

Skills Policies – Building Capacities for Innovative and Resilient Nordic Regions

Preliminary report: Policy and literature review

Discussion paper prepared for *the Nordic thematic group for innovative and resilient regions 2017–2020*

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Foreword

On behalf of the *Nordic thematic group for innovative and resilient regions 2017-2020* Nordregio is conducting an in-depth study: *Skills Policies – Building Capacities for Innovative and Resilient Nordic Regions*.

The goal for the Nordic thematic group is to contribute to the development of policies and new solutions to the challenges that the Nordic countries face in relation to the creation of innovative and resilient regions. Within this context skills development is regarded as crucial.

The overall aim of the in-depth study is to increase knowledge of how Nordic regions work with skills in order to provide relevant knowledge to the regional labour markets and best practise, new ideas and joint learning concerning how actors in the Nordic regions work with skills.

The main research question in the project is: How do regions in the Nordic countries work with skills? Other questions that will be highlighted are:

- Who are the main actors at the regional level working with skills? And to what degree are skills policies coordinated at the regional level?
- What are the enabling and hampering factors to strengthen skills development in the Nordic regions? Nordic learning and best practise will be examined.

This discussion paper aims at giving a background and overview to the up-coming in-depth study and has been made publicly available with the aim to encourage engagement with Nordregio's research while it is still in progress. As such, the findings presented here are preliminary and should be treated as such by the reader. Nordregio thanks the feedback provided by members of the Thematic Group and welcomes constructive feedback on the paper and hopes that this open process will ultimately contribute to a better result. The final report on the project will be available in mid-2020 at www.nordregio.org.

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More information on the Nordic thematic group for innovative and resilient regions 2017-2020: <https://www.nordregio.org/about/nordic-co-operation-programmes/nordic-thematic-groups-2017-2020/innovative-and-resilient-regions/>

1. Introduction

The importance of skills and jobs for national and regional development is illustrated by its prevalence in the EU 2020 Agenda¹, in the UN Sustainable Development Goals², and in OECD³ reviews and policy lessons on skills, unemployment, education and job creation.

In the Nordic countries, skills and jobs are in general high on the political agenda, and high labour market participation also represent one of the corner stones of the Nordic welfare model. The average unemployment rates in the Nordic region amount to 6.7% compared to 8.4% in the EU (Grunfelder, Rispling, & Norlén, 2018). The long-term unemployment figures are lower in the Nordics than in the EU. It is important to note that these figures differ across and within the Nordic countries.

The Nordic countries and regions face important challenges with regards to skills matching on the labour market. The regions are challenged by major demographic trends such as population growth in most regions and population decline in others, an ageing population, higher levels of immigration in recent years and urbanisation. These are trends that will also influence the labour market. Automatization and digitalisation represent important challenges in all the Nordic regions and will require new skills with the restructuring of the economy. Despite many similarities across the Nordics, there are also important differences among the regions with regards to how they are influenced by the demographic trends, their economic geography and the urban-rural landscape, and especially the peripheral areas (the Northern parts and the Arctic) face important challenges. There are also differences among the regions with regard to the regions' ability to adapt to change.

This discussion paper is designed to provide a background and a foundation for the upcoming in-depth study *Skills Policies – Building Capacities for Innovative and Resilient Nordic Regions*. This study will include regional case studies in all Nordic countries to be conducted in 2019. The aim of this discussion paper is to:

- Introduce the topic of skills and discuss different definitions and approaches to skills
- Provide an overview of national skills policies and priorities, as well as the main actors in the Nordic countries, and to provide examples of regional skills projects
- Introduce an analytical framework for the study of skills policies

Increase knowledge and open up a discussion on skills and of how Nordic regions work with skills in order to promote joint learning. The discussion paper consists of the preliminary findings from a knowledge and literature review, alongside an analytical discussion regarding the theoretical frameworks within which the upcoming in-depth study is conceived.

In section two of the discussion paper we explore different understandings of skills and skills development in research literature and in policy making. The third section of the paper consists of an overview of priorities, strategies and key actors responsible for skills development in the Nordic countries. In the fourth section, an analytical framework for the study of skills is presented, and the last section of the paper sum up the conclusions and discusses the next steps of the in-depth study.

