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Report, Grand Hotel Oslo, 18th–20th of May 2011

Nordic Early Childhood Education and Care – Effects and Challenges

Research – Practice – Policy making

NORWEGIAN MINISTRY
OF EDUCATION AND RESEARCH

THE MINISTER'S FOREWORD

In a globalised and changing world, the Nordic model for Early Childhood Education and Care is both imitated and challenged. We need to explore and discuss what Nordic ECEC institutions offer children and how it contributes in children's lives to development and well-being. We need to explore the educational, societal, economical and psychological effects. Together; researchers, practitioners and policymakers, can contribute to discussions that are based on knowledge, experience and values and that can give directions for the future development of kindergartens.

We, the Nordic countries are world-leading in terms of offering integrated pedagogical settings to all children. We also want to be in the forefront in developing the knowledgebase. This conference is a meeting place to present the latest research from the Nordic countries in this field. Shared knowledge and discussions will help develop our understanding of Early Childhood Education and Care and also respect for our different points of view.

International experts have also been invited and will provide us with perspectives that can enrich the debate.

We believe that there is no education without care, and no care without education. It is important to develop a practice based on the latest research and understanding of children and childhood. This conference gives us an opportunity to discuss the implications of new research in the practice and policy field.

It is my hope that this conference will challenge all participants to reflect on the development of Early Childhood Education and Care, and how knowledge can contribute to a good start for all children.

I wish you all the best of luck with the conference!

Kristin Halvorsen

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The Norwegian Ministry of Education and Research would like to thank the members of the Scientific Committee: Professor Thomas Moser, Professor Lars Gulbrandsen and Post. Doc. Henrik D. Zachrisson for their contributions to the conference.

PROGRAMME

Conference Chair: Director General Dag Thomas Gisholt

Reporter: Director and Associate Professor Anne Trine Kjørholt, NOSEB

WEDNESDAY 18.05.2011

1830 – 1900: ARRIVAL AND REGISTRATION

1900 – 1930: APERITIF, PALMEN, 1ST FLOOR

1930: DINNER, GRAND CAFÉ, 1ST FLOOR

THURSDAY 19.05.2011

0830 – 0900: REGISTRATION

0900 – 1300: PLENARY SESSION (ROCOCCOSALEN)

0900 – 0930: Opening of the conference: Nordic ECEC in the forefront

Minister of Education Kristin Halvorsen

0930 – 1015: Research and implications for policymaking: the UK experience

Professor Edward Melhuish, University of London

1015 – 1045: Mapping and appraisal of Scandinavian research in ECEC institutions

Professor Sven Erik Nordenbo, Danish Clearinghouse, DPU, Denmark

1045 – 1130: Keynote I: Quality: Characteristics of preschools as learning environments and conditions for children's learning

Professor Sonja Sheridan, University of Gothenburg, Sweden

1130 – 1145: Coffee

1145 – 1230: Keynote II: Governance: Child Care and Child Development: An Economist's View

Senior Researcher Magne Mogstad, Research Department of Statistics Norway

1230 – 1330: Lunch

1330 – 1730: THREE PARALLELL SESSIONS (1545 – 1615: Coffee)

Session 1: Quality in ECEC – effects and challenges (Hambro, 7th floor)

Chaired by Professor Thomas Moser

- Jan Helge Kallestad, Bergen University College, Norway: *Mapping children's activities in Norwegian kindergartens*
- Peder Haug and Gerd Sylvi Steinnes, Volda University College, Norway: *Educated kindergarten teachers, a prerequisite of quality in Norwegian kindergarten?*
- Niina Rutanen, University of Tampere, Finland: *Space for Toddlers in Early Childhood Education and Care*
- Marianne Torve Martinsen and Terje Melaas, Telemark University College, Norway : *Child care center everyday for the youngest children: Selected quality indicators for one- and two-year-olds*
- Ole Henrik Hansen, Aarhus University, Denmark: *Language Acquisition in the Danish Crèche*
- Anne Greve, Oslo University College, Norway: *Everyday life in 9 + 1 Norwegian ECEC for children under three*

Session 2: Governance of ECEC – effects and challenges (Kongen)

Chaired by Post.Doc Henrik D. Zachrisson

- Bente Vatne, Volda University College, Norway*: Challenges by implementing language screening in Norwegian Kindergartens*
- Bent Olsen, Norwegian University of Science and Technology, Norway: *Conditions of social selection : origins, positions and educational preferences of staff within the preschool occupation*
- Ellen Beate Hansen Sandseter, Queen Maud University College, Norway: *Scaryfunny – a qualitative study of risky play among preschool children*
- Pål Schøne, Institute for Social research, Norway: *Enticing Women to work- the impact of affordable Day Care*
- Nanna Høygaard Lindberg, Danish Evaluation Institute (EVA), Denmark: *Language assessments and language stimulation of three-year-olds. Cross-disciplinary results from Danish Evaluation Institute surveys*
- Frederik Kiørboe, Danish Evaluation Institute (EVA), Denmark: *Using programs for development initiatives in early childhood education and care - opportunities and challenges*

Session 3: **Inclusion and equity in ECEC – effects and challenges (Rococcosalen)**

Chaired by Professor Lars Gulbrandsen

- Ratib Lekhal, Norwegian Institute of public Health, Norway: *The relation between child care and language development, Results from the Norwegian Mother and Child Cohort Study*
- Bente Jensen and Anders Holm, University of Aarhus: *The Effect of a New Innovative Early Childhood Intervention and Care Program on Child Strengths and Difficulties*
- Biljana C. Fredriksen, Vestfold University College, Norway: *Researching children's embodied ways of learning*
- Ane Nærde, The Norwegian Center for Child Behavioral Development, Norway: *Early child care and child adjustments at 2 years of age*
- Ann Christin Nilsen, Agder Research, Norway : *When Day Care Centers report concern to the Child Welfare Service*
- Christian Eidervald, Jönköping University, Sweden: *Early education and gender (in)equality: Current and future issues*

1915: **Walk-about on Oslo Opera House**

2000: **Dinner – Oslo Opera House, Restaurant Argent**

FRIDAY 20.05.2011

0900 – 1115: **PLENARY SESSION (ROCOCCOSALEN)**

0900 – 0915: **Opening Day two**

Director General, Dag Thomas Gisholt

0915 – 1000: **Keynote III – Inclusion and Equity in ECEC : Early child care experiences and language development up to 3 years. Evidence from a prospective longitudinal study in England**

Professor Jacquline Barnes, University of London

1000 – 1030: Coffee and check out

1030 – 1115: **Keynote IV – Research and Policymaking: Contributing Factors in Policymaking in Early Childhood Education**

Professor Johanna Einarsdottir, University of Iceland

1115 – 1130: Short coffee break

1130 – 1300: THE TRIANGLE OF PRACTICE, RESEARCH, AND POLICYMAKING – PLENARY DISCUSSION (ROCOCCOSALEN)

Conference summary and introduction to the debate

Associate Professor Anne Trine Kjørholt, Norwegian Centre for Child Research (NOSEB)

- How to develop shared knowledge as a basis for the development of ECEC?
- How can knowledge developed in each field contribute to development in the others?
- Challenges in implementing knowledge as a basis for practice in the ECECsector, institutions, research-field and governance?

1. Practice – Head Teacher Øyvind Hornslien, Norway

2. Policymaking – Head of Unit Päivi Lindberg, Finland

3. Research – Associate Professor Stig Brostrøm, Denmark

1300 – 1315: Endnote

Director General Dag Thomas Gisholt

13.15: Lunch

PLENARY AND KEY NOTE PRESENTATIONS

- Edward Melhuish: Research and implications for policymaking: the UK experience
- Sven Erik Nordenbo: Mapping and appraisal of Scandinavian research in ECEC institutions
- Sonja Sheridan: Characteristics of preschool as learning environment and conditions for children's learning
- Magne Mogstad: Child Care and Child Development: An Economist's View
- Jaquline Barnes: Early child care experiences and language development up to 3 years. Evidence from a prospective longitudinal study in England
- Johanna Einarsdottir: Contributing Factors in Policymaking in Early Childhood Education

EARLY YEARS RESEARCH AND IMPLICATIONS FOR POLICYMAKING: THE UK EXPERIENCE

EDWARD MELHUISH

UNIVERSITY OF LONDON

Why should we focus on the early years? One reason is the accumulation of evidence that indicates that the child's experience in the early years has profound consequences for later life. There are now many studies that present a consistent picture indicating that adversity in early life, such as frequently accompanies child poverty, is linked to: poor adult mental and physical health , adult mortality, anti-social and criminal behaviour, substance abuse and poor literacy and academic achievement.

To quote two well known social scientists

Esping-Anderson (2004): *"If the race is already halfway run even before children begin school, then we clearly need to examine what happens in the earliest years."*

And the Nobel prize winning economist James Heckman (Heckman & Wax, 2004): *"Like it or not, the most important mental and behavioural patterns, once established, are difficult to change once children enter school."*

Heckman has analysed data from many different studies and produced a graph showing the relationship between investment and the return to investment for interventions at different stages of the life cycle, and clearly interventions in the early years are the most cost-effective.

In considering the evidence of what might be done in the early years there are a number of studies that indicate investment in the early years would have definite benefits. For example the Perry Preschool Project, and the Abecedarian Project have shown the possible benefits of high quality preschool education years for disadvantaged African-American children, and that the value of the benefits are far greater than the cost of preschool. These American studies clearly demonstrate benefits of Early Childhood Education and Care (ECEC) for disadvantaged children. Also they indicate that it can make good economic sense for society. However they do not tell us about the value of ECEC for the general population.

In addition there has been much other research on ECEC and child development. A review of this research has been provided online by Melhuish (2004). In making conclusions from the evidence on ECEC, we need to distinguish between results for 0-3 years where the evidence is mixed with some studies indicating benefits of early childcare, some indicating negative effects and some studies indicating no effects at all. Whereas for children over 3 years the evidence of benefits for children is

very clear and there are almost universal benefits for children associated with the various forms of group-based ECEC (e.g. playgroups, day care centres, nursery schools) attended by children from 3 years upwards. Also the benefits increase the greater the quality of ECEC (i.e. how well the centres serve children's developmental needs). The discrepant results for studies of ECEC for children 0-3 years probably reflects different effects for different populations, different ages, different types of children as well as differing qualities of childcare for differing settings and differing populations.

EPPE AND EPPNI PROJECTS

The EPPNI and EPPE projects are the first large-scale longitudinal studies in Europe to investigate the effects of different kinds of preschool provision for the general population, and to relate experience in preschool centres to child development. These projects are summarised below.

EFFECTIVE PRESCHOOL & PRIMARY EDUCATION (EPPE) - ENGLAND

The EPPE Project has addressed the question of the longer-term impact of preschool provision. Preschool provision includes group-based provision such as playgroups, day care centres, nursery classes, nursery schools, and integrated children's centres. This longitudinal study of 3000 children has also the effects of various child, family and home characteristics upon child development. The results up to age 11 are summarised in Sylva, Melhuish, Sammons, Siraj- Blatchford & Taggart (2010).

Children whose first language was not English, who had low birth weight, or who had 3 or more siblings, and boys, all did worse on cognitive development. Parent education and social class were also important influences upon child development and children from poor families did worse. However the strongest effect of all was for the Home Leaning Environment. Where the child had more frequent opportunities for learning activities in the home, the child did better on all aspects of child development. These effects were after taking account of all other child parent and home characteristics. We summarise these findings by the saying "*What parents do is more important than who parents are*". This reflects the fact that the Home Learning Environment had a more powerful effect upon child development than parents' education or social class.

After allowing for all these effects of background factors were considered whether attending a preschool centre mattered. On measures of language, literacy and numeracy the preschool group did better. On average the benefit of preschool was 0.2 of a standard deviation above that of the no-preschool group. As well as measuring the effect of preschool overall, we had extensive data on the quality of the preschool environments from direct observation and also of the amount of time that the child had attended preschool. We found that both quality and duration of preschool were important. Where children had been to preschool for a longer duration e.g. 2 rather than 1 year benefits were greater. Also for any period of preschool, 1, 2 or 3 years, the effects for high quality preschool were greater than average quality, which were greater than for low quality preschool. The benefits of preschool were also evident for social development, and the quality and duration of preschool also affected children's social development.

PRESCHOOL EFFECTS FOR PRIMARY SCHOOL ATTAINMENT

After children had been at school for 2 years we collected more information on their development. The benefits of preschool were still apparent and also the benefits of better quality preschool and

longer duration of preschool. After 3 years of school all children in England take National Assessments in reading, mathematics and science. We used these data to see if the effects of preschool persisted.

For all social class groups the effect of preschool was clear, and similar for all groups. However there is a minimum level of attainment that is expected of all children. While all social class groups who received preschool education were, on average, above the minimum level, for the disadvantaged group (unskilled or unemployed) children scored, on average, **below the expected minimum** if they had not had preschool education. This indicates that the consequences of not having preschool are particularly important for disadvantaged children.

The EPPE study was able to identify the most effective preschools that produced the most developmental benefit for children. We undertook case studies of the most effective and average preschools to investigate what processes were associated with particularly effective preschools. In these case studies the researchers did not know which preschools had been identified from the quantitative analyses as effective or ineffective. These case studies identified 5 areas that were particularly important.

- Quality of adult-child verbal interaction.
- Staff knowledge and understanding of the curriculum.
- Staff knowledge of how children learn.
- Adult's skills in helping children resolve conflicts.
- Helping parents to support children's learning at home.

In order to continue to investigate children's development we thought that it was important to be able to take account of the effects of the primary school upon the children in the study. Therefore we devised a way to measure the effectiveness of primary schools.

In England all children take a National Assessment in reading, mathematics and science at age 7 and age 11. Also schools keep records of characteristics such as:

- Eligibility for free school meals (indicator of poverty)
- Special educational needs
- Whether English is first language
- Ethnicity and also
- The child's postcode.

Using the child's postcode we could get data on the area where the child lived such as the level of economic, health, educational and deprivation as well as data on the population living in the area. This data existed for over 600,000 children a year in over 15,000 primary schools.

We were able to analyse the child's progress from age 7 to age 11 in literacy, mathematics and science as a function of the child's characteristics and the area characteristics of where the child

lived. Using this multi-level analysis we were able to measure the effectiveness of each primary school in England, for 3 successive years. We had schools where children did better than expected, - effective schools and schools where children did worse than expected – ineffective schools. Also the effectiveness of a school could be analysed for children of different levels of ability. We found that being in an effective school had a bigger influence on low ability pupils than for high ability pupils.

Once we had these measures of school effectiveness we could analyse children's development in terms of child, family, home learning environment, preschool and school factors. We estimated the contribution of a range of demographic factors and preschool and school factors to children's educational attainment and social development. Social class, mother's education, family income and the Home Learning Environment (measured at age 3-4) are powerful influences upon children's attainment. However preschool effectiveness and primary school effectiveness are important influences and are similar in their importance and account for about half as much variance as home factors. Similar results emerge for literacy and numeracy. However the home-related factors are stronger for literacy than for numeracy, and the preschool and school factors are stronger for numeracy than for literacy.

There also appear to be interactions between the effects of some of these predictor variables. For example preschool and primary school effects appear to interact. We analysed the effects of different combinations of preschool and school. For children who have no preschool, the effectiveness of the school is very important. This is also true for children who went to a low quality preschool; as is shown by the differences in effects for low medium and high effective school. For children who went to a medium quality preschool, the effectiveness of the primary school is still important but less than for children who went to a low quality preschool. However for children who went to a high quality preschool the effects are very similar for each level of primary school effectiveness, with children attending low effective school attaining similarly to those who went to high effective schools. This indicated that preschool quality is very important and can protect children from the consequences of less effective primary schools (Melhuish et al., 2008; Sylva et al., 2010).

