, visual arrangements
Pupils’ concepts of cultural and religious diversity in a pluralistic educational context – Results from Finnish comprehensive school
Arniika Kuusisto and Arto Kallioniemi (University of Helsinki)

This study examines pupils’ concepts of cultural and religious diversity in a pluralistic educational context. Besides immigration, the increasing polarisation of values in the society resulting for example from secularism and the growing interest in new religions has altered the children and young people’s contexts of growing up. Although this change has been visible, there is very little up-to-date research on the children and young people’s values related to the encountering of diversity in their everyday contexts, such as school, home and peer group. Through a mixed method research design, the findings of our parallel research projects, EDEN in Finland, and CARDIPS in Sweden and Estonia, illuminate the growing up processes behind individual development of pupils in the 3rd, 6th and 9th grades of comprehensive school. The here reported findings of the Finnish sample include survey (n=1301) and interview (n=38) data from pupils of the age groups 9–10, 12–13, 15–16. The findings illustrate differences in attitudes between the genders, age groups, as well as the pupils’ area of residence. Based on these findings, it seems that the actual lived experience of cultural and religious diversity in the growing up context seems to influence pupils’ openness to other traditions than their own.

Keywords: diversity, pluralism, school, education, children, youth

Integrative religion and worldview education in the Finnish context: Student perspective
Vesa Åhs and Saila Poulter (University of Helsinki)

This paper examines students’ views on integrative religion and worldview education (henceforth, IRE) in one secondary school in Helsinki. The background of this research is the current debate on RE education in Finland and the initiatives on alternative models of teaching religion. In the study, both quantitative and qualitative research methods are employed. The research material consist of surveys (N=174) and student interviews (N=20) concerning the students’ perspectives and experiences on IRE. In this paper, we examine the preliminary results that arise from the data and discuss its implications for wider discussion on RE. Although the data has been collected from a single school, the results will benefit RE research since the IRE model is innovative in the Finnish context. More broadly, the study provides important insights for designing intercultural education in plural school settings especially considering religious and non-religious backgrounds of the students.

Keywords: integrative religious education, learning about/from religion, worldview, student perspective, diversity
**Construction of identities and worldviews among the adolescents amid cultural and religious diversity in schools: A social cognitive analysis**  
Gabriel Omotosho Adebayo (University of Helsinki)

The paper discusses the social forces influencing the construction of worldviews and identities among the adolescents amidst increasing cultural and religious diversity in public schools. I suggest that we could use social cognitive theory to interpret and understand the process of construction of worldviews and identities among the adolescents amid cultural and religious diversity in schools. Then, I note that we could apply the tenets of social cognitive theory in shaping the minds (modelling) of the adolescents as they construct their identities and worldviews amidst increasing cultural and religious diversity in schools. My study mainly analyses the subject in focus with the use of Albert Bandura’s social cognitive theory. Thus, the construction of worldviews and identities among the adolescents will be explained in terms of a triadic model whereby (1) cognitive and other personal factors, (2) behaviour, and (3) environmental influences are continually interacting as determinants of each other.

Keywords: adolescents, diversity, cognitive, worldviews, identities, construction

**Literacy, identity and picturebooks in primary education: A report on ongoing doctoral research**  
Andreas Ramos (Canterbury Christ Church University)

Research in New Literacy Studies have conceived ‘literacy’ as a way of being and interacting, framing the importance of cultural models, dominant discourses and identity as integral to literacy. A regular fixture in primary classrooms, the picturebook has traditionally suffered from a lack of adequate and sufficient cultural representation in the UK – a topic that is now receiving widespread attention. However, there is little empirical research on children’s own views about this, and what it means to their negotiation of identity.

Drawing on works in sociocultural theory, literacy studies and children’s literature, this paper reports on ongoing doctoral research which uses an arts-informed approach to explore the thoughts and feelings of children through observations and workshops conducted in one UK primary school. It seeks to contribute to a wider understanding of literacy and identity, as well as of the impact of cultural discourses on children’s belonging and sense of self.

Keywords: cultural identity, cultural representation, picturebooks, primary education, arts--informed methodology
Integrating writing into learning mathematics
Pirjo Kulju, Jorma Joutsenlahti and Marja Tuomi (University of Tampere)

An aim of this study is to explore how to integrate writing into learning mathematics and how the use of writing would support the understanding of mathematical concepts such as division. In a school context, writing skills are usually connected to mother tongue, and furthermore, in mathematics the mathematical thinking is mainly expressed by symbolic language. However, this practice does not give much space to those learners who would be helped by the use of natural language. In the presentation we will present results of a project in which a multisemiotic view on language served as a basis in integrating writing into mathematics. That is, the fourth graders created stories and comics based on a mathematical expression, and during the process, they worked with symbolic, pictorial and natural language. In terms of writing, a genre-based pedagogy was applied. Writing not only served as a way to express mathematical thinking but also the teacher was able to evaluate the concept comprehension based on written outputs. In the presentation, we will describe the process and results in more detail. We will also discuss what kind of possibilities the new curriculum of basic education in Finland gives for this kind of subject integration.

Keywords: writing, mathematics, learning, multisemiotic, basic education

Three approaches to critical reading skills as an educational objective
Elina Kouki and Arja Virta (University of Turku)

Critical thinking and information literacy are topical features of school curricula in many countries, and often considered as key competences of the 21st century. However, it is unclear how these competences are achieved at schools. This presentation examines critical reading skills on the field of mother tongue and history education on the basis of data collected from the 8th grade of secondary school, upper secondary school and university. The 8th graders (n=24) were interviewed and upper secondary students (n=96) wrote an essay about a controversial issue using provided sources. The relevance of the upper secondary students’ writing task was evaluated by the university students (n=32). The data was examined by content analysis. According to these three sets of data, 8th graders could assess the reliability of the sources, if they were helped with the questions. Only few of the upper secondary students displayed critical reading skills in their essays. University students found the writing task demanding but underlined the importance of teaching critical thinking skills. Unexpectedly, several students claimed that critical literacy was not taught at school. Because of the continuously increasing information, teachers need pedagogical tools for teaching skills of critical literacy.

Keywords: critical literacy, critical reading skills, information literacy
The new learning environment in craft, design and technology education
Juha Jaatinen, Eila Lindfors and Jaana Lepistö (University of Turku)

Learning environments for craft, design and technology education (CDT) in Finland have been designed for 150 years pretty much by the same division: one for girls (later textiles) and one for boys (later technical work). This study investigates the possibility of developing a new kind of multi-material learning environment for CDT. New learning environment will promote new models of teaching. One possibility is co-teaching. Textile work teacher and technical work teacher can combine both their technical competences and their didactic knowledge and skills together.

The study aims to provide new information on about challenges and opportunities of a multi-material learning environment, how to design and implement it. The qualitative data consists of video recordings of meetings where experts discuss the designing of new learning environments. This research is a current initiative to promote ideas for developing local curriculum according to the new national Basic Education Core Curriculum that will be introduced in 2016. The study will produce and test the model, a multi-material learning environment as an enabler of innovative and equal craft, design and technology education for all.

Keywords: multi-material craft, learning environment, co-teaching, equality, CDT (craft, design and technology education)
Supporting special education pupils’ collaborative science learning through the use of smartphones
Kati Sormunen (University of Helsinki)

The number of pupils who need intensified support in their studies has been growing in the mainstream classrooms since the Basic Education Act (2010) was implemented (Official Statistics of Finland, 2014). One novel way to support these pupils is personalize learning. Personalized learning is a high quality teaching and learning process in which pupil’s abilities and working and learning skills develop. This paper reports the study that aims to investigate how pupils with special educational needs (SEN) use smartphones as a supportive learning tool in inclusive collaborative science classroom.

In the first phase the data was collected through a web questionnaire and teachers’ logs. In the second phase ten pupils’ (5 SEN and 5 mainstream pupils) group work was followed through interactive interviews after every lesson. The data were analyzed through qualitative content analysis. The results show that pupils used smartphones primarily to collaborative note making and monitoring the groupwork process. Pupils’ collaboration developed through interactive interviews.

Keywords: personalized learning, ICT, inclusion, collaborative learning

Low and high achievers in math. Early intervention for these two groups of students with special needs
Lena Lindenskov, Steffen Overgaard, Pia Beck Tonnesen, Peter Weng, and Camilla Hellsten Østergaard (Metropolitan University College)

Every math teacher has a challenge in coping with the gap between low and high achievers in the classroom. In the project, Early Math Intervention for Marginalized Students, TMTM 2014, the purpose is to bring forth knowledge of how these marginalized students - low as well as high achievers - within their first years of schooling think math, as background to initiate an adequately teaching of the two groups of students.

Autumn 2014, 328 grade 2 students (born in 2006) receive an individual special teaching, early intervention, based on the same model and material, 20 minutes 4 days a week for 12 weeks, implemented by 82 math teachers placed in 41 schools in 31 different Danish municipalities. In this session we will present the results of the preliminary analysis of the empirical data, quantitative and qualitative, supporting the knowledge of how to teach low and high math achievers toward increasing their mathematical knowledge and confidence.

Keywords: math, learning, intervention, low achievers, high achievers
Dyscalculia ≠ maths difficulties. A field analytical perspective on conflicting positions in a time with calls for inclusion
Maria Christina Secher Schmidt (Metropolitan University College)

The presentation is based on a substudy conducted in connection with a Danish PhD study of inclusive teaching of beginner mathematics in the Danish municipal primary school and focuses on the research question: What conflicting positions can be identified in relation to low-performing pupils in the teaching of mathematics? The study concentrates on which categorizations and social forms of practice dominate and are dominated in the time period under study: 1995-2014. The empirical method consists of a manual search through Danish ministerial booklets on mathematics, NOMAD (the journal of Nordic Studies in Mathematics Education), anthologies with conference articles from NORSMA (Nordic Research network on Special Needs Education in Mathematics), Matematik (Danish scholarly journal for teachers of mathematics) and Nämnaren (Swedish scholarly journal for teachers of mathematics). Electronic searches have also been made in the journal for the Danish municipal primary and lower secondary school, Folkeskolens, and on www.folkeskolens.dk.

Keywords: Bourdieu, inclusive education in mathematics, math difficulties, dyscalculia
How to identify the concept of theme - A learning study of literary analysis in the Swedish compulsory school
Magnus Larsson (Utbildning Gävle)

The study was conducted in a ninth grade within the Swedish compulsory school. The aim was to investigate the teaching of a specific literature concept, namely the capability to identify a theme in a literary text, which had proven difficult for students to master. During a series of three lessons, potential critical aspects of the object of learning were tested and evaluated. In order to analyse and enact the object of learning, a text oriented approach was used, in which the text is considered autonomous; what is in the text must be proved in the text. The results indicate the importance of enabling a separation and contrast between the concepts of theme and motif, in order to enact the intended object of learning during the lesson. Critical for the learning outcome were students’ possibilities to distinguish the main character's figuring (motif) from the texts theme, and simultaneously discern the mutual connection between them.

Keywords: literature education, variation theory, practice-oriented research

Book trailers as reading motivators in literature education
Satu Grünthal and Johanna Pentikäinen (University of Helsinki)

Our paper presents and discusses a book trailer project, carried out in subject teacher education at Helsinki University in fall 2014. Teacher students of Finnish language and literature planned and filmed book trailers for 9th grade secondary school pupils in order to motivate and enhance reading. The project also aimed to give teacher students possibilities to develop their IT skills and to find out new possibilities to use technology in literature pedagogy. Such possibilities have been tried out and developed by Anders (2013) and Maaß (2010), among others.

Before and after the project, students filled in an e-survey about their motivation and ability to use technology in literature education. Results of these surveys are analyzed and discussed in the paper. They are also tied to theoretical views on shared readership and authorship (Jacobs, 2012) and the idea about affility spaces (Gee, 2003), where shared interests, goals and projects enhance literary skills.

Keywords: book trailers, literature pedagogy, IT skills

The poetic language in the pedagogical context
Peter Degerman (Mid Sweden University)

During the last decades the place and function of literature in the educational context have been lively debated. In an era of increasing digital communication, and as a consequence of new media
genres, the traditional literary text has been questioned, resulting in the notion of a screen
culture or the concept of the text as a semiotic system including all kinds of communication.
However, at the same time as the concept of the text has been broadened, and the use of digital
media has increased, several large surveys point to the fact that the ability to read and to
understand texts is decreasing. Arguments for the importance of literature as a subject matter in
school may be formulated in accordance to these results, but exactly which role literature can play
in the teaching of reading has not been defined. In research on literary pedagogy the function of
literature as a tool for democratic education and as a means for communication in the classroom
has been emphasized, while the aesthetic aspects have been largely overlooked. In the paper I
address questions concerning the specific possibilities of the poetic language as a mode of
aesthetic knowledge in the pedagogical situation.

Keywords: aesthetics, closer reading, literacy, differentials
Teaching Danish as a second language in the context of new reform of the Danish public school
Thomas Thorning (VIA University College)

The new reform in the Danish public school gives the schools more possibilities for flexible organization of the school day. This has consequences for the schools and the municipalities allowing them to choose different approaches to second language teaching. The project follows two municipalities in the implementation of the new law focusing on Danish as a second language: What are the conditions for second language teaching in the new reform? How is the field structured and organized? How is additional teaching handled? What is the potential of the new reform in relation to second language teaching?

The session presents two examples of implementation of the reform in relation to Danish as a second language. The data is retrieved from qualitative interviews with key persons in the field, including headmasters, advisers and second language teachers. The data is analysed from the perspective of recent sociolinguistic findings (Gibbons 2009, Blommaert, 2010).

Keywords: second language, sociolinguistic, second language learners in the mainstream classroom, language and superdiversity

Conceptions of teaching and assessing oral language skills - in-service teachers and upper secondary students
Outi Hakola (University of Helsinki)

The presentation focuses on experienced in-service language teachers’ and their students’ conceptions and experiences of teaching, studying and assessing oral language skills in Finnish upper secondary schools. The objectives of the study were to collect information about the experiences and conceptions of language teachers and their students involved in teaching and learning oral skills.

The impetus was the change in the Finnish core curriculum, which obligated upper secondary schools to offer advanced oral courses in foreign languages. A test of oral proficiency will also be part of the final exam in 2019. The research was conducted as an electronic survey among teachers (240) and students (560) of foreign languages in upper secondary schools in Finland. Both questionnaires addressed a range of well-established core components of conceptions with some 50 items of Likert type and 10 open questions.

The preliminary findings show that in-service L2 teachers stress the importance of oral skills over literary skills. Neither the teachers nor the students wanted to have a test of oral skills in the
school-leaving exam. The majority of students prefer, however, mandatory oral courses. According to both groups, most important oral skills to teach and test are interaction, pronunciation, fluency and communication strategies.

Keywords: language teachers, language learners, oral language skills, conceptions, teaching

Reading as experience – beyond reading comprehension.  
A research study and some suggestions for foreign language teaching
Angela Marx Åberg (Linnaeus University)

Comparative studies of students’ knowledge of various school subjects clearly show that the Swedish school needs to put extra effort into students’ reading comprehension (PISA 2012). The optimal outcome would be to get all students to view reading as something positive and thus motivating them to read more, as this forms the basis of developing a good reading ability. This applies not only to first language teaching but also to teaching foreign languages, as an impaired reading ability in the first language will also affect reading in foreign languages. An important issue is to study what conditions obtain for making the experience of reading foreign languages in a teaching context into something positive. My contribution aims at exploring what may be viewed as (positive) reading experience and how this could be linked to reading in a foreign language, where poor language command may form an obstacle leading to a too limited understanding and a lack of an emotional link to the text. The study will also consider in what ways teaching may support the reading process and make room for focusing the reading on the students’ own reading experience.

Keywords: second language reading, foreign language reading, second language teaching, reading experience, literary reading

The native speaker role in L2 dyad interaction
Anna Korhonen (Åbo Akademi University)

The purpose of this paper is to describe the native speaker role as a language model and resource in classroom tandem within a co-located Swedish-medium and Finnish-medium school. In tandem two persons with different native languages form a tandem dyad and learn from each other. Partners in a tandem dyad function in turn, both as a second language learner in their target language and, as a model and resource in their native language. Classroom tandem is used in mixed language groups within the subjects Finnish and Swedish as a second national language.

The empirical data consists of video recordings of the interaction of tandem dyads in classroom tandem. Initial results show how the native speaker actively orients to the role of a language expert by correcting and explaining different language aspects, not only in text-based activities, but also in oral activities. The fact that both partners get to act as both learner (in L2) and expert (in L1) helps in creating an atmosphere where the participants trust each other and dare appeal for and receive corrections and support from each other, without interpreting it as face threatening.

Keywords: classroom tandem, interaction, second language, language education
Exposing the transformative potential of sacred places and student learning through narratives
Imran Mogra (Birmingham City University)

At a time when polarisation of various kinds is affecting relationships between people of different faiths, cultures, philosophical and political pursuasions, in the context of education, dialogue and encounter between adherents of different faiths and none has been proposed as a necessity by some. This paper presents evidence which suggests that encounters inside sacred spaces has the potential of transcending the all-too-common literal and physical benefits gained from visiting places of worship. Visits are not only a means of enabling others to know, understand and appreciate one’s own faith better and that of the others, but can also be a source of spiritual enrichment. Drawing from research carried out among trainee teachers, this paper will illustrate, in light of self-account narratives and reflections, the transformative nature of being in sacred spaces by focusing on the thoughts, attitudes, knowledge, emotions, philosophical traits and spiritual experiences expressed by students from various faith backgrounds. Simultaneously, the data will reveal common concerns, anxieties, confusion and misconceptions held by the participants. The paper draws implications for further research and curriculum design in relation to religious education.

Keywords: sacred, place, trainee, teachers, narratives

Home economics teacher education for diversities
Hanna Posti-Ahokas and Hille Janhonen-Abruquah (University of Helsinki)

As a school subject characterized by collaboration and communication, home economics provides a favourable context to learn skills needed in an increasingly diverse world. To benefit from this potential, future home economics teachers need both practical and theoretical tools that help them to better understand the ongoing changes in society and to work with diverse learners. Courses on gender and multiculturalism in home economics settings are included in the current curriculum for home economics teacher education at the University of Helsinki. Based on the encouraging feedback from the students, our aim is to further develop courses on diversity for the next university curriculum. Students’ learning journals, essays and course feedback from the last two rounds of the courses in 2013 and 2014 were analyzed to 1) understand teacher students’ views on how gender is performed in home economics education, 2) to study how cultural diversity is approached and 3) to identify the kinds of knowledge and skills future home economics teachers consider essential in dealing with cultural diversity and gendered practices. A particular focus is on analyzing the potential of home economics subject to make gendered and cultural practices visible and thus advance gender equality and cultural responsiveness of education.