¹ [Europe 2020 Strategy](#)

² <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

³ <http://www.oecd.org/skills/>

2. Understanding skills

Skills are complex instruments whose definition changes depending on the theoretical perspective taken to approach the issue (Bryson, 2017) and the context within which skills are defined (Toner, 2011). Since the concept of skills has been researched in isolation in several different fields (such as economics, industrial relations, or political science), there is no standard conceptual framework from which to understand skills in a comprehensive way (Smith & Teicher, 2016). Therefore, it is important to acknowledge from which perspective skills are being conceptualised because 'each disciplinary perspective reveals and explores only part of the full picture of skill' (Bryson, 2017). For example, Bryson (2017) describes how the issue of unpaid graduate internships is subjected to different theoretical starting points in economics, political sciences, sociology and industrial relations, capturing different angles and perspectives in the skills discourse. Understanding these various perspectives' contribution to the skills policy debate, and systematising these contributions within the regional policy framework, are the first steps towards creating a sound theoretical and conceptual framework for our report on skills policies in the Nordic region. The aim of this section is to give an overview of skills and different theoretical positions in research literature and in international policy discussions with regard to skills.

Skills cut across different sectors of society. One of the challenges with regards to understanding skills, is that skills are both very complex and instrumental. Firstly, skills are *complex* because the actors in charge of developing, financing, recognizing and valuing skills are in different positions in relation to these processes. Broadly speaking, it could be argued that skills are developed by educational or training systems, recognized by state authorities, and valued by the labour market. Within these three arenas several actors including schools, companies, local and regional authorities or third sector actors, cooperate and compete to achieve their goals, and their actions often overlap. The complexity of skills is an illustration of how actors are embedded in different governance networks where 'numerous interests, identities and rationalities fuse and collide' (Sørensen & Torfing, 2007, p. 25). Other examples of this complexity and that the boundaries are not clear-cut, is non-formal learning in the workplace, an aspect of skills development that takes place within the arena of the labour market. Skills acquired in the workplace can be used to validate competence in an educational setting. Moreover, 'the challenge of coordinating a wide array of practices and arrangements shaping the development and deployment of labour' (Buchanan, Anderson, & Power, 2017) lies at the heart of working with skills policy problems.

Secondly, skills are *instrumental* because they serve both the individual and the collective agents in economic and social life (Bryson, 2017). At the individual level, developing skills is a way to secure or enhance one's position within the labour market and to grow human capabilities and well-being. At the collective level, while employers can benefit from a skilled workforce contributing to enterprises' competitiveness, efficiency and effectiveness, society can benefit from an educated population contributing to social development and economic growth. For example, a recent Evidence Review conducted by Abreu for the *Productivity Insight Network* (2018) in the United Kingdom suggests that the uneven distribution of training between younger and older generations in the workplace might have an impact on productivity levels. This may contribute towards an increasingly uneven regional balance, especially considering regions displaying a significant demographic imbalance and vulnerability (Abreu, 2018). Furthermore skills returns to society do not only depend on their acquisition and utilization, but also on the economic and social context that allows their formation (Grugulis, Holmes, & Mayhew, 2017; Abreu, 2018). In that regard, Lauder, Brown and Ashton (2008) argue that skill formation is shaped by the societal capacity to build appropriate political, cultural, social and economic norms and conditions (Lauder, Brown, & Ashton, 2008).

Because of both the complexity and the role of skills as instruments for societal change, policy-making has turned attentive to the allocation and distribution of skills as well as to state involvement, system changes and social value of skills (Bryson, 2017).

2.1 Skills from a policy perspective

Skills is also a topic that has gained interest from a policy perspective and international organisations. For example, the European Commission launched in 2016 the New Skills Agenda for Europe with the aim of 'work towards a common vision about the strategic importance of skills for sustaining jobs, growth and competitiveness' (European Commission, 2016) and is centred around 'improving the quality and relevance of skills formation, making skills and qualifications more visible and comparable and, improving skills intelligence and information for better career choices' (European Commission, 2016). The OECD, on the other hand, works with policy-makers to improve skills governance by providing evidence-based research through publications such as *OECD Skills Strategy 2019* or *Getting Skills Right*. Furthermore, the European Centre for the Development of Vocational Training (CEDEFOP), works to strengthen European cooperation through the provision of vocational education and training policy which is a cornerstone issue for the development and governance of skills.

The European Commission's definition places skills firmly within the global economy and social cohesion:

Skills are a pathway to employability and prosperity. With the right skills, people are equipped for good-quality jobs and can fulfil their potential as confident, active citizens. In a fast- changing global economy, skills will to a great extent determine competitiveness and the capacity to drive innovation. They are a pull factor for investment and a catalyst in the virtuous circle of job creation and growth. They are key to social cohesion. (European Commission, 2016, p. 1)

Two other definitions of skills are additionally worth mentioning for the purpose of this discussion paper. First, CEDEFOP defines skill as 'the ability to apply knowledge, use know-how to complete tasks and solve problems and carry out the tasks that comprise a particular job' (Skills Panorama, 2019). Second, the OECD has defined skills as 'individual characteristics that drive at least one dimension of individual well-being and socio-economic progress (*productivity*), that can be measured meaningfully (*measurability*), and that are malleable through environmental changes and investments (*malleability*)' (OECD, 2015b, p. 34). However, this definition does not address the issue of *how* to measure skills, or the individual characteristics of skills. This is because there is a myriad of individual objective and subjective characteristics (Payne, 2017) of different nature that contribute to individual socio-economic progress.

