



Poster Sessions

27 March 14:15 – 15:00

Play and Learning

Poster session 1

Play in Danish Early Childhood Education

Ditte Alexandra Winther-Lindqvist, Program coordinator for research in ECE, Aarhus University, DPU
Denmark

Danish ECEC has always been play-based; however a new legislation in Denmark foregrounds children's play and makes the pedagogical participation in children's play mandatory. But how should the professionals participate and support children's play? The cultural-historical developmental approach has been, and is, a front-running theoretical framework from where to seek answers to this question. However, it promotes different adult roles in children's play and maybe reflects different underlying assumptions about the developmental potentials in children's play. "Tools of the mind" is a solution that advocates for a strong adult role in children's social fantasy play, based on the assumption that child play can be more or less developmental and of high or low developmental quality (Bodrova & Leong 2007). However, other approaches within the cultural-historical tradition advocate for a more collaborative approach where the adults co-operate with children more equally on play activities (Lindqvist 1995, Fler & Hedegaard, 2010, van Oehrs 2013). In these latter approaches, it is less clear what high quality play is, and why adult participation is important/necessary. Is it meaningful to address children's play with a view on play-quality developmentally? How are these different views on what is developmental/important in play, affecting the view on merits and pitfalls with adult participation in children's play? Hopefully, more research in this area can help solidify recommendations for practice with regards to the difficult question of adult-roles in supporting children's social fantasy play in ECE.

Supporting and stimulating children's social skills through play

Karolina Fredriksson, Researcher, Ph.D./Project manager
Swedish Institute for Educational Research
Sweden

The aim of this study is to contribute to the understanding of how preschool teachers can support and stimulate children's social development through play. In this way, the study provides guidance to preschool teachers in consciously working to achieve the goals of the Swedish Curriculum for the Preschool, i.e. the framework of all teaching in preschools. The study is a systematic review, a research method developed for synthesizing primary research. It is a synthesis of research of a qualitative character. Most of the primary studies are video observations of play situations, and the results are interpretations, like concepts and descriptions. As a qualitative metasynthesis, the study also contributes to the development of knowledge about how to integrate and synthesize findings across qualitative studies, an area where there is a lack of knowledge.

The literature searches, conducted in national and international research databases, resulted in 9,662 studies. After being evaluated according to relevance- and quality criteria, a total of fifteen studies remained.

The review describes a multitude of actions which preschool teachers take, to support and stimulate children's social skills through play, i.e. providing play material, mediating, guiding and observing. These actions are in turn divided into three categories: stage managing, participating, and observing and reflecting.

The results of the overview also show that attentiveness and responsiveness are important qualities in the actions which support and stimulate children's social skills through play. This applies to all categories of actions and thus all parts of the teaching.

Inclusive practices and pedagogies

Poster session 2

Children's communities - Understanding Children's learning as connected to social life.

Anja Hvidfeldt Stanek, Ph.D., Lektor, Institute for Psychology, Syddansk Universitet SDU
Denmark

The theoretical basis for the presentation sees people as fundamentally active social beings, which means, for example, that when we wish to understand the actions of an individual child, we must understand those actions by looking at what other children and adults around that child are doing. Against this basis it becomes relevant to address the concept of communities, as a useful concept for children's participation and learning in and across the various institutional contexts in which they find themselves. We need concepts allowing us to focus on how children participate and link their participation in different places – and how through their involvement they develop the ways they participate". The question is not

whether children are social beings but how the social dimension is acted out and acquires meaning.

This presentation is concerned with ways in which children's social lives appear to have meaning and with children's subjective orientation in the ECEC. The presentation covers on the one hand the presentation of the principal findings of different research projects in ECEC and on the other a more detailed exploration of the concept of communities, including definitions of what children share and of how what they share links to what adults arrange for them. It also presents arguments for how a social approach to children's issues paves the way for more productive measures than an individual approach offers.

In Denmark the legislation of ECEC is renewed and the concept of children's communities and the context for children's learning is a central part of the new curriculum. This presentation will present some of the research and theoretical thoughts that has inspired the new common pedagogical basis in Denmark.