Keywords: gender, multiculturalism, home economics education, cultural responsiveness
Multicultural perspectives in the Norwegian kindergarten teacher education and the reality in multicultural kindergartens according to personnel
Kari Krogstad (Telemark University College)

In 2013 a new kindergarten teacher education started in Norway that has more attention to multicultural perspectives than the former preschool teacher education. The National guidelines for the Kindergarten teacher education describe the students learning outcome in six fields of knowledge. I have examined how the phrases multicultural perspectives and cultural diversity are used in the national guidelines. Additional to this I have collected academic staff’s point of view about multicultural perspectives in their lectures and in syllabus. The data from this is compared with the result from twelve interviews with administrators and pedagogic leaders about their experiences with the multicultural kindergarten and what they consider to be challenging. I want to present my findings and discuss if goals in the national guideline and perspectives amongst academic staff is coherent with the reality described by personnel in multicultural kindergartens.

Keywords: kindergarten teacher education, multicultural, cultural diversity

Supporting intercultural and interreligious sensitivities in teacher education
Elina Kuusisto¹, Arniika Kuusisto¹ and Inkeri Rissanen² (¹University Of Helsinki, ²University of Tampere)

In this presentation we examine the supporting of intercultural and interreligious sensitivity in Finnish teacher education. The theoretical framework is built on Bennett’s (1993) and Abu-Nimer’s (2001) developmental models of intercultural and interreligious sensitivity. The empirical data was gathered from teacher students during spring 2014 at the University of Helsinki and University of Tampere. The aim was to find out, what kind of religiousness profiles as well as approaches to other religions do these Finnish student teachers represent, and how these have been dealt with in their studies so far. The data consists of quantitative survey data (N=144) together with reflective essays from some of the same respondents (n=31).

Results from quantitative data show that these teacher students typically represent ethno- and religiorelativistic views indicating basic skills for cultural and religious encounters. Still, students’ essays further illuminate that they would like more information and skills on intercultural and -religious sensitivities and competences as a part of their teacher studies.

Keywords: intercultural sensitivity, interreligious sensitivity, intercultural competence, student teachers, teacher education
Formative feedback: An analysis of dialogue between teacher and student in social science
Robert Kenndal, Lauri Kuru and Daniel Larsson (Tumba Gymnasium)

Teachers regularly give feedback to their students. The feedback can have various aims, depending on situation and school subject. Previous research shows that while time and effort are spent on written and oral feedback, teachers as well as students question its outcome. At the same time, in research of formative assessment, feedback is often considered as one of the key factors of learning. With more and more attention drawn to the use of formative assessment in schools around the world, the aim of this article is to investigate the content of feedback conversations in social science and what is done, or not done, in the dialogue to make the feedback successful. By using an analytical framework from the didactics of natural sciences, the study is focused on ten conversations in which a teacher gives feedback to students about a paper on housing markets. The empirical findings of the study show that the teacher gives guidance based on how the student perform, in relation to the educational goals of the assignment. It is also shown in the study that oral feedback needs a shared surface of language, artifacts and experiences in the subject of social science, in order to be successful. Finally, the student's verbal response to the feedback is crucial for the teacher to be able to determine whether or not the feedback is effective in the sense of formative assessment.

Keywords: social science, formative assessment, feedback

Writing in multi-subject coursework in Danish upper secondary school. The issue of citizenship education
Peter Hobel (University of Southern Denmark)

For what purpose do students in upper secondary school write in multi subject coursework, and how do the teachers position the student when giving writing prompts? Can these writing activities be looked upon as an integrated part of citizenship education? My studies have shown that there is a tacit negotiated consensus between teachers and students: the students have to position themselves as writers who want to be tested. Their writer identification is a writer organizing and structuring given knowledge in order to document that he has done his homework. The theoretical framework of the study is the social cultural tradition in literacy studies. I analyze data from the Danish research project Writing to Learn, Learning to Write (www.sdu.dk/fos). I will present and use the analytical approach of WLLW. Starting from sociocultural learning theory and critical constructive didactics I will discuss the relationship between the writing activities and civics. I will present articles I have written about writing prompts, writer identity and my analytical approach.

Keywords: writing to learn, writing prompts, multi subject coursework, social science and science education, citizenship education
EU citizenship and democratic “bilddung” - EU teaching in upper secondary schools in Denmark
Karen Marie Hedegaard and Carsten Linding Jakobsen (VIA University College)

The purpose of this project is - through “professionscirkler” - to develop and improve the teaching in EU as a subject in social studies in upper secondary schools in Denmark. “Professionscirkel” is a “working community” where teachers, students at VIA University College and lecturers together are developing teaching in different subjects.

What opportunities and limits are to be found in general from teaching experiences and through interviews with students in upper secondary school in relation to the subject EU? Which cases can be developed to encourage students critical consciousness? What issues will motivate students in the classroom and at the same time be relevant seen from a more critical perspective? Which teaching methods are in particularly promoting certain analytical skills? How can - and is it - possible to teach in concepts such as sovereignty, interdependence, etc.?

Experience from previous studies shows that many teachers find it highly complex to teach in EU as a subject (Wall 2011) and the students achievements poor (Bruun 2010). Our project is organized so that the students and lecturers on the program initially makes quantitative and qualitative studies of EU teaching and when data are presented teachers participate in “professionscirkler” and become active in relation to develop the teaching in EU further.

Keywords: EU citizenship, EU teaching, critical perspective, professionscirkler
The development of craft and technology education curricula and students' attitudes towards technology in Finland, Estonia and Iceland

Ossi Autio¹, Mart Soobik², Gisli Thorsteinsson³ and Brynjar Olafsson³ (¹University of Helsinki, ²University of Tallinn, ³University of Iceland)

The research is based on a comparative study of craft and technology education curricula and students’ attitudes towards craft and technology in Finland, Estonia and Iceland. The study was undertaken by the Helsinki University, University of Tallinn and University of Iceland during years 2012-2013. A literature review was completed, in order to examine and compare the origins of craft education in Finland, Estonia and Iceland. In addition, a quantitative survey was subsequently distributed to 658 school students in Finland, Estonia and Iceland. It consisted of 14 questions, which aimed to ascertain students’ attitudes towards craft and technology. The survey showed substantial differences in students’ attitudes towards craft and technology education in the three countries: these differences may be explained by differences in the national curriculums, the different pedagogical traditions and cultural differences in the field of technology. However, for deeper understanding, the qualitative findings need to be examined further with different research methods.

Keywords: technology education, craft education, attitudes towards technology, national curriculum

Pedagogical and societal changes in Finnish craft education

Päivi Marjanen and Mika Metsärinne (University of Turku)

Finland has a long history of school crafts as a compulsory subject for all students since 1866. School reforms have been rationalized by invoking e.g. propagation of national and social responsibility, increase of cultural democracy and economy and rising standards of living (Allardt 1966). In this article the focus is on explaining pedagogical and societal changes in craft education in Finnish comprehensive school system. The main sources in this article are committee reports and curriculum. These can be defined as documents which impress society’s prevailing values. If school handicraft aims review is concentrated on pedagogical development then it is possible to find five historical periods from the Finnish basic school education system. These periods are 1) craft for home wellbeing (1866-1911) 2) craft for civic society (1912-1945), 3) craft for independent and hard-working citizens (1946-1969), 4) genderless craft (1970-1993), 5) unlimited craft (1994-2014). (Marjanen 2012; Metsärinne 2008.) As a conclusion these periods give different perspectives to comprehend changes of the Finnish school craft but also the periods give new guidelines for developing modern school craft.

Keywords: craft, craft education, pedagogy, society, school history
Textbooks of textile crafts in 1900s: Changes in sewing and garment making
Minna Kaipainen (University of Eastern Finland)

This presentation examines Finnish textbooks of textile crafts used in schools and vocational education during 1900s. The aim is to describe the content change in sewing and garment making. The data includes textbooks for primary and lower secondary schools, vocational education including craft teacher education as well as textbooks for home dressmakers. The social and cultural changes in Finnish society characterizes the content changes in textbooks. The rise in the standard of living and the development of the clothing industry and sewing machines and simultaneously the decline of garment home manufacturing and sewing by hand have affected the contents of textbooks. The main focus of the early textbooks are in various techniques. The Second World War’s depression and rationing emphasized the practical benefit of mending and recycling. Even during 1960s there was lack of school textbooks and only the basic education reform increased their number in 1980s and 1990s.

Keywords: textbooks, didactics, sewing, garment making
D2
DIVERSITY IN LANGUAGE TESTING

Chair: Pia Sundqvist
Room: AUR 226

Rater variation: The balance between technical and hermeneutical rationality in the assessment of writing tests
Eric Borgström (Örebro University)

It is well known from studies of inter-rater reliability that the scoring of direct writing assessments varies. On the one hand, writing ability is a complex construct and a certain degree of rater variation is unavoidable, or even desirable. On the other, if assessment scores are not satisfactorily consistent, they cannot render valid interpretations and actions. Another way of putting this is that assessments that are high-stakes must handle both a technical rationality, i.e., the grading should be predictable from rater to rater, and a hermeneutic rationality, i.e., the grading must be based on teachers’ professional judgment. This presentation reports from a study interested in the question of how rater variation can be conceived of from a professional (i.e., teacher) perspective. Departing from 14 Swedish teachers’ rating of texts from a national writing test in upper secondary school, the teachers’ presumed interpretive community (Berge, 2002) is investigated using quantitative and qualitative methods. The analysis brings the need for validated criteria and tools for assessment to the fore. Several situations are revealed where teachers’ expertise clashes with the assessment criteria for the investigated test.

Keywords: writing assessment, scoring, inter rater-reliability, validity, national assessment

Selecting next speaker in paired oral exams: The role of student questions
Silvia Kunitz (University of Illinois at Urbana-Champaign/Stockholm University)

Questions are a turn-allocation technique that is used by the current speaker to select the next speaker during talk-in-interaction (Sacks, Schegloff, & Jefferson, 1974). The present conversation-analytic study aims at investigating the formats and the actions performed by students’ questions during paired oral exams of Italian as a foreign language. The dataset consists of video-recordings of 7 exams in a first-semester course and 10 exams in a fourth-semester course. The students interacted in self-selected dyads (15/17 exams) and triads (2/17 exams). All the students were instructed to “converse” on given topics; specifically, the first-semester students were required to ask each other questions, including questions initiating repair. This study intends to show how students interpret such instructions; specifically, the analysis focuses on the initiation and sequential development of question-answer sequences. Preliminary findings suggest that questions are mostly used to stay on the topical agenda indicated by the test instructions and are typically produced: (a) to launch a new topic, and (b) to elaborate on the current topic. Overall, this study shows how students display their understanding of the construct being tested as they do being conversational partners in an institutional test setting.

Keywords: conversation analysis, questions, oral exams, assessment, Italian as a foreign language
Standardized oral exams: Challenges for students, teachers/examiners, and test constructors
Erica Sandlund¹, Pia Sundqvist¹ and Lina Nyroos² (¹Karlstad University, ²Uppsala University)

Tests are consequential for learners. Assessing learner performance warrants fulfillment of educational objectives and impacts grades and access to higher education; national tests are particularly consequential in this respect. As second language (L2) scholars have pointed out, challenges for testing L2 oral proficiency include topic familiarity, interlocutor proficiency, test-taker relations, and task understanding. Test standardization presents additional challenges to oral tests, as social interaction and external conditions for test administration are difficult to predict. In our paper, we present findings from the Testing Talk project (Swedish Research Council, 2012-4129). The project aims to provide a comprehensive description of interaction in and assessment of speaking tests, focusing on the speaking part of the 9th-grade national test in English in Sweden. In this paper, we discuss challenges for students, teachers/examiners, and test constructors respectively, related to standardization of L2 oral tests. Three datasets are used: interaction data (test recordings), survey data (teachers), and interview data (teachers). In particular, we address test-taker grouping, recording practices, test topics, test occasion (open test period: 20 weeks, spring semester), and teacher participation in the conversations. Our methodological approach to test interaction is Conversation Analysis; quantitative and qualitative methods are used for the other types of data.

Keywords: oral proficiency, standardized testing, L2 interaction, assessment, EFL

Reading comprehension tests in Denmark, Norway, and Sweden: A comparative analysis of construct definitions, task samples, and response formats
Michael Tengberg (Karlstad University)

Reading comprehension is a non-unitary construct. Both contextual factors and the balancing of different sub skills account for variance at comprehension measures. Consequently, different tests tend to measure different aspects of reading comprehension, and it seems that no single ‘best method’ is yet available. This presentation reports from a comparative study of national reading comprehension tests in the Scandinavian countries. The comparison concerns instruments designed to evaluate reading comprehension at the end of compulsory school in Denmark, Norway, and Sweden (student age 13–16 years). The study aims at determining 1) in what way construct definitions of reading comprehension vary between testing frameworks, and 2) in what way text samples, task samples, and response formats vary between tests in the three countries. The method is a comparative, classificatory content analysis, involving both qualitative and quantitative aspects of data. Primary data include testing frameworks and related national documentation, text samples, task samples, and scoring guidelines from tests in use 2011 through 2014. Results and conclusions concern specifically the type and level of demands that students face in the tests, and whether proposed interpretations and uses of test results are appropriate (valid) with reference to content, form, and procedure of the tests.

Keywords: comparative analysis, construct definition, reading comprehension test, response format, Scandinavia
Drama in the curriculum – a Nordic comparison
Eva Österlind (Stockholm University)

Proponents of drama in education have striven to make drama part of compulsory education, as an aesthetic subject for all children. The conditions for drama in education vary from country to country, and the development points in different directions. A recent discussion of drama within education has dovetailed with the concept of ‘aesthetic learning’ as a common area, versus subject specific learning in each art form. Another issue has been the recognition of drama as an art form versus drama as method for learning in other school subjects. And the relationship between drama and theatre has been debated more or less constantly over the years. These themes and issues are reflected in various curricula. How is drama/theatre presented and positioned in the Nordic countries’ National Curricula? The study concerns drama and/or theatre in the curriculum for pre-school, compulsory school and upper secondary school in the five Nordic countries; Denmark, Finland, Iceland, Norway and Sweden. A comparative analysis of the specific ‘drama profile’ in each country, and eventual trends or tendencies will be described and discussed.

Keywords: drama, curriculum, pre-school, compulsory school, upper secondary school

Is it possible to teach geometry in upper secondary school through drama in education?
Panagiota Kotarinou¹, Charoula Stathopoulou¹ and Alkistis Kontogianni² (¹University of Thessaly, ²University of Peloponnese)

The less researched era concerning drama is in the teaching and learning of mathematics in upper secondary school. For this reason, for exploring the different aspects of the teaching of mathematics that drama influences and highlights, a research has been conducted with twenty six 11th grade students in a Greek upper secondary school. In terms of the research methods used, we designed and implemented an interdisciplinary didactical intervention based on a teaching experiment methodology, regarding teaching through drama techniques the axiomatization of Euclidean and Non-Euclidean geometries. The use of ethnographic research techniques helped us to gather empirical evidence concerning students’ experiences. Analysis of data indicates that drama based teaching had positively affected students’ learning and retention of geometric notions, challenged their stereotypical beliefs around geometry, helped for new norms, practices and values to be formed and was also an alternative teaching approach in fostering students’ creativity and their becoming critical thinkers and decision-makers in the classroom.

Keywords: drama based teaching, geometry, retention of knowledge, creativity, students’ beliefs
Drama and theatre education research from 1995 until 2014 in Finland
Anna-Lena Østern (Norwegian University of Science and Technology)

The aim of this paper is to present a literature review based upon the PhD dissertations that have been accepted in Finland the last 20 years. What are the topics of these dissertations? How do the researchers approach their themes methodologically? From which epistemological positions do they pose their research question? What contributions to new perspectives on knowledge, and which concepts of what knowledge and learning is, can be found in these dissertations? The methods in use in the analysis in this review paper are mainly content analysis and discourse analysis. The dissertations can be considered arguments in an educational policy debate about the (lack) of importance of the arts in education and in society.

Keywords: drama and theatre education research, empowerment, critical discourse analysis, knowledge in the arts
Modelling the background variables of learning and the learning outcomes in 2010 FNBE evaluation
Manne Kallio, Mika Metsärinne, and Kalle Virta (University of Turku)

The Finnish National Board of Education (FNBE) has measured the learning outcomes of the 9th graders in the practical subjects in 2010. The measurement (n = 4,792) is internationally remarkable in the area. This research project was established 2012 to study the relation between the learning outcomes and the background variables using the FNBE data (n = 1,548). The results are published in 2014: pupils’ leisure time interests, pupils’ experiences of classroom techniques and attitudes are studied in relation to the learning outcomes. Furthermore, we have studied how the background variables are related to pupils’ readiness for self-regulated learning. In this paper the results of the project are summarised and different background variables are presented in a structural equation model with the learning outcomes. The model arouses some interesting viewpoints that could be discussed in comparison to other subjects in wider context as well.

Keywords: Learning outcomes, background variables, FNBE evaluation, structural equation modelling

Matriculation examination in philosophy and secular ethics
Eero Salmenkivi (University of Helsinki)

In Finland, upper secondary school ends with matriculation examination. This presentation focuses on matriculation examination tests in philosophy and secular ethics education since 2006 when these subjects got their own matriculation examination tests. The questions in both these tests are analysed from three different points of view. Firstly, their relation to the national core curriculum of the upper secondary school is canvassed. Secondly, the inter-disciplinary elements in the questions are discussed. Finally, the cognitive dimension of the questions is shortly analysed based on Anderson’s and Krathwohl’s revision of Bloom’s taxonomy of educational objectives.

Keywords: ethics, philosophy, matriculation examination, testing
Validity of school grades at the end of compulsory basic education
Raili Hilden¹ and Juhani Rautopuro² (¹University of Helsinki, ²The Finnish Education Evaluation Centre (FINEEC))

The study is based on the results from the national evaluation of learning outcomes in foreign languages in Finland spring 2013.

Research questions:
1. What is the correspondence between student achievement of the four linguistic sub-skills and the school grade assigned by their teachers?
2. What are the correlations between teacher assessment practices, student achievement, and the school grade?

Assessment tasks were given to pupils at the end of their compulsory basic education in listening and reading comprehension, speaking and writing in English, Swedish and German. Pupil data were completed by a teacher survey. The data was derived from 6502 pupils and 426 teachers from 290 schools. In the current core curricula the school grade is based on achievement and effort, with undetermined ratio. The preliminary results indicate that although the association between school grade and linguistic skills is seemingly moderate, there is a lot of variation in skills shown by pupils at the same grade level. It is also problematic to distinguishing effort from achievement. We invite discussion on the validity of school grades and their impact on pupils’ future study paths from the point of view of equity and justice.

Keywords: validity, language assessment, school grades

Lower secondary grades as determinants of students’ choice of academic vs. vocational track in upper secondary education
Sirkku Kupiainen, Risto Hotulainen and Jarkko Hautamäki (University of Helsinki)

The most important choice regarding one’s future income, health, wellbeing and even life expectancy is done in Finland at age 15 when students finishing the comprehensive school choose between the two tracks of upper secondary education, the academic and the vocational. In this choice, the division “good students go to the academic, poor to the vocational” is still largely in force. But as has been shown in the different curricular assessments of the National Board of Education during the past decennia (e.g., Ouakrim-Soivio, 2013), the school marks on which the choice of upper secondary choice is for the most part based on, are not compatible across schools, subjects, or gender.

