



Nordic Council
of Ministers

**EARLY
CHILDHOOD
EDUCATION
AND CARE**
an Investment
in the Future



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1. AIMS OF THE WORKING GROUP

The Nordic Council of Ministers for Education and Research (MR-U) has made the role of education in social equality a priority in recent years. It has focused on the challenges ahead, including the growing inequality apparent in society in general and in education and learning in particular.

At their meeting in Trondheim 2022 under the auspices of the Norwegian Presidency of the Nordic Council of Ministers (MR-U 01/22), the education ministers discussed the importance of early investment and intervention to improve social equity in Nordic societies. Several research projects have been conducted in this field, such as work by the Centre of Excellence Just Ed, *Justice through Education*^[1] 2013–2018 as a part of the NordForsk research programme *Education for Tomorrow*.

In continuation of this ministerial discussion, the Nordic Committee of Senior Officials for Education and Research (EK-U) set up an ad hoc working group tasked with examining more specifically the area of early childhood education and care (ECEC) and to compile evidence of ECEC's broader social impact and proof of the return on investment from it.

Senior adviser Björk Óttarsdóttir from the Icelandic Ministry of Education and Children has chaired the group. The other members included senior advisers Liv Holmgaard Nørrelykke (7.3–30.4.2023), Nikolaj Thøger Sørensen (1.5–31.12.2023) and Marie Lund Hansen (27.6–31.12.2023) from the Danish Ministry of Children and Education, associate professor Miriam Wüst from University of Copenhagen, senior ministerial adviser Tarja Kahiluoto from the Finnish Ministry of Education and Culture, Professor Jani Erola from University of Turku, senior adviser Ole Myrnes and senior policy adviser Tove Mogstad-Slinde from the Norwegian Ministry of Education and Research, senior adviser Hrafnkell Hjörleifsson from the Icelandic

1. <https://www.nordforsk.org/sv/projects/justice-through-education-nordic-countries-justed>

Ministry of Children and Education, senior adviser Tove Mejer from the Swedish Ministry of Education, Professor Ann-Zofie Duvander from Stockholm University and Mid University Sweden, special advisor Mathias Møller Jespersen from the Government of Greenland, senior adviser Emilia Walk-Johansson from the Government of Åland, adviser Høgni Warberg from the Ministry of Children and Education of the Faroe Islands and economist Heri á Rógvi from the Faroe islands. Senior adviser Sini Keinonen and student co-worker Rebecka Skogberg from the Nordic Council of Ministers acted as the group secretariat. The group has held nine online meetings and one in person. It also hosted an expert seminar in Reykjavik on 3 October 2023.



2. DEFINING THE QUALITY OF EARLY CHILDHOOD EDUCATION AND CARE

The education system and services are at the core of the Nordic model of welfare society.

A central prerequisite for an integrated, competitive and sustainable Nordic Region is that we maintain and strengthen social equity and trust in the Nordic societies and work for a society in which everyone has equal opportunities regardless of social, cultural and linguistic background, gender, mental or physical differences.^[2]

The importance of qualitative ECEC for individual positive outcomes in relation to wellbeing and the development of linguistic, social and emotional skills is underpinned by contemporary research (we will expand on this in a Nordic context below).

In addition to the individual benefits of participating in qualitative ECEC, there is also consensus on ECEC's broader benefits for families and society in general. See, for example, the aims of the United Nations 2030 Sustainable Development Goals and high-profile European Union and OECD policies.

Several international efforts have been made to define quality factors for early childhood education and care. Quality can be measured in several ways, and its framing can depend on the varying emphasis placed on disciplines (e.g. whether the focus is on education, care, the social dimension, etc.).

In 2019, the Council of the EU adopted a recommendation on high-quality early childhood education and care systems. The Council recommendation includes a quality framework for ECEC that focuses on five areas of quality indicators: The importance of *accessibility* with regard to availability and affordability for all (1).

2. [Tillid – det nordiske guld \(norden.org\)](https://norden.org)

This is to ensure high participation and social cohesion. *Well-trained staff with favourable working conditions* contribute to the quality of the ECEC (2). A clear definition of the *curriculum* ensures effective learning outcomes for children (3). *Governance and funding mechanisms* are crucial prerequisites for upholding high standards in ECEC services (4). *Regular monitoring and evaluations* are an integral part of assessing the effectiveness of ECEC systems as well as ensuring and enhancing the overall quality of services provided (5).^[3]

Nordic Approaches to Evaluation and Assessment in Early Childhood Education and Care^[4], a report initiated by the Nordic Network on Early Childhood Education and Care and funded by the NCM, shed light on the values and principles that have guided the evaluation and assessment of the quality of early childhood education and care in the Nordic countries. The research found evidence of a Nordic model based on holistic and rights-based interpretations of children's wellbeing, development and learning, combined with a leading role assigned to the local and municipal context within ECEC. Nordic ECEC is child-centric, and children in ECEC have the right to participate in and actively influence their everyday lives within these settings. They are listened to, and their views are taken into consideration.^[5]

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3. <https://education.ec.europa.eu/education-levels/early-childhood-education-and-care/about-early-childhood-education-and-care>
 4. [Nordic Approaches to Evaluation and Assessment in Early Childhood Education and Care \(norden.org\)](#)
 5. [ECEC Documents – EAC Groups - EC Public Wiki \(europa.eu\)](#)



3. CONCISE POLICY BRIEF

The knowledge gathered from the Nordic Region (presented in sections 4–8) indicates that ECEC professionals, such as preschool teachers and social educators, play a key role in assuring quality in ECEC. Many countries have worked intensively to raise the competence of ECEC staff, draw up a quality framework and agree on educational requirements for staff. Nevertheless, during a time of challenging public finances coupled with a more demanding and heterogeneous operational environment, many Nordic countries now face challenges in recruiting and retaining ECEC professionals.

Discussions are also being held about how to get families that tend to have a lower ECEC participation rate than the average (e.g. families with immigrant backgrounds and/or lower socioeconomic circumstances) to become more involved. Research has demonstrated the clear benefits of ECEC to language and socio-emotional skills development.

In addition to the benefits for children, participation in ECEC also has positive implications for the welfare and income of families and parents.