Support for Development and Learning in Finnish ECEC - Local Interpretations

Mervi Eskilinen, Ph.D., University lecturer, University of Jyväskylä
Finland

In past few years, the governance of ECEC in Finland is reformed. Legislation of ECEC is renewed and the first binding steering document, national curriculum guidelines, was drawn up. ECEC service providers, usually municipalities, are required to make local versions of national curriculum guidelines and to amend and clarify national guidelines. ECEC service providers should describe the model of support for child's development and learning, forms of support and co-operation with stakeholders, and determine the objects and working approaches. Due to these changes it is important to examine what kind of local interpretations and practical implementations can be found from local level documents regarding to support for child's development and learning, since they reflect on children's equal educational opportunities. It seems that provision of support differs regionally in forms of support and also in number of children who gets support (THL, 2017; Eskilinen & Hjelt, 2017; Vainikainen et al., 2018). Previous study in basic education in Finland has shown that adequate and timely support for learning increases child's participation and social integration (Lintuvuori, Jahnukainen & Hautamäki, 2017). In ECEC, this has not yet been explored.

This research has a two-fold aim. Firstly, it examines the local interpretations of support for child's development and learning. Secondly, it examines connection between interpretation of support for development and learning in local curriculum and implementation of support.

ECEC for children under 3 years of age

Poster session 3

The Longitudinal Effect of the Quality of Early Teacher-Child Interactions on Child Outcomes

Jenni Salminen, Ph.D., Post Doctoral researcher, University of Jyväskylä
Finland

Emotionally supportive, responsive and cognitively stimulating interactions along with child-centered teaching practices have been shown to predict gains in child development in early childhood education and during early school years. The aim of the present study was to investigate the role of the quality of early teacher-child interactions in toddler classrooms in emerging academic and self-regulation skills later on at the age of 5. Children (n = 206) were tested at the age of 2-3 and again at the age of 5 in terms of emerging literacy and math skills as well as self-regulation skills. The quality of teacher-child interactions was assessed in toddler classrooms (n = 41) using the CLASS-Toddler observation instrument. The path models with Complex approach were constructed. The results indicated that after controlling for parental level of education, child gender and previous level of investigated variable, the higher quality of emotional and behavioral support in toddler classroom was related to children's better behavioral self-regulation skills later on. Furthermore, high quality of engaged support for learning was related to higher phonological awareness and emerging reading skills at the age of 5. The results imply that the quality of teacher-child interaction in ECEC classrooms has longitudinal benefits in terms of supporting children's emerging academic and self-regulation skills. The results can be used in teachers' pre-service and in-service training in early childhood education sector.

Cognitive development and social competence in ECEC

Erik Eliassen, Ph.D., Oslo Metropolitan University
Norway

Despite being one of the few countries that have implemented universal ECEC from age 1 year, few studies have assessed the impact of infant/toddler enrollment on subsequent development. To address this question, we studied a sample of 700-800 children (born in 2011 & 2012), from 80 different ECEC centers, who were recruited in the GoBaN / BePro study—Norway's largest ECEC study to date. We exploited a 'natural experiment' arising from national uptake regulations in order to estimate the causal effects of children's age of entry into ECEC on social and cognitive development at age 3 years. Our findings showed that children's age of entry was an important causal influence for both cognition and social competence. On average, children performed an additional 14.1% of a standard deviation higher on non-verbal ability at age 3 years for every month earlier entry prior to age 2 years, but there was no impact on verbal abilities. Surprisingly, children also performed an additional 32% of a standard deviation lower in social competence at age 3 years for every standard deviation earlier entry. Lastly, ECEC quality did not predict cognitive development at age 3 years—independent of socioeconomic background. In conclusion, ECEC during the infant/toddler period exerts both a positive and negative influence on children's short-term

development, resulting in a trade-off between cognition (non-verbal) and social competence, for children enrolling prior to age 2 years.