Against this background, the present study focuses on the role of students’ 9th grade school marks in the choice of upper secondary education, on gender differences in the grades and in the choice, and on the cognitive and motivational factors predicting the choice and the marks. The data is drawn from the 13 500 students applying to upper secondary education in the Helsinki metropolitan region in spring 2014, of whom about 8 000 participated in a longitudinal multidisciplinary study following students’ learning, motivation and wellbeing during lower secondary education.

Keywords: choice of upper secondary education, development of learning and motivation during lower secondary education, gender
D5
GEOGRAPHY AND EDUCATION 4

Chair: Lena Molin and Gabriel Bladh
Room: AUR 212

Danish geography teachers pedagogical content knowledge
Søren Witzel Clausen (Aarhus University)

The presentation will be a part of a PhD. project, which aim is to generate new knowledge about how Danish Geography teachers Pedagogical Content Knowledge is expressed in the teachers professional language and teaching method and how their PCK might be developed during their career. The concept of Pedagogical Content Knowledge (PCK) is understood as an amalgam of Subject Matter Knowledge (SMK), Pedagogical Knowledge (PK) and Context Knowledge (CK) (Abell, S., 2007). There will be presented results from a questionnaire send to Geography teachers at 80 schools (app. 300 teachers) evenly distributed in the region of Middle Jutland. Half of the school being part of the larger cross-institutional research project QUEST. The questionnaire will be send out in the autumn of 2014, and they will later on be triangulated with interviews and classroom observations with some of the involved Geography teachers.

Keywords: Danish geography teachers, pedagogical content knowledge, questionnaire, interviews, classroom observations

Abilities in geography in compulsory school in Sweden
David Örbring (Lund University)

My paper session is about my research, which aims to seek answers to how geography teachers describe their work to develop students’ geographical abilities. Furthermore I want to relate the teachers’ descriptions of geographical abilities to how the term is used in a national and international context and in compare with other related terms such as geographical skills and competencies. My aim is also to relate the teachers’ description to the traditions of geography, to the view of knowledge and the teachers’ goals and to the purpose with their teaching. Also relevant is to do research about the intentions behind the policy documents for geography teachers. My research is a case study, consisting of various qualitative methods: reflections of recorded lessons together with the teachers’ and interviews with teachers’ and others which are involved in the process of making the policy documents. My research can contribute and relate to an important and relevant issue about abilities that young people need to develop and why they need to develop them. It is important for students today to develop abilities to contribute to a sustainable society, and to develop knowledge of the interaction between the individual, nature and society.

Keywords: abilities, curriculum, phenomenography, educational sciences
The present situation of and issues with the subject-matter expertise of social studies teachers in Japan: Focusing on the geographical aspect
Takashi Shimura and Satoshi Ibarak (Joetsu University of Education)

Both subject-content knowledge and pedagogical skills are crucial to be a good teacher. In Japan, where is greatly interested in the Finnish education system and Finnish students’ excellent performance, the national curriculum has adopted social studies subject that comprise geography, history, and civics fields. This requires that social studies teachers acquire both extensive subject-content knowledge and pedagogical skills. We conducted a survey to determine subject expertise of 152 primary school teachers and 38 junior high school social studies teachers. This presentation reports on the outcome of the survey, focusing on the geographical aspect. The survey results showed that differences in teachers’ expertise affected their confidences in geography/history/civics lesson practices, their ways of lesson development methods, and their views on the goal in social studies learning. A detailed data analysis revealed that geographical units related to local/regional research (including field surveys) are the most difficult in all social studies units.

Keywords: teacher’s subject expertise, social studies education, geographical education, Japan

Teaching geography in Sweden – Swedish geography teachers subject knowledge and teaching strategies
Gabriel Bladh (Karlstad University)

In this presentation I will highlight how Swedish geography teachers think about their subject and how they enact it. During the autumn 2012 a survey was conducted among 3000 teachers, who teach geography in primary and secondary schools (4–9 grade) in Sweden. Building on analyses of the questionnaire, some basic data about Swedish geography teachers are presented, and some issues about teachers’ different subject approaches and different teacher strategies are discussed. Geography teachers’ subject view varies with e.g. length of education, pedagogical approach and on what level they are teaching. In terms of teacher strategies, more student active approaches can be contrasted with more traditional textbook teaching. The results show that traditional study materials and textbooks are increasingly challenged by less structured forms of source material.

Keywords: national survey, geography teachers, subject knowledge, teaching strategies
Interdisciplinary challenge of human rights education
Manfred Kwiran (University of Bern)

The different aspects of human rights education are often dealt with on a meta-level. The complexity of the global relationships involved and the political consequences remain without concrete steps necessary. How does it affect our families, our different local groups and how does it influence special educational endeavours in process? Human Rights Education has a holistic approach, involving everyone and includes every member of our school, of the community, of the nation. It needs to become a normal approach and activity shaping our life-style, our everyday behaviour and action for the welfare of all.

Keywords: HRE advisory teacher, interdisciplinary RH commission, RH exhibition, RH projects in process, holistic approach

Holocaust education as a tool for education about diversity in educational settings
Fred Dervin, Mia Matilainen, Kaarina Lyhykäinen, Eero Salmenkivi, Arto Kallioniemi, and Anna-Maria Veijo (University of Helsinki)

This presentation deals with Holocaust education in the Finnish educational context, presenting how it has been integrated into curricula (2003, 2004) and gives some examples of how textbooks in RE, history and philosophy deal with the Holocaust, especially after the Holocaust was further emphasized in curriculum in 2010. Additions concerning the Holocaust were made to core curricula of both the upper secondary school and grades 7-9 of comprehensive school. We conclude with an examination of the challenges facing Holocaust education in the school curricula and the opportunities it offers as a tool for education about diversity in diverse, pluralistic educational contexts.

Keywords: Holocaust education, textbooks, Finland, Framework of Curriculum, diversity

Holocaust and themes related to existential philosophicy – enlightening similarities and differences between different subject areas through a “common third”; virtual cooperation as a means of intensifying and diversifying the didactical discourse
Jesper Garsdal¹ and Michael Penzold² (¹VIA University College, ²Ludwig-Maximilians-Universität)

How can (or can’t) students with the help of internet platforms cooperate on value based issues across different subject areas, national borders and through a common lingua franca, namely English? Will they be able to cooperate with students abroad, who offer complementary skills to their own knowledge? These are questions raised in the course of a cooperation project between a class of Danish students at VIA-UC Aarhus on the one side and a class of German students at LMU München (in both cases are the students studying to become teachers). The students will be
organized in local groups (LG) which each will develop didactic reflections related to their own “local theme” (LT) in relation to different value based subject matters (existential philosophical themes and Holocaust education). The cooperation is organized in trans-local groups (TLG); each TLG consisting of one German and one Danish LG. The students will in TLG negotiate and choose a common trans-local theme (TLT), which they think fruitfully can be related to each of the two groups’ LT and used as common communicative categorical frame. The research questions focuses on how collaboration through development of joint categories both might throw new light over the relation between learning and edification, and might help in contributing to resolve important scalability issues in Global Education.

Keywords: subject-based, teacher-education, edification, IT-didactic, values
Physical safety as an element of safety culture in learning environment

Matti Waitinen (Helsinki City Rescue Department)

Safety culture in learning institutions is a mixture of physical, psycho-social and pedagogical perspective on learning environment. This research is a part of a larger research project in safety culture in learning institutions in basic education. This part focuses on physical safety which is a key element in fulfilling the law of Basic Education ACT 628/1998 statement: the student has a right to a safe learning environment. Basic elements in reconstructing safety in schools are either active actions (e.g. practiced protocols) or passive ones (e.g. fire safety constructions).

The safety culture in schools (N=14) is analyzed on the basis of audits in physical leaning environments in the capital area of Finland. The research question is: How safe is a learning environment on the basis of physical audit? The result can vary between 1,00–0.00. The best school was scored 0,84 points while the weakest school 0,42. Safety is highlighted in learning institutions but not all the personnel consider it as their personal duty.

Keywords: safety culture, basic education, physical safety, learning environment, safety audit, internal audit

Tutor audit - a tool in evaluation of safety and security management in schools

Tiina Ranta¹ and Eila Lindfors² (¹Laurea University of Applied Sciences, ²University of Turku)

As for the safety culture, it is an organization’s ability and willingness to comprehend how the safe conduct is best demonstrated, what kind of risks are involved in the functioning of the organization and how to prevent them, as well as the ability and willingness to act with safety in mind, preventing dangerous situations from happening and promoting safety on all levels (Reiman 2008). In schools safety culture is usually guided by norms and regulations instead of having the basic task of an organization as a starting point. We do not know how the safety culture is conducted in schools because there is little research on it.

TUTOR is a quite new audit-method to evaluate safety and security management in organizations. Eight areas are evaluated in TUTOR Audit: 1. Management 2. Functional risks 3. Legal compliance, fulfillment of required measures 4. Documentation 5. Building and safety technology 6. Safety education and training 7. Safety communication and 8. Continuously measure on results and effects. This study presents the TUTOR-audit in educational organizations. A sample of ten basic education schools is used as an example. The results and the method will be considered critically in relation to the definition of safety culture.

Keywords: safety and security management, safety culture, basic education, TUTOR-method, safety audit
Running risk prevention systems - Teachers' experiences in primary school craft education  
Atso Tulosmaa¹ and Brita Somerkoski² (¹University of Eastern Finland, ²National Institute for Health and Welfare)

Safety education is an important part of craft learning. Craft education and craft learning environments naturally raise the safety issue as an integral part of a learning process. In choosing a risk prevention system as a part of a safe learning environment the dependence on results of science-based research has been limited. Information about choosing the risk prevention system is provided only by a supplier. However systems acquisition is a long-term investment.

The research question of this study is: What was the main reason to choose the current risk prevention system into craft learning environment and how the system works? The research is qualitative and focuses on craft teachers’ experience in choosing and running the risk prevention systems. The research is based on a sample of 20 primary school craft teachers. Significance of the research is to produce new knowledge of the variety of risk prevention systems on the basis of teacher experience. As a conclusion of the research a finished reference list of the issues taken into consideration in choosing the risk prevention system will be presented. This will help educational institutions, which are going to construct a renovation in their craft learning environments in next few years.

Keywords: risk prevention, craft learning, safety didactics, safety education, learning environment
Ethical responsibility as an embodied mediator between past–present–future: An educational possibility to oppose violence?
Silvia Edling (University of Gävle)

The 20th century was in many Western countries characterized by school reforms based on democratic values that introduced obligatory school for all children independent of their social background. In the Swedish SOU 1948 the reforms were described as a necessary response to the monstrosities of the two World Wars. It was pointed out that so as to avoid such mass-violence the entire conception of school needs to change, from a totalitarian standpoint stressing hierarchy and unity, to a pragmatic view in which unique and free individuals’ feelings of responsibility for the community and others’ life situation become important to acknowledge and stimulate. Similar ideas can be found in research on violence stemming from critical directions: in order to counteract various forms of violence individual’s sense of responsibility for unique people’s sufferings in the past and present needs constant attention. When this sensitivity decreases, violent acts threaten to expand and become normalized in society. Yet, the Swedish education after the Post-War period has been grounded on moral developmental theories in which children are to be regarded as “not yets” that first require proper education in order to become morally responsible future citizens. Paradoxically, the focus upon the future risks overlooks the dynamics in the presence where violence at times takes shape and which is intimately interwoven with past events. In this light, the paper explores Ewa Ziareks’ notion of ethical responsibility as an educational option to challenge the elusive presence of violence inexorably connected to its historical heritage, and her notion of ethical responsibility as an embodied and mediating link between the past–present–future.

The moral-ethical objectives in history teaching – analysing key texts of history education from the turn of the Millennium
Jan Löfström (University of Helsinki)

The development of historical consciousness has been studied extensively, and there is also a vibrant tradition of studies of moral consciousness and the development of moral judgement. However the relation between historical and moral consciousness remains largely untheorised and unexplored in research. A bridge between theories of historical and moral consciousness could help better understand the connections between people’s experiences of temporality and historical agency on the one hand, and their experiences of moral order and justice on the other hand.

The paper discusses the work of selected specialists in the field of history education (history didactics) in the recent 30 years from the perspective of what they have said about developing
students’ moral-ethical thinking in the context of history teaching. The prospect of moral-ethical development has often been implicit in the framework of discussing the development of students’ historical empathy and in theories of the types of historical consciousness, for example. Where exactly have these theories of history education located the objectives and challenges in moral-ethical development (if they do so in any visible way) is the question addressed in the paper.

**Patterns of reasoning – A tentative model to analyse historical and moral consciousness among Swedish 9th grade students**
Niklas Ammert (Linnaeus University)

Students find ethical and moral issues central and interesting when they interpret history. History can offer explanations and references to moral values that are still valid – or not valid – in our time. At the same time moral values provide conceivable contexts that connect students to the past. Views on interrelations between the past and the present seem to interact with the students’ moral foundations, questions, interpretations, understanding or repudiation. On a societal level similar phenomena can be identified when groups of people turn to history, either to handle challenges or to apologize or heal wrongs of the past. Furthermore the National Curricula prescribe ethical dimensions in school education, not least for the subject of history.

In this pilot study Swedish 9th grade students discuss a text from Christopher Brownings’ book *Ordinary Men*. The students’ answers are analysed in a theoretical model including different types of historical consciousness and different aspects of moral reasoning. The aim is to study if there are patterns of interrelations and, if so, how these patterns are manifested.
A systematic review of Finnish studies on writing in basic education

Pirjo Kulju¹, Merja Kauppinen², Mari Hankala², Elina Harjunen³, Johanna Pentikäinen⁴ and Sara Routarinne⁴ (¹University of Tampere, ²University of Jyväskylä, ³Finnish Education Evaluation Centre, ⁴University of Helsinki)

For several years Finnish students have succeeded well in large, international surveys on reading skills. However, less attention is paid to productive skills of young students even though writing is an everyday activity both in schools and out of school contexts. Furthermore, the digital turn has transformed the literacy practices and multiplied the functions and ways of writing.

The main aim of our systematic review was to investigate how much and what kind of research is done on writing in Finland during the 2000 century. The main focus was on learning the writing skills as well as in the pedagogy of writing in basic education. An essential question was also to define the writing beliefs constructed in the studies.

The data were retrieved using major search engines, and it consists of 78 peer-reviewed studies, doctoral dissertations and national surveys on writing. The results show that Finnish writing studies group into three main bias: psychological, linguistic and pedagogical which also represent variable beliefs of writing. This leads into a highly scattered picture of the field. In our presentation we will discuss the results in more detail and consider the results in the light of the school pedagogy.

Keywords: writing, literacy, learning, teaching, basic education

Writing instruction and assessment in lower secondary school – a case study

Anna-Maija Norberg (Stockholm University)

The aim of the paper is to investigate the relation between instruction and subject/content related assessment in Swedish (first language). Assessment is here seen both as instruction embedded and connected to grading. A second aim, connected to the theoretical framework, is to explore if and how Brookhart’s concept assessment event (1997) can be related to Barton’s concept literacy event (2007).

Data are based on video and audio recorded classroom observations (grade 7) through two writing units, a fairy tale and a book review, complemented with material based interviews with the teacher while assessing students’ final texts. Discourse analysis (Ivanič, 2004) complemented with analysis of the questions, answers and feedback in relation to types of feedback and subject content have been used.

Main results show that different discourses were identified in the two writing units. Discourses in instruction were almost identical with assessment discourses related to students’ texts. Further,
assessment events during instruction are formative and support summative assessment, and assessment events tend to occur in literacy events when important content comes up. Content that is highlighted in instruction is also important in assessment of pupils’ writing.

Keywords: writing instruction, assessment, literacy event

Developing a shared practice for reading and writing instruction. A classroom-based study in a school for children with intellectual disability
Åsa Lyrberg (Stockholm University)

This presentation is based on an intervention, conducted in the Swedish compulsory school for children with intellectual disability, grundsärskolan. Previous research (Berthén, 2007; Reichenberg, 2012; 2013) and a report from the Swedish Schools Inspectorate (2010) indicate that students in grundsärskolan are not given adequate opportunities for literacy learning in social interaction with their teachers and peers. The aim of this study was to design, implement and analyze lessons, focusing on a certain object of learning: The capability to distinguish between words and letters in continuous text. Another interest was to investigate whether analyses of research lessons, planned by teachers and researcher together, might increase students’ opportunities to develop literacy capabilities. A theoretical framework combining sociocultural theory, variation theory (Marton & Pang, 2006; Runesson, 2006) and Clay’s (1991) theory of early reading and writing instruction was used in order to design a series of three lessons, following the method of Learning study. Results show that variation of content and participants’ interaction are mutually related in the process of constituting the object of learning. Thus, learning opportunities depend on how the object of learning is focused by variation and how the participants’ interact in relation to this.

Keywords: special education, students with intellectual disability, emergent literacy, sociocultural theory, variation theory, practice-oriented research
Traces of methods for the teaching of writing in EFL textbooks
Aud Solbjoerg Skulstad (University of Bergen)

This paper reports on a study of the teaching of writing in Norwegian textbooks for learners of English as a foreign language (EFL). The Norwegian national curriculum for the teaching of English does not recommend any specific method for the teaching of writing. The study aims to identify what textbook writers do in response to this freedom. Methods and approaches to the teaching of writing suggested or implied in these books are identified. Qualitative analysis has been used. Five textbooks for the 10th grade (15 to 16 year olds) have been analysed. Preliminary results show that some of the textbooks present model texts similar to what we find in teaching approaches based on the Sydney school. We also find elements of genre-based pedagogies (e.g. Hyland 2003) and process-oriented writing.

Keywords: teaching of writing methods, EFL textbooks

Exploring English teachers’ reasoning about the texts they choose for their lower secondary learners
Anja Synnøve Bakken (Nord-Trøndelag University College)

Most teachers rely on the textbook when they choose texts for their learners. Still, as other teachers, the twelve English teachers in my study seldom cover the whole textbook. Therefore they need to make decisions about what to read and what to leave out. Moreover, they often find texts from other sources as addition to or replacement for textbook texts. These "other texts" might be verbal print texts or multimodal representations. In my analysis of teacher interviews, I explore the words these teachers use when they prioritise and give value to texts. I use perspectives from critical discourse analysis (CDA) to examine how characteristics of sometimes conflicting discourses about texts in the teaching of English create tension or merge in these teachers’ talk. In addition, I discuss the possible consequences of their reasoning on the associated teaching practices. The current Norwegian Subject Curriculum for English encourages exposure to a diversity of texts and suggests how different texts might benefit the learner. Still, when these teachers talk about texts, there is seldom a one-to-one relationship between their explanations and the descriptions in the curriculum. Rather, they tend to lean on shared understandings about the value of texts among their colleagues and within a wider community of English teachers.