Based on the knowledge it has accrued, the working group has set out the following policy recommendations for ECEC in the Nordic Region:

1. Provide qualitative ECEC for all children by investing in ECEC professionals and institutions. Research indicates that the investment pays off in the long term.
 - a. Recruit more students into ECEC teacher training and other relevant professional training courses.
 - b. Improve working conditions to ensure higher retention rates among ECEC staff, including considering more favourable staff-child ratios and qualified leadership in ECEC institutions.
 - c. Enhance skills to cope with multilingual and multicultural environments in ECEC institutions

- d. Provide specific support for ECEC institutions in vulnerable neighbourhoods to encourage inclusion and a sense of community and belonging.
2. Encourage groups with lower-than-average levels of participation to use ECEC services:
 - a. Actively convey the advantages of universal ECEC services, particularly for children and families in vulnerable situations.
 - b. Ensure affordability of ECEC services for families. This can be achieved in several ways, such as guarantees of a set number of free hours per week for all or lowering the maximum fee per child.
 - c. Actively convey the benefits of ECEC and an early start for children (at ages one to two) for the parents' livelihood and careers. Critically evaluate systems of cash-for-care (public grant system for families taking care of young children outside of publicly subsidized day care after family leave) while enabling flexible systems encouraging work-family life balance for families with small children.
3. Broaden the knowledge base to measure the impact of Nordic ECEC and how it helps promote social equity.
 - a. Gathering large-scale data on ECEC can be challenging, as the knowledge base may be fragmented and/or specifically local. In order to facilitate broader longitudinal effect studies with high-quality quantitative data, more routine and ongoing data collection should be considered.
 - b. Continue working on a Nordic level to acquire in-depth knowledge of the factors affecting the prerequisites for qualitative ECEC on the one hand and participation and obstacles to it on the other.
 - c. Collect specific knowledge about how economic and social segregation affect children and ECEC institutions in the Nordic Region and develop collaboration in order to identify measures that can counteract any negative effects.
 - d. Where appropriate, consider conducting larger studies such as randomised controlled trials (RCTs) to evaluate and measure the impact of system adjustments to increase participation in ECEC (see Finnish RCT on the extension of free pre-primary education by two years)
 - e. Improve exchanges of best practices for addressing language skills and inclusiveness for all in Nordic ECEC.



4. QUANTIFYING ECONOMIC SIGNIFICANCE

4.1 What does Nordic research reveal about the causal impacts of early-life policies in shaping long-term outcomes?

The working group hosted a Nordic expert seminar on the economic impact of qualitative ECEC in Reykjavik on 3 October 2023. Professor Miriam Wüst from the University of Copenhagen provided an overview of current economic research from the Nordic countries on the causal effects of early childhood education, including the importance of early life circumstances, investment and the impact of design features on child outcomes. The presentation highlighted several examples that stressed the significance of the age of the child at ECEC enrolment, the importance of quality assurance, professionally trained staff, and measures to improve the intake of children from immigrant backgrounds.

A large body of economic research into early investment policies has focused on higher income for families (tax credits), paid-leave policies, direct financial aid programmes (such as school meals and food stamps), early-life health policies (preventive care during birth and infancy and vaccination programmes) and childcare programmes (ECEC).

Looking specifically at ECEC investments, research has looked at the type of ECEC services that could be provided, the impact of their design, various quality aspects, the question of timing (when a child should start in ECEC) and which children the services should target (early intervention agenda).

However, demonstrating direct causality is inherently difficult due to challenges arising from aspects such as the selection of elements, the variability of content, and a lack of data or data suggesting multiple dimensions.

Nonetheless, it is possible to note some causal effects of ECEC from first- and second-generation Nordic studies: Studies examining the roll-out of universal programmes in the 1970s provide solid evidence of positive causal (long-term) impacts of ECEC on individuals' educational and labour market outcomes.^[6] These tend to be greater for disadvantaged individuals^[7].

Given the current universal coverage of ECEC in the Nordic Region and increased research focus on the intensive margin (types and quality of ECEC, age of entering and the weekly/daily time spent there) rather than the extensive margin (whether or not children have access to ECEC), second-generation studies have focused on other aspects such as ECEC staff composition or child-teacher/child-staff-ratios. Evidence of the effects of Nordic ECEC design focuses mainly on shorter-term impacts, with many studies examining a diversity of settings and methods, thus potentially affecting the more general applicability of the results.

However, they do point to the important impact of both ECEC timing and design on children's outcomes. These studies are, for the most part, challenged by the limits of available data – see our recommendations^[7] above. High-quality national data on, for example, childcare inputs and child development at younger ages is sparse or non-existent.

Some examples of research from the Nordic Region:

Timing of ECEC

- Comparing outcomes for children in different types of care (centre vs family-based): Centre-based care appears to outperform family-based daycare with reference to children's 9th grade GPA (grade point average) in Danish.^[8]
- Early-start and test scores for cognitive development, the effect of enrolment in ECEC at ages one to two: An earlier start improves test scores in cognitive skills and seems to reduce the proportion of critically low scores.^[9]
- The timing of ECEC start in Denmark seen in relation to increased use of parental leave and children's socio-emotional development: starting ECEC at age 10.5 months (instead of eight months) improves adolescent wellbeing, conscientiousness and emotional stability and reduces school absenteeism.^[10]

6. Dietrichson, Kristiansen, and Viinholt (2020): Universal preschool programs and long-term child outcomes: A systematic review. *Journal of Economic Surveys*. <https://doi.org.ep.fjernadgang.kb.dk/10.1111/joes.12382>

7. Havnes and Mogstad, 2011 and Havnes and Mogstad, 2015: Roll-out of access to public childcare in the 1970s https://soeq.kb.dk/permalink/45KBDK_KGL/1f0go08/cdi_elsevier_sciencedirect_doi_10_1016_j.jpubeo_2014_04_007

8. <https://ideas.repec.org/a/eee/ecoedu/v53y2016icp217-229.html>
<https://www.sciencedirect.com/science/article/abs/pii/S0165176512003527>

9. Drange and Havnes, 2019: Early start and test scores https://soeq.kb.dk/permalink/45KBDK_KGL/1f0go08/cdi_uchicagoress_journals_700193
<https://www-journals-uchicago-edu.ep.fjernadgang.kb.dk/doi/abs/10.1086/700193>

10. Houmark, Jørgensen, Kristensen and Gensowski, 2023: Timing of daycare start and socio-emotional development. https://www.researchgate.net/publication/361955897_Effects_of_Extending_Paid_Parental_Leave_on_Children%27s_Socio-Emotional_Skills_and_Well-Being_in_Adolescence