EFFECTIVE PRESCHOOL PROVISION IN NORTHERN IRELAND (EPPNI)

The EPPNI project is a longitudinal study that has investigated the development of children between the ages of 3 and 11 years. It is a parallel study to EPPE in England. In EPPNI 683 children were randomly recruited from 80 preschool centres randomly selected in Northern Ireland. In order to examine the impact of no preschool provision, 151 children without preschool experience were recruited from the primary schools later attended by EPPNI children. The progress and development of the children has been followed from age 3 until the end of primary school (age 11) After allowing for the effects of background variables preschool experience was related to age 11 performance in English and mathematics. High quality preschools show consistent effects that are reflected not only in improved attainment in English and mathematics, but also improved progress in mathematics over the primary school years. Children who attended high quality preschools were 2.4 times more likely in English, and 3.4 times more likely in mathematics, to attain the highest level than children without preschool experience (Melhuish et al., 2010a). Overall the results support those of EPPE.

SUMMARY

In summary there are 3 key elements of a child's environment for educational success.

- Good Home Learning Environment
- Good preschools
- Good primary schools.

Other things being equal, those children with all 3 will outperform children with 2 who will outperform children with 1 who will outperform children with 0.

CONCLUSIONS

- From age 2 all children will benefit from preschool education.
- The quality of preschool matters.
- The duration of preschool matters in the early school years.
- Part-time preschool has equal benefit to full-time.
- For medium and high quality preschool the benefit persist until at least the end of primary school.
- High quality preschool can protect a child from consequences of attending low effective school.

In the UK similar effects of quality of preschool have been found for disadvantage samples also (Melhuish et al., 2010b). In addition, Goodman and Sianesi (2005) found that preschool education leads to better educational attainment at age 7. Although these effects diminished in size, they remained significant up to age 16. In adulthood, preschool experience was associated with an increased probability of obtaining qualifications, of being employed, and a 3-4% wage gain at 33.

Research in other parts of the world also supports the importance of preschool education for children's later educational attainment. In the US the Early Childhood Longitudinal Study, a nationally representative sample of children who entered kindergarten in 1998, was used by Magnuson, Meyers, Ruhm and Waldfogel (2004), who found that pre-kindergarten 9preschool) increases mathematics and reading skills at kindergarten entry. Other US research also finds benefits for children from preschool education (Gormley, Phillips, & Gayer, 2008). Also Aboud (2006) found that preschool boosted primary school achievement in Bangladesh, with similar results reported for ten countries by Montie, Xiang & Schweinhart (2006). Other recent research also compares children having preschool experience versus none. Berlinski, Galiani & Manacorda (2007) used administrative data in research in Uruguay. A period of expansion of preschool in the 1990's allowed this study to compare a) siblings with and without preschool and b) regions that varied in speed of preschool expansion. Controlling for background characteristics, both comparisons indicated clear benefits of preschool for school performance in primary and secondary school. Similarly Berlinski, Galiani & Gertler (2006) used the expansion of the preschool education in Argentina in the 1990's to explore amongst regions the covariation of changes in school performance with increases in preschool

education. Recent US evidence indicated that high quality preschool may have influences upon academic attainment as late as age 15 (Vandell et al, 2010).

Such evidence has fuelled an increasing interest in the provision of preschool education for all children as a means of advancing the school readiness and later attainment of children (Zigler, Gilliam and Jones, 2006), and it has been argued that the longer term benefits far outweigh the costs involved, particularly for disadvantaged groups (Heckman 2006). Some authors argue that preschool experience is critical for children's future competence, coping skills, health, and success in the labour market, and consequently the social and economic health of the nation (e.g. McCain & Mustard, 1999). In a technologically sophisticated world a population's educational attainment is likely to be increasingly important for a nation's economic development. The EPPE and EPPNI studies show the factors that can influence such attainment. The effects associated with various child and family background variables are very similar to those frequently reported in other studies. In addition preschool education, particularly high quality preschool education, is important.

MAPPING AND APPRAISAL OF SCANDINAVIAN RESEARCH IN ECEC INSTITUTIONS

SVEN ERIK NORDENBO

DANISH CLEARINGHOUSE

INTRODUCTION

From 2007 *Danish Clearinghouse for Educational Research* has carried out an annual research mapping and assessment of Scandinavian research on the topic of institutions for 0-6 year old children (pre-school or day-care institutions). Till now Danish Clearinghouse has put out four reports for the years 2006, 2007, 2008 and 2009 respectively, and is presently working on the fifth report on Scandinavian ECEC research in the year 2010.

Each report contains a presentation of the methods used in preparing the report, a general description of research done in the respective year in the three Scandinavian countries: Denmark, Norway, and Sweden, some remarks on selected results for the year's research, and, finally, some more general comments on perspectives and implications for future research and educational practices in pre-school or day-care institutions.

It has to be emphasized that the reports only concern mapping and assessment of Scandinavian research on ECEC, and that the reports do not attempt to produce systematic research syntheses about specified systematic research problems. On the other hand, the reports are necessary preliminary works if a wish arises to produce systematic research syntheses on specific topics in ECEC.

WHAT DID CLEARINGHOUSE FIND?

In 2006, 53 studies were published on institutions for 0-6 year-olds: 17 in Denmark, 13 in Norway, and 23 in Sweden. The majority of studies concerned the quality of the educational activity in the institutions. More than half of the studies concentrated on the adults in the institutions, not on the children. Only seven studies looked into "what works?" The majority of studies employed qualitative methods. Where quantitative methods were used, these were overwhelmingly of a descriptive nature. Only seven studies concerned evaluations of interventions or programs.

In 2007, 54 reports were published of studies on institutions for children aged 0-6 years: 10 in Denmark, 14 in Norway, and 30 in Sweden. Of these, 46 were considered to be of good scientific quality. Only a few studies focused on what one normally regard as the key task of pre-school institutions, namely play and care, whereas there appeared to be a growing interest in studying learning processes in young children. The previous year's great interest in the professional staff in these institutions was still very much in evidence, but in 2007 there was increased focus on the children and a greater interest in cooperation, linkages and relationships. The majority of studies were qualitative, whilst a small number also included quantitative methods. Use of advanced statistical methods was rare, and there was a marked lack of longitudinal studies. Relative to 2006, far fewer studies in 2007 claimed to be interested in studying "what works", and there were only a few intervention and implementation studies (program evaluations).

In 2008, 52 reports were published of studies on institutions for children aged 0-6 years: 16 in Denmark, 13 in Norway, and 22 in Sweden, and one study that can be considered to be 'Scandinavian'. Of these, 49 were considered to be of good scientific quality. As in the previous year, only a few studies focused on play and care. The previous year's great interest in the professional staff in these institutions was still very much in evidence as more than 70% of the studies concentrated on the adults in the institutions, whereas children only were treated in less than half of the studies. In about a third of the studies applied an ethnographic design, followed by document studies, view studies and case studies, applied in roughly a fifth of the studies. Still no Scandinavian study employed a classic experimental design. In seven studies one fund elements of evaluations of interventions or programs.

In 2009, 52 reports were published of studies on institutions for children aged 0-6 years: 14 in Denmark, 23 in Norway, and 19 in Sweden. Of these, 44 were considered to be of good scientific quality. Still, the professional staff in these institutions was very much in evidence as two third of the studies concentrated on the adults in the institutions. Children were treated in less than two third of the studies. The majority of studies was concerned mainly with the educational activity in the institutions, and involved normally not a broader societal perspective. About half of the studies applied an ethnographic design, followed by document studies, and case studies, applied in roughly 15 %, respectively. For the first time two Scandinavian studies employed a classic experimental design, and sex studies evaluated interventions or programs.

SOME PRELIMINARY CONCLUSIONS

The four reports cannot give evidence for strong conclusions about general tendencies of typical research questions, research design and method, and research quality of Scandinavian research in ECEC institutions. It is, however, possible to draw attention to some points of interest:

1. The typical research questions addressed in Scandinavian research in ECEC institutions are divided among sex thematic area: (1) Play, learning and care, (2) Child development and competences, (3) Vulnerability, social inequality, inclusion/exclusion and the pre-school institutions, (4) gender and equal opportunities, (5) national and local guidelines and curricula for ECEC institutions, and (6) physical environment in institutions, and parents.

2. The majority of studies employ qualitative methods. Where quantitative methods were used, these were overwhelmingly of a descriptive nature. Only few studies looked into "what works?" with

a downward tendency. Only few studies are concerned with evaluations of interventions or programs, but quite recently we have for the first time encountered studies employing classic experimental design.

3. There seems to be a fairly steady number of an acceptable good research from one year to the next of Scandinavian research in ECEC institutions. In total the three Scandinavian countries publish about fifty research reports yearly within this area.

CHARACTERISTICS OF PRESCHOOLS AS LEARNING ENVIRONMENTS AND CONDITIONS FOR CHILDREN'S LEARNING

SONJA SHERIDAN

UNIVERSITY OF GOTHENBURG

In Sweden, preschool embraces children from one to five years of age and constitutes the first step of the educational system. The main aim of preschool is to promote children's wellbeing, development and learning, which implies that the quality of preschool – and by that I mean, the conditions for children's learning in terms of goals, content, pedagogical processes, communication, interaction and participation – are crucial to study.

This paper is part of a project entitled *Children's early learning in preschool* (Sheridan, Pramling Samuelsson & Johansson, 2009). The aim of this paper is to examine *characteristics of preschools as learning environments and conditions for children's learning* in relation to different aspects of language and mathematics. Questions at issue are:

- What characterizes various learning environments in preschool from the perspective of the four dimensions of pedagogical quality?
- How are different characteristics of learning environments related to teachers' approaches and teaching strategies?
- What conditions are created for children's learning of different aspects of language and mathematics in various learning environments?

THE THEORETICAL FRAMEWORK

The theoretical framework is based on interactionist perspectives, where the learning environment in preschool is seen as a complex system of interplay in which individuals/children and the environment influence and are influenced by one another in a continuous interaction. Bronfenbrenner's (1979, 1986) ecological framework, the extension of his theory (Garbarino, 1992), and a critical ecology of the early childhood profession (Miller, Dalli & Urban, 2011) are used to explain how, on different levels, systems interact, influence conditions for children's learning in preschool, and determine the forms in which preschool quality can develop. The systems are intertwined and the dialectic between them means that societal intentions with preschool are integrated with events in practice (Ball, 2006). In order to understand conditions for children's learning in preschool in a more comprehensive way, all of these systems need to be taken into consideration (Sheridan, Pramling Samuelsson & Johansson, 2009).

AN INTER-SUBJECTIVE PERSPECTIVE ON PEDAGOGICAL QUALITY

Compared to views on quality as either subjective or an objective concept (Dahlberg, Moss & Pence, 1999), the notion of pedagogical quality as an inter-subjective phenomenon provides a novel perspective on quality (Sheridan, 2001, 2007, 2009),. Inter-subjectivity means that, to a certain extent, people can agree on and share understandings of experiences, values, phenomena, concepts and situations (Stern, 1985; Wertsch, 2000). In order to share views on quality and to evaluate preschool quality in a comparable way, inter-subjectively agreed-upon understandings of conditions, values and knowledge have to be defined (Sheridan, 2007, 2009; Sheridan, Giota, Han & Kwon, 2009). Pedagogical quality derives from the view that there are conditions that are so vital to children's wellbeing, learning and development that they serve to bridge specifics and function as unifying devices (Balaguer, 2004).

An interactionist perspective on pedagogical quality means that the learning environment in preschool is seen as a complex system of interplay between teachers, children, material resources, contents and pedagogical processes, and can be defined as "a multidimensional phenomenon, in which interdependent dimensions and aspects constitute an environment that in different ways contribute to children's opportunities for learning and development in educational settings. These dimensions and aspects are partly constituted of sustainable qualities that are inter-subjectively agreed on and partly by dynamic and relative qualities that are subjectively conceived depending on perspective, time and context" (Sheridan, 2009, p. 254). From such a perspective, pedagogical quality is seen as a phenomenon of sustainable dynamism and one that has both sustainable structures and is culturally sensitive.

The core of pedagogical quality lies in the interplay between the teacher and the child. This means that pedagogical quality does not exist in itself, but takes shape and develops in pedagogical processes through the interaction and communication between children and teachers, and children's interactions with objects in various preschool learning contexts (Sheridan, 2001; Sheridan et al., 2009).

FOUR DIMENSIONS OF QUALITY

As an educational phenomenon, quality in preschool can be regarded as being constituted by four interacting dimensions. These are: 1) *the dimension of society*, 2) *the dimension of teachers*, 3) *the dimension of children* and, 4), *the dimension of learning contexts*. Each dimension is constituted by aspects/qualities that are unique for the dimension and can be related to structures, processes, contents and results (Donabedian, 1980; Sheridan, 2009). Depending on how the dimensions interact with one another, learning environments of different quality are created. To understand conditions for children's learning in preschool in a more comprehensive manner, all of these dimensions need, in an integrated way, to be taken into consideration and positioned in relation to the focus of analysis. In this paper, these dimensions are used as analytical lenses through which central aspects in the overall context in preschool can be discerned and analysed. Through the analyses, characteristics of learning environments as well as the quality of conditions for children's learning in preschool can be identified.

DESIGN AND RESULTS

This paper is based on the study, *Children's Early Learning*, which was conducted in Gothenburg. A stratified sample of eight districts was chosen in order to represent diverse geographical areas and living conditions, as well as ethnic and socio-economic backgrounds. Within these districts a random sample of 38 preschools was selected. A total of 230 children between one and two years of age, their parents, and 120 preschool teachers participated in the study.

The data has been generated using a mixed methods approach. Preschool quality was evaluated using a revised version of the Early Childhood Environment Rating Scale (ECERS)(Harms & Clifford, 1980; Sheridan, 2007a). The preschools were externally evaluated and related to the teacher's self-evaluations on the ECERS. The evaluations of quality on the ECERS were analysed statistically using SPSS.

To grasp the complexity of pedagogical quality as an educational phenomenon and the relationships between preschool quality and conditions for children's learning, new methods for the observation, analysis and evaluation of children's learning were developed. Video observations were used to document children's mathematical understanding during a structured situation characterised by play and talk (Doverborg & Pramling Samuelsson, 2009). Video observations were also used to document children's communication during a situation in which a teacher read a story to a number of children individually and where thereafter each child retold the story with the help of different artefacts (Mellgren & Gustafsson, 2009). The results are here presented in relation to the four dimensions of quality.

THE DIMENSION OF SOCIETY

This dimension focuses on societal intentions relating to views of the child, childhood and preschool. This dimension provides knowledge of the overall goals for preschool and reveals how these goals are implemented in practice as values, content and activities. The focal points of analyses are conditions for children's learning as they appear in relationships between intentions in overall goals, preschool practice, teachers' approaches and children's learning (Sheridan, 2009). Therefore, in this study, the analyses through the dimension of society focused on how, in preschool practice, the intentions of the goals in language and mathematics in the preschool curriculum meet the experiences and interests of the individual child.

THE DIMENSION OF LEARNING CONTEXTS

The dimension of learning contexts highlights the observable quality in preschool. It shows how teachers, children and (learning) objects interact and, in practice, are related to one another. The focus of this dimension is on how contents, pedagogical processes, communication and interaction are formed to support and challenge children's learning and development, and to enable them to participate and influence ongoing processes and activities in preschool. In this dimension analyses focus on the range of dimensions and aspects and consider how they interact as a means of gaining an understanding of the conditions for children's learning and development in preschool (Sheridan, 2009).

Let us first examine the evaluations of preschool quality gained from the ECERS. The external evaluations have a mean value of 4.44 and a range of 2.90 – 6.24 (1.00 – 7.00 = min-max). The mean values for the self-evaluations are higher – 5.19 – and range from 3.41–7.00. The results also reveal a difference among the teachers' self-evaluations. Whilst teachers in preschools externally evaluated as being of low or good quality tend to evaluate their own preschool quality as high, teachers in preschools of high quality seem to underestimate their own quality (Sheridan et al., 2009).