Keywords: CDA, literacy, reading, multimodality, English teaching
Teachers' strategies for supporting adult second language learners
Marianne Seppä (University of Helsinki)

The study presented here examines Finnish as a second language teachers’ strategies for supporting adult second language learners in the context of integration training. This paper combines the organisational and pedagogical views on teachers’ strategies in order to improve integration training in Finland. The paper will present fieldwork experiences, which have a social significance and also will offer information that helps L2-teachers to plan their instruction to make it more effective.

The qualitative research data consists of documents describing the theoretical framework and instructional resources of second language programs in addition to semi-structured thematic interviews of Finnish as a second language teachers from the Helsinki Capital Region. The data was analysed with the methods of content analysis. The results indicate that there are many effective practices. Teachers considered it important to take different learning styles into consideration and to use variable learning methods. Especially, co-operative learning methods were seen as effective. Differentiated instruction in one form or another was also seen as necessary in classrooms. A lack of resources was seen as a key challenge facing teachers.

Keywords: Finnish as a second language, second language acquisition, immigrant training, adult education
Is the supervision of student teachers during school practice sufficiently subject specific?
Anne-Brit Fenner (University of Bergen)

Theories of supervision have mostly been developed by scholars with a footing in general pedagogy rather than subject-specific didactics, emphasizing communication and reflection on practice (Dewey 1933, 1966, Schön 1983, Handal & Lauvås 1999). Over the past decades theories of situated learning and communities of practice (Lave & Wenger 1991, Wenger 1998) have also been important influences on supervision in schools. More recently scholars (Kvale 1998, Skagen 2011) have questioned certain aspects of communication in the supervision situation and have emphasized the need for more subject-related content, based on the assumption that different subjects are taught differently.

This presentation discusses briefly the various concepts related to supervision of future teachers and the interpretations of these concepts, including definitions of and views on reflection. It also presents the results of a research project carried out, over the past two years, on the quality of subject-specific supervision, as experienced by groups of student teachers of English at the University of Bergen. Finally it looks at possible ways of improving subject-specific didactic supervision in teacher education, including experiences of using the European Portfolio for Student Teachers of Languages. A reflection tool for language teacher education (Newby et. al.2007).

Keywords: subject-specific supervision, communication, reflection, improvement

Comparing the objectives expressed in the curricula of two class and subject teacher education programmes
Harry Silfverberg (University of Turku)

In this presentation, we compare the objectives presented in two curriculum texts of class and subject teacher education programmes using both the qualitative and quantitative text analyses. Modern text analysis tools (e.g. Roberts, 2000) enable researches to investigate large text masses quicker and more easily than before. Keyword in context -searches have become easier and researchers can construct own dictionaries (i.e., the sets of content categories) describing the themes, which have been found to be characteristic according to the preceding qualitative analysis of the text or according to theory-based reasoning. When the themes in these dictionaries are constructed to reflect the meanings intended by the texts sources, consequent analyses are more like representational thematic text analyses. Analyses of word-counts and multidimensional scaling of the key concepts of the texts yield inferences about the predominance of themes in texts. In this study, we examine the question about how cognitive, educational and didactical
approaches are emphasized in the curricula. Furthermore, we examine the emergence of questions ethical, moral and social and educational policy aspects in the texts.

Keywords: teacher education, class teachers, subject teachers, curriculum study, text analysis

Guiding teacher students in practice
Lene Vera Wagner and Inger Ubbesen (VIA University College)

We present a combined study and literature review that map stakeholder’s perception of good practice guidance in teacher education. In the new teacher education act in Denmark (LU13) guidance is a core activity in the scaffolding of teacher students individual and collective study activities. We present results about how different concepts relating to practice guidance exist in a tension field between existing guiding perceptions and new contextual demands in LU13. The study is based on a series of narrative semi structured group interviews with students, teacher educators, administrators and guidance teachers in schools. The interviews have been analyzed using a phenomenological-hermeneutic method. Through a process from naive to structured and condensed reading on the basis of Persson and Sundins reading of Ricoeur's hermeneutics (Carina Persson and Karin Sundin) has central points been separated and reflected in the light of recent research in the field. Using results from the state-of-the-art research from the literature review and results from the study, we will present a set of guidelines on how the guidance of students in practice can develop further.

Keywords: guiding teacher students, practice guiding, teacher education
What can we actually know about history as a subject matter?
Heidi Eskelund Knudsen (University College Lillebaelt)

The paper concerns classroom research in history as a subject matter. The paper is based on a recently defended and published dissertation where history is described as a subject of discrepancy, since students and teachers often express to understand the subject in one term during their practices - while another during interviews. The paper presents two examples of how the discrepancy reveals itself.

The aim - and following part of the paper - is to bring forward the issue of research reflections and considerations for possibilities and limitations in classroom research. The interest in classroom research in history education (i.e. history didactics) seems to be increasing among researchers these years. Along with this interest methodological considerations regarding the entrance to “subject practices” follow and raise questions on the kind of influence the researcher has on the practice that he/she wishes to uncover during classroom visits. Furthermore, and as a result, the researcher needs to consider data – i.e. the character and potential of the collected and produced data in the light of the overall pursue of describing and establishing conclusions about history as a subject matter. The discovery of history as a subject of discrepancy is a result of thorough comparisons between sound-recorded classroom situations and teacher-student interviews about these situations. The paper includes experiences from classroom research completed in five history classes in Danish upper secondary schools during the year 2010/11.

Keywords: history teaching, understanding history, classroom research, history as a subject of discrepancy

The role of students’ contextual knowledge in interpretations of historical sources
David Rosenlund (Malmö University)

In this paper the relation between students’ contextual knowledge and their interpretation of historical sources is studied. The empirical material in the study is student responses on a task where they are called upon to identify and explain certain opinions in the past and in the present. The responses have been examined in order to describe how the students make interpretations based on the information in sources and in what ways contextual knowledge is used in this process. One section in the paper also deals with how students make connections between temporal dimensions using historical knowledge. Students' constructions of historical knowledge are presented as taking place on of different levels and a tentative model of progression for the use of contextual knowledge will be proposed in the paper. The conclusion is that contextual knowledge is crucial in shaping the interpretations of the sources, and thus also in shaping the students' understanding of the past.

Keywords: historical sources, interpretation, contextual knowledge, history education
How children interpret images in historical picturebooks
Arja Virta (University of Turku)

One of the early forms in which children learn about the past before the formal history instruction at school are historical fiction picturebooks. This presentation deals with children’s way of understanding images of the past in historical picturebooks, and their way of judging the veracity of the visual presentation. The data were collected in 17 focus groups with children from Grades 2 through 7 (n = 66). The object that was used as the basis for discussions were Koiramäki (Doghill) books, which describe life in Finland in the 19th century. Findings suggest that children can distinguish between fantasy and what they see as real history, but do not question the realism or veracity of the images. They had difficulties in explaining why they found the descriptions as real. As to the change and differences between the past and present, they referred to practical differences in the way of living but also to more abstract issues. Some participants expressed sophisticated ideas of history. The findings encourage to paying attention to the informal processes of historical learning.

Keywords: historical picturebooks, children’s historical thinking, focus groups
Teachers´ concerns when adopting “Responsible Research and Innovation” into teaching modules
Miikka de Vocht¹, Antti Laherto¹, and Ilka Parchmann² (¹University of Helsinki, ²University of Kiel)

It is known that reforms in schools are unlikely to happen if teachers are not involved from the beginning of the process, and teachers’ attitudes towards a learning innovation play a ‘make-or-break’ role in the success of that innovation. Therefore, the project IRRESISTIBLE (FP7-SCIENCE-IN-SOCIETY—612367) engages teachers in Communities of Learners (CoLs) to develop teaching modules that will be implemented in schools and science centers/museums. In CoLs the teachers work in collaboration with each other, research scientists, experts of informal learning environments, and science education researchers.

The CoLs are guided by “Responsible Research and Innovation” (RRI), a framework made by EU for bridging the gap between science and society. RRI and its key-points (e.g. engagement, ethics, equality…) are also guiding themes for all the modules. This puts the teachers in a position where they have to adopt and apply abstract ideas in practice.

This study looks into the concerns teachers face during IRRESISTIBLE. We employed the Concern Based Adoption Model (CBAM) and a related questionnaire measuring 6 stages of concern. Results will be discussed in reference to the abundant literature on teachers’ concerns about educational innovations published during the past 30 years.

Keywords: teachers’ concerns, professional development, communities of learners, Responsible Research and Innovation

Teachers´ perceptions of purpose and aims for science education in primary school
Ann-Catherine Henriksson (Åbo Akademi University)

Science education in primary and secondary school are traditionally looked upon as “a pipeline” to further studies in science. Parallel to this point of view concepts and perspectives as humanistic science (Aikenhead, 2006), scientific literacy (e.g. OECD, 2013) and science in society (EU, 2014) exist. National curriculum planning can be influenced by these different perspectives (Roberts, 2007). Sjøberg (2000) describes four different arguments for science education in school. This study focuses on primary school teachers´ perceptions of purpose and aims for science education. The 15 teachers were interviewed in spring 2012. As results from study analysis the teachers´ motives for science education in primary school could be separated to four different categories. As aims for science education for pupils in primary school the teachers mention for example pupils´ increased interest for science and nature, more knowledge about sustainable development...
issues, general understanding of basic concepts and phenomena in science and the learning of scientific working methods.

Keywords: science education, purpose, aims, primary school teacher

**Flipped classroom, active learning?**

Thomas Dyreborg Andersen, Peter Jespersen, Kristian Kildemoes Foss, Henrik Levinsen, Marie Lohmann-Jensen, Morten Philipps (Metropolitan University College)

Action research is conducted in three physics classes over a period of eighteen weeks with the aim of studying the effect of flipped classroom on the pupils' agency and learning processes. The hypothesis is that flipped classroom teaching will potentially allocate more time to work actively with the teaching subject compared to more traditional teaching, where introductions and theoretical monologs conducted by the teacher prevail. In addition it is assumed that the pupils learning processes move towards more independency and metacognitive thinking. During the study period interventions are conducted in three different phases corresponding to different teaching sequences. During the first phase the classes are taught as they are usually taught. During the next two phases classes are taught on the basis of a common understanding of the flipped classroom teaching model obtained during a 4 day didactic workshop with the involved teachers. One of the demands of the didactic design is to include a video embedded in a formative evaluation sheet produced in Google Drive by the teachers themselves. The didactic analysis of the collected audio and video recordings will be presented at the conference in order to address the hypothesis.

Keywords: flipped classroom, action research, teaching, learning
What can and should religious education achieve?
Geir Skeie (Stockholm University)

Curricula of religious education have aims related to a balancing of knowledge and formation on the one hand and on the other hand they are trying to balance intercultural education towards national heritage. These ‘balance sheets’ can be traced in curricula, in classroom teaching and in the public and professional discourse about religious education. The Nordic countries, in spite of having much in common, have been influenced by different organisational models and different pedagogies and therefore are interesting to compare. The paper maps some of the issues mentioned based on material from Nordic countries and discuss some of the challenges this raises for religious education research in particular.

Keywords: curriculum, intercultural education, national heritage, Nordic perspective

Worldview education in relatively autonomous schools
Siebren Miedema (VU University Amsterdam)

In my presentation I will try to make up the balance sheet regarding the most adequate positioning of worldview education within the setting of elementary and secondary schools. I will base my theoretical reflections on empirical research outcomes: the insights from our recent research on teachers and school leaders of secondary denominational schools; insights from earlier research on principals of denominational elementary schools and on parents school choices for these schools; the insights presented in the dissertation project of my PhD student Coby Speelman on teachers in protestant, islamic, catholic and state elementary schools. What is still disturbing to me in the discussion – at least in my country the Netherlands – is the open or hidden relationship taken into account with religious institutions casu qua the churches, mosques or temples. This still leads to the preference for what I want to coin as para-ecclesiastical rituals and practices instead of taking a pedagogical point of departure and posing the question: In what way can relatively autonomous schools interconnect worldview education with the other domains of education in the school with an eye on the self-responsible self-determination of children and young people?

Keywords: worldview education, self-responsible self-determination, para-ecclesiastical rituals and practices, autonomous schools
Lived religion – religion embedded in the body and materiality
Kerstin von Brömssen (Karlstad University)

In the commentary to the Swedish syllabus for Religious Education (2011) it is argued that lived religion is highlighted to a greater extent than previously. One of the basic questions in education relates to which subject content teachers and students together choose to study. What is the meaning and interpretation then of the concept of lived religion that should be made visible in the curriculum? Is the description in the commentary a relevant description? And if so, what is the difference between lived religion and other perspectives in the study of religion? In this paper I will discuss two researchers in the field of religious studies (sociology) who claim the relevance of studying lived religion, namely Meredith McGuire (2008) and Nancy T. Ammerman (2007). What then does the concept of lived religion imply for these two researchers and how does their work relate to the interpretation of the concept in the Swedish commentary? When “changing times” in education, is the concept of lived religion part of a change in Religious Education?

Keywords: subject content, lived religion, “the long revolution”, body, materiality
Counseling in teacher education – State of art
Dorthe Busk Mølgaard and Linda Breum Andersen (VIA University College)

We report on a state-of-art literature review on research about counseling in the Nordic didactical research literature between 2008 and 2014. The research question that guided our review was: What does the Nordic didactical research conclude about good counseling in teacher education?

This review is part of a R&D-project that experiments with various counseling modalities in the newly reformed Danish teacher education. We identified eleven articles that is the basis of our meta-analysis. From articles about counseling in practice teaching we draw on the following themes: insecure role of the teacher counselor, teacher students’ experience of being shown how to teach and being left alone with reflections on theory and practice. Few articles deal with cooperation between institutions. Our review indicates a need to develop new knowledge and verbalizing about the genre counseling in teacher education.

The responsibilities of coeducation as part of teachers’ professionalism - The case of pre-service teacher
Ritva-Liisa Järvelä, Merja Kauppinen and Marja Kemppinen (University of Jyväskylä)

Just like all education systems, teacher education is facing challenges in an increasingly global and technological world. Among its most important goals teacher education is concerned with ethical questions of teaching. What is worth teaching? What are the responsibilities of the teacher? Teacher students specializing in mother tongue and literature, and IT deal with themes of responsibility during their teaching practice period, where they prepare and carry out their instruction in small groups using peer teaching methods. We discuss collegial responsibility in teacher education. Our research questions are: 1) What kind of questions of responsibility do the pre-service students encounter during the coeducation? and 2) What is the significance of collegial responsibility regarding growth towards teachers' professionalism? The data consist of thematic group discussions, reports of pre-service teachers and observations made by two didactic supervisors during the training sessions. The students understood that it is possible to have a coeducation which is real and has a profound effect on the structures of school. The biggest challenge facing teacher education with regard to coeducation is to offer experiences and thus to change attitudes: growing towards a new school culture within the old structures of school levels and different subjects.

Keywords: coeducation, teacher education, teacher’s responsibility, peer teaching
Professional guidance in teacher education
Tina Kjær and Frede Krøjgaard (VIA University College)

The current transformation of teacher education is demanding increased efficiency especially in the form of attaching more importance to students’ independent studies. Hence guidance of students is expected to play a bigger part. So far the predominant theoretical understanding of the concept of guidance has been linked to the “Action and Reflection Model” in which pedagogical authority is scaled down in order to avoid suppression of students (Skagen 2013). How does this view fit with the current notion of professional guidance among the actors in practice? What is the meaning assigned to guidance in practice and which circumstances related to guidance is considered significant? Do the supervised and the supervisor share view on this? Our presentation will be focused on professional guidance in teacher education understood as an act which is characterized as such by actors in teacher education - students, teachers and leaders. “Dimensions” in guidance are identified based on a phenomenological-hermeneutic analysis of 6 focus group interviews with homogeneous groups of actors and the relevance of the analysis model’s dimensions as a mean to prescribe more quality guidance will be discussed.
Designing didactic design
Jan Fogt (Metropolitan University College)

In recent years an understanding of didactics as a form of design has gained increasing momentum, despite the fact that some empirical evidence seems to indicate that the notion of design is counter-intuitive as related to didactics. A review of the literature further shows – at least – two characteristics of the use of the concept: 1) ‘Design’ is being used in many differing ways referring as well to various forms of processes as forms of products, thus making it an extremely ‘sensitizing concept’ (Bryman), perchance even a ‘floating signifier’ (Laclau & Mouffe); 2) ‘Design’ often occurs in contexts where digital technology, ICT and media are reflected on in a praxeological rather than definitorial way. This state of affairs makes it clear that it is in fact rather unclear what one speaks of, when one speaks of didactic design.

Going back to Herbert Simon’s notion of a ‘science of the artificial’, my presentation will present an attempt at a definitorial understanding of the ways in which ‘design’, ‘didactics’ and ‘technology’ relate to each other and – in the light of this definition – discuss consequences for and findings from educational practice taken from my ongoing PhD-project ‘ICT and Media in the Subject Danish (Mother Tongue Education) in Teacher Education’. The presentation will include examples of student productions involving mediated didactic designs.

Keywords: ICT pedagogy, didactic design, technology in education, teacher education, mother tongue education

Fab Lab in education - a Danish school project
Steen Lembcke (VIA University College)

In 2014, the Education Departments in the Danish municipalities of Aarhus, Silkeborg and Vejle decided to use fabrication laboratory principles in teaching in several primary schools. Fab-learning and fabrication pedagogy are based on ‘Maker culture’, a global subculture in which young people in informal environments use both traditional analogue technologies and new digital technologies for experimentation and design, with the goal of developing innovative products for their own use or for sale. World-wide fab labs are increasingly being adopted by schools for project-based education.

Project aim: This project examines how one school implemented fab-learning pedagogy in the teaching of Danish and Mathematics. Research questions: What are the benefits and drawbacks of Fab Lab workshops for teaching and student learning? How are the prescribed learning goals incorporated in the design of the fab-learning course?

Since 2005, Stanford University has been the focal point for the development of the fab-learning pedagogy. Fab Lab workshops and fab-learning concepts are considered by researchers Paulo
Blikstein and Dennis Krannich to be an appropriate platform for learning. Learning takes place in an authentic, personal and collaborative context, where students can pass through several of stages of concept, design, reflection, prototyping, and learning from their mistakes and through repetition and improved performance. Paula Hopper, a science educator at San Francisco’s Exploratorium science museum, describes the constructivism in the pedagogical concept with reference to Seymour Papert’s work.

Theory and Method: The project uses the method of Design-based Research. In collaboration with two teachers and two student teachers, we have organized an intervention in which students must work together to develop and produce an artefact in the school’s Fab Lab. Inspired by the Brightworks School in San Francisco (founded by Gever Tully), we planned for a revised didactic model called "The Arc". The implementation of the project will take place in January 2015, and empirical data will be collected based on observations of group interaction processes, knowledge-sharing and products. During our session, we will present our findings and discuss the development and sharing of Fab Lab learning concepts.