Quality of language-learning environment in toddler care and language development

Joacim Evensen Hansen, Ph.D., Assistant professor, Norwegian Reading Centre, University of Stavanger
Norway

The topic for the presentation is associations between quality of the language-learning environment in toddler care and children's vocabulary development from age 3 to age 5. This study constitutes a part of my doctoral thesis, and is a part of the longitudinal national research project on quality Better Provision for Norway's Children in Early Childhood Education and Care (www.goban.no). The importance of high-quality toddler care for children's language development is widely acknowledged, however longitudinal studies on the effects of ECEC quality show diverging results. Specifically global observational measures of quality (e.g. ITERS-R, ECERS-R) have shown null to modest effects, and the use of more domain-specific measurements (e.g., quality and quantity of verbal interactions) seems to be more promising when predicting child language outcomes. The hypothesis in the study is that both the quality of language-based interactions and provision of specific language-learning opportunities (i.e., domain-specific quality aspects) predict vocabulary development. The sample is 1131 Norwegian children from 206 toddler groups from 93 centres. Multilevel analysis showed that the quality of the language-learning environment experienced in toddler care was associated with verbal ability at 5 years, when controlling for verbal ability at 3 years and the quality experienced in kindergarten groups at 5 years. These results indicate that toddler language-learning environments characterized by responsive staff, extended talk, and facilitating conversations promote vocabulary development.

Professionalism and teacher role

Poster session 4

Preschool teachers' professional development through collaborative action research

Ingibjörg Ósk Sigurdardóttir Ph.D., Adjunkt, University of Iceland
Iceland

The study was collaborative action research (CAR), lasting for 24 months. The aim was to create new knowledge on values education in early childhood education and on the methodology of CAR, and, to contribute to changes in the field. The author worked in close collaboration with seven preschool teachers in one Icelandic preschool, who focused on their professional development in relation to values education. The main research question that guided the study was How can collaborative action research support preschool teachers' professional development in relation to values education?

Sociocultural perspective guided the study, where learning and development are believed to be inseparable from the social context in which they happen (Säljö, 2005; Vygotsky, 1978).

Furthermore, Habermas's theory of communicative action was used to study values education in more detail. Habermas believed that learning happens through communication and therefore, education should be more about communication (Edgar, 2006). Values are seen as intertwined in the minds and actions of individuals rather than only related to either of these two spheres (Hitlin & Piliavin, 2004; Tappan, 2006).

The methodology of CAR has proven to be beneficial to reach teachers in the field, to create new knowledge and to make changes in practice (Bruce, Flynn & Stagg-Peterson, 2011; Kemmis, McTaggart & Nixon, 2014; Koshy, 2010).

Four themes represent the overall findings of the study; values education: moving from implicit to explicit practice, professional development: empowerment through the learning process and, collaboration with the researcher: two forms of expertise meet in the third space.

Researching Finnish early childhood teachers' pedagogical work using Layder's research map

Tuulikki Ukkonen-Mikkola, Ph.D., University teacher, University of Tampere
Finland

This study examines the experiences of early childhood teachers in their everyday pedagogical work. The data for this qualitative study consists of the diaries of early childhood teachers. Layder's (1993) research map has been used to structure the theoretical background and provide an analytical frame to categorise the data.

The results show that early childhood teachers' work is complex and demanding, but they did encounter successes in their work. Certain common themes were identified on the levels of Layder's research map. These themes, which were experienced both as successes and challenges, included laws and steering documents, values and attitudes, pedagogical principles and solutions, leadership, collaborative structures, interaction, professional self-conception and skills. The challenges in the teachers' work were caused by differing professional values, a lack of discussion, and inoperative organisational structures and practices, among others.