2.2 Skills assessment and anticipation

The imbalance between the demand and supply of skills represent societal challenges. Skills mismatch contributes to a loss in efficiency and effectiveness, not only for individuals but also for firms, the public sector and the economy as a whole (ILO & OECD, 2018). For that reason, most OECD countries have developed systems for skills assessment and anticipation (SAA) to some extent (OECD, 2016). These exercises of assessing and anticipating skills aim to provide knowledge about current and future skills needs of the labour market, and the availability of current skills (OECD, 2016). The outcomes of these exercises can help policy makers, state authorities, labour market actors, or educational providers to re-adapt the provision of training to meet the needs of the labour market (ILO & OECD, 2018).

There are several approaches and methods to conduct SAA exercises. Some of these are employer surveys, sector studies, workers and graduates surveys, labour market data analysis, and quantitative forecasting models (OECD, 2016). However, the main differences between skills assessment and skills anticipation are the time-span they cover and the aims they pursue. While skills assessment 'evaluate

the current supply and demand for skills (...), skills anticipation look into the future and can be distinguished according to whether they are forecasts or foresight exercises' (OECD, 2016, p. 39).

When it comes to skills forecast and skill foresight exercises, it is necessary to note their different methods. Forecast exercises shed light about the trends in the labour market and the skills mismatch in an economy, but they do not consider the action of policy makers and stakeholders. Neither does it consider the governance of skills and the potential outcomes of public and stakeholder action. Foresight exercises are designed to 'provide a framework for stakeholders to jointly think about future scenarios and actively shape policies to reach these scenarios' (OECD, 2016, p. 39). Although foresight exercises allow for a more dynamic approach to understanding potential futures, its main critique lie in the cognitive barriers that may determine the development of scenarios, and that the foresighted scenarios often resemble the pre-existing imagined futures of those engaged in the exercise (Bradfield, 2008).

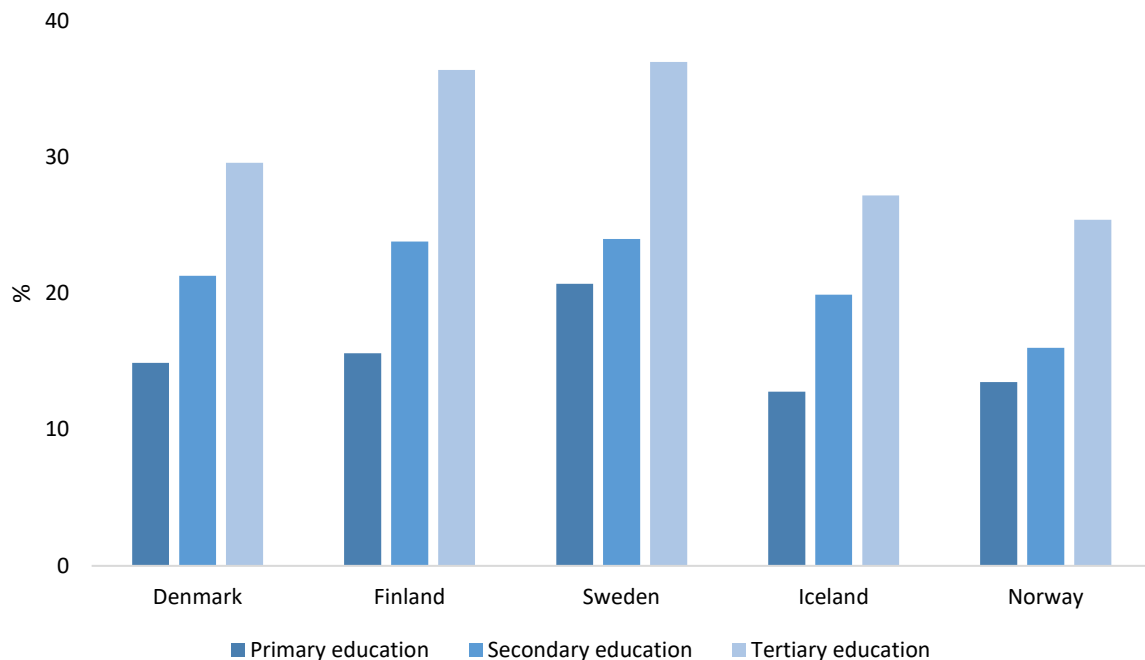
2.3 Skills development – how to improve skills supply?