Quality of ECEC centres

- Correlational evidence for positive relationships between ECEC centres' quality indicators and child outcomes: A research example looking at ECEC participation and the grade point average (GPA) in Danish at 9th grade. The quality assurance included indicators such as staff-child ratios, proportion of staff with training and proportion of male staff.^[11]
- Impact of centre characteristics on child outcomes (test scores, language tests): This study examined how the composition of the ECEC centre staff affected child outcomes, particularly test scores and language development. The study found that children who received their first offer of enrolment from a ECEC centre with a higher proportion of male staff performed better on language tests during early school years. Conversely, high sick leave in a ECEC centre was associated with lower test scores in both language and mathematics. Thus, ECEC centre staffing levels and staff composition were found to play an important part in children's development and educational outcomes.^[12]

Unequal access/peer groups

- A pilot project in Norway providing free ECEC for children aged four to five years old resulted in a higher intake of immigrant children: Research indicated a positive impact on national assessment tests in schools at third, fifth and eighth grade but no noticeable effect on marks in tenth grade.^[13]^[14]

In future, it would be interesting to conduct more in-depth research into marginalised communities, as there are still some groups with low levels of participation in ECEC despite its universal accessibility in the Nordic Region.

Potential research themes could include

- variations in participation levels and the drivers behind differences in enrolment
- the interplay of different policies over the course of childhood
- how ECEC can shape parental behaviour in terms of labour supply and later educational choices by the children
- ECEC and a sense of belonging; the effects of increasing concentrations of migrants in residential areas and neighbourhoods in Nordic cities.

11. Bauchmuller, Gørtz, Rasmussen, 2014: Correlational evidence for Possible relationship of quality indicators with 9th grade GPA in DK https://www.researchgate.net/publication/262975534_Long-run_benefits_from_universal_high-quality_preschooling

12. Drange and Rønning, 2020: Use over-subscription of daycare centres in Oslo to study the impact of centre characteristics on child outcomes (test scores, language tests) <https://www.sciencedirect.com/science/article/pii/S0047272720300682?via%3Dihub>

13. Drange and Telle, 2015: Free childcare for children aged 4–5 in NO <https://www.econstor.eu/bitstream/10419/192781/1/dp799.pdf>

14. <https://www.udir.no/tall-og-forskning/finn-forskning/rapporter/2023/gratis-kjernetid-i-barnehage-i-oslo-rapport-4/>



5. EXAMPLES OF QUANTIFYING ECONOMIC IMPACT AND A SYSTEM CHANGE

A common feature of the Nordic countries is that policy initiatives are always based on solid research and data-based knowledge. In recent years, there has been a growing interest in estimating and evaluating the economic and social significance of investments in early age. This chapter describes several examples from different Nordic countries, including a new Icelandic law on the integration of services in the interest of children's prosperity, a model developed in Denmark to calculate educational investments, and a large-scale randomised controlled trial (RCT) in Finland on expanding free ECEC by two years of pre-primary education provision.

5.1 The prosperity act, Iceland

In Iceland, The Act on the Integration of Services in the Interest of Children's Prosperity (the Prosperity Act) was unanimously approved by Parliament on 11 June 2021 and entered into force on 1 January 2022.^[15]

The Prosperity Act emphasises early assistance and access to coherent services for the individual. Under the Act, children and families deemed to be in need of early assistance and support of any kind are ensured access to a specific coordinator in the child's own local environment. This coordinator provides information and instruction on services to ensure correct and timely access to assessments and coordinates benefits if there is a need for more targeted or specialised assistance than is available at the primary level.

15. <https://www.bofs.is/media/almeningur/Childrens-Prosperity-handout.pdf>

If children and their families need more targeted or specialised assistance, i.e., on secondary or tertiary levels, they will be assigned a case manager by their municipality's social services. The case manager will advise and give information on services, assist with access to assessments and/or analysis of a child's needs, be responsible for drawing up a support plan, lead the support team and follow up on the services provided in accordance with the support plan.

During the preparation of the Prosperity Act, the Minister of Education and Children retained a third-party economist to analyse its cost-effectiveness and economic impact for both state and municipalities.

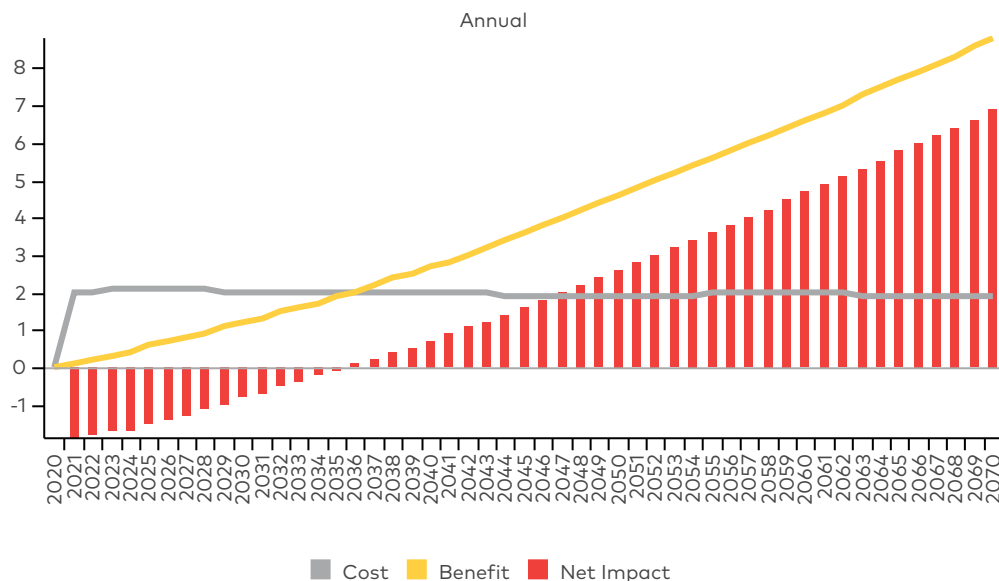
Adverse childhood experiences (ACEs) are potentially traumatic events that occur during childhood. They can negatively impact future wellbeing and be costly for the individual and society. It is estimated that additional government spending due to ACEs in 2018 was approximately ISK 100 bn (EUR 680 m). To put this in perspective, Iceland's GDP for 2018 was ISK 2.803 bn.