Keywords: Fab Labs in education, constructivism, design experiment, learning environment

**Transforming poems into poetic film**
Ove Nielsen and Raffaele Brahe-Orlandi (VIA University College)

Digital tools are thought of as appropriate in modern education to lead to multimodal learning. However few research projects have dealt with transduction as a key concept in teaching learning designs. Kress (Kress 2010) defines transduction as remaking meaning across modes.

This research developed and tested a design where students (12-14 yrs.) were asked to transform their interpretation of poems into poetic film. Our main research question is: what do students learn when working with this kind of transduction? The project involved working with two primary school classes over a two week period. Data was collected from video observations, interviews and materials produced during collaborative planning sessions with teachers.

The main findings are: Only when students were able to make connections to the meaning of poems they were able to transform them into personal and emotionally meaningful products. In those cases students were not only remaking meaning but redesigning across modes.

Keywords: transduction, multimodal learning, primary school education, Danish
Recent and early immigrants’ achievements in mathematics  
Jöran Petersson (Stockholm University)

Achievement in mathematics, science and language is often used as national indicators and a personal bridge for future opportunities to work and education. One Swedish school law defines a ‘recent immigrant’ as the first four semesters during school years 6-9 of immigrated students. In an ongoing research project, the distribution of students’ different solving strategies in a multilingual classroom is studied through a test. Preliminary results are that students who immigrated in school years 8-9 in many cases show higher mathematical quality than those who immigrated during school years 1-7. This can be interpreted as a partial exclusion from taking a productive part in the mathematics classroom due to being second language learner. This raises questions of extending the definition of recent immigrants to all newly immigrated students disregarding their age and thus allow all newcomers extra support needed to include them in the mathematics classroom.

Keywords: mathematics, recent immigrants, language support, inclusion

Not only teachers are actors in the Swedish assessment system  
Viveca Lindberg (Stockholm University)

A common feature of the debate on and in the governance of the assessment system of the Swedish school, as well as of research produced during the past decades, is a critique of teachers’ assessments of students’ knowledge. The issue of this paper is to illuminate firstly what parts are included in the assessment system, and secondly the different actors involved (directly and indirectly) in the system, and thirdly how these contribute to continuously changing the conditions for teachers’ assessment work. The analysis is based on official reports of the Swedish Government, evaluations by the Swedish National Agency for Education, the Swedish Schools Inspectorate, and the Swedish National Audit Office, as well as Swedish research within the field. The consequences of continuous changes for teachers’ chances to develop assessment competency are discussed.

Keywords: Assessment system, actors, governance, teachers

Teacher-intentionality in lower secondary school under the influence of final assessments in writing literacy  
Solveig Troelsen and Thomas Iskov (VIA University College)

To what degree do teachers let the final assessments in mother tongue writing literacy influence their didactic intentions and decisions? The presentation refers to a project exploring how teachers perceive and understand the final assessments in writing literacy, as well as the impact
of this understanding on teachers’ intentionality and planning practice. The research has been
designed as an exploratory, qualitative, phenomenological, and hermeneutical case study of two
9th grade teachers in a Danish secondary school - inspired by Interpretative Phenomenological
Analysis (IPA) as presented by Smith, Flowers and Larkin (2009). The main focus is on the
teachers’ didactic reflections and attention prior to teaching in class. The focus of the presentation
is twofold: 1) reflecting the theoretical framework of the project and 2) presenting data and
preliminary interpretations.

Keywords: Teacher-intentionality, didactics, assessments, teachers’ experience, mother tongue
education.
**Interaction and embodiment in sloyd teaching**
Anniina Koskinen and Pirita Seitamaa-Hakkarainen (University of Helsinki)

The aim of the study was to describe the embodied interaction between a teacher and students in the sloyd class from the sociocultural viewpoint. We focused on the embodied interaction between a teacher and a student and analysed how the physical materials and the tools mediate the craft knowledge. The study was based on the videographic method and it consisted of approximately 5 hours video data of making garment in textile class. Nine seven-grader girls alongside their teacher were filmed. The conversation analysis method was applied together with observation of embodied interaction. The results showed how the teacher demonstrated the skill with gestures and how she together with the student build a common participation framework. It was essential that the teacher apply lot of gestures in order to support student’s zone of proximal development. The results show how a student shows embodied understanding, as well as how the tools in sloyd class mediate cultural information.

Keywords: sloyd, teaching, embodiment, interaction, videographic method

**Hands on teaching and learning. Three perspectives on demonstration as a form of teaching craft skills**
Emmi Holopainen and Erja Syrjäläinen (University of Helsinki)

Traditionally teaching and learning craft skills are based on hands on and bodily showing. Although this form of teaching and learning is very essential in skill-based disciplines, there are few studies that would point the actual factors of such a learning situation. In this study six videos of teaching the skill of tatting (3) and the skill of making net filet lace (3) were analysed from three perspectives: embodied, craft and pedagogical. Leaning on theory-based analytical frame the occurrence of seven factors of embodied perspective, five factors of craft perspective and nine factors of pedagogical perspective were examined. According to the results of this study the most significant ways of teaching craft-skills are “pointing to a detail” (embodied perspective), the working methods of the technique (tatting or net filet) from the craft perspective and specifying the critical incidents from the pedagogical perspective.

Keywords: demonstration, teaching craft skills, videoanalysis, embodied knowing
Material mediation and embodied actions in collaborative design process
Henna Lahti, Kaiju Kangas, Veera Koponen and Pirita Seitamaa-Hakkarainen
(University of Helsinki)

The paper reports a study in which textile teacher students designed three-dimensional toys based on the children’s drawings. Three students in each team worked on the given materials and designed the shape for the toy together. Materials for designing were either: 1) pen and paper, 2) masking tape and thin cardboard, or 3) wire and non-woven interfacing fabric. After the modelling phase, the final toys were created by sewing. Research data consisted of the video recordings of three design sessions representing the different design materials given to the students. By conducting multiple levels of analysis, we examined how the participants used materials and gestures to support their communication. The results highlight the strengths of 3D modelling techniques, particularly through comparison with the drawing technique undertaken by one design team. It seems that simple material tools support students’ design process and could be applied to different design settings.

Keywords: collaborative design, design materials and artifacts, embodiment, mediation

Approaching embodied experience of materiality
Tellervo Härkki (University of Helsinki)

Embodied experiences are, by nature, not easy to translate to words, nor is it self-evident that they even get recognized. This paper presents an approach wrestling with those two challenges, an approach to study embodied experience of materiality, in a setting of collaborative design in education. The approach is based on the assumption that embodied experiences are - up to a certain level - expressed in collaborative interaction: made visible or audible as gestures, bodily postures, and speech acts. Instead of extensive video transcripts of both verbal and non-verbal interactions - which is surprisingly often the way selected - the approach relies on video observation with minimum amount of annotations, and a video analysis software with advanced graphical reporting features, like time-sequenced, scalable visualizations of selected event categories.

Keywords: collaborative design, embodiment, materiality, multimodal, video analysis
**E6**

**INCLUSION: A CHALLENGE FOR SUBJECT MATTER TEACHING AND LEARNING PROCESSES IN SCHOOL? (HISTORY TEACHING)**

Chair: Andreas Körber  
Room: AUR 223

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**Inclusive history teaching as a challenge – The German perspective**  
Andreas Körber (Universität of Hamburg)

Following the signing of the UN Convention on the Rights of Persons with Disabilities, inclusive teaching is currently introduced in Germany – and hotly debated. No matter whether inclusive (abandoning to identify and recognize specific needs in favor of a broad model of heterogeneity among students) or integrative model will prevail – not only pedagogy and school administration must address new challenges – subject matter teaching also has to live up to new questions. Training for special education and regular teachers having been rather separate so far, their respective role models are challenged by inclusive schooling models. Whatever the models of cooperation will be in the future, their respective perspectives on and concepts of learning and assessment, will have to be co-reflected. From a history teaching perspective, the introductory paper will raise some of the questions which academic reflection and research of history teaching will have to address when inclusion reaches the history class.

Keywords: inclusive teaching, history teaching, special education, Germany, international perspective

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**Deafness and deafhood. Historical thinking among deaf students as a cultural and/or disabled minority**  
Lise Kvande (The Norwegian University of Science and Technology)

Students without ability to hear face challenges in «normal» classrooms. Dependence on hearing aids (CI) or translators into sign language make them a minority, a disabled group among hearing students. On the other hand most of them belong to a community (local, national and international) with their own cultural identity as deaf people claiming for respect as such among other minority groups in society. As such they often feel neglected in the general Norwegian history and develop their historical consciousness outside school.

This paper aims at develop a deeper understanding of how these students develop their historical consciousness inside and outside school. It is based on in-depth interviews with deaf students that are asked about their relationship to the hearing society’s historical perspectives in general and their own historical thinking and development in particular. These views are explored within a theoretical framework of cultural identity, historical consciousness and self-esteem as individual citizens as well as members of a minority group. Some of the interviewed students are studying in special classes for deaf students while others study within general schools. The findings of this study give new insight into deaf students’ relationship to the major historical culture and might lead to a better history education for this particular group. At the same time the findings from this
study can contribute to a better understanding of students belonging to a cultural minority in general.

Keywords: inclusive teaching, history teaching, deafness, deafhood

**Inclusive history teaching -- The British experience. Challenges, approaches, problems**

Michael Fordham (University of Cambridge)

A shift in the UK towards more ‘inclusive’ schooling in the early twentieth century raised a number of issues regarding teaching history to the full ability range. History teachers have had to address a range of questions in response to this. Ought it to be the case that all pupils, regardless of ability or background, have access to the same history curriculum? If this is desirable, then what might such a curriculum look like? Teaching history to the whole ability range presents history teachers with a range of challenges regarding the nature of teaching, the kinds of resources that might be used and how achievement – distinct from attainment – might be measured. In this paper I shall address these issues from a British perspective, and in doing so I shall draw on the considerable corpus of work written by history teachers in the UK over the last decade. I shall argue that existing approaches to inclusion - particularly the demand for ‘differentiating’ teaching resources - have tended to make history less rather than more accessible. I shall suggest, instead, that solutions to teaching history inclusively need to be sought not in pedagogy, but rather in how we approach curriculum and assessment.

Keywords: inclusive teaching, history teaching, Great Britain
The model of visual multiliteracy: An approach based on cultural diversities and multimodality
Marjo Räsänen (University of Turku)

The model of visual multiliteracy is connected with the definition of material culture referring to a wide range of human artifacts from art to commonplace objects. Included in it are the images made by students at school and in their free time. According to the model, visual experience gets its meaning when cultural identities of the maker and the recipient meet as the product of visual culture is explored. An individual’s cultural identity is constructed in a dialogue between the dominant macro culture and different part cultures. Personal micro culture is determined by membership in groups representing ethnicity, world view, residence, language, social position, gender, age, and abilities. In the model, images are approached from these perspectives. The model leans on a cognitive view of learning and representational theories emphasizing multimodality. In addition to methods of traditional art disciplines, semiotic approaches developed in cultural studies are applied in the model. Artworks and other artifacts are analyzed through both verbal discussion and visual production. Interpretation is interwoven with verbal, auditive, kinesthetic, and numerical meaning systems. The model offers to teachers of art and other school subjects an approach which integrates ways of representation characteristic of different modes.

Keywords: visual culture, multiliteracies, multimodality, cultural identity, art education

Producing intercultural diversities in art education by constructing glocal places through social media
Martina Paatela-Nieminen (University of Helsinki)

This presentation presents a methodology, a research project and selected outcomes from an intercultural art education exchange in 2013. Two university faculty members share their experience of engaging students in exploring ideas interculturally about their local places through an intertextual art method that provides them the means to study and reconstruct their place open-endedly as a space of multiple meanings. Participants of this project include student teachers studying at an art education minor at the University of Helsinki, Department of Teacher Education (Finland) as well as graduate art education students and secondary school art teachers studying at the art department of National Changhua University of Education (Taiwan). The content and structure of this intercultural exchange were based on the findings from our collaboration last year and earlier participants’ inputs for refinement.

Keywords: intercultural, diversity, art education, social media, intertext
Visual orders and diversities in visual arts education perspective
Leena Knif (University of Helsinki)

Since the world is becoming more and more culturally mixed also visual arts education must take diversity into account. The concepts of cultural identity and citizenship must be re-considered and updated, since they have a significant effect on the feeling of belongingness and on tolerance. Art provides effective tools for working with these complex issues and for researching what these hybrid and constantly changing concepts mean to each individual in the world of today where identity can be something that is being constantly re-negotiated. I argue that the visual arts education can have an important role in enhancing the feeling of belongingness and therefore in supporting acculturation already at primary school level. In that task the study of visual orders as shared and established, often self-evident cultural meanings that create social order is in focus. This presentation describes the background, actions and outcomes of an art project in which pupils of a multicultural school in Helsinki researched their Finnishness and cultural identities through visual art.

Keywords: visual orders, visual arts education, diversity, cultural identity

My Culture, My Roots – A community art-project with children in five Nordic countries
Tarja Karlsson Häikiö (University of Gothenburg)

My Culture, My Roots is a community art-project with Nordic children and youth conducted during 2013-2014 in elementary schools in five Nordic countries; Faroe Islands/Denmark, northern Finland, Greenland/Denmark, Iceland and northern Norway. The project is an on-going investigation and collaboration between art practice and visual art education research. The theme for the project is cultural identity where the participating children between 7 – 17 years old has a possibility to reflect upon their cultural roots and create meaning through art workshops about their daily life, their interests, their identity in the crossroads of their own traditional culture and a contemporary world. The project consists of participatory workshops with creative writing and both analogue and digital visual art work. In the art workshops the children and young people can use different kinds of creative visual methods like, besides writing, drawing, painting or using mixed-media, collage or digital media as well as taking photographs. Other children and young people as well as other audience were invited to visit exhibitions and learn to know more about the participating Nordic countries and share the thoughts of the children and youngsters about their cultural identity. In this way the project is one contribution to investigation about cultural activities and visual learning strategies of children.

Keywords: community art, art workshops, cultural identity, elementary school
Environmental responsibility as an issue in social school subjects
Essi Aarnio-Linnanvuori (University of Helsinki)

The environmental crisis is a crisis of society. Even though environmental change can be explained by natural science, its causes and solutions are created by people. Solving global environmental problems requires a major change of values. This relates to environmental education: learning natural science is not sufficient to develop environmental responsibility. Environmental education (EE) has an interdisciplinary emphasis on both nature study and environmental citizenship.

This study explores, to what extent environmental themes are intertwined to school subjects that discuss social and ethical issues. Which challenges does a teacher face when including environmental issues into social school subjects? These questions are discussed based on data consisting of Finnish textbooks and teacher interviews. School subjects discussed are history, civics, Lutheran religion and secular ethics.

There seems to be confusion about the role of social school subjects in EE: what actually is the specific environmental content of the social school subject in question? Integrating value-laden, cross-curricular issues in teaching contains an element of risk for teachers and textbook authors as they have to discuss issues outside their own field of specification. However, social school subjects offer great possibilities for emphasizing action and citizenship with EE.

Keywords: environmental education, social school subjects, responsibility, environmental citizenship, cross-curricular themes

Social studies from an interdisciplinary perspective
Hans Petter Dahl-Hansen (Bergen University College)

In Norwegian schools, there was a long-standing cooperation with science subjects through the subject Science, Society and the Environment. Unfortunately, this interdisciplinary model has now been abandoned. This is the result of political decisions. In many people's opinion, this model worked very well, particularly with a view to achieving a broader perspective on sustainable development through the focus on topical issues relating to nature and the environment. I will argue that the model should be reintroduced in Norwegian schools.

Environmental issues cut across national boundaries and must be regarded as global challenges. This should make social studies' international focus more relevant seen from a global citizen perspective. The model demonstrates the constructive dimension that cooperation across disciplines can have. Social studies contributes knowledge about political conditions – locally, nationally and internationally. Concepts such as power and influence are important in this
context. How, for example, can individual citizens influence the environment by helping to set the political agenda? But also how citizens in their everyday lives can influence lifestyles etc.

Science’s contribution is, among other things, to show how natural conditions change as a result of human influence. In my contribution, I will endeavour to show how and in what way the subject of social studies can function in an interdisciplinary context and how the dialogue with other subjects can produce synergies that are highly relevant in a globalized world. This applies in particular to issues relating to nature and the environment. My perspective has two points of departure: 1. Social studies’ international orientation. 2. The dialogue with other subjects.

**Education for sustainability in teacher education**

Veli-Matti Vesterinen¹, Caitlin Meleney Wilson², Sakari Tolppanen³, Jaana Herranen³ and Susan Gollifer² (¹Stockholm University, ²University of Iceland, ³University of Helsinki)

This paper discusses the key characteristics of education for sustainability in teacher education. The discussion is based on the core principles of participatory action for sustainability in higher education, developed in an interdisciplinary ActSHEN project involving experts from four Nordic countries. One of the core principles is the influence of students on what and how they learn. We argue that to facilitate teacher students’ ability and willingness to take action on sustainability issues, students have to take responsibility for their leaning. Teacher education should thus be based on student-driven approaches, in which students co-create the goals and pedagogical strategies as well as collaborate with organizations and actors both within and outside academia. Finally, we present few cases on how these principles have been taken into action in teacher education. On courses based on the collaborative peer teaching model instructors have assumed a consulting and facilitating role, and the pre-service teacher participants have responsibility as well as freedom in planning and carrying out the instruction. With a goal of teacher education becoming a catalyst of societal change, teacher students have also collaborated with nearby schools.

Keywords: education for sustainability, teacher education, peer teaching
What does “cognitive activation“ mean in literature classes? First steps to an empirically based conceptualization
Iris Winkler (University of Jena)

Cognitive activation is one of three empirically proved basic dimensions of teaching quality. From a view that focuses on subject teaching, cognitive activation is the most interesting of these dimensions. It allows to describe characteristics of teaching that are (1) domain specific and (2) can be expected to support significantly the pupils’ success of learning. The paper gives a suggestion how to specify the general concept of cognitive activation for L1 literature classes. The crucial question relating to literature classes concerns the relation between the reader’s subjective involvement on the one hand and accurate analysis of the text on the other hand. The offered conceptualization is based on theoretical positions in the fields of literary studies and teaching literature. Additionally, it is empirically underlaid with data of a pilot study for the research project KoALa (cognitive activation by tasks in literature lessons). For the pilot study, six literature lessons about the same short story with different teachers and classes (grade 8, German “Gymnasium”) were videotaped. Student questionnaires, teacher interviews and results of reading literacy assessments of the participating classes complement the data base.