The results highlight three qualitatively different learning environments, namely *Separating and limiting environments*, *Child-centred negotiating environments* and *Challenging learning environments*. The variety of learning environments of low, good and high quality indicates that children have unequal opportunities for learning in preschool.

Low-quality preschools can be characterised by their limitations in space, material resources and restricted accessibility for the children. The results demonstrate how low-quality preschools are characterised by few reciprocal encounters, poor interaction and communication between teacher and child, and few opportunities for children's participation in and learning of different content. Further, in such preschools, although teachers are present physically, they seem most frequently to focus on keeping control and maintaining order. Teachers and children appeared to follow parallel, but separate paths that never actually merged. They seemed to have different intentions and/or were unaware of each other's intentions, and as a consequence, they gained different experiences.

In preschools externally evaluated as being of high quality, the learning environment seemed to be rich in challenges and learning opportunities. During observations the children participated in ongoing activities and the teachers focussed on their interest, experience and knowledge formation in relation to the overall goals for preschool. They communicated and seemed to focus on and share similar learning objects. The teachers interacted with the children in the 'here and now' by being present physically, emotionally and cognitively in communicating about issues in the past, present and future (Sheridan et al., 2009).

THE DIMENSION OF TEACHERS

The focus of this dimension is teachers' professional competence. The dimension encompasses teachers' knowledge, skills, beliefs, values and their views of the child, knowledge and learning. A central feature of this dimension is the teacher's perspectives of the child and the ability to understand the child's own perspectives in terms of strategies, approaches, communication and interplay. It is a question of being part of the child's learning processes and combining the child's interests and intentions for learning with the goals in the preschool curriculum. In this paper, the analyses aim to highlight how the teachers approach the children in their learning processes, the strategies the teachers use, their knowledge of different educational content, and their competence to share and communicate leaning objects with the children (Sheridan, 2009).

The results highlight variations in teachers' approaches and different strategies/teaching orientations are identified. These are: *abdication, dominance, negotiating and learning-orientated approaches.* One main difference between preschools of low and high quality is the teacher's understanding of children's learning by doing things and participating in different activities. This can be contrasted

with directing the child's attention towards a specific learning object in relation to the child's actions and participation. The results show that teachers' knowledge seems to be a generality. This means that the teacher's knowledge – or lack of thereof – encompasses different contents, areas and situations. Consequently, low quality in preschool engrosses more or less all contents and ongoing activities in preschool, and vice versa when the quality is high.

THE DIMENSION OF CHILDREN

Children are, in this dimension, seen as subjects with voices of their own. Central aspects of this dimension are children's meaning making, communication and interaction, both with one another and with preschool teachers. The focus of research is on children's wellbeing, learning and development. Participation is studied from a child perspective and the perspective of the child. It is based on a desire to understand children's intentions and expressions of meaning in relation to a specific content, a certain situation and a particular context. Documentation and evaluation provide means to support and challenge children in their learning, as well as to enhance preschool quality (Sheridan, 2009). In this paper, the focus of our analyses is on conditions for children's learning of different aspects of literacy and mathematics.

In the study of children's learning in mathematics, six tasks embracing different aspects of basic mathematics were presented to the children. The results describe what the children discover from their perspectives and in accordance with their meaning making. The results show that in young children's experiences grow with encounters and age, and that the teacher's knowledge of basic mathematics and her ability to challenge children in their understanding are vital (Doverborg & Pramling Samuelsson, 2009).

To study children's knowledge and experience in language and communication, the teacher reads a story to each individual child. With the help of different artefacts symbolising the content of the book, the child retells the story. Video-observations focused on the relation between the teacher and the child. How the teachers interacted with the children while reading to them, what they did and said, and how they approached the child during the retelling session. The results highlight four hierarchical categories, showing qualitative steps in the children's acting during the book-reading situation. They also indicate that the way the teacher interacts with the child and the text creates different opportunities for the children to retell the story (Mellgren & Gustafsson, 2009).

CONCLUSIONS

Results show that the participating preschools varied in quality, indicating that the children had unequal conditions for learning. Analyses through the four intertwined dimensions highlight tendencies towards a link between high quality in preschool and children's learning of mathematics and communication. The knowledge generated by this study is of importance to research on early childhood education at both a national and international level in that it provides additional evidence that children's opportunities for learning depend on the quality of their preschool (Sheridan et al., 2009).

CHILD CARE AND CHILD DEVELOPMENT: AN ECONOMIST'S VIEW

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INTRODUCTION

Recent research from a number of fields suggests that investments in early childhood have high returns, especially for disadvantaged children (Knudsen et al., 2006). Studies in neuroscience and development psychology indicate that learning can be more effective in early childhood than later in life (Shonkoff and Phillips, 2000). Meanwhile, classical economic theory predicts that returns to investments in early childhood are likely to be high, simply due to the long time to reap rewards (Becker, 1964). Going one step further, the economic model of skill formation developed by Carneiro and Heckman (2004) implies that investments in human capital have dynamic complementarities, suggesting that learning begets learning.

On this background, Currie (2001) suggests that governments should aim to equalize initial endowments through early childhood development, rather than compensate for differences in outcomes later in life. Economic theory implies that government's role in facilitating child development is particularly strong, both from positions on equity and efficiency, if families under-invest in early childhood due to market failures such as liquidity constraints, information failures, and externalities (see e.g. Gaviria, 2002).

Child care institutions are important arenas for child development, and expanding child care coverage is an explicit goal in many countries. A number of randomized experiments show that early childhood educational programs can generate learning gains in the short-run and, in many cases, improve long-run prospects of children from poor families.[1] While the results are encouraging, the programs evaluated were unusually intensive and involved small numbers of particularly disadvantaged children from a few cities in the US. A major concern is therefore that this evidence may tell us little about the effects of child care systems offered to the entire population (Baker et al.,

[1] The Perry Preschool and Abecedarian programs are well-known examples of how preschool services can improve the lives of disadvantaged children. See Barnett (1995) and Karoly et al. (2005) for surveys.

2008). Nonetheless, it has fuelled an increasing interest in economics about large-scale provision of child care as a means of advancing child development.

So far, the evidence is focused on short-run outcomes, and the findings are mixed. Loeb et al. (2007), for instance, find that pre-primary education in the US is associated with improved reading and mathematics skills at primary school entry. However, Magnuson et al. (2007) suggest that these effects dissipate for most children by the end of first grade. Positive effects of child care on children's short-run outcomes are also found by Gormley and Gayer (2005), Fitzpatrick (2008), Melhuish et al. (2008) and Berlinski et al. (2008, 2009). On the other hand, Baker et al. (2008) analyze the introduction of subsidized, widely accessible child care in Quebec, finding no impact on children's cognitive skills but substantial negative effects on children's non-cognitive development. These negative effects echo the results in Herbst and Tekin (2008), while Datta Gupta and Simonsen (2007) find that compared to home care, being enrolled in preschool does not lead to significant differences in child non-cognitive outcomes.

While the evidence on short-run effects of large-scale child care programs is of interest, a crucial question is whether these effects persist, and perhaps are amplified, over time. In particular, evidence from early intervention programs targeting particularly disadvantaged children suggests that even though the short-run gains in test-scores tended to dissipate over time, there were strong and persistent impacts on long-run outcomes (Heckman et al., 2006). In Mogstad and Havnes (2011), we side step the question of whether the short run effects persist, by investigating how the large-scale expansion of subsidized child care in Norway in the late 1970s affected children's *long-run* outcomes.

The purpose of this article is to summarize our analysis. The empirical results are interesting in their own right, but also serve to illustrate how economists apply statistical methods to analyze the effects of child care on child development based on observational data (that is, data not generated by a randomized experiment). But first, we will briefly discuss the sense in which randomized experiments of the sort used in medical research provide an ideal benchmark for the quantitative analysis of child care and child development.

THE EXPERIMENTAL IDEAL

The experimental ideal can be organized around three questions, concerning the causal relationship of interest, the ideal experiment, and the identification strategy.[2]

The first question is: *What is the causal relationship of interest?* Although purely descriptive research has an important role to play, we believe that the most interesting research in social science is about questions of cause and effect, such as the effect of child care on child development. A causal relationship is useful for making predictions about the consequences of changing circumstances or policies; it tells us what would happen in alternative (or "counterfactual") worlds.

The second question is concerned with *the experiment that could ideally be used to capture the causal relationship of interest*. To investigate the relationship between child development and child

[2] This discussion builds on Angrist and Pischke (2009), who also provide an introduction to quantitative

care, ideally we would conduct a randomized experiment where a restricted number of child care slots were handed out in a lottery. In this case, we could compare the development of children that are randomly in child care with children that are randomly not in child care, and infer the effect of child care directly. However, ideal experiments are often difficult, practically or ethically, to implement. Still hypothetical experiments are often worth contemplating because they help us pick fruitful research topics, and helps you formulate causal questions precisely. An ideal experiment also highlights the forces you would like to manipulate and the factors you would like to hold constant. For example, questions about the causal effect of gender seem to be very difficult to give a meaningful answer, because gender is hard to manipulate in isolation ("imagine your chromosomes were switched at birth". If you cannot devise an experiment that answer your question in a world where anything goes, then the odds of generating useful results with a modest budget and observational data seem pretty slim.

The last question is: *What is your identification strategy?* The term identification strategy refers to the manner in which a researcher uses observational data to approximate a randomized experiment. There is, for instance, every reason to suspect that parents who send their children to child care are more career oriented and have higher education, and that their children would develop differently in any case. Consequently, simply comparing the development of children in child care with children not in child care based on observational data would most likely produce a biased estimate of the effect of child care. Credible identification strategies address this so-called selection bias, so that the groups being compared become truly comparable.

ANALYSIS USING OBSERVATIONAL DATA: AN EXAMPLE

Havnes and Mogstad (2011) investigate how the large-scale expansion of subsidized child care in Norway in the late 1970s affected children's long-run outcomes. Since we use observational data, we employ a statistical method to take into account differences between children and their parents that are both observed and unobserved to the researcher. Specifically, we follow much of the recent economic literature on child care and child development in using a difference-in-differences (DD) approach.[3]

The child care expansion. In June 1975, the Norwegian parliament assigned the responsibility for child care to local municipalities, but under federal provisions on educational content, group size, staff skill composition, and physical environment. The government aimed at quadrupling the number of child care places to reach a total of 100,000 by 1981, and federal funding more than doubled from USD 34.9 million in 1975 to 85.8 million in 1976, reaching 107.3 million in 1977.[4] This implied an increase in the federal coverage of running costs from about 10 percent in 1973 to 17,6 percent in 1976, and further to 30 percent in 1977.

Altogether, the reform constituted a substantial positive shock to the supply of subsidized child care, which had been severely constrained by limited public funds. In succeeding years, the previously

[3] See for instance the study by Baker et al. (2008) of a reform in Quebec that introduced large subsidies for child care available to the general population.

[4] Source: National budgets 1975/76 through 1978/79. Amounts are reported in 2006-USD, with USD/NOK = 6.5.

slow expansion in subsidized child care accelerated rapidly. From a total child coverage rate of less than 10 percent for 3 to 6 year olds in 1975, coverage had shot up above 28 percent by 1979.[5] Over the period, a total of almost 38,000 child care places were established, more than a doubling from the 1975-level. In our analysis, we will focus on the early expansion, which likely reflects the abrupt slackening of constraints on the supply side caused by the reform, rather than a spike in the local demand.

The 1975-reform quickly generated large variation in child care coverage for children 3–6 years old, both across time and between municipalities. Figure 1 shows average child care coverage before and after the 1975 reform in municipalities where child care expanded a lot (i.e. *the treatment group*) and municipalities with little or no increase in child care coverage (i.e. *the comparison group*). The graphs move almost in parallel before the reform, while child care coverage in treatment municipalities kinks heavily after the reform. This illustrates that our study compares municipalities that differ distinctly in terms of changes in child care coverage within a narrow time frame.

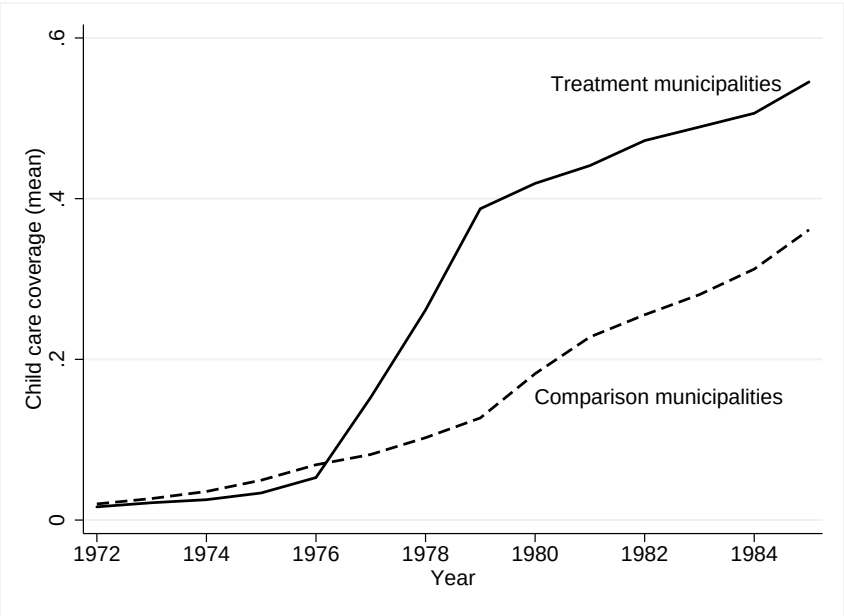

Figure 1. Child care coverage rates 1972–1985 for 3--6 year olds in treatment and comparison municipalities. Note: Treatment (comparison) municipalities are above (below) the median in child care coverage growth from 1976 to 1979.

The identification strategy. Since we use observational data, our identification strategy needs to address that children living in municipalities with good access to child care may be inherently different and would have different outcomes in the absence of the reform. Roughly speaking, our identification strategy is the following: We compare the adult outcome of interest for 3 to 6 year olds before and after the reform, from treatment municipalities and comparison municipalities. In doing

[5] Throughout this paper, child care coverage rates refer to formal care, including publicly and privately provided child care institutions as well as licensed care givers, all eligible to subsidies from the government.

so, we are able to control for unobserved differences between children born in different years as well as between children from different areas. The identifying assumption is that that the change in the outcome of interest for 3 to 6 year olds before and after the reform would have been the same in the treatment municipalities as in the comparison municipalities, in the absence of the reform. We take several steps to examine the identifying assumption. First, we make sure our estimates are robust to inclusion and exclusion of a large set of controls capturing important child and parental characteristics, as well as municipality-specific fixed effects. Second, we run a battery of specification checks, testing or relaxing the assumption of a common time trend between the treatment and comparison municipalities.

Our identification strategy and main results on education are illustrated in Figure 2. Panel (a) graphs children's years of education by birth cohort, separately for the treatment group and the comparison group. The child care expansion started in 1976, affecting children born between 1973 and 1976 with full force. The reform effect per child in the treatment group is given by the change in years of education for 3 to 6 year olds before and after the reform, in the treatment group relative to the comparison group. Panel (b) takes the *size* of the child care expansion into account, showing the predicted reform effects per child care place based on our DD approach (without controls). Figure 2 shows a good coherence between the time trends of the groups before the reform, and a striking change in the relative outcomes after the reform. Consistent with this evidence, our baseline DD estimations (with controls) suggest that the reform caused .35 years of education per child care place (cf. Panel (b)), corresponding to an effect of .06 years per child in the treatment municipalities (cf. Panel (a)).