Skills shortages have been often attributed to the failure of education systems in providing the skills required for the labour market (Cappelli, 2015; Cunningham & Villaseñor, 2016). However, the shift from industrial to knowledge economies, paired with demographic transitions causing longer working lives, has broadened the perspectives on the role of education in society. For example, lifelong learning strategies, non-formal training systems or workplace learning initiatives have been envisaged to update, upgrade and better adjust the skills needs of the labour market in developed societies. These efforts take place in public and private institutions and adopt different approaches, are targeted to different groups of the population, and are adapted to the needs of firms and individuals. For that reason, education is no longer framed within the walls of schools and universities but rather as something that happens on multiple arenas, from working places to the Internet. Thus, the role of education systems in providing a competent workforce has been diluted and is shared with other platforms. Therefore, given the changing nature of work and employers valuing socio-emotional skills such as teamworking, creativity, or problem-solving over cognitive skills (Cunningham & Villaseñor, 2016), the role of enterprises, higher education institutions and other actors in providing, assessing and financing these skills needs to be addressed.

Furthermore, one of the tasks of formal education systems is to address social inequalities by providing equal opportunities to all members of society. However, the lack of resources may pose barriers to the effectiveness of education systems (e.g. measured by graduation and repetition rates⁴ amongst pupils/students) and, therefore, increase social inequalities. Thus, educational attainment should be considered as a process in which social factors play an important role. Figure 1 below, shows the participation in formal and informal adult learning of the active population aged 25-64 years old in the five Nordic countries.

⁴ Number of repeaters in a given grade in a given school year, expressed as a percentage of enrolment in that grade the previous school year (UNESCO, 2019).

Figure 1. Participation in education and training by educational attainment, 2018



Own elaboration using Eurostat data. Source: Eurostat [trng_lfse_03] (2019)

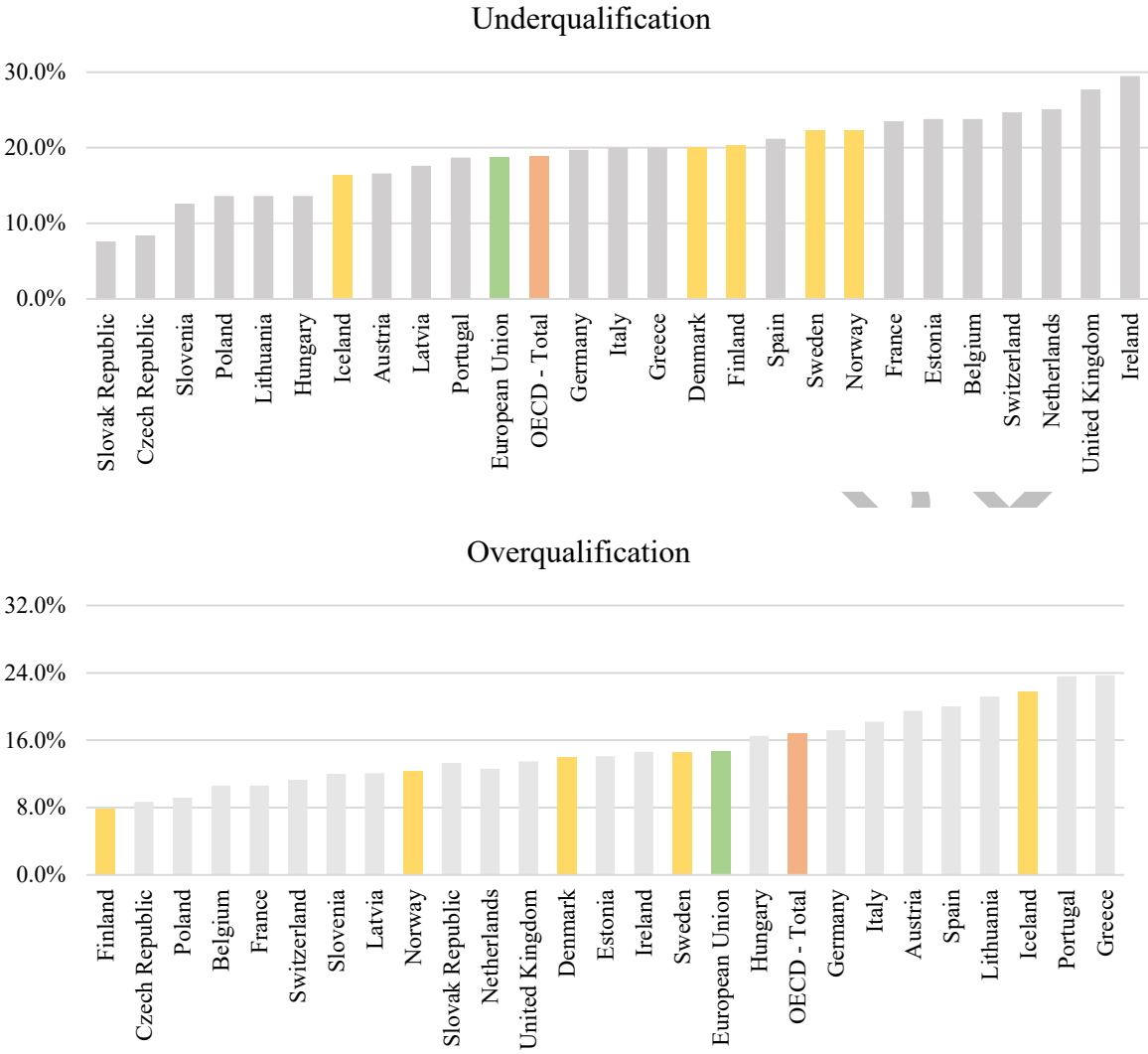
The pattern is repeated in the five countries and shows how the highly educated members of society are more prone to enrol in adult education than the low educated. One explanation could be that those who have 'succeeded' in the educational system are aware of the advantages education can bring to them and are, thus, eager to engage in other types of learning. One consequence of this situation is that low-educated individuals do not participate in learning activities that could help develop their skills.