The analysis projected that the Prosperity Act would reduce ACEs by 7% and make children 7% better at processing them. The cost-effectiveness of the changes would take several years to determine, i.e. the children affected reach adulthood.

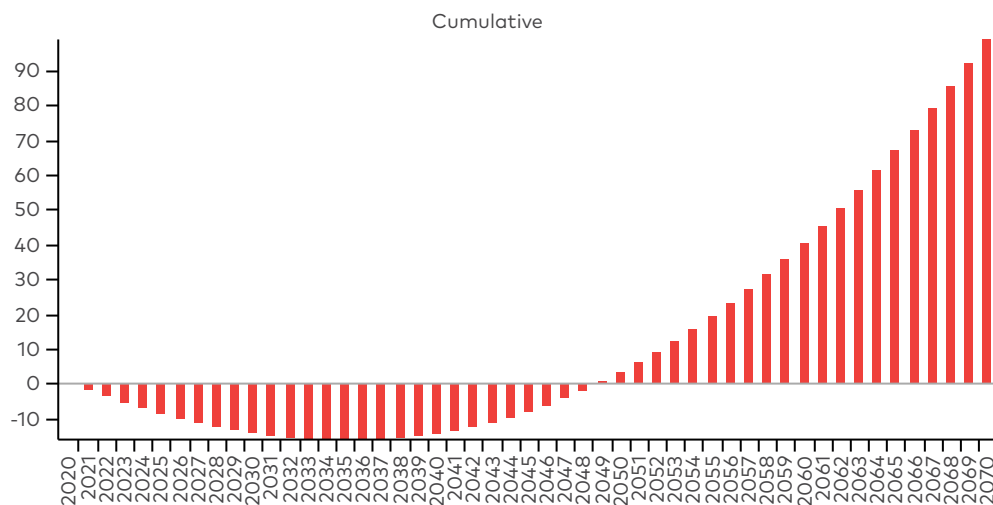
According to the analysis, the annual gain will exceed costs in 2035, and the cumulative impact on public finances will be positive from 2050. The legislation is estimated to be cost-effective and will yield returns on par with the most profitable investments the Icelandic government has previously undertaken. In addition, the Prosperity Act will have no negative environmental impact, with only a positive impact on the lives of children and their families, leading to increased overall wellbeing and national prosperity.

Integration of services in the cause of children's wellbeing is a profitable long-term investment

Estimated costs, economies, and overall impact on public finance (ISK bn)*



- **Costs remain similar** while **economies increase cumulatively** year by year
- The annual **gain will exceed costs in 2035**



- Cumulative impact on public finance will be **positive from 2050**
- Funding spent on implementing the Bill will yield at **9,2% real rate of return****

Figure 1. A graph representing the estimated financial and economic impact of the integration of services in the interest of children's wellbeing under the Prosperity Act in Iceland. An assessment was conducted by the Ministry of Social Affairs of Iceland in 2021.

* Figures are fixed price

** Internal rate of return of overall impact premised on 2% annual growth after 2070.

5.2 REFUD model in Denmark

REFUD (Regnemodel for Uddannelsesinvesteringer) provides insight into the short-term economic consequences of educational investments in basic education and ECEC at the national, regional and municipality level. REFUD has two separate components: a Knowledge Bank and a Calculation Module.

The Knowledge Bank consists of a collection of quantitative research on children's learning and wellbeing. In the field of ECEC, REFUD has focused on investments designed to lower child-to-staff ratios^[16] and investments in pedagogical competencies^[17].

The Calculation Module is based on the Washington State Institute for Public Policy's (WSIPP) cost-benefit model. It includes only short-term returns over a four-year period and solely evaluates monetary returns.

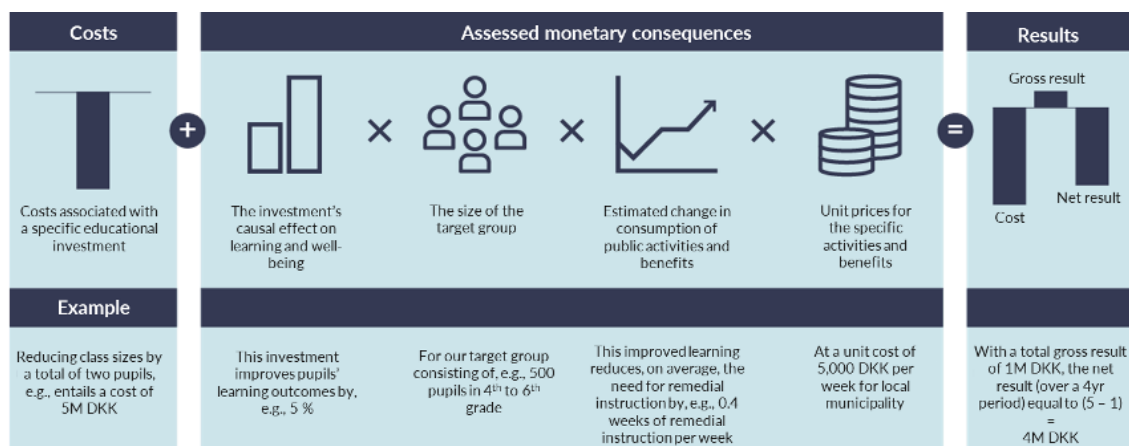


Figure 2. A simplified example of the calculation model in REFUD estimating the impact of a financial investment and the estimated monetary consequences of it in the field of primary education.

16. [REFUD, studies behind the investment: Lower child-to-staff ratio](#)
 17. [REFUD, studies behind the investment: Pedagogical competencies](#)

5.3 Finland's pre-primary education expansion experiment

Professor Matti Sarvimäki from Aalto University presented the Finnish pre-primary education expansion experiment at the Nordic expert seminar in Reykjavik on 3 October 2023. The presentation included a particular focus on the political process involved and the commitment of the three most recent Finnish governments.

At present, Finnish children attend pre-primary education from the age of six and elementary school from the age of seven. The new intervention reduced the age at which mandatory pre-primary education starts by a year, from six to five.

In 2015, the newly elected government started a number of experiments in different policy fields to incentivise social innovation and development. First was the introduction of basic income on a trial basis. The following government continued this approach and introduced a randomised controlled trial (RCT) with two years of free pre-primary education.