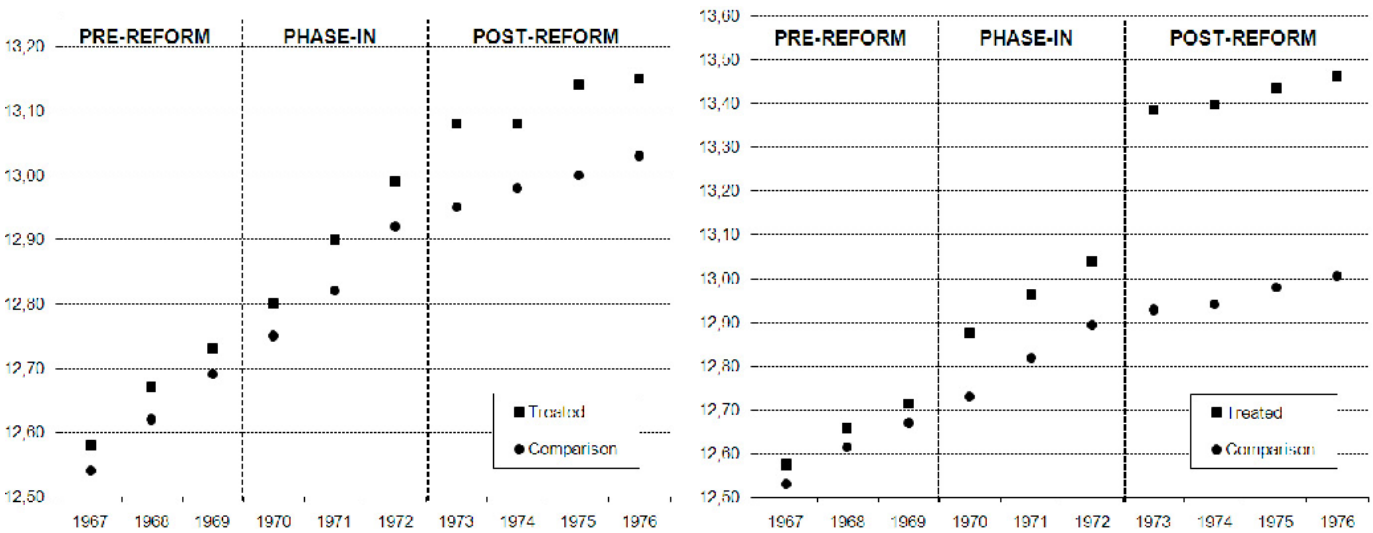

Figure 2. Unconditional cohort means for years of education in 2006 by treatment and comparison group for cohorts born 1967-1976, and predicted reform effect per child care place. Note: Treatment (comparison) municipalities are above (below) the median in child care coverage growth from 1976 to 1979.

Main results. The results in Havnes and Mogstad (2011) show that child care had strong positive effects on children's educational attainment and labor market participation, and also reduced welfare dependency. In light of the recent focus on dynamic complementarities in learning, a compelling question is how subsidized child care affects children's educational attainment. We estimate that by facilitating the supply of an additional 17,500 child care places local governments were able to produce about 6,200 years of education, which amounts to around .35 years of education per newly established child care place. In addition, our estimates suggest that subsidized child care decreases the probability of dropping out of high school by nearly 6 percentage points, while increasing the probability of attending college by almost 7 percentage points. When breaking down the effects according to observable characteristics, we find that most of the effect on education stems from children of low-educated mothers. Consistent with these effects on education, we also find that girls who gained access to child care postponed child bearing and family formation as adults.

Mechanisms. Finally, we take a close look at what mechanisms may be driving our findings. In particular, a crucial point in interpreting our estimates is the counterfactual mode of care, i.e. the type of care the children would be exposed to absent the reform. Following Blau and Currie (2006), consider the following three combinations of mother's work and child care decision: not working and maternal care, working and informal care, and working and subsidized care. If the reform led to a shift from parental to subsidized child care, we would expect it to affect maternal employment rates also. A shift from parental care to subsidized child care could affect children differently than a shift from informal care, which is likely to be of inferior quality (see e.g. Datta Gupta and Simonsen, 2007).[6]

To learn about the counterfactual mode of care, we estimate the effect of the child care reform on full-time and part-time work of married mothers. To this end, we use a similar DD approach as above, comparing the growth rate in employment of mothers with the youngest child aged 3 to 6 years depending on the municipal expansion in child care coverage. The analysis provides robust evidence that the new subsidized child care crowds out informal care arrangements, with almost no net increase in total care use or maternal labor supply. Specifically, we find that the child care expansion caused an increase of about 0.06 percentage points in maternal employment per percentage point increase in the child care coverage rate. The difference between the increase in maternal employment and the rise in child care coverage suggests a 94 percent crowding out of informal care arrangements by the new subsidized child care slots. This finding of weak effect of child care on maternal employment, and a significant crowding out, is in line with studies from several other countries, including Sweden (Lundin et al. 2008) and the United States (Cascio 2009).

[6] It is possible that non-working mothers were taking up some of the new care child care slots. However, survey results reported in Leira (1992) suggests that the number of non-working mothers using subsidized care did not increase much over the period 1973–1985.

EARLY CHILD CARE EXPERIENCES AND LANGUAGE DEVELOPMENT UP TO 3 YEARS. EVIDENCE FROM A PROSPECTIVE LONGITUDINAL STUDY IN ENGLAND

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INTRODUCTION

For several decades investigations have focussed on implications for child development of non-maternal childcare (NMC) with ongoing suggestions of persistent adverse effects for behavioural (e.g., Belsky et al., 2007). In contrast research on children's cognitive–linguistic outcomes suggests positive associations for those attending group care in nurseries emerging as early as 15 months of age (NICHD ECCRN, 2000) and remained evident to 54 months (NICHD ECCRN, 2004).

Concerns about group care or care relate to the fact that staff might have less time to spend in one-to-one interactions than young children would experience in their own homes (NICHD ECCRN), 2000). Children in groups tend to experience fewer and lower quality interactions with adults than those at home (Tizard & Hughes, 2002) or with one adult caregiver such as a childminder or grandparent (Leach et al., 2008). A variety of different strategies have been used to study child care effects, examining the relevance of its quantity at different ages, the type and quality.

Quantity: With respect to children's language and cognitive development, the effects of child care appear mixed (Melhuish, 2004). A US study reported that the cumulative number of hours in non-maternal care did not contribute to the prediction of children's cognitive or language skills during the first 3 years of life, even when controlling for family background and child care quality (NICHD ECCRN, 2003b). However, there were significant effects of quantity when examined in relation to type of care (i.e. average hours); more centre care in infancy (0-17 months) was associated with lower pre-academic test scores at 54 months, while more hours in the toddler period (18-35 months) was associated with better language skills, also at 54 months (NICHD ECCRN, 2004). A Canadian study (Geoffroy et al., 2007) reported that full-time NMC in the first year was associated with better receptive language at 55 months, but only for low SES children

Type: While much non-maternal care in the toddler years takes place in home environments, research has often focused on the effects of day care provided by centres. Findings indicate that children attending nurseries are more involved in peer interaction, positively as well as negatively, and it has been suggested that differences in findings might be due to variations in children's starting ages in child care (Melhuish, 2004). When controlling for family background factors, quantity and quality of care, the NICHD ECCRN initially found a facilitating effect of early group care on children's

socio-emotional maturity (NICHD ECCRN, 2001). However, these findings again failed to hold up longitudinally; at pre-school age, an experience of centre care was found to be consistently linked to problematic adjustment (NICHD ECCRN, 2003a, 2004).

Seemingly contradictory findings can emerge from the same study when the data are analysed in a slightly different manner. For instance the US study found, by entering time lagged child care measures into the model that concurrent home-based child care was related to higher cognitive and language scores only at age 2, but not at 3. However, children who had been in home-based care in a home other than their own during the first 2 years of life performed better at age 3 than did children whose earlier experience had been in other types of care (NICHD ECCRN, 2000), displaying greater expressive language and verbal comprehension. Beyond age 3, time spent in child care homes failed to predict child outcomes (NICHD ECCRN, 2004).

Quality: Quality may be the determining factor rather than type or quantity. A USA study of 227 centres found that children in lower-quality centres were less competent in language and social development, but the study also found that families with low income tended to use low quality day care (Whitebook, Howes, & Phillips, 1989). In other studies high quality care in the infant and toddler years is associated with better cognitive functioning and enhanced language development, after adjusting for family factors (Loeb, Fuller, Kagan & Carrol, 2004). There is evidence from the UK to support positive associations between cognitive development and children's early experience of group care in nurseries (Sylva et al., 2004).

A review (Melhuish, 2004) concluded that high quality centre care may facilitate children's language development compared with low quality care. Low quality childcare leads to lower levels of language development than either high quality childcare or none. The current FCCC study found that quality of care and specifically emotional responsiveness and sensitivity provided in grandparent and nanny care was higher at 10 and 18 months than in nursery care (Leach et al., 2008). Previous analyses based on the FCCC study found that more hours in nursery care and higher quality of non-maternal care predicted better cognitive development but neither quantity, type or quality of child care were associated with vocabulary at 18 months (Sylva et al., 2011). The main predictors of vocabulary were female, minority ethnic group (lower score) social class and maternal sensitivity. In that analysis the quantity was the average number of hours in both home-based and group child care and quality was based only on information from non-maternal care, with maternal care entered separately for all children.

This paper uses a different strategy to determining the type of child care. In general, child care arrangements can be categorized as one to one child care (i.e., home-based child care, such as care by a family member, nanny or child-minder) and group care (i.e., centre-based care, such as nurseries, or play grounds). Literature on child care mainly has focused on these two types of arrangements. However, maternal care should also be considered as one type of arrangement since even in the modern Western world almost half of the children are still being cared by their mothers, especially in the first couple of years. Therefore, in this study, three types of child care arrangements were examined, maternal care, home-based non-maternal care, centre-based care.

In addition to grouping children according to the predominant type over time quality measures are common to maternal and non-maternal care to enable quality to be studied in relation to the whole

sample, using measures most likely to influence language. Using this strategy Melhuish et al. (1990) found that the relatively lower language scores of children attending nurseries could be explained by the lower level of responsiveness of staff in comparison to adults in other settings. This study was designed to determine whether there was in impact of group care on children's language development at 18 and 36 months and whether the quality of the setting was as or more relevant than the type of care experienced.

METHOD

Participants: Recruitment took place in hospitals and child health clinics in London and Oxfordshire. Eligibility for mothers: aged 16 or over, sufficiently fluent for interview in English, no plans to move in the next 2 years, and no plans to have their child adopted or placed in care; eligibility for children were: singleton, birth weight ≥2,500 grams, gestation ≥37 weeks, no congenital abnormalities, ≤ 48 hours in Special Care Baby Unit (SCBU). For a more detailed description of the sampling see the FCCC website (www.familieschildrenchildcare.org).

Procedure: All 1201 participants were interviewed when infants were 3 months old. At follow-up 1077 were interviewed at 10 months, 1049 at 18 months and 1016 at 36 months. Demographic information was collected at 3 months and a full record of child care use month by month was determined at each subsequent interview, covering the elapsed time since the previous contact. Observations of maternal behaviour took place at 10, 18 and 36 months. If NMC was for at least 12 hours per week, observations were conducted of the dominant type of NMC at 10 months (*n*=320), 18 months (*n*=345) and 36 months (n=361). Grandparents and childminders were underrepresented in observations relative to centre-based care.

Type of care: For each month from 0 to 36 months it was determined which was the dominant type of child care from three types: maternal (no non-maternal care for more than 12 hours per week on average in the month); home-based with one specific caregiver (grandparent, nanny, childminder, friend, father); or group-based (nursery, playgroup, nursery class). If a child had same type of dominant non-maternal care (i.e., non-maternal home care or centre-based care) for at least 3 consecutive months within the relevant time period (0 to 18 months and 19 to 36 months) that type was coded as the predominating type, or mixed for children who had both home care and centre care experiences meeting the above criteria. Remaining children were categorised as maternal care.

Quality of care: Measures were used that had been applied in both the home (to mothers) and in child care settings so that combined measures could be created, with data relevant to the assigned group. Although maternal observed quality was available for the majority of participants it was only used if they were deemed to be in the predominant maternal care group. This meant that some children did not have an indicator of quality and were excluded from some regression analyses.

At 18 months the measures of quality were: from the Caregiver Interaction Scales (CIS, Arnett, 1989), the 8 item positive relationships scale and from the HOME (Caldwell & Bradley, 1988) the 10 item emotional and verbal responsivity scale. At 36 months the measures common to all setting s were: the Observational Record of the Caregiving Environment (ORCE, NICHD ECCRN, 1991) which has 8 items (sensitivity to distress; sensitivity to non-distress; intrusiveness; detachment/disengagement;

stimulation of development; positive regard for child; negative regard for child; and flatness of affect) and the from the Toddler HOME three items from the language stimulation scale (encourages to talk, used correct grammar, conveys positive feelings).

Child outcomes: At 18 months language development was assessed by the maternal report Communicative Developmental Inventory (CDI) (Fenson et al., 1993) as an interview; a standardised checklist of words and expressions that children might use, and aspects of the structure of language such as making plurals, talking about ownership or the past and using word combination. Two scores are derived to reflect vocabulary (range 0- 513) and structure (0-27). Language was assessed at 36 months using the individually administered Reynell Developmental Language Scales (RDLSIII; Edwards et al., 1997) which produces two scores, language comprehension and language expression.

Analysis: Step-wise regression analyses were conducted first with all children and then repeated for those with mothers who had English as their first language (85%) to identify significant predictors of language development at 18 and 36 months. Type of care group was entered first (home-based, group based and mixed compared to maternal), then child characteristics (gender, bilingual) and family demographic factors (social class, maternal ethnic group) and finally current quality indicators. For the 36 month outcomes a final step was to enter the type of group from 0 to 18 months, and quality of that type.

RESULTS

The predominant groupings for child care from 0 to 18 months were maternal (428, 43%) and home-based child care (442. 44%) with fewer experiencing predominantly centre-based child care (118, 12%) and very few a mixed pattern of non-maternal child care (10 1%). During the time from 19 to 36 months the proportion of children in both maternal and home-based care were reduced but they were still the most frequent (maternal 359, 36%; home-based 367, 37%) while both group-based and a mixed pattern increased (group 241, 24%; mixed pattern 31, 3%). There was strong continuity from the first to second time periods apart from the small number originally in the mixed group (maternal at both 308, 72%; home-based at both 311, 70%; group-based at both 107, 91%; mixed at both 1, 10%).

The type of dominant care experienced from 0 to 18 months was unrelated to the average number of words used (vocabulary) or to the complexity of the language structure. Prior to entering any quality measures into the analysis the only predictors of better language (both vocabulary and structure) were being female and a higher family social class. However, less than 4% of the variance was explained by these indicators. Entering measures of the quality of the care environment at 18 months, almost 10% of the variance in vocabulary and 7% of the variance in language structure could be explained. Social class was a less powerful predictor, non-significant for predicting vocabulary in the group including only families with English as the mother's first language and non significant for all children and those in the English ad first language group for language structure. The only significant predictors once quality was added were child gender (female) and a higher observed emotional and verbal responsivity (HOME) of the caregiver relevant to that grouping.
Children's language comprehension at 3 years was greater on average for those who were in group care from 19 to 39 months (mean 48.6), significantly great that for both the maternal care (44.1) and

home-based care (45.1) groups. The children in the mixed care group also had a relatively high mean score (48.3) but small numbers meant that no significant difference was identified. However use of group care was strongly associated with higher social class. Entering in family demographic variables a substantial proportion of the variance in language comprehension could be explained (All F [988, 7] 54.85, p<.0001, 27.5% of variance: English mothers first language F [882, 7] 39.64, p<.0001, 23.3% of variance) and there was still a trend for children in group care, and those with a mixed pattern of child care, to have more language comprehension in comparison to children with predominantly maternal care. However the main predictors of a higher score were being female, higher social class, with lower scores predicted by being a bilingual child and a mother did not categorise herself as white (black, Asian, or mixed ethnic background). When quality of care was included factors associated with better language comprehension were – group care from 19 to 36 months, female, higher social class, greater overall observed caregiver responsivity (36 month ORCE) and more observed language stimulation (HOME). A non-white mother again predicted a lower score. Being brought up bilingual predicted a lower score for the whole group but not for children with mothers whose first language was English speaking. Entering child care type and quality from 0 to 18, being in group care from 19 to 36 was no longer significant but group care from 0 to 18 was a significant predictor and all others except being bilingual remained.