Poster session 5

Creating space for multilingualism in kindergarten

Anja Maria Pesch, Universitetslektor PhD, UIT the Arctic University of Norway
Norway

This qualitative ethnographic case-study explores how views on multilingualism in kindergarten create space for teachers' linguistic practice and for cooperation with parents of multilingual children. The study's data material consists of relevant policy documents, photos of the kindergartens' semiotic landscapes, field notes on kindergarten teachers' linguistic practice and interviews with teachers and parents in one Norwegian and one German kindergarten. Theoretically, the study is based on a social-epistemological view on kindergarten (Ødegaard & Krüger, 2012), Bakhtinian (1986) concepts, Jørgensen's (2008) and Garcia and Li Wei's (2014) views on multilingualism. A nexus analytic approach (Scollon & Scollon, 2004) is used to study the teachers' linguistic practice.

Both kindergartens view multilingualism as a resource, but this resource perspective has different limits. The study also shows how the teachers' views on multilingualism are connected to how they legitimize and value both their own and children's choice and use of language. In the Norwegian kindergarten, the findings show a field of tension between acknowledging multilingualism and including the children's different mother tongues in kindergarten on the one hand and a strong obligation towards developing their skills in Norwegian on the other hand. Regarding cooperation with parents, the data material points towards contrasts in teachers' and parents' understanding of multilingualism and how they influence their views on each other's practice and choice of language. The study's findings are important issues to discuss for teachers working in kindergartens and Early Childhood Teacher education, preparing students for work in kindergartens with a growing linguistic diversity.

The effects of the PedaSens intervention in supporting early childhood education professional's pedagogical sensitivity

Sivi Harkoma, Ph.D. student, University of Helsinki
Finland

The aim of the study is to investigate the extent to which a pedagogical intervention (PedaSens) can enhance early childhood education professional's sensitivity, and support adult-child interaction in kindergarten groups. The intervention training consists of raising professionals' knowledge on pedagogical sensitivity both with theoretical information and video material collected from the study groups. Theoretically this study draws from emotional availability (EA) theory (Biringen, 2000) that explains the emotional features of adult-child interactions. EA refers to adult emotional signaling and understanding of the child's signaling. The concept describes the affect and behavior of the adult-child interaction on a relational perspective. Participants were 75 ECE professionals and 274 children from 24 groups in 16 daycare centers in Finland. Total of 61 professionals completed the full follow-up assessment (41 in the intervention group and 20 in the control group).

Data was collected by videotaping adult-child interaction in the groups. The EA assessment (sensitivity, structuring, non-intrusiveness, non-hostility, child responsiveness/involvement) was conducted before the intervention and twice after the intervention (after 6 and 9 months). Statistical analyses were used to test the differences in EA between the intervention and control groups.

According to preliminary results, several dimensions of adult emotional availability of the intervention group seems to have increased 6 and 9 months after the first measurement. This effect was not visible in the control group assessments

Pedagogy for exploration and experimentation

Poster session 6

One-to-three Year Olds' Risky Play in Early Childhood Education and Care

Rasmus Kleppe, Ph.D., OsloMet, Oslo Metropolitan University, Kanvas Foundation
Norway

*Over the last decades there has been a growing scientific interest in children's risk-taking in play. Previous studies suggest that risky play enhances children's well-being and support vital learning processes. **However, there** has been no studies investigating risky play below three years. The present study therefore made use of a multi-method approach in varied ECEC settings to effectively describe and map risky play in this age group. The main findings include 1) detailed descriptions of children's risky play from one year of age. 2) ECEC staff, in almost equal portions, supported risky play appropriately or did not interact with 1-3 year olds in risky play. Inappropriate interaction, for example overprotective behavior, were observed only in a few instances. 3) Appropriate affordance did not necessarily entail an objective risk, such as great heights, but had aspects of uncertainty and potential for mastering and exhilaration. A high-scoring ordinary ECEC center facilitated better for risky play than a nature center. 1-year olds engaged more in risky play indoors than outdoors. 4) ECEC center groups that provided well for 1-3-year-olds' risky play also provided safety, and there was no apparent conflict between the two aspects Norwegian ECEC, as measured with a standardized measurement (ITERS-R).*

Exploring children's musical learning from a play-responsive teaching perspective