2.4 Skills mismatch – how to bring together skills demand and skills supply?

CEDEFOP defines skill mismatch as the situation taking place when 'employers [are] unable to fill vacancies despite high unemployment' (Cedefop, 2015, p. 14). In a more detailed sense, the concept of skills mismatch also comprises of skills gaps and qualification mismatch. While the first refers to the lack of required skills in the working population, the second focuses on employees being over- or underqualified for the job they are performing. These nuances paint different situations that require different approaches to overcoming skills mismatch. Nonetheless, both of these two aspects of skills mismatch illustrate the same issue; the relationship between the skills required by a job and the skills a worker can provide. While the latter aspect of this relation could be attributed to the role of education systems in producing skilled workers, the former aspect could be attributed to the labour market and the creation of added value in the labour market. In other words, under- and overqualification are indicators of the capability of both the education systems and the labour market to correspond each other's need. In this vein, the two sides of the relationship need to be considered.

Figure 2, below, shows the percentage of the workforce that is under- or overqualified by the job they are performing; if their education level is below what is required by their jobs, they are considered underqualified, and vice versa.

Figure 2. Skills mismatch of the workforce aged 15-64 years old, 2016. Source: OECD (2019).



3. Illustration of priorities and strategies in the Nordic countries

The aim of this section is to provide an illustration of the strategies and actions taken in the Nordic countries regarding skills. Different approaches, in terms of focus areas, actors involved, and examples, have been identified across the Nordic countries. This illustration is an important aspect of skills policies given that national priorities, strategies and actors provide a framework for working with skills at the regional level in the Nordic countries. How the regions work with skills and how this is linked to national and international priorities, strategies and actors will be further analysed in the upcoming case studies.

3.1 Denmark

Priority areas

- Strengthening of basic skills (Regeringen, 2017)
- Recognition of prior learning (Regeringen, 2017)

Key policies/strategies

- Strategy for Denmark's Digital Growth (2018)
- Forlæns ind i fremtiden (2017) [Forward to the future]
- Trepartsaftale om styrket og mere fleksibel voksen-, efter- og videreuddannelse (2018–2021) [Tripartite agreement on a stronger and more flexible adult, continuing, and further education]

Key actors

- Several ministries take part on the design of skills policies, for example, the Ministry of Education, the Ministry of Higher Education and Science, or the Ministry of Employment.
- The Danish Disruption Council, dependant of the Ministry of Employment, works towards ensuring that both Danish companies and individuals are prepared for the future labour market.
- The Ministry of Industry, Business and Financial Affairs, through the Danish Growth Council, promotes coordination between the national growth strategy and the regional development strategies in which skills, knowledge and competences upgrading are framed.

In October 2017, the Danish government, trade unions and employer associations established a tripartite agreement on the reform of adult, continuing and further education. One of the priorities on the agreement was the strengthening of basic skills and six measures were established to achieve its goals (Regeringen, 2017):

- To include English and digital skills courses in the provision of preparatory adult education (FVU), especially to employees with lack of basic skills.
- To implement joint screenings of skills to make it easier for companies to map employees' skills and their upgrading.
- To remove participation fees in adult vocational training (AMU) for students who enrol in Danish language and maths courses within the programme.
- To allocate 25 DKK million to companies engaging in adult continuing education (VEU) focusing on general skills (literacy, arithmetic, problem-solving, and IT).
- To launch an 'outreach education consultancy service' aimed at providing career planning and assistance to jobseekers.
- To follow-up the development of the skills upgrading effort enacted by this agreement. Therefore, a study will be carried out, in 2018 and 2021, to assess the progression of the situation of adults' basic skills.