Keywords: cognitive activation, literature education, teaching quality

Applying languaging in learning metalanguage
Kaisu Rättyä¹, Pirjo Kulju² and Jorma Joutsenlahti² (¹University of Eastern Finland, ²University of Tampere)

Based on earlier research on gaining metalinguistic knowledge in school, the teaching methods and exercises seem to rise from behavioristic learning theory and emphasize naming, labeling and memorizing. The learning objects have often been lists of metalinguistic concepts or thumb rules - not the internalized understanding of the meaning of the concept or the creative applying of concepts in literacy skills. The underlying purpose of this paper is to discuss and suggest new possibilities of learning metalanguage. We will present a new model of teaching and learning metalinguistic concepts. In the model we apply the knowledge and cognitive process dimensions of taxonomy table and the conceptual change theory. The model consists of exercise prototypes which are based on languaging method. By it we here refer to the teaching method based on sociocultural and socioconstructivist learning theories. In the model, languaging serves as a way for the students to express his/her thinking or reasoning as well as an evaluation method for the teacher.

Keywords: teaching methods, languaging, metalinguistic knowledge
**Why become a mother tongue and literature teacher? - A Finnish-Estonian perspective**

Satu Grünthal¹ and Kersti Lepajõe² (¹University of Helsinki, ²University of Tartu)

The aim of our paper is to investigate the motivation of career choice and career orientation of Finnish and Estonian subject teacher students of mother tongue and literature. The research data was collected through an e-survey in the spring term of 2014 amongst Finnish and Estonian students, and it is analyzed as well quantitatively as qualitatively. Results of Finnish and Estonian student groups are discussed in comparison to each other and, respectively, in the context of national subject teacher education curricula and teachers’ socio-economic situation.

The research is theoretically anchored to D. T. Hansen’s concept of ‘call to teach’ (1995). The research data is discussed in the framework of different dimensions of this vocation, such as the social and ethical aspects of teaching, teacher’s constant professional development, and the emotional rewardingness of teaching. Also, the concept of vocation or mission for today’s students is questioned in the analysis.

The weight students gave to the importance of subject knowledge, research-based teacher orientation and multicultural aspects in mother tongue education are also scrutinized in the paper. In this respect, Higgins’ (2005) suggestion of seeing professions as ways of interacting with the world turns out useful.

Keywords: teacher motivation, vocation, mother tongue, literature

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Johanna Pentikäinen (University of Helsinki)

Using popular genres like movies in tuition is often considered to motivate pupils’ learning and create connections between classroom topics and freetime activities. While movies may widen viewers’ perspectives and give the possibility to identify oneself with their characters and settings, their use as pedagogical tools is complex and they also have certain limitations that arise from their artificially constructed nature as artworks. For example, mainstream movies tend to use stereotypical characters and constructional plot structures, as well their problem-solution orders are often conventional. However, their pedagogical value is worth exploring. My study aims to analyze student teachers’ reflective essays written after viewing Luokka (Laurent Cantent: Entre les murs, 2008) or Freedom Writers (Richard LaGravenese, 2007). The essays discuss cultural negotiations in the classroom, the development of cultural sensitivity, trust, and empathy, as well as the impact of language pedagogy achieving change in pupil’s lives.

Keywords: mainstream movies, cultural sensibility, reflective essays, Entre les murs (Luokka), Freedom Writers
Beyond comprehension: Mining authentic literary texts in ELT
Elsebeth Hurup (VIA University College)

In English Language Teaching, literary texts are often overlooked for their potential to give cultural insights, expand vocabulary, and contribute to personal growth. This research paper explores how student teachers approached lesson planning that considered these three aspects. The student teachers created online reading and writing activities to increase pupils' levels of interaction with literary texts. Online materials featured extracts from texts, task descriptions, images, video, and feedback boxes designed for pupils to write and submit their answers and thoughts. Findings suggest that moving to a digital format prompted student teachers to think about new ways of working with texts, both in terms of their own reading process as well as the ways in which they designed activities for their pupils.

Keywords: ELT, literature, lesson planning, IT

Teaching English to would-be teachers: How to profit from ESP in the Spanish faculties of education
Edgardo Galetti (Universidad Autónoma de Madrid)

Second language learning is a long-lasting complex task. One of the most important factors in that learning process is motivation (Dörnyei, 2001; Dörnyei y Ushioda, 2009; Gardner y Tremblay, 1994; Schunk et al., 2004; among others). Without motivation, success considerably decreases. The Faculties of Education at Spanish Universities tend to follow a curriculum based on the general contents of The Common European Framework of References for Languages (MCERL, 2001; http://www.coe.int/t/dg4/linguistic/cadre1_en.asp). That means teaching general strategies, skills, linguistic structures and vocabulary which may have limited use in the students’ working context. More and more university degrees choose English for Specific Purposes (ESP) which aims, not at teaching the general linguistic variety, but at teaching a professional register. If Teacher Training Faculties offered ESP courses, students could doubly benefit: their motivation would increase and they would graduate with higher quality training. The main goal of this project is that pre-service teachers could optimize their English learning, highlighting those contents which will be especially useful for their future professional performance. Thus, the programme created will produce contents related to the students’ professional life, specific materials for teacher training and student and teacher textbooks to be used in their EFL classes at university.

Keywords: ESP, EFL, motivation, teacher training, textbooks
Poetry and phonetics at primary and secondary school: The poem as a means of introducing and practicing sounds in the EFL class
Edgardo Galetti (Universidad Autónoma de Madrid)

Northrup Frye said in 1956 that ‘no sound that is part of the system of language can be without some meaning’. In 1999, Cynthia Whissell, added that ‘the sounds we make when speaking are expressive by nature’.

Analyzing a line of poetry in terms of sound distribution, prominence and attention allocation seem as important to meaning as that first phase of semantic meaning we need to understand the poem (cf. Johnson, 1987; Murphy, 1988; Talmy, 1996; Ungerer and Schmid, 1996). Poetry may come to the teacher’s aids in order to give the students the phonetic practice they need. ‘No other form of English expression provides as many opportunities to see, read, hear, and practice phonemes’ (Fresch & Harrison, 2013).

This paper takes an interactive, collaborative approach, and describes how poems can be used to promote cooperation and communication as well as individual expression in the EFL classroom. By inviting students to be “in the poem” (Moore, 2002), actively reading poems in pairs or other small groupings, and creating ideas together, ‘poetry can become an integral part and can be a means of investigating issues relevant to the students’ backgrounds, experiences, and attitudes’ (Finch, 1998).

Keywords: poetry, phonetics, EFL, primary, secondary
Promoting teacher development through the use of Lesson Study in an in-service course for teachers
Rebecca Charboneau (University of Stavanger)

This study explores the use of Lesson Study (LS) in a part-time in-service course for English teachers. The research focuses on to what extent Lesson Study and a research focus affects in-service teachers’ ability to collaborate, reflect and incorporate theoretical knowledge into teaching. Lesson Study has been used successfully at the University of Stavanger within pre-service teacher education.

One aim of Lesson Study is to help teachers make the connections between subject-matter knowledge, theory and practice explicit within their planning, teaching and reflection. It has been a focus of this course to use Lesson Study to frame in-service training as not only a learning process, but a research process in which teachers can apply theory and previous research to conduct action research to improve their teaching. Additionally, Lesson Study focuses on collaborative learning among teachers, as they are required to collaborate and share equal responsibility for the lesson.

The research is based on the reports the in-service teachers wrote during the Lesson Study cycle from multiple years of in-service courses taught at the University of Stavanger. A coding framework is used to analyze the in-service teachers’ analysis and reflections in their reports.

Keywords: Lesson Study, in-service course for teachers

‘Lesson Study’ as a research and development tool in teacher education - Giving students a voice in the Lesson Study process
Deborah Larssen and Ion Drew (University of Stavanger)

This paper presents a study of how pre-service student teachers of English report the impact of a Lesson Study project during teaching practice. Murata & Pothen (2011:104) describe Lesson Study as a professional development tool which supports high-quality learning experiences for student teachers. Lesson Study assumes that the students and teachers collaborate on the development of a lesson, that there is an active inquiry agenda, that research-based knowledge is a natural and essential part of the deliberations that go on in the group, and that content knowledge is equally important and discussed in detail in relation to pupils’ learning outcomes.

Student teachers studying English teaching methodology at a Norwegian university undertook a Lesson Study project during teaching practice as part of their course. Many of the students chose to use the opportunity to try new methods that had been demonstrated at the university. As a follow-up, they wrote a report which included a personal reflection on the process of the project.
and on their own learning and development. These reports are analyzed in terms of both trends within the group and individual experiences, in order to find out how the students discussed the impact of Lesson Study on their professional development.

Keywords: Lesson Study, pre-service teacher development

Feedback and metakognition
Vibeke Christensen¹, Søren Pjengaard¹ and Grete Dolmer² (University College of Northern Denmark, VIA University College)

How does feedback processes affect and develop learning strategies in school subjects? Why is it important for learners to develop metacognitive strategies? What kinds of feedback does the teacher offer and what kinds of feedback are the students interested in? What sorts of feedback do the students pick up?

The aim of our research is to acquire knowledge of and to contribute to develop the culture of evaluation and feedback in secondary schools in Denmark. We investigate how Hattie and Timperley’s quantitative based feedback model works in the specific subject Danish by using qualitative methods. One of the outcomes is a development of Hattie and Timperley’s feedback model. Furthermore the research addresses the gap between what the teachers communicate concerning goals, the subject-matter, the learner’s understanding and the evaluation of the learning outcome. We discusses and analyses the relation between teacher’s and learner’s feedback processes, the learner’s metacognition, their ability to design their own learning and the development of learner’s critical skills and competencies. Our studies show that academic meta-reflection is rare among students and thus essentially becoming a teacher issue. This means that teachers and student teachers must develop attention towards situations where this type of feedback could usefully be involved. The examples come from both secondary schools and teacher’s education in Denmark.

Keywords: feedback, metacognition, learning strategies, subject Danish
History as a school subject in Denmark – what’s going on?
Heidi Eskelund Knudsen and Jens Aage Poulsen (University College Lillebaelt)

The paper presents preliminary results from an ongoing research project on teacher and student understandings of history as a subject in the Danish primary school. In doing so, the paper concerns three specific areas:

- Teaching materials
- History lessons from the teacher’s perspective
- History lessons from the students’ perspective

Results from analysis of the three areas are discussed in the light of a current reform process of the existing history syllabus. The reform implies an increased focus on aspects such as opening the school to the outside world and using the surroundings in teaching. Furthermore, the reform focuses on integration of ICT in teaching and learning and on facilitating varied ways of teaching and learning, in order for all students to learn as much as possible. The paper relates to these different aspects of the new syllabus in history.

Regarding research design, data production and data analysis, the research project takes an ethnographic approach, combined with theoretical inspiration from British History Education and the ideas of distinguishing between substantive first order and structural second order concepts.

Keywords: history teaching, teacher-student understandings, classroom research, primary school

Design-oriented pedagogy in history teaching – Openmetsa portal as a learning environment (with reference to Finnish teacher education)
Ismo Pellikka, Saara Nissinen, Anu Liljestrôm, Henriikka Vartiainen and Petteri Vanninen (University of Eastern Finland)

The combination of eLearning and history education in schools is a new development. In this paper we investigate and reinforce the link between eLearning and primary school history education by applying a new theoretical basis (DOP) to a new learning environment (the Openmetsa portal) in history teaching and by giving Finnish examples of fresh and successful projects. These projects were designed for university students of education. Our model of design-oriented pedagogy consisted of 1) connecting the process with the pupils’ thinking and life questions; 2) tasks and questions guiding the process; 3) access to expert supervision, knowledge and help; 4) varied study of the phenomenon in question (both physical and cognitive studies); 5) group work; and 6) sharing of the results and experiences. The learning projects were documented by students themselves and also by a graduate student who recorded the process by interviewing the students working in the project. According to our results, design-oriented pedagogy combined
with an eLearning environment provides a suitable and useful mix of methods. They are well-suited to the method of studying history and to the needs of developing the teaching of history in primary schools and to the need of providing fresh insights into teacher education.

Keywords: design-orientated pedagogy, history teaching, eLearning, teacher education

Teaching historical competence in a Norwegian context
Christian Sæle (University of Bergen)

A crucial point in the Norwegian history curriculum, as in many other countries, is that history teaching should not just transmit knowledge, but develop skills that enable students to use what they learn, both within a school context and in other arenas later in life. Together, this forms what the plan calls historical competence. This also reflects essential views held by historical didactical research, both that rooted the term of historical consciousness and that of historical thinking. Despite this, research indicates that history is taught as a very knowledge oriented subject in Norwegian schools, with little emphasis on developing skills. The paper will discuss various reasons for this gap between the curriculum and history didactics on one side and teaching practice on the other, arguing that a school culture influenced by 1) a traditional view of what historical science does and what history actually is, 2) a lack of theoretical-didactical knowledge among teachers and 3) the strong position held by history textbooks, contribute to an environment where new didactical research and even new curricular approaches face difficulties in influencing how history is taught. Subsequently, the paper will discuss how history didactics can play a more central role in developing Norwegian history teaching practices in the future.

Keywords: history teaching, historical competence, historical consciousness, historical thinking
Different teaching methods and their relationship to students’ affective states in Finnish science classrooms
Janna Linnansaari¹, Kalle Juuti¹, Katarina Salmela-Aro¹, Barbara Schneider² and Jari Lavonen¹
(¹University of Helsinki, ²Michigan State University)

The aim of the presentation is to have an overview of eight Finnish science classrooms focusing on the teaching methods and their relationship to students’ affective states. Overall 10 teachers (7 females and 3 males) from two different schools participated in the study. Teachers filled out an instructional sheet after every science lesson, in which they were advised to estimate how much time they used on different teaching methods. At the same time students were examined through the experience sampling method (ESM). In other words, students received smartphones which included an application and a questionnaire. The questionnaire came three times during a science lesson and measured students’ affective states in those situations. Afterwards teachers’ and students’ answers were combined and analyzed. According to preliminary results, the time spent on different teaching methods was partly related to the subject at hand. In biology and physics, lecturing was the leading method while in chemistry, it was laboratory work. Moreover, students’ affective states were related to both the subject and the teaching method used. Surprisingly, laboratory work decreased students’ level of enjoyment, interest and self-assessment of their skills while lecturing and independent work increased their level of enjoyment, interest, happiness and success.

Keywords: science, lecture, teaching methods, students’ affective states, experience sampling method

Tools for information mapping: A theory-practice approach in transcultural contexts and science education
Carlos Manuel Pacheco Cortés (Universidad de Guadalajara)

This study shows the results of a pilot test for a scientific experiment to be carried out from the perspective of quantitative research where a Massive Open Online Course (MOOC) was implemented within the Modular Object-Oriented Digital Learning Environment (MOODLE) with the purpose of instructing the use of tools for information mapping as a technique of information processing in science education; concretely mind mapping and concept mapping. The target sample of analysis consisted of educators which have previously attended online courses implemented for MOODLE version 2.6; however, due to the low participation obtained after four weeks of monitoring, it was not possible to get enough data expected from the activity modules enabled within an xMOOC and required to measure indicators such as validity and reliability from a sample of certified participants. Moreover, it is argued in this study that there are not, at the moment of performing such meta-analysis, scientific articles in public domain providing results of MOOCing in local or specific contexts.
Changes of students’ explanation models during DC-circuit interviews
Terhi Mäntylä¹, Tommi Kokkonen² and Markus Mattila² (¹University of Tampere, ²University of Helsinki)

In this study, the changes in pre-service physics teachers’ explanation models of brightnesses of bulbs in DC-circuits were examined. The pre-service teachers’ participated in three small group interviews with several predict-test-explain-tasks. The interview transcripts were qualitatively analyzed using content analysis. In categorizing the explanation models and their explanatory power, the scientific concepts and their relations were the distinctive feature. The changes in the explanation models of two students are presented. In the first case, there is a development towards a more scientific explanation. In the second case, the student already masters the topic. In his case, we see flexible use of the concepts and explanation models. The scientific concepts are core parts of explanation models and conceptual development requires learning to use the scientific concepts in relation to each other.

Keywords: physics education, pre-service teacher education, explanation models, conceptual development, qualitative research

Variables of innovation competence
Laura-Maija Hero, Eila Lindfors and Vesa Taatila (University of Turku)

New realities in working life and the world of education challenge not only the contents of education but also the pedagogy and traditional forms of teaching and learning in order to address knowledge, skills and attitudes when targeting future work life competencies. Innovation is defined as a process that can be a learning platform to develop innovation competencies. The aim of this research is to create an overview of the innovation competence ontology usable. In a pedagogical framework skills, knowledge and attitudes are defined to form the learning objective framework, but it seems that mostly the social, personal and interpersonal qualifications form the innovation competence variables. The outcome is to define innovation competence based on recent research. Research question is: What are the variables of innovation competence in the light of current research? Research articles are collected and analyzed with an ontological content analysis frame. Based on the learning framework, the competencies are categorized and clustered. Finally, the outcome will be reflected in the light of experiential education larger theoretical framework and the pedagogical innovation process. An innovation competence ontology will be presented.

Keywords: innovation competence, innovation pedagogy, competence ontology, learning innovation
Religious education for minorities – perspectives from Islamic education in Finnish schools
Inkeri Rissanen (University of Helsinki)

Supporting students’ identity development and educating for tolerance are central aims of European religious education. However, challenges related to identity and tolerance are distinct for the majority and minorities, and developing successful and legitimate forms of religious education requires paying attention to these particular challenges. Muslim Young in Europe often negotiate between ideals and demands from the religious tradition of their family and liberal democratic society. Some of them feel attacks on Islam in the media as personal attacks threatening their identity, and the felt need to defend the authenticity of their tradition induces fundamentalist reactions. Furthermore, students’ experiences of their tradition being stereotyped and forced into liberal or cultural relativistic framework increase defensiveness. This paper presents some central results from a dissertation study on Islamic education in Finnish schools and discusses the possibilities of Finnish approach to RE in fighting against different forms of cultural imperialism, easing the identity pressures of minority groups and promoting their integration into society.

Keywords: religious education, identity, minorities, integration, Muslims, Finland

Managing diversity in Finnish schools and education: Religious education as a bridge builder
Gabriel Omotosho Adebayo (University of Helsinki)

The paper discusses that while the presence of diversity in the contemporary Finnish schools and education is generally acknowledged, concerns for managing the differences characterising diversity appear insignificant in the previous studies. Hence this study proposes that the recent topical issues in religious education in Europe have positioned religious education to be a bridge builder amidst the differences embedded in diversity. Then, I highlight and analyse the relevant recent topical issues in religious education vis-à-vis diversity. The recent topical issues in religious education discussed, in this paper, regarding the management of the differences embedded in diversity are: religions and multiculturalism, worldviews, religious tolerance and competence, religions and citizenship, human rights education, security education and environmental education. The paper further discusses religious education as a bridge builder as enhanced in some resolutions of the United Nations, Council of Europe and Organization for Security and Co-operation in Europe. I subsequently reinforce the proposition that religious education is suitable to assume the role of a bridge builder across diverse relevant interests in Finnish schools and education, and that necessary curriculum reforms to that effect need to be made.