Children's expressive language score was also higher on average if they were in either the group care (45.8) or the mixed care (49.4) categories from 19 to 36 months, with the group care children on average having significantly higher scores that those with predominantly maternal care (42.3) but not significantly different to home-based care (44.0) . These child care type effects were not evident once demographic and child factors were entered except for the small group with a mixed pattern of care, predicting higher scores than those in maternal care. Results were the same for the whole group and for the smaller group including only mothers with English as their first language.

When quality was included in the analyses both group care and a mixed pattern re-emerged as significant predictors of better expressive language in comparison to maternal care, together with the same set of significant predictors as found for comprehension with the exception of language stimulation (female, higher social class, child bilingual, mother minority status, observed caregiving responsivity). Again, if the type of dominant care between 0 and 18 months and its quality was included these effects of child care group type were not found but group care from 0 to 18 months was a strong predictor (Beta .302, p<.001)

DISCUSSION

If language development is studied at a young age the type of child care experienced during the infancy and early toddler period appears to be irrelevant, with the significant predictors based within the child (female) or the family (social class). However even at that stage of development, when there is a great deal of individual variability in language, the quality of interactions in whatever is the most typical setting for the child is important, and particularly the caregivers responsiveness to the child both emotionally and linguistically. Possibly if there were a measure of language comprehension different influences might be identified but reliance is usually given to maternal reports of language use.

By the age of three years, when most children have developed a wider range of language skills there was evidence that the predominant type of care over the previous year and a half is of relevance, with group experiences tending to be associated with more language comprehension, though not more spoken language once family social class had been taken into account. The important of quality was again identified and once that had been added to the analyses then children experiencing group care or a mix of group and home care were likely to have more language comprehension; only a mixed pattern of care was predictive of more spoken language. Possibly these children who have received a substantial amount of child care in settings such as a childminder in addition to groups such as a playgroup or nursery have developed greater language skills by being faced with a wider range of adults and children suggesting that change may not be detrimental, but rather that it can stimulate developmental progress.

The relevance of early group experiences, up to 18 months, appears to have had a beneficial sleeper effect in that it was associated not with language at 18 months but if the group experience continues subsequently early group experiences predict enhanced language at 3 years. There was a high level of continuity of group experiences with the majority (91%) of children receiving group care before 18 months continued with that whereas receiving group care after that time, coming from maternal or home-based experiences appeared not to provide any boost to language.

Thus overall, rather than any possible negative impact of early non-maternal care there is evidence that it can be an important way to boost children's language development if it takes place in a group setting and is provided by sensitive and responsive caregivers. Ongoing sensitive and responsive caregiving in any setting is also important throughout the early years. Finally further work is necessary to explore the experiences of children whose mothers are of minority ethnic status. They were found to lag behind other children by the age of three, though not at 18 months. All measures of responsivity were found to be significantly lower, both at 18 and 36 months for children from ethnic minority families, including all participants, though not when broken down by care type. Minority group differences with a lower average quality of care and responsiveness for the maternal care and home-based care groups but not for the centre-based or mixed child care children. This suggests that ethnic minority children may particularly benefit from some high quality early group experiences in the early years.

CONTRIBUTING FACTORS IN POLICYMAKING IN EARLY CHILDHOOD EDUCATION

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INTRODUCTION

Early childhood policy documents reflect both explicitly-stated and implicitly-couched assumptions about children and childhood, as well as the overall function and aims of early childhood education and the role of early childhood staff (Oberhuemer, 2005). But where do these assumptions, values, and aims come from? What factors contribute to policymaking? The answer is not simple since there are many interrelated factors involved, and their influence varies depending on context and time. This paper will focus on policymaking in early childhood education. First, I will review the current discourses and debates on the connection between research and policymaking. Then, I will introduce the Icelandic playschool[7] context and discuss the potential factors contributing to policymaking with examples of the new Icelandic national curriculum framework for playschools that is currently in the making and in which the author of this paper has been involved.

RESEARCH BASED POLICY

The relationship between research, policy, and practice in education has been widely discussed and the terms "research-based policymaking", "evidence-based policymaking", and "knowledge-based policymaking" have been discussed and debated to a great extent. In 1996, Hargreaves criticized educational research for failing to provide the kind of evidence that is required for evidence-based practice and called for educational research that is relevant to practice (Hargreaves, 1996).

The process of putting research into practice can, however, be a difficult one, and the effort toward making educational research relevant has been criticized. Labaree (2008), for instance, argues that it can be counterproductive to press education research or, for that matter, any other form of research to be relevant (p. 422). He argues that scholarly research justifies itself primarily by its contribution to theory. When education researchers seek to make their work relevant, they feel the need to tailor their work to the demands of educational practice in the present time and for a given place. Applied research may become out of date quickly, whereas basic research my age well. Research that does

[7] All early childhood programs in Iceland for children before compulsory schooling are called playschools.

not arise from a search for relevance may turn out to be highly useful at a later time and at a different place, he claims.

Others have argued that practitioners and policymakers see research differently, and therefore, research will not provide what practitioners and policymakers feel they need when they need it. Hammersley (2005) argues that research can provide too much or too detailed information and too complex a picture for practitioners to find useful. Furthermore, research findings cannot tell us what is good or bad and what should be done. Along the same lines, Black and Willam (2003) assert that all educational research should not be useful because the possibility for some research in education to be uninterested in consideration of use should exist. Additionally, they stress that it is impossible to state which research will be useful in the future.

Whitty (2006) attempts to strike a compromise between these two opposite poles, suggesting a distinction between studies *of* education and studies *for* education. He stresses the importance all types of education research, regardless of its utility for policy makers.

THE ICELANDIC PLAYSCHOOL CONTEXT

As in the other Nordic countries, the first early childhood programs in Iceland were established for children with evident social needs. In 1973, playschools and day-care centres were incorporated under the authority of the Ministry of Education. Iceland thereby became the first Nordic country in which early childhood education were integrated as part of the general educational system, with the care and education of children prior to compulsory school no longer viewed as a social policy geared especially toward poor children. Since 1991, the term 'playschool' has been used for all group-care services for children up to six-years-old, prior to the start of compulsory education. In 1994, playschools officially became the first level of schooling, which, in practice, means that although attendance is voluntary for the children, the provision of this service is mandatory for the municipalities. Almost all Icelandic children attend whole day playschool from the age of two until they start school in the fall of the year they turn six years old (Einarsdottir, 2010a).

Research in Iceland has shown that Icelandic playschool teachers emphasize social skills, informal teaching through play, and creative activities (Einarsdottir, 2002a, 2002b). Recent research also reveals, however, the differences of opinion and practice among playschool teachers in Iceland who, upon reflecting on their roles and the playschool curriculum, find themselves at a critical juncture. Regarding the role of the playschool, Icelandic playschool teachers can be divided into three camps.

The first, and most traditional, camp emphasizes the playschool years as the golden age of free play and development. Consequently, the role of the playschool is to provide care as well as emotional and social support.

A second camp emphasizes playschool as the first level of formal education, where adults are teachers (not caregivers), whose job is to make sure that children learn what they need to learn.

And, still, a third camp argues that caregiving and teaching are mutually inclusive concepts, not only compatible but also both necessary in order to ensure a high quality experience and outcomes for Icelandic children prior to their entrance into formal schooling (Einarsdottir, 2006).

Research with parents of Icelandic playschool children has indicated that the parents' main expectation of the playschools was that they should work on the children's social development; the

way in which the playschool day was organized and the content of the curriculum seemed to be less important to them. Parents wanted their children to have the opportunity not only to enjoy themselves as individuals, but also to learn self-reliance and respect for other people. Care-giving and attentiveness of the staff were more important than the teaching of knowledge and skills (Einarsdottir, 2010a, 2010b). Icelandic playschool children place the highest value on friendship with peers, freedom to choose what to do, and playing in playschool (Einarsdottir, 2005).

NATIONAL CURRICULUM FRAMEWORK FOR ICELANDIC PLAYSCHOOLS

The first national curriculum for Icelandic playschools was published in 1985 by the Ministry of Education, although it was called the 'Educational Plan for Playschools' instead of curriculum. In 1999, a policy document called the *National Curriculum Guidelines for Playschools* was published. In 2009, a committee was formed to work on new curriculum guidelines, and in November 2010, a draft of the new curriculum was published on the Ministry's website for playschool teachers and others to comment on. At the time of writing, this draft has been reviewed and is waiting for formal validation/ratification by the Ministry (Mennta- og menningarmálaráðuneytið, 2011).

The new national curriculum highlights the importance of democracy, wellbeing, and interpersonal relationships in playschool education. The importance of the learning environment is stressed, and playschool teachers are encouraged to use play in a goal-directed way. Learning areas are integrated and have been grouped into the following categories: expression and communication, movement and wellbeing, environment and science, culture and the arts. Parents' cooperation built on reciprocal understanding and respect is underscored, and cooperation between school levels and continuity in the children's learning stressed. Assessment should focus on children's learning and wellbeing and should include the involvement of parents, children and staff. Each playschool is to compile their own playschool guidelines based on the national curriculum.

RESEARCH - THEORIES

Those who are responsible for developing educational policies come to the table with myriad experiences, interests, and beliefs—either explicit or implicit—which influence the policymaking. When the new Icelandic playschool curriculum was developed, the committee that was formed consisted of specialists in the field of early childhood education. Two were from academia, three were playschool teachers holding administrative positions for municipalities, and two were representatives from the Ministry. All had advanced degrees in early childhood education, except the Ministry representatives. These committee members built on both their experiences and interests and also on contemporary theories in early childhood education as well as recent research in the field.

A comparison of five playschool curricula that have been highly valued for their quality—Reggio Emilia in Italy, Te Whariki in New Zealand, High/Scope in the USA, the Swedish National Curriculum, and Experiential Education in Belgium (Pramling Samuelsson, Sheridan, & Williams, 2006)—show that certain issues and values connected with children's wellbeing were considered to be important in all cases. In all the curricula, an emphasis is placed on the child as a unique and competent being with rights of his or her own, including the right to be treated with respect. Children should be given the opportunity to be active and reflective and also to communicate with other children and adults. The level of quality in all of these programs is closely linked to the competence and professionalism

of the teachers, who are guided by the children's interests and questions, are enthusiastic, and challenge the children to learn about the world around them. All of the programs, except for T/W, consider the quality of the environment to be extremely important to children's learning. Despite some differences concerning evaluation and assessment, most of the programs focus on the assessment of the individual child's learning process and outcome: in T/W through learning stories, in R/E through documentation, and in EXE by evaluating child's involvement. The focus of the evaluation in the Swedish curriculum is the playschool itself and not the child. One of the conclusions of the comparison is that one of the reasons why these five curriculum are highly valued for their good quality may be that none of them ever fell into the trap of making playschool into a primary school for young children. Their overall aim "is to engage the children in life-long learning by focussing on qualities and abilities that help children to learn and develop in playschool, such as being critical, reflective, analytical, etc." (Pramling Samuelsson, et al., 2006, p. 26). The programs are, in other words, learning oriented but not in a formal way.

These core values and objectives that the five curricula have in common build on contemporary knowledge of children's learning, and the impact of international documents acknowledging children's rights are also clearly evident in the new Icelandic curriculum. When compared with older versions, the new curriculum has moved from a developmental view of children to a more post-modern or constructivist view. Play and learning are regarded as connected concepts, and the role of the teacher as a supporter of the children's learning is stressed.

CULTURE

Culture is a system of general normative principles: values such as equality, democracy, emancipation and freedom are institutionalized in social systems, and these values guide actions. It can be assumed that the values of a society are expressed in school and playschool curricula and thus transmitted to the next generation.

In early childhood education, diverse theories and programs have influenced the field throughout the years. Spodek and Saracho (1996) have observed that as various programs have evolved around the world, they have been modified and adapted to cultural beliefs. Spodek (1991) suggested that the content of all education is culturally defined, traditionally in terms of how each society defines the ideals of truth, virtue, and beauty. Therefore, the cultural content of playschools in one society will not be found in the curriculum of playschools in other societies. Bruner (1986, 1996) introduced the concept of folk psychology, meaning the underlying beliefs in a culture about human tendencies and about how minds work. Folk psychology is a culture's account of what makes human beings tick and is influential in molding pedagogy and early childhood programs.

A comparison of the five playschool curricula (Pramling Samuelsson, Sheridan, Williams, 2006) shows similarities but also differences. Difference can be traced not only to different theoretical stances but also to different cultural and historical contexts. Two outstanding cultural qualities of Sweden are democracy and equality, and these aspects are evident in the National curriculum. In New Zealand, there is an emphasis on the relationship between the Maori people and the rest of the population, and in the Te Whariki, the cultural and historical roots are emphasized. In Reggio Emilia, the philosophical value orientation and the critical approach stand out, and in High/Scope, a developmentally appropriate approach is evident as is in American culture.

Similar to the other Nordic countries, the Icelandic playschool tradition is child-centered and focuses on care-giving, the needs of the child, socialization, and the assumption that children learn when they play. In this romantic and child-centered view of children, children should be happy and free, and they should learn from experiencing the environment. (Einarsdottir, 2002b). Child-centeredness, freedom, and the view of childhood in its own right are evident in the new curriculum, as can be noted in the absence of both formal instruction and also graded tests and the emphasis on children's outside and inside play. Playschool is a democratic forum, where values and practices supporting democratic society are highlighted. Democratic pedagogy based on equality, diversity, solidarity, and the acknowledgement of different viewpoints is stressed. Children should feel that they are part of a group and community where justice and respect characterize communication.

POLITICAL CONTEXT

The political context has been influential throughout the work on the Icelandic curriculum framework. From the beginning, the intention was to work on the curricula for all school levels simultaneously and that there should be a common thread guiding all of them. The Ministry's personnel introduced "key competences for lifelong learning" that were published by the European Union (European Communities, 2007). The eight key competences were: (a) communication in the mother tongue, (b) communication in foreign languages, (c) mathematical competence and basic competences in science and technology, (d) digital competence, (e) learning to learn, (f) social and civic competences, (g) sense of imitativeness and entrepreneurship, and (h) cultural awareness and expression.

There was resistance from the early childhood specialists in the curriculum committee against using these key competences as they were intended to be used, that is, as age appropriate levels, against which individual children were to be assessed. When there was a change in government, the new minister agreed with this viewpoint. New educational principles were agreed on, which were to be mirrored in the curriculum guidelines. These new principles are: democracy and human rights, sustainability, equality, reading in a broad sense, and creativity. At the time of writing, the document is still under scrutiny by Ministry personnel, and it remains to be seen what will happen.

FINAL WORDS

Educational research has been contested, and solving educational problems has, by some, not been thought to require special expertise. These people believe quite simply that work in education requires common sense, and they know what it takes. As Lowenberg Ball and Forzani (2007) pointed out, because schooling is a common experience, familiarity masks it complexity. Others, on the other hand, see that disciplined research into the problems and solutions could help in education, just as it does in other fields. Hosteltler (2005) regards good education research as research whose ultimate aim is to serve people's well-being – the well-being of students, teachers, communities, and others. He sees it as in the power of every researcher and educator to do something to improve the lives of people.