Pernilla Lagerlöf, Ph.D., Senior Lecturer, University of Gothenburg
Sweden

Music is an important part of young children's everyday lives as their musical cultures are increasingly intertwined in children's play at preschool. Traditionally, music and play are seen as children's free expressions and many teachers rely on an approach where they 'interfere' as little as possible. However, to organize for a playful music education is important in providing all children equally rights to come in contact with different musical expressions and to facilitate their agency in musical activities. The overarching aim of this presentation is to take a meta-perspective on previous studies (Lagerlöf, 2016; Lagerlöf & Wallerstedt, 2017, 2018) in order to explore how preschool teachers find ways of contributing to children's music learning in response to children's play. The perspective here used aims to contribute to conceptualizing teaching and didaktik relevant to early childhood education without residing to a dichotomy between traditional-schooled-instruction, on the one hand, and free play, on the other. From this perspective, teaching is understood as a mutual activity, co-constructed by coordinated practices and actions of the participants, hence an inter-responsive activity between teachers and children. The meta-analysis is made on video recordings of children and teacher engaged in interactions in preschools. Data have been generated from different projects: e.g. MIROR, (EU, FP7-ICT, Grant 258338), and Theorizing play-based preschool didactics (Skolfi 2016/112). The research builds on detailed process

studies that show how teacher participation and responses are critical to the continuation and development of mutually engaging play-responsive music teaching activities.

Keywords: *musical play activities, play-responsive teaching, popular media, Swedish preschool*

Poster session 7

Foregrounding science in early childhood education and care

Jonna Larsson, Ph.D., Senior Lecturer, University of Gothenburg
Sweden

There are different ways to understand science and physics in institutional contexts. This presentation foregrounds science as a learning area and show that learning and teaching about physical phenomena have a place in early childhood education and care. Such notions rests upon the tradition of Nordic preschool education. Drawing on four different studies conducted in Swedish preschools, the aim is to problematize the relation between children, preschool teachers and science as a learning area in contemporary society. The studies are framed in a cultural-historical perspective implying that knowledge develops within social contexts and to participate in such environments contributes to opportunities for learning. In this perspective, cultural constructions and the notion that children's development of scientific concepts derives from everyday concepts are important. The results show that there can be a challenge for teachers to capture and interpret moments of children's play as opportunities to foreground aspects of science (physics). On the other hand, when teachers have basic skills and knowledge in science, and combine this with ECEC ways of organizing play and activities, children's possibilities to collaborate, explore, talk, raise questions, discuss and express evolving knowledge about abstract phenomena increases. In sum, the research results display the intertwined relation of play, care and education. Further, the teachers' role is highlighted together with implications for policy and practice.

Multilingual mathematics: Using digital games to develop children's mathematical languages

Tamsin Jillian Meaney, Professor, Western Norway University of Applied Sciences
Norway

The aim of project, discussed in this poster, is to determine how the affordances of digital games can be used to support multilingual children's possibilities to discuss mathematical ideas in all of their languages. To achieve this, parents, kindergarten teachers, teacher education students, and teacher educators are working together to develop and integrate playful mathematical digital games into learning opportunities provided at home and kindergarten. Information is being collected from a collaboration between parents, teachers, teacher education students, and teacher educators: as input for the design stage; in the trialling of digital games in some kindergartens; from the implementation of the apps/games across the kindergartens and in the parallel studies being undertaken elsewhere in the world. A multi-modal analysis of the data will be done that builds on the work of Johansson, Lange, Meaney, Riesbeck and Wernberg (2014). This project includes several sub-tasks:

1. *a survey to gain parent and teacher perspectives on how young children interact with digital games in the company of adults*
2. *recording of parents' and kindergarten teachers' interactions with multilingual children when they play digital games on digital devices*
3. *an analysis, including identifying differences in the Norwegian that children use for discussing mathematical ideas*
4. *designing, trialling and refining playful mathematical digital games with kindergarten teachers, preservice students and teacher educators will be documented and analysed*
5. *designing, implementing and refining support materials for kindergarten teachers and parents about how to interact with children around playful mathematical learning opportunities*