A second priority is related to the recognition of prior learning and the following initiatives are suggested:

- To develop digital tools to assess the competences acquired on the labour market and include them into formal qualifications.
- To set up a working group, under the direction of the Ministry for Higher Education and Research, comprising educational institutions, social partners and the Ministry of Education with the aim of mapping potentials and barriers to the use of recognition of prior learning. In addition, the working group will examine the needs of changes on the adult continuing education system and propose reforms to it.

In 2018, the Danish Ministry of Industry, Business and Financial Affairs presented the Danish strategy for digital growth with the goal of turning Denmark into a digital frontrunner (Ministry of Industry Business and Financial Affairs, 2018). In this effort, skills play an important role given their importance to create innovation, new business models and growth (Ministry of Industry Business and Financial Affairs, 2018) and, therefore, specific measures are suggested in this direction.

Regional examples from Denmark

FremKom – North Denmark Region

FremKom was initiated in 2007 by the North Denmark Growth Forum and the North Denmark Regional Council. The project focus is three-fold: in first place, the project aims at providing knowledge about the region's future skills needs; in second place, the aim is to open up the debate based upon the results of the analysis; and, finally, to bring concrete initiatives and projects to reality in the region.

One of the key success factors of the project is the cooperation between education providers, employment services and business authorities.

Learn more: <http://fremkom.dk/om-fremkom-3/>

Region Hovedstaden

The region identifies some challenges such as the need of more qualified workers, the need for skills critical for growth, the lack of international talent as well as the lack of SMEs internationalization, and the lack of collaboration between private and public companies. In order to address these issues, the regional council will promote investments aimed at:

- Strengthening continuing training programmes for adults through on-the-job training and recognition of qualifications
- Increasing skills development in SMEs
- Working for a closer cooperation between Eastern Denmark and Southern Sweden in relation to educational programmes and internships
- Strengthening the region's talent development efforts.
- Establishing a regional knowledge centre for public-private cooperation to ensure knowledge sharing

Learn more:

<https://www.regionh.dk/english/businesses/Business%20Stronghold%20of%20the%20Capital%20Region%20of%20Denmark/Regional%20Growth%20and%20Development%20Strategy/Pages/Greater-Copenhagen.aspx>

3.2 Finland

Priority areas

- Closer cooperation between higher education institutions and business life to bring innovations to the market (Finnish Government, 2018)
- Improve efficiency of vocational education and promote on-the-job learning paths (Finnish Government, 2018)
- Provide flexible learning paths to reconcile work and studies (Finnish Government, 2018).

Key policies/strategies

- Government Action Plan 2018-2019
- Working Life 2020

Key actors

- Ministry of Education, Ministry of Economic Affairs and Employment
- Centres for Economic Development, Transport and the Environment (ELY)
- Suomen Kuntaliitto (Association of Finnish Local and Regional Authorities)

In the report 'Solutions to the Transformation of Work' the Finnish government proposes up to six actions on the reform of provision of skills in order to better "respond to the rapidly evolving needs of different individuals, businesses and working life" (2018: 31).

The first of these measures relies on the use of artificial intelligence (AI) in the identification and conversion of skills. In that regard, a joint development between the Ministry of Education and Culture and the Ministry of Economic Affairs and Employment of a digital service oriented to these ends has started. The service focuses on career planning, recognition of skills and matching the skills of individuals with the current needs of the labour market.

As a response to the rapid changing nature of work the Finnish government proposes to put more emphasis on the development of the digital aspects of skills such as communications, social and cognitive skills.

Given the successful results the adult education allowance has shown, the Finnish government suggests expanding it to cover specific sectors of the working population, such as industrial workers, where the usage has been low. As a measure to boost the continuous adult learning, therefore, an annual personal education budget combined with career counselling and the provision of flexible education are suggested.

Furthermore, an increase in the supply of higher education for the employed population, including those already in possession of a degree, is also suggested. To acknowledge the situation of these groups' flexibility is a central issue in this proposal, and attendance requirements should be lower than in regular studies.

Related to the previous proposal and with the aim of allowing graduates to upgrade their skills, the Finnish government suggests a longer relationship between higher education institutions and their graduates focusing on continuous adult learning scheme in which a training voucher would be useful.

Finally, it is suggested that unemployment allowances should be directed to the upgrading and developing of own skills so that unemployed people could jump to new occupations instead of just jobs within their sector of expertise.

Regional examples from Finland

Pirkanmaa region

In the development plan for 2018-2020, Pirkanmaa region gives importance to skills development to make the region an example of integration. Through cooperation between educational institutions, working life and employment services new and flexible study opportunities with the goal of a faster adaptation to changes in the labour market have been designed.