The relationship between research and policy has also been disputed. Establishing policy-making on research is not a one-way process, as the author of this paper has become aware of through the process of developing the new curriculum for Icelandic playschools. Specialists in early childhood education coming to the table with a sound knowledge of research in the field and extensive

experience in the field face various other issues that they have to take into consideration and also take a stance on, including the political context; the pressure of specialized groups, such as test developers; international conventions; culture; and local playschool traditions.

ABSTRACT PRESENTATIONS

SESSION 1: QUALITY IN ECEC – EFFECTS AND CHALLENGES

CHAIRED BY

THOMAS MOSER

VESTFOLD UNIVERSITY COLLEGE

- Jan Helge Kallestad: *Mapping children's activities in Norwegian kindergartens*
- Peder Haug and Gerd Sylvi Steinnes: *Educated kindergarten teachers, a prerequisite of quality in Norwegian kindergarten?*
- Niina Rutanen: *Space for Toddlers in Early Childhood Education and Care*
- Marianne Torve Martinsen and Terje Melaas: *Child care center everyday for the youngest children: Selected quality indicators for one- and two-year-olds*
- Ole Henrik Hansen: *Language Acquisition in the Danish Crèche*
- Anne Greve: *Everyday life in 9 + 1 Norwegian ECEC for children under three*

MAPPING CHILDREN'S ACTIVITIES IN NORWEGIAN KINDERGARTENS

JAN HELGE KALLESTAD

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The aim of the study was to show characteristic patterns in children's activities in Norwegian kindergartens and to explore variations in such activities for example according to age, gender, ethnicity and disability. In this study children's activities include practically everything that goes on in kindergarten, and it is assumed that this content highlights children's cultural formation. The present study is part of the ongoing NRC research project "Kindergarten as an arena for cultural formation," at Centre of Educational Research, Bergen University College.

Preschool teachers (32) reported observations of children's activities several times every day during one particular week in 2008. The observers were instructed to give detailed descriptions of the activities, the situation and characteristics of the children and adults involved. The observers also reported additional information in a separate questionnaire.

In general the pedagogical quality of the kindergarten in this study was very high according to the preschool teachers, and it was claimed that *all* children experienced this positive learning- and developmental environment.

Based on more than 500 observations we found that over 80 percent of the activities were *not planned* and these activities were typically a result of *children's initiative*. This finding raises the question whether the learning quality in not planned activities is at the same level as in planned activities? Our data shows children that are active and take initiative in their own daily life, which can be regarded as positive and in line with political aims. On the other hand, it should be further explored how "children's initiatives" are distributed in the whole group of children and whether some groups of children risk being excluded from learning activities in this structure. It should also be critically discussed whether the high level of activities initiated by children contributes conserving or stimulating the learning- and developmental environment in kindergartens.

An overall view on the reported activities shows that most of the activities were performed indoor in groups of 2-5 children (and adults typically in a passive role of supervision). The most typical activity was categorized as art performance (drawing, painting etc). In a gender perspective both girls and boys participated together in such activities, also groups of only girls but seldom groups of only boys. Children less than 2 years old participated relatively less frequent than older children. The types of activities reported most seldom were dance- and musical activities and in particularly activities involving digital tools. Focusing on *only planned activities*, we found that such activities were reported most frequently within subject areas such as language/ communication, art performance and physical health/ outdoor life.

In official documents kindergartens are required to focus on all subject areas listed in “Rammeplan for barnehagen”. Based on our results, however, it seems relevant to discuss what is actually the minimum acceptable focus on a particular subject area, and how kindergartens can develop a system to inspect children’s activities and apply such data in an assessment of learning- and developmental quality in their kindergarten? This challenge also requires more knowledge about activity patterns for different groups of children in kindergarten. This issue will be further investigated in our research project.

EDUCATED KINDERGARTEN TEACHERS, A PREREQUISITE OF QUALITY IN NORWEGIAN KINDERGARTEN?

PEDER HAUG AND GERD SYLVI STEINNES

VOLDA UNIVERSITY COLLEGE

Kindergarten has become a significant contribution to the Norwegian welfare state as part of the educational system, and is expected to comprise care, experiences and play. Extensive development, learning and formation are the main objectives. The political expectations are high regarding quality and effects of kindergarten as preparation for school and even to learning outcomes in school. Studies show that children's learning is related to staff competence (Aukrust and Rydland 2009). The largest group in staff is the assistants, with no formal requirements to be employed. When only 32 percent of staff being educated kindergarten teachers it is questionable if and how the expectations could be reached. As early as in 1999, the OECD pointed out that the large amount of assistants might affect the quality of Norwegian kindergarten. The composition of staff seems to have led to a non-hierarchical structure, and questions have been raised if the extensive use of assistants with no formal pedagogical education is an expression of trivialization and undermining of the pedagogical content (Bae 2004). The study presented here is part of a research project[8] supported by The Research Council of Norway.

The main question in the study is related to the composition of staff and consequences for the quality of Norwegian kindergarten. How does the composition affect what goes on in kindergarten? The presentation is comparing division of labor between kindergarten teachers and assistants in Norwegian kindergarten, based on their own report. We are asking what characterizes kindergarten teachers' and assistants' understanding of important elements in kindergarten pedagogy, and how they assess their own competence related to these challenges.

Competence includes ability, authority, knowledge and skills to perform certain actions (Nielsen and Kvale 2007) and is acquired through compound studies and experiences. Knowledge can be practical or theoretical, self experienced or red about, codified or relational. An important approach is Eraut's (2004) distinction between individual and cultural knowledge. Cultural knowledge plays a key role in most work based practices. Kindergarten is a close working community, where kindergarten teachers

[8] "Coping of the role of kindergarten teacher in a field dominated by laymen" (MAFAL-prosjektet)

and assistants are working side by side, often performing the same tasks. Although some knowledge is developed through cooperation, common action, communication and reflection, the individual also have personal experiences constituting their unique body of knowledge. The most obvious distinction between kindergarten teachers and assistants is that the kindergarten teachers have developed academic and professional knowledge during years of specific formal education.

A nationwide questionnaire was sent to 1000 kindergartens spring 2009. Response rate was a little less than 60 %, representing 1357 assistants and 1192 pedagogical leaders. The data show extensive similarities in how the two groups assess their own competence, and merely marginal division of labor related to formal qualifications. Kindergarten culture seems to be less dominated by individual kindergarten teachers' formal competence, and more characterized by common sense and popular views on upbringing. These findings imply the need for a discussion about quality in kindergarten, also related to what kind of professional qualifications are required working with small children. An implication could be to introduce demands about formal training for assistants and even to employ more kindergarten teachers.

SPACE FOR TODDLERS IN EARLY CHILDHOOD EDUCATION AND CARE

NIINA RUTANEN

UNIVERSITY OF TAMPERE

This three-year (2010-2012) research project funded by the Academy of Finland addresses the dynamic interplay among the culturally constructed meanings, ideals and expectations of (good) toddlerhood, the institutionalized practices for care and education for toddlers, and toddlers' construction of personal places within these practices. On the basis of this larger project, this paper focuses on how do the professionals in ECEC negotiate their views about toddlers and the 'best interests of the child', and how are these views materialized in the actual practices with 1-3-year-olds in Finland.

This work is multidisciplinary, applying theoretical-methodological tools from early childhood education, social studies of childhood, and childhood geography. In addition to basic research on early childhood education and care with 1-3-year-olds, the project investigates and discusses theoretical concepts of space and place as theoretical-methodological tools for studies in early childhood education. From a wider perspective, the attempt is to discuss *what kind of space is offered for toddlers* in ECEC.

The project builds on qualitative case analysis and ethnographic field study in one day care centre in Finland. The corpus of data for the study includes national and local-level curricula for ECEC and documents (such as child-specific plans), written observations, field diary, video recordings, and stimulated-recall interviews with the professionals working in this particular child group.

The preliminary results indicate that the professionals use children's age as a justification to differentiated spatio-temporal practices in the group. The practices are guided by age-related expectations in relation to children's behaviour and skills. Also, 'the best interests of the child' is defined from the institutional point of view. It is addressed as adults' support to children in their age-related developmental tasks to enhance children's adaptation to the institutional order and routines. The practices also include dilemmas in relation to child's individual interests and needs and, as a counterpoint, the quest for stability of the routines and order in daycare.

The results suggest that the development of policies, professionals' training and practices with under three-year-olds would benefit from an update and application of critical perspectives to early childhood education and childhood institutions. The national curriculum guidelines in Finland leave space for local interpretations that seem to emphasize the age-related developmental theories and practical experiences as the main source of knowledge for the practices. Continuing professional education should be promoted to enhance reflective discussions related to care and education for under three-year-olds and, particularly, address the perspectives that emphasize children's agency in learning and development.

CHILD CARE CENTER EVERYDAY FOR THE YOUNGEST CHILDREN: SELECTED QUALITY INDICATORS FOR ONE- AND TWO-YEAR-OLDS

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TELEMARK UNIVERSITY COLLEGE AND

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AND

TERJE MELAAS

TELEMARK UNIVERSITY COLLEGE

The content of Norwegian day care centers, and pre-school teachers' competence was, until a few years ago, to a great extent determined by the fact that the majority of children in day care centers were over three years of age. The recent increase in the proportion of one- and two-years-old enrolled in Norwegian day care centers brings with it a concern for adjustment to the youngest children's needs.

Day care centers create the material conditions for pedagogical activities by setting up space and time frames for activities and organizing habituation procedures. Staff stability and expertise are key factors in this process. We can understand that these basic conditions are the specific conditions of care and children's lives, playing, learning and creation of meaning. Although day care centers at first sight may appear to be relatively similar organizations that must deal with governing laws and regulations that apply to all institutions, there is still little knowledge about quality indicators with particular relevance for the youngest child's life in kindergarten. The results from this study may contribute to knowledge development in this area.

We present new findings concerning procedures for adjustment to day care and personnel competence and stability from questionnaires and interviews in 2009 with 117 head teachers and 285 pedagogical leaders in 130 day-care centers participating in the Behavior Outlook Norwegian Developmental Study, conducted by the Norwegian Center for Child Behavioral Development in collaboration with Vestfold University College. A major aim of the study is to identify relevant aspects of day care that may help to promote children's social development.

In this presentation we will especially focus on descriptive findings concerning primary contacts, staff competency, education and stability, and the opportunities for play for the youngest children. The results show that over a quarter of day care centers do not provide any primary contact person for the youngest children (17%) or only for a period of less than a month (11%). By a primary contact is intended a staff member who has special responsibility for one (or a few) particular children during a significant period. Almost two-thirds of the day care centers organize the youngest children in 1-2-year groups (11%) or in small groups under three years (52%). 15% of the head teachers and 11% of the pedagogical leaders assess staff stability as less optimal or poor. Although the overall situation is considered rather positively by staff, the results suggest that there is a potential for improvement of day care centers before they can offer overall high-quality care to the youngest children.

LANGUAGE ACQUISITION IN THE DANISH CRÈCHE

OLE HENRIK HANSEN

AARHUS UNIVERSITY

This project investigates the child aged 1-3 years, language acquisition in the Danish crèche, as a multi-scientific language-concept, conceiving the language as complexities between instincts, intersubjectivity, thought, matter, culture and policy (Barad, 2007, Burman, 2008, de Haan & Gunnar, 2009).

It is a presumption that language is a consequence of the child's natural, ontogenetic needs and social relations. The project argues that language exist as biological entities, contextualized in cultural codes, due to neural resonance phenomenon's and multi-modal perception. Face-mimic and prosodic tone of voices reveals emotions, intentions, mental images and attention, as 'a view from within' - in other words - thoughts.

It is a presumption that the child's ability to verbal language, depend on the ability to nonverbal gestures and mimicry, and the capacity to distance one self from the world. This distance emerge through affective intersubjectivity. And it is in the context of intersubjectivity, the child comes to discover what it means to anchor meanings in symbolic vehicles of thought.

The importance of intersubjectivity is investigated with 10 case studies, where 10 children's interactions with the pedagogues are observed. Their interactions are measured in time, and the dialogue are counted and structured in ritualized and symbolic dialogue (Tomasello, 2007).

It is an effort to extend knowledge in a multi-disciplinary frame, conducting the academic freedom and maintaining the legitimacy of diverse paradigms, recognizing the quality and distinctive character of the theories involved.

The project reveals a big gap between Danish crèche's ability to facilitate environments that support the child's language acquisition. And more so, big gaps between the time the individual child will attain interaction with adults. The smallest amount of time is crèche's where the child only will have 15 minutes every day. The greatest amount of time is 26 minutes every hour. It is documented that the difference, not is a consequence of numbers of staff, but of pedagogical structures, and leadership.

EVERYDAY LIFE IN 9 + 1 NORWEGIAN ECEC FOR CHILDREN UNDER THREE

ANNE GREVE, ELLEN OS, BRIT EIDE, NINA WINGER, JAN-ERIK JOHANSSON AND INGRID PRAMLING SAMUELSSON

PRESENTING AUTHOR: ANNE GREVE

OSLO UNIVERSITY COLLEGE

The aim of this project is to contribute to knowledge of ECEC as an important institution in young children's everyday lives. Through different studies we have focused on, among other things: teachers' mediation of young children's peer relations, day schedules and children's opportunities to participation during circle time, teachers' reflections concerning their emphasize in pedagogical practice with the very young, methodological challenges related to listening to children`s voices, and friendship between one year olds.

The project is based on multiple perspectives, with strong emphasis on socio-cultural theory, partly with a phenomenological approach. The basis for data construction is video-observations in nine + one toddler groups. The day care centres in our study are small entities with 3-4 adults and 9-12 children. The observations took place during three half-days in each kindergarten, with one of the children in each group as a guide. Data consists of approximately 33 hours video recordings during everyday life and the teachers in each group were interviewed about their everyday practices. We also invited four 5 year old children to retrospective focus-talks about their experiences from attending toddler groups three years after they left these. The other study, concerning friendships between one-years olds, is based upon approximately 25 hours of video-observations from one toddler group.

Teachers' mediation of toddlers' peer relations: Teachers employ various strategies for mediating peer-relations, but frequency and quality differ. Analyses indicate that high degree of involvement combined with sensitivity for children's intentions, logic-in-action and ongoing activities facilitate peer-relations, as opposed to low degree of involvement. High degree of involvement is characterized by questions, extended utterances, flexibility and duration over time. Long-lasting mediation seems to be more group oriented than momentary mediation. These results are in accordance with international research.

Day schedules and children's opportunities to participation in circle time: The nine groups had approximately the same day schedule. Circle time was a part of the day schedule. The content included taking turns, and methods that promoted structure, such as creating common focus by arousing children's interest and attention through fairytales, stories, and motion-songs. Children`s participation was limited in circle time. During free play time, activities to a large degree were initiated by the children themselves.

Teachers' views on what is important to emphasize with the youngest children: Staff argue that increasing number of children under the age of three represents challenges that calls for specific awareness and sensitivity toward the children`s needs. Staff find that they, to a large extent, are able to fulfill the youngest children`s needs for individual care due to small entities, stability and predictability. They underline the importance of close collaboration with the children`s parents. Caring cultures based on collectivity, commitment and reciprocity are emphasised.

Methodological challenges related to listening to children`s voices: Retrospective conversations with 5 year olds based on "guided tours" back to their old day care settings, indicated that these children experienced continuation between their current everyday life and their past expressed by positive and relatively detailed memories of activities and relations they were engaged in three years earlier.

Friendships between the one year olds: Early childhood settings provide opportunities for establishment of friendship relations even among the youngest children. However, it seems like the older children, who master verbal language, are more likely to be noticed and get the other children's attention than the younger ones.