Keywords: diversity, differences, bridge, builder, education
A methodological model to analyse informal and formal educational settings
Fredrik Jahnke (Södertörn University)

One of the objectives of the CARDIPS-project is to study the attitudes and experiences of cultural and religious diversity amongst children and teenager in primary school. For example, the attitudes of pupils of different age, from different geographical location (cities and smaller towns) and from different countries (and different school systems) will be compared. Besides theoretical and methodological considerations in this study, a model for analysis and comparison is needed. In this respect the model elaborated by Oddrun Bråten (2013) seems to be profitable and will be, if necessary, modified and tried out during this study.

Bråten’s theory is based on a three-leveled model of processes that influence schools which are combined with four dimensions of curriculum. Bråten’s model offers a wide range of comparative possibilities. This presentation will comprise a presentation of Brätens model and how it will be (is) used, as well as evaluation comments and critical aspects.

Keywords: diversity, religious education (RE), comparison, Bråten
CHANGING TEACHER EDUCATION

Chair: Janne Holmén
Room: AUR 226

Governing education practices – a study of the de-professionalization of teachers and the fate of the profession’s ‘technical core’ in Sweden
Eva Bejerot¹, Hans Hasselbladh², Tina Forsberg Kankkunen¹ and Niklas Stenlås³ (¹Stockholm University, ²Örebro University, ³Uppsala University)

The teachers are an ‘anomaly’ compared to other, similar ‘semiprofessional’ groups. The methods advanced by national agencies, the local principals and teacher colleges seem to be consciously distancing the general teaching practice from the use of explicit knowledge, standardization and evidence based methods. We intend to investigate how the technical core of teaching has changed over time and the landscape governing professional practice in the Swedish school system. The teaching practice is approached as an object of control to actors, forces and contexts within the larger school system. We analyze the emergence of a new direction in the governing of teaching practice, and how and in what ways the technical core of teachers work have been affected by the new forms of governing teaching practice.

Keywords: teacher’s education, professional practice

Perspectives on teaching of subject teaching in teacher education with examples from geography and civics
Martin Kristiansson and Gabriel Bladh (Karlstad University)

In the spring of 2014, in an extension to the national regulation of teacher education in Sweden, it was stated that student-teachers also need to have knowledge about “methodology” in teaching. The main reason was said to be that teacher education has become too theoretical and not enough practical with too little focus on the teacher's main task today – to teach his/her subjects. This argument raises interesting questions, where different perspectives on the teaching of subject teaching in teacher education come into focus. In this paper we present results from a study where “teaching of subject teaching” has been examined historically as a three-part tension between “methodology”, “didactics” and “subject-didactics”; first by analyzing national documents behind teacher-education reforms from the 1950s until today, secondly by interviewing two teacher-educators using a life-history approach in order to situate those tensions in their histories on teaching geography and civics in teacher education.

Keywords: teaching of subject teaching, civics, geography, teacher education
Reforms of teacher education in Sweden and Finland
Janne Holmén and Björn Furuhagen (Uppsala University)

The aim of our project is to study continuity and change in teacher education. Why does teacher education in some countries and periods undergo subsequent reforms and rapid changes, while it in other countries and at other periods is characterized by continuity and gradual development? We want to investigate how and why Swedish and Finnish teacher education has been reformed since the Second World War. Finnish teacher education underwent a period of rapid reformation in the 1970s, where after it has been characterized by a more continuous development. In Sweden on the other hand, teacher education has been reformed roughly once a decade (1968, 1977, 1988, 2001 and 2011). We will analyze how actors like teacher unions, employer associations, academic disciplines, political parties and think tanks have tried to influence reforms, and thereby the curriculum codes, views of what is the purpose of education, that underlies teacher education.

Keywords: teacher education, educational reforms, Sweden, Finland, curriculum codes.

Four organizing themes of Finnish teacher education (since 1950s)
Janne Säntti and Jari Salminen (University of Helsinki)

At the first sight, it seems that the development of Finnish teacher education has been continuous and victorious from 1970s when the new university-based teacher education was launched. We state that there have been remarkable turning points which we try to outline by identifying different and time-specific ideal teachers. These ideals reflect, before anything, the interests of teacher education. First, didactically-thinking teacher replaced the normative teacher in the 1970s. Now, teachers’ practice was expected to be based on educational theory and personal pedagogical thinking rather than the tradition. This teacher ideal coincided with the comprehensive school and teacher education reforms. The 1990s introduced the research-oriented teacher. At that time teachers were required to accept new assignments and administrative duties to their practice since local curriculum work was handed to them. The last stage of the ideal teacher is called the research-based teacher. Teachers are expected to make their own classroom-based research as real researchers.

Keywords: Finnish teacher education, the ideal teacher, academization, research
F3

DIVERSITY OF MEDIA EDUCATION 2

Chair: Heikki Kynäslahti
Room: ATH 169

Digital design for learning
Alice Bonde Nissen, Johannes Fibiger and Inger Maibom (VIA University College)

Project aim: Our main aim is to produce knowledge about how student competencies can be developed in a digital age. Through interventions and design experiments conducted in authentic school settings the project aims to develop models for student capacity building. On the basis of experiments and results, the aim is to provide input for the further education of teachers and to develop new methods for using digital resources in learning designs.

Theory and method framing: Our project is founded on action research: intervention in classrooms through a circle of designing, testing and evaluating digital based teaching. We use the concept of Design-Based Research (DBR) built on intervention in an iterative process in order to strengthen the design and to generate knowledge about learning design. In design-based research the researcher creates a learning design together with the involved actors, and for this purpose the three-phased research design is applied. Interventions are conceptualized and then implemented in natural settings in order to test and to generate new knowledge.

Research Questions: How do we qualify the students to make reflections and constructions of digital educational design?

Expected Results: We have seen significant signs of change in the way students think about didactic design: a strengthening of their teacher competencies, i.e. the students do not only set aims from restricted pedagogical trend concepts or technological activism, or from restricted professional/subject didactical aims, but instead they attempt to find the complementary relation between pedagogy, technology and subject. Another tendency is that the weight has moved from using existing educational materials or teaching courses to developing real design of teaching. By design we mean not only the choices the students must make but also the constructions of the digital artefacts and the subject content needed to translate the choices into teaching.

The Content of our Session: During our session we will present three exemplary didactic designs showing students balancing in the complementary relation between technology, pedagogy and subject.

Keywords: digital Resources, learning design, intervention, design experiments

Supporting development of intercultural communication skills with internet applications
Laura Pihkala-Posti (University of Tampere)

In this paper results of my interdisciplinary PhD project are described. During the project multimodal, collaborative, experiential, action-based and authentic web-supported concepts
were developed for foreign language education. A central issue was to support the development of learner autonomy, agency and skills for intercultural communication. The approach was based on ideas of action and design based research. During the project material and method triangulation was realized. Different kinds of web2.0 tools and platforms, videoconferencing, the informal webgameworld Minecraft and the embodied, collaborative language learning environment Berlin Kompass were used in different kinds of interventions on different school levels from primary school level to university as well as in international cooperation projects. These first results are promising. A multi-faceted, pedagogically sketched approach offering different modality and media combinations seem to support the skill development of learners with different cognitive styles, but also the whole learning community.

Keywords: intercultural learning foreign languages, internet

**National evaluation of art in Swedish secondary schools 2013**
Hans Örtegren (Umeå University)

In this evaluation quantitative as well as qualitative studies have been carried out. Both teachers, heads of schools and pupils have answered questions concerning their views on the subject from context, content to results, assessments and effects and effictivit. There is also a comparison made to the latest evaluation in 2003, to some extent also to the subjects music and slojd (textile and wood and metal) and between pupils in grade 9 and grade 6.

A special interest is the use of digital media in art, both as a tool to produce and to search and present work on visual culture. An underlying media ecological perspective is used to discuss the results of the qualitative studies. Differences and likenesses of importance between views of teachers and pupils, boys and girls are discussed and compared to earlier evaluations.

Keywords: assessment, art, digital, visual culture, Swedish secondary school
Evaluation of Learning Outcomes 3

Chairs: Juhani Rautopuro and Raili Hildén
Room: AUR 209

Recent assessment of oral proficiency in German
Laura Lahti (University of Helsinki)

This is a work-in-progress presentation, which studies the assessment of oral proficiency in German as a foreign language. The informants of the study have just finished the compulsory basic education: one part of the research data consists of videotaped oral test performances of Finnish, first-year upper secondary school students in German language. The assessments of a Finnish and a German teacher jury form another part of the data. The teachers’ CEFR level assessments, questionnaire answers and videotaped assessment discussions will be analyzed by means of multi-faceted measurement (e.g. McNamara 1996), correlation coefficients (e.g. Bachman 2004) and qualitative content analysis (Mayring 2010). The research questions are: 1. What kinds of structures do the students master on a specific CEFR competence level? 2. To what extent does the assessment correspond to the student performances? 3. Which aspects do the teachers emphasize when assessing oral proficiency? 4. Which aspects are essential, in their opinion, regarding the comprehensibility?

Keywords: oral proficiency, assessment, German as a foreign language

What may be learnt in ethics? Varieties of conceptions of ethical competence to be taught in compulsory school
Olof Franck¹, Annika Lilja¹, Annika Lindskog¹, Christina Osbeck¹, Karin Sporre² and Johan Tykesson³
¹University of Gothenburg, ²Umeå University, ³Chalmers University of Technology

The aim of the paper is to present the framework of this newly started project and report some initial findings. Questions about a compulsory school teaching ethics has regained urgency in Sweden since national tests are given in ethics. Every fourth child in grade six and nine are evaluated every year as having/not having approved knowledge of ethics, and one can ask if it is reasonable to be forced to undertake a test assessing your skills in ethics and risk being evaluated as not passing. This raises the question of what constitutes relevant knowledge in this field, a question which to a large extent has been absent in research. The purpose of the project is to identify and elucidate varieties of conceptions of ethical competence and critically analyse and discuss them, in relation to each other and in relation to ethical theory, as potential educational content in compulsory school.

Keyword: ethics
Does evaluation environment count – and how?
Juhani Rautopuro and Elina Harjunen (The Finnish Education Evaluation Centre)

The Finnish Education Evaluation Centre (FINEEC) and the Finnish National Board of Education (FNBE) evaluated learning outcomes in Finnish (as a native language) and literature in the final (9th) grade of compulsory basic education in the spring of 2014. In the assessment, the effect of web-based evaluation environment (n = 1799) compared with traditional paper-pen test (n = 3345) was examined for the first time in national evaluations.

The test, which was similar in both versions, consisted of a variety of exercises in writing and language skills. Our preliminary results indicate that there are some variety in the outcomes in different environments. Moreover, the logic of differences in writing and language skills, as well as the difference between genders, seems to be a little bit confusing. We will present and discuss results in more detail in our presentation.

Keywords: web-based evaluation, learning outcomes, effect of environment
The craft teachers’ views on the skills of the pupils
Antti Hilmola (University of Helsinki)

The research data has been collected during the school year 2013 - 14. The study represents a quantitative research method. Fifty eight comprehensive schools participated in the study from a separate side of Finland. The sample includes the information of 982 pupils in the seventh grade. The data has been collected from craft teachers, pupils and parents. In this context, the interest is directed to the data of craft teachers.

The craft teachers took a stand on the skills of the pupils in the following fields of the crafts: the planning, the intensiveness, the orientation, the safety working and self-assessment. For example: according to the craft teachers’ views, 37 per cent of the pupils have a good intensiveness and 44 per cent of the pupils have a good orientation in the craft lessons. The variation in the teachers’ views is dependent on the pupils’ background information.

Keywords: crafts, craft teacher, pupils’ intensiveness, pupils’ orientation

Futures on craft (craft, design and technology) education – Student teachers’ perspective
Jaana Lepistö and Eila Lindfors (University of Turku)

In future craft education will be more emphasized to pupils’ examining, experimenting, participating and entrepreneurial working within pedagogical innovation processes in multi-material spaces (FNBE 2016). Pupils will study crafts by hands-on learning to get known a variety of materials, techniques and technology as well as understand and applicate them open-minded in pedagogical innovation processes connected to students’ living environments.

The goal of our study is to reveal and investigate differences in how student teachers of craft understand craft as a school subject in the future and what kind of challenges and solutions they see for teaching craft in the Finnish basic education. The research question is: what challenges and solutions student teachers see in the craft subject in the futures? The research material is student teachers’ written consideration on the challenges and solutions of the future craft subject.

Keywords: multi-material craft education, pedagogical innovation process, gender-segregated craft, teacher education, basic education
Material and surface – experiences in developing synergy through courses
Päivi Fernström, Ana Nuutinen and Riikka Räisänen (University of Helsinki)

The course material and surface is a combination of four minor courses: Experiential textile design, Dyeing, Printing and Embroidery. The course combination is offered to the first year textile teacher students as an attempt to reduce subject based orientation and fragmented education. The aim is to reinforce students’ understanding of learning and strengthen them through experiences.

The courses form an intertwined and progressive structure in which one course is based on the former knowledge. The creative basis is built in Experiential textile design and the ideas are applied to assignments in Dyeing, Printing and Embroidery. Following the courses, students collect assignments into learning portfolios. They organize assignments into continuum to assess personal development and creative process. During the courses, students work in groups. Mutual shearing builds the group’s identity and cohesion and strengthens collective values and meanings. Diversity is important - all experiences are equally true and valuable.

Keywords: textile teacher education, course development, synergy, learning

Estonian and Finnish craft teachers' views on the purpose of contemporary craft education
Eva Veeber and Erja Syrjäläinen

In Estonia and Finland, craft has had a permanent position as a school subject although its appreciation and value have changed during the last decades of modern society. The purpose and significance of this subject has inevitably taken a turn. Is craft still a school subject that is current and necessary? As we see it, craft is a subject that enriches learning environment and develops skills that people need to manage in modern life. Craft teachers are the ones whose daily work and direct contact with adolescents creates and carries the purposefulness of craft education.

When studying craft teachers, one should keep in mind the question how does the craft as content of teaching determine teachers' thinking and knowledge, and how is the subject matter translated into classroom curricular events? Current paper focuses on Estonian and Finnish craft teachers’ prevailing views on (a) significance of craft making, (b) its purpose for child development and (c) how these views affect the way craft is being taught in basic schools.

Keywords: craft, craft teacher, teachers’ views, basic education, craft education
PISA 2012 Mathematics: Measuring mathematics or the language of instruction
Maria Kela and Päivi Portaankorva-Koivisto

The PISA 2012 test was meant to measure mathematical literacy of the 15-year-olds, but for the immigrant pupils the real test was not only about their mathematical but also linguistic skills in the language instruction. The language of PISA tasks is characterized by complexity features, such as subordination, passive voice and infinitival structures. Thus, one factor that can explain immigrant pupils’ success in these tests is how well they master the language of instruction.

For the first time in Finland, students with an immigrant background (3.5 % of the population) were oversampled for the PISA 2012 data (15 % of the sample). In comparison with other OECD countries, Finnish first and second generation immigrant pupils scored statistically significantly below average in PISA 2012; but in Norway both generations succeeded better than in other Nordic countries. Finnish students with an immigrant background showed lower performance in all of the mathematical fields tested, and a particularly alarming finding was that 51.5 % of immigrant pupils did not reach the minimum level 2 of mathematical proficiency. The biggest difference (41.7 %-units) between immigrant pupils and pupils without immigrant background was in mathematical content area Uncertainty and data, where tasks dealt with working and interpreting statistics and probabilities.

In our presentation we will concentrate on some PISA mathematics tasks. First, we will analyze what mathematical skills pupils are expected to have while solving these tasks. Second, we will define why these tasks are linguistically complex. Third, we will show some pieces of data where 15-year-old “Rolan” is solving PISA tasks. The informant has moved from Russia at the age of 11 and thus he represents the largest foreign population in Finland.

Student-initiated question sequences in maths’ classes with L2 users of Finnish
Niina Lilja (University of Tampere)

Today, there are more and more students around the world learning academic content in their second language. Different educational contexts demand different linguistic skills and afford different opportunities for participation and learning. In comprehensive school, a central linguistic challenge the students face is connected to subject-specific language use: the academic language of mathematics is different from that of history, for example.

This paper focuses on learner-initiated question sequences in a classroom of young adult immigrants studying mathematics in their second language (Finnish). More specifically, the paper analyses questions indicating some sort of problem in understanding either 1) the language of instruction or 2) the mathematical subject content, and the answers to these questions. The observations made in the analysis will be discussed in relation to both the recent research on
language learning in interaction and the research on content and language integrated learning (see Koole 2012, Dalton-Puffer 2011). On the theoretical level, the analysis aims at deepening our understanding of the notion of academic language ability (Cummins 2000).

The paper is based on the framework of conversation analysis and adopts a multisemiotic perspective to analyzing (language) learning in classroom interaction. The data consist of 20 lessons.

Keywords: mathematics, second language, classroom interaction, student-initiations, conversation analysis

**Student teachers in collaboration: integrating science and language**
Eija Aalto and Mirja Tarnanen (University of Jyväskylä)

There is a widely shared understanding that language is not considered a skill to be learnt first and only then used as a means to communicate content, but rather language and content objectives should be integrated (e.g. Bunch 2013). Thus, engagement in disciplinary practices and interaction with peers and teachers in joint activities are regarded as key elements for both content and language learning (Walqui 2006; Gibbons 2007). Therefore, language-related expertise is required from all teachers. Subject teachers’ role in language and literacy teaching has been, however, recognized in phase with the increasing diversity in classrooms (e.g., Gibbons 2007).

In this paper, we will report on a teaching intervention carried out in pre-service teacher practice. A student teacher of physics collaborated with two student teachers of Finnish. They planned and implemented a thematic unit which focused on optics and project skills. The data consists of audio-recorded planning sessions, student teachers’ diaries, interviews and video-recorded lessons. The data is analyzed using qualitative content analysis. In our paper we will report how student teachers constructed shared understanding when integrating content and language. We also discuss their language awareness and their approach to teaching content knowledge intertwined with language skills.

Keywords: pedagogical language knowledge, literacy education, teacher education, disciplinary language
Swedish students make their most crucial educational decision in the transition from compulsory school to upper-secondary school. Swedish upper-secondary school provides a number of theoretical and vocational educational programs, including design and technology. Nonetheless, the interest for science and technology education of Swedish youngsters is decreasing, leaving the future demand for manpower in the technological sector much greater than the supply.

This study identifies factors of importance when secondary-school students reflect on future study options. A special focus is on the reasons why to choose or avoid technology education. A paper-based questionnaire was given to 320 students who already had made their choices to upper-secondary school. The questions deal with their reflections on e.g. the situation in school, relation to science and technology subjects, influences from parents and classmates, as well as future career expectations. The answers were stored in a database making it possible to compare combinations of themes, e.g., gender vs. interest in school subjects. The results show that boys find the subject technology more fun and less difficult than girls do. Maybe this is the reason for the majority of girls choosing a technology-oriented program to mention the father’s impact as important for their choice of education.