In order to conduct the RCT, a specific Act was passed for the trial, the Act on a Two-Year Pre-Primary Education Trial (1046/2020). The randomisation was conducted in two steps: The selection from larger municipalities (those with a sufficient number of suitable ECEC units) was random, as was the division of ECEC units into treatment and control groups within this selected group of municipalities. For smaller municipalities (with only a few suitable ECEC units), the researchers randomised the entire municipality to either treatment or control.

Working with the Ministry of Education and Culture, researchers designed a randomised experiment to evaluate the impact of extending pre-primary education on children's socio-emotional, numeric and language skills.

The treatment group (N ≈ 15,000) attended pre-primary education for two years instead of one, following a curriculum drawn up specially by the Finnish National Agency for Education for the two-year pre-primary education experiment. The control group (N ≈ 20,000) either continued with the business-as-usual early childhood education at daycare centres or stayed at home. The research team behind the trial evaluated each child three times between the ages of five and seven, using standardised tests and teacher evaluations. The primary outcomes are indices of socio-emotional, numeric and language skills. This data has been augmented using register-based data on the children and their parents.

The broader research project also includes online surveys for teachers, parents and civil servants, in-depth interviews with children and parents, and text analyses of administrative records.



6. SOME EXAMPLES OF RESEARCH

This section is based on presentations at the Nordic expert seminar in Reykjavik on 3 October 2023 and information collected by the ad hoc working group.

There has been a comprehensive social and cultural transition towards organised, universal ECEC services, which has signified a big shift for families, parenthood and the care arrangements for children. It is worth acknowledging g that different concepts and values exist side by side in the societies of today.

For the vast majority, the research results demonstrate the benefits of ECEC for the cognitive, socio-emotional, and linguistic development and wellbeing of children.

It has been demonstrated that ECEC plays a significant role in inclusion, integration and in strengthening the sense of community belonging. ECEC is also important when it comes to the parents' careers and income development.

6.1 About families and ECEC

Professor Ann-Zofie Duvander from Stockholm University and Mid Sweden University held a presentation on how ECEC has developed in the Nordic countries, moving towards (almost) universal participation from an early age and the professionalisation of the way ECEC is organised.

Family care used to be a temporary form of childcare before the establishment of institutional ECEC programmes. In Sweden, as well as in other Nordic countries, we have experienced a comprehensive and deliberate move towards professionalisation and an emphasis on the pedagogic and educational aspects of ECEC, transitioning away from traditional family

care^[18]. In recent decades, starting ECEC at the age of one has come to be considered the norm in the Nordic Region.

The social arguments in favour of universal ECEC services have highlighted their potential to alleviate poverty, especially for single mothers who are given an opportunity to work while their children are in ECEC programmes. Furthermore, participation in ECEC is considered to play a vital role in meeting children's physical and social needs and supporting their wellbeing, development and learning by offering a supportive and stimulating environment. The programmes also serve as an alternative to other childcare options, providing parents with more choices for their children's care and education.

This has signified an extensive shift over time between what is considered a private or public duty, as well as changes in attitudes to the promotion of children's wellbeing. Diverse research traditions have taken quite different paths when researching these questions^[19]. One important question, but one not always considered, concerns the relationship between ECEC service providers and parents, which may involve conflicting interests and ideas due to factors such as gender, class, education and personal values. As a result, the goals of the parents and the pedagogical staff may clash, raising questions about how the ECEC-parent relationship is constructed and whether the two distinct roles should be clearly separated or should be seen as a partnership, whereby the ECEC is recognised as a service also influenced by its users (parents).

Moreover, the differences in the starting age and backgrounds of children in ECEC programmes highlight potential class disparities and the impact of policy changes, which can affect various groups differently^[20].

6.2 Assessing the impacts of home care allowance: Effects on parents and children

Professor Tuomas Kosonen from the VATT Institute for Economic Research presented a research paper analysing the Finnish home care allowance: Paying Moms to Stay Home: The effect of home care subsidies on mothers and children^[21].

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18. Duvander, Ann-Zofie, & Nyberg, Anita. (2023). Diversity of childcare policies in Nordic welfare states. In Mary Daly, Neil Gilbert, Birgit Pfau-Effinger, Douglas Besharov (Eds.) *The Oxford Handbook of Family Policy over the Life Course*. Pp 655–677. Oxford University Press <https://su.diva-portal.org/smash/record.jsf?pid=diva2%3A1791873&dswid=-3558>
 19. Moss, Peter. "Power and resistance in early childhood education: From dominant discourse to democratic experimentalism" *Journal of Pedagogy*, vol.8, no.1, 2017, pp.11–32. <https://doi.org/10.1515/jped-2017-0001>
 20. Viklund, Ida, & Duvander, Ann-Zofie. (2017). Time on leave, timing of preschool - The role of socioeconomic background for preschool start in Sweden. In Hans-Peter Blossfeld, Navena Kulic, Jan Skopek & Morris Triventi (Eds.), *Childcare, Early education and social inequality: An international perspective* (p. 67–88). Edward Elgar Publishing. <https://www.e-elgar.com/shop/gbp/childcare-early-education-and-social-inequality-9781786432087.html>
 21. <https://www.doria.fi/bitstream/handle/10024/186210/vatt-working-papers-151-paying-moms-to-stay-home--short-and-long-run-effects-on-parents-and-children.pdf?sequence=1&isAllowed=y>

The home care allowance (HCA) is a form of financial support provided to parents who choose to stay at home and care for their children instead of utilising formal ECEC services (in Finland, this is available to families with a child under three years old). The research studied the effects of the home care allowance subsidy on parents and children. This allowed researchers to assess what impact the allowance had on aspects of the children's lives as they grew up.

The research found evidence that higher monetary subsidies have the relatively significant effect of increasing the proportion of mothers who stay at home and that this, in turn, has a negative impact on the earnings and employment prospects of mothers in the longer term.^[22]

To identify the effect of HCA on the outcomes under review, the study utilised municipal top-ups to the national HCA, where mothers and children in those municipalities were compared to similar mothers and children in municipalities that had not altered their supplementary policies or had not completely introduced supplements. Examining the children in the research data, the researchers found that the impact of HCA was negative; children do less well in early childhood cognitive tests, enrol less often in upper secondary school programmes and commit more crimes in their youth. These last results suggest that the negative effects on children may also have negative earnings implications for them as adults. The results for children also suggest that at least in the Nordic Region, where the alternative to home care is relatively high-quality ECEC, incentivising families to place their children in ECEC from the age of one would be more beneficial than encouraging mothers to stay at home with their children.