Learn more: https://www.pirkanmaa.fi/wp-content/uploads/Maakuntaohjelma_ENG.pdf

North Karelia region

The Training Factory (Koulutustehdas) is a project in development funded by the ESF in North Karelia that aims to match the needs of companies with the needs of the workforce. To do so, companies' need for skills are assessed and solved through the provision of on-the-job training to applicants. BioKymppi Oy is one example BioKymppi which is a company that produces energy and recycled fertilizers, was in a shortage of skilled workers when they turned to the Training Factory and were offered instruction training to experienced workers within the company.

Learn more (in Finnish): <https://www.keti.fi/en/koulutustehdas> and https://www.rakennerahastot.fi/web/ita-suomen-suuralue/etusivu/-/asset_publisher/2OjtclgOTFp1/content/koulutustehdas-tehokas-tapa-rekrytoida-ja-kouluttautua/maximized

3.3 Iceland

Priority areas

- Promotion of an extensive consultation forum for industry, schools and authorities on future education policy (Samtök iðnaðarins, 2018)
- Targeted policy-making and long-term vision with regard to skills (Samtök iðnaðarins, 2018)

Key policies/strategies

- Menntastefna Samtaka iðnaðarins [Education policy from the Federation of Icelandic Industries]

Key actors

- Directorate of Education and Directorate of Labour
- Fræðslumiðstöð atvinnulífsins (The Education and Training Service Centre), Icelandic Confederation of Labour (ASÍ), The Confederation of Icelandic Employers (SA), The Federation of State and Municipal Employees (BSRB), the Ministry of Finance.
- Samband (Icelandic Association of Local Authorities)

In 2018 the Federation of Icelandic Industries (Samtök iðnaðarins) published its policy recommendations of the field of education and skills. Five broad objectives were set and several actions suggested for its achievement (Samtök iðnaðarins, 2018).

The first of these objectives is to get more people with vocational training onto the labour market, and the measures in this direction suggest to:

- Address systemic problems of vocational education such as graduation and post-study opportunities.
- Raise awareness and attractiveness of vocational education.
- Combat gender imbalances in vocational education.

The second objective is to promote innovation-driven economy for the future, and to reach this goal, the following actions are proposed:

- Raise the percentage of university graduates in STEM subjects to 25% by 2025.
- Encourage the use of innovative technology at all levels of education.
- Introduce programming, science, and technology subjects in primary education.

The third objective is to improve educational resources for those working in the labour market and they recommend to:

- Increase the offer of validation of prior learning (VPL).
- Develop targeted VPL and lay the foundations for distance academic study.
- To enable more employers to offer re-training and bring more flexibility to the system.
- Introduce VPL at the university level.

The fourth objective is to increase support for teachers' working environment and training together with innovation of teaching methods. Therefore,

- Shorten the length of teacher training studies to three years plus one year of remunerated on-the-job training.
- Increase the number of teachers in vocational education who have professional experience on the jobs they are teaching for.

Finally, the fifth objective is to improve dialogue between businesses and schools to reach targeted decision-making.

- Clampdown dropout in secondary education by addressing the issue at primary level and presenting work opportunities.
- Ensure work conducted on skills forecasts and needs in the labour market follows a formal procedure for both the country and the regions.
- Introduce a skills framework for Icelandic education with a focus on skills criteria for jobs.

Regional examples from Iceland

SÍMEY (Símenntunarmiðstöð Eyjafjarðar – Eyjafjarðar Lifelong Learning Center

SÍMEY is a lifelong learning center located in Akureyri region (North-East Iceland) aimed at increasing the level of education in the region. It was established in 2000 by 10 municipalities, schools' representatives, trade unions, the Association of Employers, and the Akureyri Region Business Agency.

The center not only provides lifelong learning opportunities for adults, but it is also in constant cooperation with the labour market to identify the needs for lifelong learning through assessment tools. In addition, it offers educational and career counselling to individuals with low levels of formal education.

Learn more (in English): <https://www.simey.is/is/in-english> and (in Icelandic) <https://www.simey.is/is>

3.4 Norway

Priority areas

- Norwegian strategy for skills policy 2017-2021(Norwegian Government, 2017):
 - o Contribute to making informed choices, regarding skills, for the individual and for society
 - o Promote learning in the workplace and effective use of skills
 - o Enhance skills among adults with weak labour market attachment
- Digital Skills – The development of digital learning platforms and online courses for industry

Key policies/strategies

- Norwegian strategy for skills policy 2017-2021
- Kompetansebehovsutvalget – Skills forecast (2017-2020)
- Making County Municipalities a strategic actor concerning skills from 1.1.2020 (Regional reform)
- Upcoming White paper on skills policies 2020.