Policy implications: Numerous studies show that it is the quality of the activity that determines children's learning and well-being in ECEC, and that quality is linked with teachers' education. The younger the children are, the more important it is that the groups are small, so that the children can be heard, seen and develop relationships with their peers and caretakers.

ABSTRACT PRESENTATIONS

SESSION 2: GOVERNANCE OF ECEC – EFFECTS AND CHALLENGES

CHAIRED BY

HENRIK D. ZACHRISSON

THE NORWEGIAN INSTITUTE OF PUBLIC HEALTH

- Bente Vatne: *Challenges by implementing language screening in Norwegian Kindergartens*
- Bent Olsen: *Conditions of social selection : origins, positions and educational preferences of staff within the preschool occupation*
- Ellen Beate Hansen Sandseter: *Scaryfunny – a qualitative study of risky play among preschool children*
- Pål Schøne: *Enticing Women to work- the impact of affordable Day Care*
- Nanna Høygaard Lindeberg: *Language assessments and language stimulation of three-year-olds. Cross-disciplinary results from Danish Evaluation Institute surveys*
- Frederik Kiørboe*: Using programs for development initiatives in early childhood education and care - opportunities and challenges*

CHALLENGES BY IMPLEMENTING LANGUAGE SCREENING IN NORWEGIAN KINDERGARTENS

BENTE VATNE

VOLDA UNIVERSITY COLLEGE

This paper aims to discuss challenges of implementing, analysing and interpreting language screening in Norwegian kindergartens. The Norwegian Parliament has established legislation offering language screening for all three years old children in kindergartens. A public commission has been set up to develop supervisory material for the recommended language screening tools, following a professional evaluation of the tools. Issues of educational policy in Norway concern the government's decision to give all children the right to a place in early childhood education and to build kindergartens in a rapid tempo. Due to the building of new kindergartens many newly educated kindergarten teachers and assistants with lack of experience recruit Norwegian kindergartens. In this paper the questions concerning the staffs competence in language screening will be raised in implementing, analysing and interpreting language screening in a context were only roughly one third of the workforce in Norwegian early childhood educations are fully qualified teachers.

The research data is based on a national questionnaire survey sent to assistants and kindergarten teachers (pedagogical leaders) in 1000 kindergartens under the auspices of the MAFAL[9] project. The study received responses from 1192 pedagogical leaders and 1357 assistants which represent a response rate of about 59% of the kindergartens. The data in this paper is based on questionnaires where we ask to what extent assistants and pedagogical leaders emphasize different areas in their daily work with the children. In this paper the areas focused upon are *learning; language competence* and *communication* and *language and text*. The data are analyzed on the basis of how many years' assistants and pedagogical leaders have been working in kindergarten.

The results in this study show that focus areas such as c*are, play* and *social competence* are rated as highest by most of the kindergarten teachers and the assistants (Vatne, 2010). L*earning, linguistic*

[9] This study is part of the MAFAL project- coping with the role as a kindergarten teacher in a field dominated by laymen. The study is financed by The Research Council of Norway and is a joint project between Volda University College (HVO) and the Center for the Study of Professions (SFS) at Oslo University College (HIO).

competence and *communication, text and communication* are rated behind these focus areas. There is a significant difference between those who have been working more than eighteen years and newly educated and inexperienced in how they emphasize these areas. The more experience the two work groups have the more they emphasize *linguistic competence* and *communication, text and communication*.

Increased pressure on learning and language screening combined with many newly educated kindergarten teachers and inexperienced assistants makes a negative foundation for such screening. Language screening requires understanding of linguistic competence, of communication, text and language and for the work in kindergarten. One of the challenges will be to generate acceptance for language screening and provide competence to implement, analyze and interpret the results such a screening might produce.

CONDITIONS OF SOCIAL SELECTION:

ORIGINS, POSITIONS AND EDUCATIONAL PREFERENCES OF STAFF WITHIN THE PRESCHOOL OCCUPATION

BENT OLSEN

NTNU, NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

A range of research projects has revealed some selecting traits of kindergartens: Educational practices may vary according to the socio-geographical structure of a region or a city as a conditioning force. The study examines interrelationships between staff recruitment patterns, positions and educational preferences ("values"). Special attention is directed towards age and the three main occupational groups: Preschool teachers, including day-to-day heads and the childcare assistants.

The research project is developed using the theory and research of Pierre Bourdieu in association with the grid-group theory of Mary Douglas. The main basis according to P. Bourdieu is theory and research on practice and the sociocultural study of class and cultural distinctions. A social space of positions (1) is constructed along inherited, acquired and current capital assets. The questionnaire is developed on indicators of economic, cultural and social capital. A second space of educational preferences (2) based on some 13 themes of everyday life in kindergartens is constructed upon the social space. The main questions to be investigated are: How does the structures of social space (1) compare to the space of educational preferences (2)? The theory of habitus is the prime tool for outlining possible structural similarities of the kind.

Some 682 staffmembers of 80 kindergartens have responded to the posted questionnaire (response rate 60 %). The highly comprehensive questionnaire has been subjected to geometric data analysis (multiple correspondence analyses) suitable to the theoretical framework of P. Bourdieu.

The findings reveal a highly contradictory space of heritage and positions within the kindergarten staff which additionally has some affinities to spaces of educational preferences as well as the regions social geography over an axes of rural-urban.*

In sum the purpose of the project is to investigate hidden structures of social heritage, positions and educational preferences in regard to socioregional differences: Are differences of educational practice in kindergartens due to social distances between the staff members of kindergartens?

Additionally the project outlines specific conditions for the social production of leadership in kindergartens.

The findings support some questions on research policy and knowledge management. 1) The social structure regarding "class", generation and generation gap of staff members seems to be a crucial condition to understand the specific resources expelled in the educational practices of kindergartens. 2) Social heredity and volume as well as composition of capital are central as research objects regarding the practical and reflexive capacity; recruitment of leaders and special educators relies heavily on these conditions of heredity and capital. 3) Inherited prereflexive and bodily capacities seems to be import and in the meantime strictly ignored in several discourses on preschool education, overestimating models (of psychological as well as philosophical origin), prescriptive discourses, deliberate intentionality, "reflection" and control of "output". 4) Educational and "professional" pursuit seems to be obvious vague contributions regarding studies over staff's everyday life in kindergartens.

* The preparatory study is published as:

Bent Olsen (2009): *Når pædagogikken bringer mennesker sammen – en eksperimentel rejse gennem byens sociale geografi og alle dens børnehaver.* VIA/Systime.

SCARYFUNNY - A QUALITATIVE STUDY OF RISKY PLAY AMONG PRESCHOOL CHILDREN

ELLEN BEATE HANSEN SANDSETER

QUEEN MAUD UNIVERSITY COLLEGE

The present study's overall aim was to contribute to a better understanding of the phenomenon of children's risky play – particularly with the aim of trying to grasp children's perspective.

Observations and interviews with preschool children and staff revealed six categories of risky play: 1) play with great heights, 2) play with high speed, 3) play with dangerous tools, 4) play near dangerous elements, 5) rough-and-tumble play, and 6) play where the children can "disappear"/get lost. Further video observations of children engaging in risky play revealed two categories of characteristics by which to judge risky play: a) Environmental characteristics (such as height of climbing structure, surface hardness, steepness of sliding features, etc., as well as surveillance of adults), and b) Individual characteristics (such as the height and speed pursued by the child, the rashness of movements, motor control, focus/concentration, etc.). Individual characteristics are assumed to be highly influenced by the child's subjective perception of risk, while both environmental and individual characteristics contribute to the objective risk in the play situation.

A phenomenological analysis of video observations of children's risky play showed that children's experiences of engaging in risky play range from pure exhilaration, through exhilaration and fear at the same time (exhilaration bordering fear), to pure fear. The results indicated that experiencing both exhilaration and fear at the same time was the primary goal of engagement in risky play. Interviews with preschool children also showed that children's motivation for and experiences of engaging in risky play formed a phenomenological structure where the contrast and ambiguity between the experiences of pleasant emotions versus unpleasant emotions were key concepts. Children experience both fear and excitement in risky play, and this ambiguous feeling is the central motivation for engaging in this play.

The results of the study are discussed in relation to a model of risk-taking decisions and their influencing factors. In addition, an evolutionary psychological perspective of why children seek out risky situations forms a basic theoretical understanding for this phenomenon. As such, this study is a contribution to an emerging theorizing upon the phenomenon of children's risky play.

The knowledge from this study can be utilized in policy making both concerning pedagogical work with children, and the regulation of children's play environments (e.g. safety legislation).

ENTICING WOMEN TO WORK - THE IMPACT OF AFFORDABLE DAY CARE

INÉS HARDØY AND PÅL SCHØNE

INSTITUTE FOR SOCIAL RESEARCH

This paper analyzes the impact of reduced child care costs on female labor supply. Further, it exploits potential exogenous variation in child care prices induced by a public child care price reform in 2006. The reform set a maximum level on what municipalities could charge for a full-time slot and led to a large reduction in child care prices. The aim of this study is to answer the following question: can cheaper child care effectively spur the labor supply of mothers in an environment with an already high female labor supply? To answer this question this study develops a triple difference approach especially suitable when evaluating nationwide reforms equally accessible to all women with children to achieve this.

The data set used is gathered from several different registers, collected by Statistics Norway. The starting point is a public demographic register with information on all births in Norway, linked to information on the mother and the father. The data set contains detailed information on a child's mother regarding spells of employment, non-labor income, work experience, education, place of residence, presence of older children in the family, marital status, and age.

The results show that the decrease in child day-care prices did lead to a rise in the labor market participation rate of women with children. The impact is in the range of 4 percentage points, or approximately 5 per cent. The reform seems to have only a minor impact on number of working days, given participation. The positive and significant participation result and the positive but small and insignificant duration result are in line with previous results suggesting that labor supply is more elastic on the extensive margin.

The positive and sizeable impact on participation is robust after controlling for pre-trend differences and composition effects. The result is also robust across different model specifications. In summary, our results lend support to the hypothesis that cheaper child care can be an effective tool for increasing labor supply among mothers, even in an environment characterized by an already high female labor supply.

LANGUAGE ASSESSMENTS OF DANISH THREE-YEAR-OLDS; CROSS-DISCIPLINARY RESULTS FROM DANISH EVALUATION INSTITUTE SURVEYS

NANNA HØYGAARD LINDEBERG AND NANNA LOUISE PAGAARD

THE DANISH EVALUATION INSTITUTE

Since 2007, the Danish Evaluation Institute (EVA) has conducted a number of surveys on the way Danish municipalities and daycare centres have implemented the provisions on language assessments of three-year-olds laid down in the Danish Daycare Facilities Act. These surveys have served different purposes:

- to create an overview of how municipalities work with language assessments
- to create an overview of the children's results
- to create knowledge about implementation and effects of follow-up language interventions
- to create knowledge about how children experience taking part in a language assessment.

Several different methodologies have been used in the different surveys: National surveys and register data have provided an overview of how municipalities work with language assessments as well as an overview of the children's results. Qualitative interviews with e.g. social pedagogues and daycare centre managers, as well as written material from selected municipalities, have been used in connection with those surveys where the objective was to create knowledge about implementation and effects of follow-up language interventions. Finally, the survey on children's experience of taking part in language assessments was based on video footage of language assessments and questionnaires for children and adults who took part in the recorded language assessments.

The surveys can be divided into three main results:

1) Results regarding the actual language assessments

With regard to how municipalities work with language assessments of three-year-olds, previous surveys have shown that municipalities and daycare centres have access to tools and knowledge necessary for conducting language assessments. In the majority of municipalities, language

assessments are conducted at the child's daycare centre by a social pedagogue, who has been trained to carry out this assignment through courses and similar. In addition, the majority of municipalities use a centrally developed language assessment tool, which is freely available to the municipalities.

2) Results regarding follow-up language interventions

The follow-up language interventions for those children who have been assessed to need

interventions are usually incorporated in the children's daily life at the daycare centre. Regular staff are responsible for carrying out these interventions. Surveys identify several barriers when implementing the interventions, and identify the following conditions that seem to be crucial for targeting and implementing the interventions:

- knowledge about language and methodologies for language development as well as tools
- available for the social pedagogue who is responsible for preparing an action plan for the
- child on the basis of the language assessment
- knowledge and tools available to the social pedagogues who are to conduct follow-up
- language interventions as well as their attitude to the language work
- structure in relation to knowledge sharing among the social pedagogues
- management's focus on language assessments at the daycare centre
- active involvement of parents

3) Results regarding children's experience of the language assessments

The survey of how children experience taking part in a language assessment shows that the children adopt different positions in the language assessment situation, e.g. the "professional test taker" or the "rebellious test taker". At the same time, different approaches among the social pedagogues assessing the children have been identified. The different approaches taken by the social pedagogues are important for the children's experience of the situation, and the survey identifies aspects that the social pedagogues should be aware of in order to make the language assessment situation a positive experience for the child.

The surveys have contributed with knowledge which can be used in relation to local implementation of language assessments and follow-up interventions, as well as in relation to national initiatives in this area. In relation to follow-up language interventions, the surveys have also contributed with knowledge about the need for skills development as well as access to relevant tools for the staff conducting the language assessments.

USING PROGRAMS FOR DEVELOPMENT INITIATIVES IN EARLY CHILDHOOD EDUCATION AND CARE - OPPORTUNITIES AND CHALLENGES

FREDERIK KIØRBOE

THE DANISH EVALUATION INSTITUTE

This presentation focuses on the opportunities and challenges, which, seen from an evaluator's point of view, are involved in using programs for development initiatives in early childhood education and care as a means to develop the quality of pedagogical work in municipalities and early childhood education and care centres and to make positive changes for the children. In this presentation 'program' is understood as a management funding tool used by national and municipal institutions, charitable organisations or other stakeholders, and includes systematic interventions aimed at solving societal problems.

The goal of this presentation is to contribute with professional input and (re)start a debate with relevant stakeholders concerning the use of programs as a management and development tool within the social policy field, including early childhood education and care, and through this debate strengthen the institutional sustainability of the development initiatives in programs, and their ability to "live on" prospectively.

Overall this presentation aims to provide an insight into and disseminate learning points concerning:

- Fundamental approaches to initiating and carrying out programs and their importance for the short term as well as the long term results of the interventions in programs.
- Potential benefits, challenges and dilemmas in program implementation and administration
- Methodological considerations linked to evaluating and monitoring various program interventions in early childhood education and care

Firstly, this presentation is based on specific experience from the Danish Evaluation Institute in conducting program evaluation at national and municipal levels, including the evaluation of development projects under the program for "Better quality in early childhood education and care" set up by the Danish Ministry of Social Affairs for the period 2007-2010. Secondly, the presentation is based on perspectives from this specific experience coupled with methodology literature regarding program evaluation as well as official documents and guidelines on managing programs at ministerial and municipal levels in Denmark.

This presentation specifically focuses on a number of inherent challenges concerning the use of programs seen from an evaluator's perspective, including the significance of these challenges in relation to following the implementation process of program interventions as well as evaluating short-term and long-term results of these interventions. Within this perspective the presentation focuses on:

- Competing logics between the development approach and the expectations for immediate results
- Formal administrative requirements for carrying out programs vs. basic conditions for ongoing monitoring and evaluation of the implementation process and results of program interventions.
- Challenges in evaluating the linkage between specific interventions at local level in municipalities/early childhood education and care centres and results for the final target group/end-users in large-scale programs or in programs with multiple thematic areas. This may be particularly relevant for development initiatives in early childhood education and care.
- Handling the project dynamics; the dilemma in learning and "getting wiser" from interventions during the implementation process
- The role of the evaluator in program evaluation - formative, summative or both?