6.3 ECEC, integration and language learning

In recent years, there has been a growing awareness of and interest in ECEC's role in building democracy and how it can contribute to social integration and inclusion.

A Nordic research project was conducted on how Nordic early childhood education and care policies frame values and education in preschools, emphasising the values of democracy, caring and competence (*Democracy, Caring and Competence: Values perspectives in ECEC curricula in the Nordic countries*)^[23]. This study focused on how values in the national curriculum serve as a basis for pedagogical practices in the Nordic countries.

The results showed that the Nordic curricula include guidelines for ECEC staff on how to foster an environment based on democratic principles, including caring and competency, in order to encourage children to learn. These are viewed as fundamental values in all Nordic countries.

22. Carneiro, Pedro, et al. A Flying Start? Maternity Leave Benefits and Long-Run Outcomes of Children. 2015 <https://www.jstor.org/stable/10.1086/679627>

23. "Democracy, caring and competence: values perspectives in ECEC curricula in the Nordic countries." — [Scandinavian research in early childhood education and care \(nb-ecec.org\)](http://Scandinavian_research_in_early_childhood_education_and_care(nb-ecec.org)).

Significant Nordic research has also been conducted into the importance of early interventions for vulnerable groups^[24] and the significance of ECEC services for children and families who have newly arrived in the Nordic countries.^[25]

As diversity increases – generally and in ECEC institutions –the Nordic countries must invest and develop the quality of their institutions with a focus on training qualified staff to support the wellbeing, development, care and education of children.

6.3.1 Enhancing language development for dual language learners (DLLs) in Norwegian ECEC

Professor Veslemøy Rydland from the University of Oslo held a presentation about ECEC's impact on Norwegian preschools, the language development of dual language learners, and the need for professional development models to enhance language outcomes.

As a part of examining ECEC's impact on integration, a project was carried out in Norwegian preschools to encourage multilingual development, native language support and learning Norwegian as a second language. The importance of ECEC staff in fostering both Norwegian language skills and native language support for dual language learners is paramount for the integration and development of young children. Both internationally and in Norway, children's language learning and educational achievement are related to their socioeconomic and migration backgrounds. There is a need to identify professional development models in ECEC that can improve the content offered to children, the teachers' interactional styles and the children's language outcomes.

Two studies focusing on the language development of DLLs in Norway were presented. The first study, known as "The Extend intervention", investigated DLLs in Norway who participated in a book-based language intervention programme within ECEC. This study documented the main effects on three to five-year-old DLLs' first- and second-language development^[26]. The intervention group showed improvements in second-language vocabulary, grammar skills and the ability to see things in perspective. The home components of the intervention had positive effects on first-language vocabulary skills for words shared in the family's preferred language, as well as Norwegian. Overall, shared book reading in preschool can support DLLs' second-language learning and first-language vocabulary skills^[27]. The second ongoing study, "The Oslo Early Education Study",^[28] was initiated as a researcher-sector partnership to develop, implement and assess the effects of an

24. [Tidiga insatser för sårbara familjer I NVC \(nordicwelfare.org\)](https://nordicwelfare.org)

25. <https://nordicwelfare.org/en/publikationer/barnehage-en-arena-for-barn-og-foreldres-integrering-i-norden-bornehave-paivakoti-leikskoli-barnehage-forskola/>

26. Shared Book Reading in Preschool Supports Bilingual Children's Second Language Learning: A Cluster-Randomized Trial Rydland et al. 2020. <https://pubmed.ncbi.nlm.nih.gov/31943173/>

27. Shared Book Reading in Preschool Supports Bilingual Children's Second Language Learning: A Cluster-Randomized Trial. Rydland et al. 2020 <https://pubmed.ncbi.nlm.nih.gov/31943173/>

28. <https://www.uv.uio.no/iped/english/research/projects/rydland-lekhal-oslo-early-education-study/index.html>

intervention aimed at assisting multi-ethnic ECEC centres in utilising their potential to support children's language learning.

6.3.2 Examples of studies of language development and ECEC's role in Denmark

One Danish study looked at the connections between early language capabilities and learning to read in primary school^[29]. The study was based on language assessments of children aged between 16 and 30 months and concluded that the extent of their vocabulary at that age explains between 13% and 25% of the reading skills differences ten years later in 6th grade. The majority of the children who had a smaller vocabulary in earlier years also scored below average in 6th-grade reading. Another study examined children's language outcomes, not only in Danish but also in English, mathematics and physics/chemistry in the 9th-grade final exams, based on the children's vocabulary when they were between 16 and 30 months old^[30]. Children with an extensive early vocabulary generally performed better in all four subjects, even taking into account a number of social differences, such as parental education and employment and differences in the home learning environment.

A third Danish study represented a large-scale randomised control trial (87 childcare centres and 1,116 infants) designed to improve the quality of instruction in early childhood education (ECE) programmes for infants.^[31] The study showed that a low-cost 20-week intervention providing teachers with the time, perspective and supportive tools to improve their interactions with children resulted in medium to large effects on targeted language and maths skills.

6.4 ECEC and supporting children's development before school age and in the long term

A number of research studies in the Nordic countries have been conducted into universal ECEC services and their significance for children's learning and educational outcomes both in the short-term and long-term perspective.

A review (*Universal Preschool programmes and long-term child outcomes: a systematic review*)^[32] used natural experiments for children aged zero to six years in universal preschool programmes to assess the outcomes from third grade to adulthood. Comparing universal preschool and taking into consideration differences in parental, family and private modes of care, mixed effects were revealed on test scores relating to health, wellbeing and behaviour. The results indicate that

29. [Bleses et al. \(2016\): Early productive vocabulary predicts academic achievement 10 years later](#)
30. [Dale et al. \(2022\): Prediction from early childhood vocabulary to academic achievement at the end of compulsory schooling in Denmark](#)
31. [Bleses et al. \(2020\): Low-cost teacher-implemented intervention improves toddlers' language and math skills](#)
32. [Universal Preschool programs and long-term child outcomes: a systematic review](#)

universal preschool programmes positively affect areas related to adequate primary and secondary school progression, years of schooling, highest degree completed, employment and earnings.