Keywords: technology education, educational choices, upper-secondary school, gender

In the teacher education curriculum one of the key elements is a safe learning environment. The increase of unintentional injuries as well as the national target programs indicate that safety procedures need to be enhanced. Safety culture in learning institutions is seen as a mixture of physical, psycho-social and pedagogical perspectives. Teacher education not only provides the teacher students with skills and knowledge but also reflects the values of the society. This study describes to what extent the safety contents and especially the subject didactical safety contents appear in the Finnish crafts education curriculum for teachers. The text based analysis is a part of the OPETURVA study that was carried out last year. The crafts education curricula of five teacher education units (N=5) were analyzed and categorized to get a better understanding for the future developmental needs.

Keywords: learning environment, curriculum analysis, unintentional injuries, safety pedagogics
The development of craft and technology education curriculums and students’ attitudes towards technology in Finland, Estonia and Iceland
Ossi Autio (University of Helsinki)

The research is based on a comparative study of craft and technology education curriculums and students’ attitudes towards craft and technology in Finland, Estonia and Iceland. The study was undertaken by the Helsinki University, University of Tallinn and University of Iceland during years 2012-2013. A literature review was completed, in order to examine and compare the origins of craft education in Finland, Estonia and Iceland. In addition, a quantitative survey was subsequently distributed to 658 school students in Finland, Estonia and Iceland. It consisted of 14 questions, which aimed to ascertain students’ attitudes towards craft and technology. The survey showed substantial differences in students’ attitudes towards craft and technology education in the three countries: these differences may be explained by differences in the national curriculums, the different pedagogical traditions and cultural differences in the field of technology. However, for deeper understanding, the qualitative findings need to be examined further with different research methods.

Keywords: technology education, craft education, attitudes towards technology, national curriculum
F8

GEOCAPABILITIES: WHAT DOES THE CAPABILITIES APPROACH OFFER FOR GEOGRAPHY EDUCATION?

Chair: Sirpa Tani  
Room: AUR 118

Panel discussion  
Gabriel Bladh (University of Karlstad)  
Anke Uhlenwinkel (Humboldt University of Berlin)  
Michael Solem (Association of American Geographers)

Discussant: David Lambert, Institute of Education, University of London

This panel session is based on the international project ‘GeoCapabilities 2: Teachers as Curriculum Leaders’, the aim of which is to investigate the role of geography education in cultivating the development of human capabilities. The background of the project derives from the ideas of Amartya Sen and Martha Nussbaum by applying their approach in the context of geography education. The participants are interested in how formal educational structures and their contents can contribute to enhancing human capabilities (or opportunities and potentials). The key objective of the project is to create teacher training materials to develop teachers as curriculum leaders through the capabilities approach. The project embraces diversity in culture and language and in how geography is understood and expressed in national school standards. Panelists will discuss the potential and challenges that have been encountered during the empirical phase of the project. Some differences between the participating countries (UK/England, Finland, Germany, Sweden, and the US) will be also reflected.
The role of arts in Singapore and Finland, distinctions and similarities
Mikko Ketovuori (University of Turku)

The central feature of arts is that it is understood and appreciated beyond cultural boundaries, even though different art forms, styles and genres reflect multiple realities. The arts are, at the same time, local and global. Since the arts in their totality constitute one of the core disciplines in Finnish education and have recently become a primary issue of interest in Singapore, questioning of their nature, role and identity in these societies, as well as, at schools, is increasingly important. In this research paper, teacher candidates’ knowledge of arts education, its’ methodology and different arts content areas are compared in Finland and Singapore. Also the attitudes towards arts and its use in education are discussed.

Keywords: arts education, identity, authentic learning

Teacher profiles in change: Classroom-music teachers´ views on teacher education and working life
Minna Muukkonen and Anna-Mari Lindeberg (University of Eastern Finland)

This paper discusses the recent changes in teacher education and teacher profiles from the viewpoint of classroom teachers with intermediate (60 ects) studies in music education. This new teacher profile has challenged the teacher education. It has also led to changes in music teachers’ professional profiles as classroom-music teachers enter the upper grades of basic education, a field which has traditionally been exclusively for specialized music subject teachers. The presentation builds on a research project dealing with early-career classroom-music teachers graduated from the University of Eastern Finland. Altogether 38 teachers have completed this specific program since 2008. The research is a follow-up study and aims at gaining knowledge of the working conditions and at developing the teacher education program. The data consists of a survey and interviews. The research employs a qualitative framework and the data is analyzed using content analysis.

This paper considers how do early-career teachers evaluate their music education program with 60 ects and its relevance for the everyday life of teaching, how do they see themselves as curriculum planners and implementers, as agents in their school community and as members of the music teacher profession.

Keywords: teacher education, music education, teacher profile
Counseling in teacher education
Torben Bjerre and Dorthe Busk Mølgaard (VIA University College)

Counseling is about supporting and challenging students in making decisions, being adaptive, seeing opportunities and acquiring self-knowledge. We initiated a participant-orientated pilot project about counseling in teacher education. The aim was to acquire knowledge about how students perceive counseling. This knowledge could help uncover potential areas of development for counseling practice. A domain that is under-researched in a Nordic context. A review of literature about counseling in Nordic teacher education 2008-2013 gave no hits. In the pilot project it is tested if the chosen method is suitable for bigger qualitative study.

The study is a qualitative questionnaire survey. The “lifeworld” is central. Therefore a phenomenological and hermeneutical approach was chosen, where the student’s perception of the counseling is studied. Central research themes: Framing the counseling situation, progress of the counseling process, content, shape and ethics of the counseling. Data material consists of 13 teacher student’s response in a questionnaire. The study had a course of 2 months. Preliminary results show that the method is valid, though the questionnaire needs a revision. Most students experience a support in seeing opportunities and making decisions, while one experience the opposite. Students perceive the counseling as guiding and broaching of new perspectives. Results show nothing about abilities to adapt or increased self-knowledge.

Teaching academic writing based on professional roles
Tero Juuti¹ and Kaisu Rättyä² (¹Tampere University of Technology, ²University of Eastern Finland)

Supervising process of an academic thesis (candidate thesis, master thesis, doctoral thesis) is a part of subject matter didactics in higher education. From supervisors, supervising process requires knowledge on several areas, including scientific guidance and writing skills.

In this paper, we introduce a model which sums up elements of content knowledge and pedagogical content knowledge required in the successful guiding process. The model proposes a holistic approach on supervising of an academic research and learning process, which results as a thesis.

One of the most important aspects of the supervision is that students understand the combination of different skills needed in research project: research, writing, project management and facilitation. This meta-knowledge can be taught with the model of professional roles. These roles are author, researcher, project manager and facilitator. For example, as an author student needs the skills that are based on process writing and genre pedagogy or as a project manager to define the goals, schedule, results and project routines.
The understanding of these roles is a fundamental element of pedagogical content knowledge which supervising teacher should possess. With this understanding teacher can professionally plan and design the teaching of academic writing.

Keywords: academic writing, higher education, subject matter didactics

A stepping stone to working life or the biggest stress factor ever: Student teachers comment on writing a Master’s thesis
Anne Huhtala (University of Helsinki)

The aim of this paper is to study student teachers’ thoughts about writing a Master’s thesis. As my data I use essays where prospective L2-teachers reflect on themselves as writers and on the necessity to write a Master’s thesis. As the results of this qualitative study show, there are prospective teachers who see thesis writing as an inspiring and valuable project and feel competent as writers, while many others regard the whole process as very stressful and completely unnecessary. In my presentation, I discuss both the positive and the negative aspects of thesis writing as reported by student teachers. Furthermore, I discuss the pedagogical implications of seeing thesis writing as “an unnecessary evil”, and talk about student teachers’ suggestions for making the whole process more worthwhile and motivating for future L2-teachers.

Keywords: Master's thesis, academic writing, student teachers, L2-teachers
A reflection tool to an open investigating approach to teacher education practice
Lisbeth Lunde Frederiksen and Mette Beck (VIA University College)

In Danish teacher education several understandings of the education exist. During our research we have experienced, that during their education students do not meet a systematic clarifying of the understanding(s) of the education neither by the teachers nor by the institution. For many students this results in confusions.

In Center of Methods and Approaches (didactic) VIA, we have developed a didactic model of reflection for teachers and managers in the teacher education, which we would like to present. This model can systematically help educators to clarify the understandings of the educations that surrounds and steer the practice of the education. The purpose of the model is to offer a systematic way to talk about what you do and what you would like to do with the education and the teaching and ultimately minimize confusion among the student teachers. The model can be seen as a tool to an open investigating approach to practice, and help to make the differences in teaching transparent, and in relation to that invite to discussions of if these differences are productive or conflicting each of.

Keywords: reflection, understanding of education, developing teaching, teacher education

Implementation of quality assessment and quality improvements in teaching practice at university
Danijela Trskan (University of Ljubljana)

Implementation of quality assessment and quality improvements in higher education is an important part of evaluation, both external and internal (self-)evaluation, focusing on the quality of educational programmes, their objectives and contents, and on the quality of the education itself and on the staff that educates (Quality Assurance in Teacher Education in Europe, 2006). At the Faculty of Arts – University of Ljubljana teaching practice is a constituent part of all pedagogical study programmes and is being implemented very diversely, in accordance with the specifics of the school subjects.

Based on the interviews and questionnaires with students, mentors at schools and faculty and school coordinators (in 2013 and 2014), we tried to develop the fields, subfields, indicators, standards and criteria for indicators which would be suitable for determining and improving the quality of teaching practice in all study programmes. When preparing the list of indicators we followed the Offering Quality Education to Adults (OQEA) model, which had been developed by the Slovenian Institute for Adult Education.

We have reached the conclusion that the expectations and needs of all the participants are
extremely important and that they present the main criteria. Moreover, every institutional self-evaluation must be systematically planned, performed and constantly developed.

Keywords: quality, evaluation, indicators, teaching practice, university

**Digital assessment forms in teacher education of literature and writing**  
Ingrid Mossberg Schüllerqvist and Zara Hedelin (Karlstad University)

On the basis of digital assessment forms like, blogs for feedback, wikis for research review and the production of digital teaching material for crossover literature, the presentation will discuss how digital forms can facilitate teaching and learning of higher aspects of taxonomies for learning outcomes, for example understanding, analysis, comparison. And, how digital assessment forms can extend and broaden the understanding of frames and content in the school subject Swedish (Kress & van Leeuwen 2001).

The subject of Swedish in teacher education, as well as in secondary school and in high school, has been dominated by two academic disciplines, Comparative Literature and Language. Little has been devoted to film and media. Even less has been taught and learnt within the field of digital and multimodal texts. But, content issues in the subject of Swedish are due to a change. EU's eight key competences, where digital competence is one, will be integrated in the curriculum.

By experience from teacher education and by research of assessment (Hattie and Timperly 2007, Black & William 2012, Mossberg Schüllerqvist and Olin-Scheller 2011) the presentation will argue that focus on digital assessment sharpens discussions of the outcomes of learning and how to get there.

Keywords: digital, assessment, literature, writing, teacher education
National minority schools – Between majorities use of history and identity construction
Tom Gullberg (Åbo Akademi University)

Despite several homogenization projects through history, Europe has always been more heterogeneous than unified. The pluralistic picture of Europe is still the best description – at least from an ethnic and a linguistic perspective. This has meant a big challenge for the organization of education in the modern Europe of nation-state. Some nation-state have recognized national or linguistic minorities, and in some countries it has been possible to found schools for the minorities. In Finland the establishment of Swedish-speaking schools has been possible since the 1920ths, because Swedish is constitutionally considered a national language, and most of the schools in the 1900th century before the independence where in fact Swedish. In the southern part of Denmark and the northern part of Germany, respective German and Danish minority schools has been founded after the changing of the border 1920. And for example in Carinthia in southern Austria, a Slovene school system was established after the border solution after the First World War. It is possible to find examples all over Europe.

In my paper I am going to report results from my project about history education in European minority schools. Focus will be on the use of history. Is there a canon of national history meant for every school?

Keywords: use of history, canon of history, national minorities, identity

The diversity of aims and purposes in history teaching: The teacher’s view
Katrin Kello (University of Tartu)

History teaching is situated between different contextual fields: education, society, politics, academy. These fields reflect different interests, different ways of thinking about the past, and different objectives of using the past. Based on in-depth interviews with Estonian and Latvian history teachers, the presentation expands on the hitherto rather scarce research centering on the history teacher as facing sometimes divergent values, demands and expectations.

The study shows how teachers’ representations of their subject reflect both their own social positions as well as their perceptions of the broader, sociopolitical contexts of teaching. For example, an open and multiperspective approach to the past seems more obvious if also the contexts of the subject are represented as open and pluralistic. The subject’s traditional aim of enhancing national identity is seen as more implicit by the Estonian- and Latvian-speaking ethnic majority teachers, whereas the Russian-speaking minority teachers perceive the political
functions of their subject more explicitly. This is particularly visible in case of teaching sensitive and controversial issues that divide the majority and minority populations in Estonia and Latvia.

Keywords: history teaching, aims and purposes of history teaching, teacher positions, sensitive and controversial issues, divided societies

**What did you learn in “The Old Town” today?**
Marianne Axelsen Leth (VIA University College)

How do students experience one day of school activities in the “Old Town Open Air Museum”? How are their experiences to be qualified into concepts of History learning on location or in the classroom? How to assess the teacher’s competences in this process? From an out-door/open air perspective, what is specific about teaching in the "Old Town Open Air Museum"?

These questions will be the focus of this discussion of history teaching in the "Old Town" (www.dengamleby.dk) based on a small study of one of the school activities: "One day as a child in 1864" from the museum's education department. The study consists of participant observation of eight school classes participating in the school activity, student assignments as well as interviews with teachers and museum educators.

The basis and foundation of this study is partly built upon a longstanding collaboration between my History classes at The Teacher Education in Aarhus, the Education Department in "Old Town" and our collaboration in the project "Learning Museum" (www.learningmuseum.dk), and partly on theoretical discussions and inspirations from a combination of out-door educational theories in Scandinavia as formulated by eg. Arne Nikolaisen Jordet, Erik Mygind, Niels Eibye-Ernst, museum didactics as formulated by eg. prof. Olga Dysthe and Helene Illeris, and analyzes of "time travelers", by eg. prof. Cornelius Holtorf. As a result of many years of collaboration, there is a common need for more acquired knowledge and research about students’ experiences and learning as well as the teachers’ role in these school activities.

Furthermore, it will be discussed whether the teacher acts as support or conversely an obstruction of students' learning in the school activities and whether the students' understanding of the time travel to 1864 is to be regarded as more accurate than the "old days" in general.
**F13**

**LEARNING STYLES**

**Chair:** Torben Spanget Christensen  
**Room:** K114

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**Student notes as learning strategy**  
Torben Spanget Christensen (University of Southern Denmark)

This study examines the function of student note-writing in Danish upper secondary school. The impetus for this study was an observed disparity between the significance that students attach to note-writing and the actual quality of their notes. This empirical ethnographic field study follows two male students and examines their note writing. It addresses two central research questions: 1. Can the notes written by students in the transition from Danish lower secondary school to upper secondary school be considered a product of their own independent making? 2. Why do students write notes? It is argued that note-writing serves as a mediating tool between the students’ everyday language and the language of the subjects to be learned. Two learning strategies are identified: note-writing as an attempt to align everyday language with the language of the subject discourse (and thereby to capture and acquire the subject discourse) and note-writing as an attempt to identify with and act as a member of the academic and disciplinary social community of the class and school.

Keywords: student notes, writing to learn, learning to write, writing in the disciplines, transition from lower to upper secondary school, learning strategies

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**Diversity in students’ approaches to learning in parallel psychology courses**  
Maria Öhrstedt (Stockholm University)

The SAL (Student Approaches to Learning) tradition focuses on mapping and assessing students’ approaches to learning in the learning context of higher education. Previous research suggests that approaches to learning are indeed sensitive to modifications in the learning context, and influence the quality of student learning. However, the knowledge regarding variations in student approaches relating to learning flexibility is still limited.

This study investigates whether a natural learning context, providing parallel and resembling courses, involves different approaches to learning. Second semester psychology students were asked to describe their approaches to learning separately for two parallel courses. The analyses suggest that even though individual students seem to exhibit a consistent core regarding their approaches to learning, alternations between similar learning contexts can bring about large changes in both surface and deep approaches to learning. Strategic approaches to learning seem less flexible, but not unaffected.

The findings add to the theoretical idea of considering approaches to learning as a flexible construct, which is sensitive to smaller transitions in learning contexts. From a practical view, the results support the idea that there are ways of designing powerful learning environments.

Keywords: approaches to learning, higher education, psychology
Influence of teacher gaze and gestures on student visual attention during teacher's presentation - A gaze tracking study
Enrique García Moreno-Esteva¹, Markku S. Hannula¹, Man Ching Esther Chan², David Clarke² and Miika Toivanen³ (¹University of Helsinki, ²University of Melbourne, ³Finnish Institute of Occupational Health)

In this research report we shall present results from a study using a mobile gaze tracking device to record student’s visual attention during mathematics lessons. Gaze tracking in classrooms provides a novel methodological opportunity to study student attention in class. This is specifically important in mathematics, where interpretation of diagrams and translating from one representation to another are essential competences to develop. Our objective is to explore how a student’s attention is directed in reaction to the direction of the teacher's gaze and to teacher use of gestures. This case study focuses on episodes, when the teacher is engaging the class to study a diagram on the board. As expected, the student’s attention is influenced by teacher gaze direction and gestures. The results of this study indicate that the new research method is a feasible way to study student visual attention in real classrooms.

Keywords: mathematics education, student attention, self-regulation, gaze-tracking, gestures

Who benefits from visual illustrations in psychology teaching – A question of diversifying teaching according to learning style or not?
Ann-Sofie Jägerskog and Fredrik Jönsson (Stockholm University)

A key question concerning the use of visual illustrations in teaching is whether teaching should be diversified and adapted according to students’ preferred learning style (visualizer-verbalizer), whether focus should be on strategies that work well in general (multimedia learning), independent of preference, or whether it is worthwhile to combine the two to further improve learning. Upper secondary students were given a psychology lecture presented only verbally or with the aid of visual illustration. Results from a learning test were analyzed in relation to the students’ self-rated learning style. Visuo-verbal presentation resulted in better learning than verbal presentation only, independently of learning style. Support was not found for the learning styles hypothesis, since there was no crossover interaction. However, students with mixed or visual learning styles performed generally better on the learning test than students with a verbal learning style. Since the use of visual illustrations seems to have a beneficial effect on learning for all students, this mode of instruction ought to be used in teaching. Rather than being a tool for teachers to adapt their teaching, learning styles diagnoses may be used in order to identify students who need to develop their study strategies towards a more visual preference.

Keywords: multimedia learning, learning styles, visual illustration, visualizer, verbalizer