In a longer perspective this presentation also aims to contribute to a common dialogue between evaluators, decision-makers and specialists/professional staff initiating and administrating programs, e.g. through national, municipal, charitable initiatives or other types of initiatives. The goal is to mutually qualify insight and experience related to different approaches in carrying out programs, so that ultimately development initiatives can best benefit the final target group/end-user, e.g. the children.

ABSTRACT PRESENTATIONS

SESSION 3: INCLUSION AND EQUITY IN ECEC – EFFECTS AND CHALLENGES

CHAIRED BY

LARS GULBRANDSEN

NORWEGIAN SOCIAL RESEARCH

- Ratib Lekhal: *The relation between child care and language development, Results from the Norwegian Mother and Child Cohort Study*
- Bente Jensen and Anders Holm: *The Effect of a New Innovative Early Childhood Intervention and Care Program on Child Strengths and Difficulties*
- Biljana C. Fredriksen: *Researching children's embodied ways of learning*
- Ane Nærde: *Early child care and child adjustments at 2 years of age*
- Ann Christin Nilsen: *When Day Care Centers report concern to the Child Welfare Service*
- Christian Eidervald: *Early education and gender (in)equality: Current and future issues*

THE RELATION BETWEEN CHILD CARE AND LANGUAGE DEVELOPMENT, RESULTS FROM THE NORWEGIAN MOTHER AND CHILD COHORT STUDY

RATIB LEKHAL AND THE SOL- GROUP

INSTITUTE OF PUBLIC HEALTH

Our knowledge on the relation between child care and children's language development has until now mainly been based on research from outside the Nordic countries. In this study we give an overview over the three first findings from the research group on language and learning at the Norwegian Institute of Public Health, on associations between types and timing of child care and language development in Norwegian children.

Findings on relating to three topics will be presented 1) the associations between child care arrangements at 1 and 1.5 year of age and late language emergence at 1.5 years, 2) the association between child care arrangement at age 1, 1.5, and 3 years and late talking (LT) at 3 years of age, and 3) the buffering effect of child care at 1.5 and 3 years on delayed language development in children of depressed mothers.

Data was drawn from the Norwegian Mother and Child Cohort Study (www.fhi.no/morogbarn). Questionnaires were completed by mothers several times during pregnancy and the child's early years, including reports on child language/communication and type and amount of care. Mothers also reported on a variety of child, parent, and family factors such as parent education and family income. Additional covariates, such as perinatal risk factors, were available from the Medical Birth Registries of Norway (MBRN). The sample in the 3 studies were between N = 18 000 – 46 000.

We found no relation between type of child care at 1.5 years and late language emergence at 1.5 years. However both family day care and centre care at 1.5 and 3 years of age were related to a lower prevalence of late talking at three years compared to children in informal care. Moreover, children with full-time attendance of centre care at age 3 showed less late talking than children with part-time attendance. Finally, poor language development at 3 years was slightly less associated with maternal depression when children were in non-maternal- compared to maternal care. For depressed single mothers, and depressed poor single mothers, the differences were stronger. Even when controlling for covariates these relationships remained significant.

The results support the hypothesis that children in Norway's universally provided child care centers in general have lower rates of poor language than those cared for by parents or in informal care, at

least in 3 year olds. Our findings suggest that the Norwegian universal child care may provide an arena for intervention to prevent poor language development. We do however caution against concluding that child care causes children to have lower rates of poor language development. Future research will investigate the causal role of child care as a preventive intervention, and aim at indentifying potential mechanisms that explain if and why Norway's universally provided child care protects children from poor language development

THE EFFECT OF A NEW INNOVATIVE EARLY CHILDHOOD INTERVENTION AND CARE PROGRAM ON CHILD STRENGTHS AND DIFFICULTIES

BENTE JENSEN AND ANDERS HOLM

UNIVERSITY OF AARHUS

The objective is to present a new innovative approach to Early Child Education and Care (ECEC)-intervention program and to demonstrate the effects of the randomized controlled trial (RCT) intervention study of the specific ECEC that targets socially disadvantaged children. Here socially disadvantaged children are defined as children with a weak social background

The data for the analysis of the intervention consist of measurements of children from 30 day-care centers that have participated in the Danish ASP-program and children from 30 day-care centers that constituted the control group in the study. In total, the data comprise approximately 3000 children, within the age span of 3-5 years. The day-care centers were randomly allocated into either the intervention group or the control group.

The intervention program we evaluate here is a new innovative approach in Pedagogical Work with Socially Disadvantaged Children (ASP)-program, which is a Danish ECEC-governmental program aimed at improving children's life chances through.. The analysis shows that the ASP-intervention program has a statistical significant effect on child behavior as measured by the Strengths and Difficulties Questionnaire (SDQ), which measures children's emotional, behavioral, and relational strengths and difficulties. As allocation into the program was randomized, we expect that the observed effect of the intervention on the SDQ scores is causal. We will in further analyses demonstrate how management skills of the head of the daycare centres related to the effect.

This paper places the ECEC-intervention program in a wider concept of inclusive learning as the education and training program aims at improving the skills of staff caring for disadvantaged children. The interven-tion program is developed further and will be evaluated by a RCT-design in VIDA, a new Danish governmental ECEC and research program, 2010-2013 that include four Danish municipalities with 6000 children. The studies will have political implications because increased public investment in a better and more effective preschool education pro-grams for all children will be needed in the future. Here will the results from this paper have implications in order to contribute to develope Early Childhood intervention and Care programs not only based on knowledge about children's development but also on knowledge about leaning and innovation in preschool education of teachers.

RESEARCHING CHILDREN'S EMBODIED WAYS OF LEARNING

BILJANA C. FREDRIKSEN

VESTFOLD UNIVERSITY COLLEGE

Children learn through their senses before they are verbally competent. This learning is retained during their language development and later in life. The empirical study presented here focuses on the *process* of children's learning and intends to uncover their creative learning strategies. Building on the theories of John Dewey, Elliot Eisner and Arthur Efland, the study suggests that cognition is closely connected to social interactions, and embodied explorations of physical environments and three-dimensional (3D) materials. The study has three main objectives:

1. To understand the interactions between 3D- materials and children in visual art educational contexts and how this contributes to their construction of meaning.
2. To illustrate the importance of a holistic understanding of young children's learning.
3. To promote young children's experience, competence and democratic participation as integral part of quality of early childhood education (ECEC).

Respecting children's views and competences, raises questions about *how* they view their world and what their competences *are*. To answer such questions it is not enough to listen only to their verbal expressions, but is necessary to consider the full range of their communication forms: movement, sounds, body language etc. The study presented here was carried out in a Norwegian ECEC by a researcher, who in role of a teacher, conducted ten sessions (case studies) of visual art activities with different pairs of 3-5 year old children. The sessions were filmed and analyzed, taking a *multiple case study* approach and using software for digital analysis (NVivo8). From the cross-case analysis the following four findings emerged:

1. Through their embodied experiences and physical activities the children explored the 3D-materials' qualities as well as possibilities and limitations of their own bodies.
2. The physical experiences and the verbal language mutually supported one another. Through their imagination, children connected their earlier and new experiences and constructed meaning.
3. The resistance of a given material initiated problem-solving activities and engaged creativity. Unique solutions and new meanings emerged in the form of micro-discoveries.
4. What was possible to learn was highly dependent on the quality of inter-subjective relations in the educational contexts. The researcher's choices of 3D materials and tools structured the curricula and what was possible to learn. Nevertheless, her attitude (expressed through body language, tone of voice etc.) was equally important for the children's learning.

Policy implications: If we require children to develop into self-confident, creative adults who continue to acquire knowledge, embodied experience, imagination and creativity have to be valued as driving forces behind children's learning strategies. Such understanding needs to be connected to the already existing recognition of the importance of play in Scandinavian ECECs. Respecting children's learning strategies and inviting them to contribute to the curriculum, requires attentive, open-minded and competent teachers. This should have practical consequences for ECEC-teacher education and demands higher positioning of arts/aesthetic disciplines in the teacher education. However, the *curriculum* itself needs to be re-considered as *negotiated through interactions*, in order to provide better possibilities for children to contribute to the curricula and use their competences.

EARLY CHILD CARE AND CHILD ADJUSTMENT AT 2 YEARS OF AGE

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The Nordic countries, along with France, are in a unique position among the OECD-countries in offering extensive paid parental leave and a universal outreach of subsidized child care meeting adequate standards of quality. All children in Norway have an individual right to center care from age one. In excess of 88% of Norwegian children aged one to five attended center care in 2009, an increase from 72% in 2005. In 2009, the coverage was 77% for 1-2 year-olds and 96% for 3-5-year-olds. There is a lack of knowledge about factors that are associated with child care use, and of the relationships between child care factors and child development, particularly with respect to young children.

We present data from two sets of analyses concerning early center care for children up to 2 years of age. The data come from the Behavioral Outlook Norwegian Developmental Study (BONDS), a prospective longitudinal study of 1159 children from 6 months of age, their parents, and child care centers, carried out at Atferdssenteret (the Norwegian Center for Child Behavioral Development). The overall study aims are to generate knowledge about the development of social competence and behavior problems. Frequent multi-method, multi-informant measures of children's behavior, development, family, and day care variables are collected. The overall retention rate is high: close to 98% of the children and parents were still participating in June 2010.

Study I: Entry into center-based day care up to 18 months of age was predicted from demographic, family, and child characteristics collected at age 6 months of the child. The utilization rate of center care was 72%. Parent's preferences for early center care were the strongest predictor of utilization. Nonwestern immigrant status and lower socio-economic status predicted lower utilization. The age of entry was higher for children in two parent families. Mother's severe somatic problems, parents' preferences for entry prior to 18 months, and high child levels of activity predicted earlier entry. The findings suggest that in a context of universally accessible subsidized center care, family and child factors beyond preferences for center care predicted utilization only to a very limited extent.

Study II: A series of preliminary analyses of associations between children's physical aggression, norm-breaking/oppositional behavior, and social competence reported by center care personnel at age 2 years on one hand, and a set of day-care, family, and child variables on the other were performed. Preliminary findings suggest that age of entry into day care was slightly and negatively associated with all three outcomes reported by center personnel. Girls were reported to be less aggressive and norm-breaking/oppositional, and more socially competent than boys. Single mothers'

children were reported to have higher levels of aggression and norm-breaking/oppositional behavior. A lower level of self-reported symptoms of anxiety and depression in mothers, and advanced child development at age 6 months, were associated with higher center care personnel reports of social competence at age 2 years.

Implications of these preliminary findings, and strengths and limitations of the current findings are discussed. Future analyses of the current data set extended with further data, may focus among other things on adjusted regression and instrumental-variable estimations of day care effects, and on the influence of language and motor development, center care entry, and center quality, on children's continuing development of physical aggression.

WHEN DAY CARE CENTERS REPORT CONCERN TO THE CHILD WELFARE SERVICE

ANN CHRISTIN NILSEN

AGDER RESEARCH

Day care centers play an increasingly important role in the daily lives of Norwegian children. Statistics from 2009 show that 96 % of Norwegian children, aged 1-5, attended day-care centers. It is not assumed that there is any major systematic variation in social class as regards to day-care attendance. Despite the high rate of day-care attendance, only 4, 2 % of the reports of concern that the child welfare service received in 2009 came from day care centers. This has given rise to great concern about day-care personnel's competency to discover disturbing situations that affect individual children, and how they manage such situations. Research has shown that pre-school teachers request more information about child welfare, and that their relation to the child welfare service tends to suffer from lack of confidence (Backe-Hansen 2009; Baklien 2009). Furthermore, Backe-Hansen found that day-care personnel often show great concern and take many measures to accommodate the needs of children in difficult situations, endeavoring to avoid contacting the child welfare service out of fear of complicating the relationship with the child's parents, thus deteriorating the situation further for the child. Rather than questioning the number of reports from day-care centers it may be more relevant to question the accuracy of the reports, the researcher argues.

As a part of the national research project "Det nye barnevernet" (DNBV) ["The new child welfare service"] a survey was conducted among parents and employees in the child welfare system. We have specifically sampled out those cases that were reported to the child welfare service by day care centers (N=34), investigating whether there can be identified any specific characteristics with these cases compared with the total picture. The statistical sub-sample from DNBV is compared to data on child welfare from the database of Norwegian Statistics. Additionally we conducted interviews with four employees in two different municipal child welfare offices elaborating on their experiences cooperating with day care centers.

The results showed a substantial predominance of boys in the sub-sample, and a small predominance of children from other ethnic groups than Norwegian. This is also the case when considering the normal imbalance of the total sample. This finding may indicate that the day-care personnel is more attentive to some groups (who may have characteristics and behaviors that are less easily neglected) at the cost of others. Furthermore, the results showed that compared with the total, the sub-sample more often reported concern in cases of great seriousness and where strong initiatives, such as

foster care, were taken. These results indicate that day care centers take the responsibility to report concern in cases that are comprised by the information requirement. As regards to collaboration with parents the data shows that a larger portion (44 %) of the parents in the sub-sample was informed and agreed with the decision to report concern to the child welfare authorities, compared with the total (26 %). Furthermore, the parents in the sub-sample more often reported that they thought the child was in need of help/assistance. These two findings may indicate that the communication between the day-care personnel and the parents prior to reporting concern is better than in other cases. This may be taken, however, as a sign of the day-care personnel's reluctance to report concern of fear to worsening the situation of the child. Both the interviews and the statistical data bear witness of a tendency to report concern late in the day-care course, which can be understood as one element of the same argument.

As a whole, the differences between the sub sample and the total are marginal. However, the low report rate from day care centers, combined with the seriousness of the cases that are reported by day care centers, raise question to whether day care personnel report sufficiently in cases of less seriousness, but where intervention is still required. The results implicate that measures are necessary in order to improve knowledge, exchange and cooperation between day care centers and the child welfare service, aiming at increasing the number of reports of concern from day care centers to the child welfare service.

EARLY EDUCATION AND GENDER (IN)EQUALITY: CURRENT AND FUTURE ISSUES

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This presentation draws upon a critical questionnaire study among Swedish pre-schools who actively work, or have been working, with "gender equality projects", within the VR-project “Preschooling as an arena for developing gender-equality” at Stockholm University. The aim is to present and scrutinize common methods in pre-schools practical and daily work. Partly by analyzing the methods stated to be in use, as well as the justifications and descriptions of these methods.

All pre-schools that were given funds (total amount of 2,5 million SEK) from The Swedish Commission for Equality in Preschool [Delegationen för jämställd förskola] during the period 2004-2005 for gender equality projects where asked to answer a questionnaire. The questions where about what they have changed in their daily work as pre-school-teachers, in their striving for gender-equality in pre-school, seeing that the aim with the founding was to intensify the pedagogical gender equality work. The answer frequency in the study where 93 % (89 of 96 pre-schools). The theoretical assumptions for the analysis draws from feministic post-structuralism and focuses on how language, rather than objectively describing objects, replicates attitudes. This means that different methods and approaches are seen as if they give different natural and obvious “truths” about what “gender pedagogy” *is*, or *should* be.

Some pre-schools express an ambition of “sex-neutral” environments and pedagogy, while other pre-schools express a wish for an environment and pedagogy where children are encouraged to cross traditional sex stereotyped behaviors. In the latter cases materials and activities are connected to one of the two sexes, with the ambition to give girls and boys opportunities to choose “non-traditional” materials and activities such as dance and wrestling, dolls and cars. These different approaches gives an perplex understanding of what “gender pedagogy” is and how teachers are supposed to work in an “gender correct” way.

These different visions will create problems in the strategic “gender equality work”, as they have entirely different starting points and aims. Therefore it is important to illustrate these dilemmas and enlighten the antagonism in the practical work, that often exist within the same pre-school.

The study reveal that children are seen as passive receivers of a pedagogical activity, and therefore suggests that the responsibility for gender equality work resides with the adults. This presentation aims at setting establishing theoretical starting-points for a pedagogy where children instead are seen as active and responsible co-constructors.

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