A study conducted in Finland asked how Finnish six-year-olds who stay at home before they start school compare in educational outcomes with children who attend public ECEC (*Long-term educational outcomes of childcare arrangements in Finland* [33]). The researchers took as outcome variables grade point averages after compulsory schooling at age 15 to 16 and dichotomous variables measuring completion of further education by age 25. The study utilised data from the birth cohort 1987 (N = 4,928). The results show that staying at home before starting school is associated with poorer school performance but not with later completion of further education.

Even though the research results, for the most part, speak to the general benefits of qualitative ECEC, there is also some evidence that school performance is not necessarily dependent on participation in ECEC, such as a study of Finnish children 's PISA 2015 results and whether these children had participated in ECEC or in a preschool class before school start.[34] Similarly, a comparison of five Nordic countries studied the link between ECEC starting age and literacy scores at age 15 and also examined the heterogenous effects according to social background.[35] The article found evidence for the overall benefits of ECEC in the Nordic countries surveyed. However, many of these benefits were largely explained by family background and ECEC enrolment.

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33. Hiilamo, Heikki, Marko Merikukka, and Anita Haataja. "Long-Term Educational Outcomes of Childcare Arrangements in Finland." SAGE Open 8, no. 2 (April 1, 2018): <https://doi.org/10.1177/2158244018774823>
 34. Saarinen, Aino, Jari Lipsanen, Minna Huotilainen, Mirka Hintsanen, and Liisa Keltikangas-Järvinen. "The Association of Early Childhood Education and Care with Cognitive Learning Outcomes at 15 Years of Age in Finland." Psychology 10, no. 4 (March 5, 2019): 500–520. <https://www.scirp.org/journal/paperinformation.aspx?paperid=91123>
 35. Laaninen, Markus, Nevena Kulic, and Jani Erola. "How Attendance in Early Childhood Education and Care Is Associated with Literacy Scores at the Age of 15? Comparison in Five Nordic Countries." SocArXiv, November 18, 2022. <https://doi.org/10.31235/osf.io/2nr9w>



7. SHORTAGE OF ECEC TEACHERS

The Nordic Teachers' Council has recently compiled information on the current teacher shortage, including the situation among preschool teachers.^[36] According to the publication, there is a notable shortage of qualified preschool teachers.

For instance in Sweden, there is an estimated risk of qualified preschool teacher shortages in two-thirds of the regions by 2035. In Finland, where there is otherwise a high level of trained professionals in the education sector, 16% of ECEC teachers are unqualified. Demand is highest in densely populated areas, such as Helsinki, where the shortage is up to 40% of the required pedagogical staff. In Iceland, the percentage of non-qualified ECEC teachers is as high as 72%.^[37]

In Norway, the overall situation with trained staff has been better in comparison with other countries, but there are ECEC teacher shortages, and the recent figures from Norway show that there has been a considerable decline in the number of applicants for ECEC teacher training in 2022 and 2023.

In Denmark, the rate of unsuccessful recruitments of pedagogues rose from 16% to 29% from 2019 to 2022. In the same period, the rate of unsuccessful recruitments also rose for pedagogical work assistants, from 7% in 2019 to 20% in 2022. It must be noted that pedagogues and pedagogical work assistants do not only work in the ECEC setting, therefore the rate of unsuccessful recruitments can only be used as an indicator of lack of staff in ECEC.^[38]

The Nordic Teacher's Council report also addresses challenges in the Nordic Region when it comes to the level of salaries for preschool teachers and pedagogues, which lag behind salaries for other tertiary-educated employees in the public sector.^[39]

36. <https://nls.info/nyheter/507-nls-rapport-om-tillgang-till-behoeriga-laerare-och-foerskollaeare>

37. <https://nls.info/nyheter/507-nls-rapport-om-tillgang-till-behoeriga-laerare-och-foerskollaeare>

38. Danish Agency for Labour Market and Recruitment (STAR) quarterly recruitment survey report. <https://www.jobindsats.dk/databank/arbejdsmarked/ledigheds-og-jobindikatorer/jobindikatorer/succesfulde-og-forgaevtes-rekrutteringer/>

39. <https://nls.info/nyheter/507-nls-rapport-om-tillgang-till-behoeriga-laerare-och-foerskollaeare>

Another issue is the remarkable gender gap within ECEC staff (women make up around 90% to 99% in Nordic ECEC centres).



8. DATA ON ECEC IN THE NORDIC COUNTRIES

8.1 Participation in ECEC and the relationship between leave and ECEC entitlements

[Public social expenditure by age group \(OECD statistics\)](#)

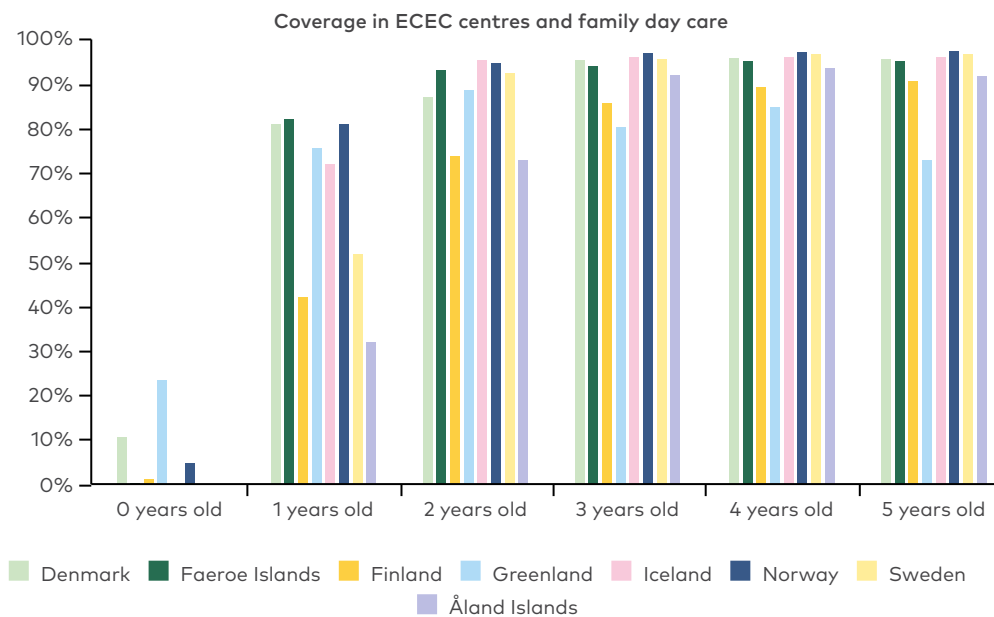


Figure 3. Attendance rates for zero, one, two, three, four and five-year-old children in formal ECEC settings (information from the national statistic offices)

* No data for 0 years old in Iceland and Sweden

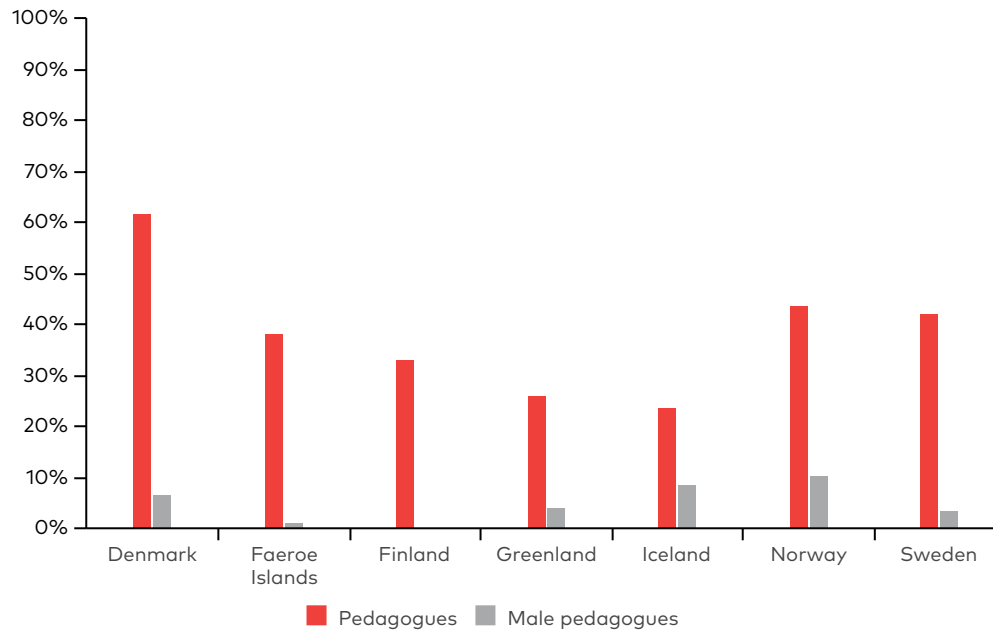


Figure 4. Ratio of trained pedagogical personnel in ECEC centres

* No statistics for male pedagogues available for Finland

** No statistics available for Åland Islands

8.2 Length of family leave

Table 1. Length of family leave.

Source: [Blum, S., Dobrotic, G., Koslowski, A., and Moss, P. \(2023\): International Review of Leave Policies and Related Research 2023](#)

*figure of well-paid leave for Finland's part: Ministry of Education and Culture

	Child's age (months) at:	
	end of leave (a)	end of well-paid leave (b)
Denmark	11.2	11.2
Finland	36	13.8*
Iceland	20	12
Norway	37	13
Sweden	18	13

8.3 Right to ECEC

DK: Subjective right. Municipalities must offer parents a childcare guarantee in ECEC facilities. This is for all children in Danish ECEC from age 26 weeks until school start.

NO: Subjective right. The entitlement to ECEC varies according to month of birth. Children born between January and August are entitled to a place from August the year they turn one (i.e. they may be between 13–19 months old in August). Children born in September–November are entitled to a place from the month they turn one. Children born in December are entitled to a place from August the year they turn two.

FI: Subjective right. The entitlement to ECEC starts from the beginning of the calendar month in which the child turns nine months old.

IS: No regulation

SE: Subjective right. Entitlement to ECEC begins when a child turns one.

FO: Subjective right. Entitlement to ECEC begins when a child turns five months old.

GRL: Municipality determines the start of ECEC entitlement. ECEC entitlement can start already at the age of 6 months given there is a place at ECEC institution. Starting age of entitlement is decided by municipalities.

ÅL: Subjective right. The entitlement to ECEC starts from the beginning of the calendar month in which the child turns nine months old.

8.4 Unit costs and maximum fees

It is not possible to make a direct comparison between the unit costs of ECEC institutions in the Nordic countries as the definition of unit costs varies. In some cases, it includes the costs for premises (such as in Sweden), in some cases not. The unit cost may also be calculated by different age spans.

Taking into consideration these restrictions, we note the following: Unit costs for ECEC institutions (per child and year) in the Nordic countries vary somewhere between approx. EUR 12,955 on average in Finland (2022) and up to EUR 19,500 on average in Iceland (2021). Unit costs for ECEC institutions for younger children of zero to two years are the highest, e.g. the unit cost for "vuggestue" (nursery/kindergarten) of EUR 22,400 in Denmark (2023).

The Nordic countries, the Faroe Islands, Greenland and Åland have all worked towards making ECEC affordable by subsidising the cost of ECEC services for

families. There are national pricing models for ECEC services in Finland, Norway and Sweden, as well as municipal autonomy to decide prices in some countries (Iceland, Denmark, Faroe Islands and Greenland).

In Denmark, the monthly ECEC fee is not allowed to exceed 25% of the average unit cost in the municipality in question.

In Sweden, Norway, Finland and the Åland islands, there is a maximum fee for ECEC, and the system enables greater fee reductions for younger siblings (and ECEC can be free – such as in Norway for a third child in the same family, and in Sweden for the fourth child in the same family).

In Finland, families with low income are exempt from fees. Both Sweden and Norway have also introduced a number of free ECEC hours. In Sweden, 525 hours are offered free of charge per year in a public ECEC institution starting from the year that a child turns three. In Norway families earning less than EUR 54,000 (NOK 615,590) p.a. are entitled to 20 hours per week of free ECEC for children ages two, three, four and five. In addition to the free hours, there is national scheme that ensures that no families pay more than 6% of their income for a full-time place in ECEC.

There are notable differences in the maximum fees per child – starting from approximately EUR 140 in Sweden, EUR 240 in Åland, EUR 295 in Finland, EUR 264 in Norway^[40] and EUR 480 in Torshavn in the Faroe Islands and EUR 339 in Kommuneqarfik Sermersooq in Greenland.

40. In Norway, maximum fees will be reduced to EUR 175 (NOK 2000) per month from August 2024. The fee will be further reduced to EUR 131 (NOK 1,500) in the least central municipalities. ECEC is already free in the northernmost municipalities.

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