Key actors

- Ministry of Labour and Social Affairs, Ministry of Justice and Public Security, Ministry of Local Government and Modernisation, Ministry of Education and Research, Ministry of Trade, Industry and Fisheries
- Employer's Association Spekter, Norwegian Association of Local and Regional Authorities (KS), Confederation of Norwegian Enterprise (NHO), Enterprise Federation of Norway (Virke), Federation of Norwegian Professional Associations (Akademikerne), Norwegian Confederation of Trade Unions (LO), The Confederation of Unions for Professionals (Unio) and Confederation of Vocational Unions (YS)
- Norwegian Association for Adult Learning (VOFO)

The Norwegian Ministry of Education and Research presented in 2017 the official skills strategy which consisted of three main priorities: to make informed choices for the individual and for society; to promote both learning in the workplace and effective use of skills; and to enhance skills among adults with weak labour market attachment (Norwegian Government, 2017).

In first place, to succeed on the completion of the first of these priorities, the strategy suggests to:

- Establish a Future Skills Needs Committee with the mission to compile/forecast and analyse knowledge about the country's skills needs.
- Strengthen regional responsibilities and cooperation between different actors.
- Provide a coherent system for career guidance focusing on regional career centres as well as strengthening the expertise of guidance counsellors.
- Strengthen cooperation between education actors and social partners.

In second place, to achieve the goals of learning in the workplace and using skills effectively, it is suggested to:

- Strengthen and developing digital skills and implementing a new division of labour.
- Strengthen the knowledge on learning in the workplace with a special emphasis on the value of investing in skills.
- Develop career opportunities on vocational education.
- Work more systematically on the linking of businesses needs and education providers.
- Facilitate the documentation and to evaluation skills acquired at work.
- Improve systems of assessment and recognition of qualifications.

In third place,

- Provide flexible training and opportunities for adults to complete upper secondary education.
- Stimulate the use of the *Skills plus* schemes.
- Use workplaces more actively as a learning environment.
- Target and streamline training in Norwegian.
- Strengthen NAV's (Norwegian Labour and Welfare Administration) training for jobseekers, especially on courses in basic skills and Norwegian language. Develop a two-year vocational training scheme.
- Stimulate more people to find learning motivation.

Regional examples from Norway

Balansekunst – The Balancing Act

The objective of the project is to develop a model and method for describing competencies and skills that are developed at work, so that these may be understood in other parts of one's working life and in the formal educational system. The purpose is to create a better understanding of this competence, rather than contract and compare. When the model and method are employed on the labour market, an increased understanding for the next steps will help create a more appropriate and relevant evaluation, as well as a comparative basis, of the competences developed both in the labour market and in the education system.

The project was conducted in whole sale and retail trade, but the aim is to develop a model and method that could be used in the labour market on a general basis. The development of the model and method has happened in close collaboration with Kiwi, Many (both supermarket chains) and IKEA.

Learn more (in Norwegian): <https://www.virke.no/globalassets/var-politikk/andre-dokumenter/balansekunst---lang.pdf>

KOBRA – Kompetens Baserad Regional Analys

Arendal and Larvik municipalities in Aust-Agder and Vestfold counties respectively have teamed up with other 23 partners, spread over Midtjylland region in Denmark and Gotland and Halland regions in Sweden, to develop a cross-border tool to identify the skills needs of these regions. KOBRA carries out three main activities:

- To identify and disseminate knowledge about skills and training requirements between companies and education providers.
- To develop education concepts to increase accessibility, flexibility and cost efficiency in needs-based education.

Learn more (in Swedish): <https://eukobra.wordpress.com/om-kobra-2/> and (in Norwegian) <https://interreg.no/prosjektbank/kompetansebasert-regional-analyse-kobra/>

3.5 Sweden

Priority areas

- Stimulate enterprise and innovation (Government of Sweden, 2016)
- Meeting the business sector's need for skilled labour (Government of Sweden, 2016)
- Securing the welfare state and develop better social cohesion through the country (Government of Sweden, 2016)

Key policies/strategies

- Sweden's National Strategy for Sustainable Regional Growth and Attractiveness 2015-2020

Key actors

- At the national level, actors involved in employment policy comprise the Ministry of Labour, the Public Employment Service (Arbetsförmedlingen), the Swedish Social Insurance Agency (Försäkringskassan), the Social Security Council (Trygghetsrådet), and the Institute for Evaluation of Labour Market and Education Policy (IFAU). Actors within the vocation education sector include the Ministry of Education, universities, university colleges, vocational education colleges (Yrkeshögskolan) and, the Swedish Higher Education Authority (UKÄ). Finally, the economic development perspective is represented by the Ministry of Enterprise, the Swedish Agency for Economic and Regional Growth (Tillväxtverket), the Swedish Innovation Agency (Vinnova) and, the Swedish Agency for Growth Policy Analysis (Tillväxtanalys)

In May 2018 the Swedish government presented the national reform programme in which the country's two education targets were set to reduce early school leaving to 7% and to reach the target of the share of population aged 30-34 with tertiary education to 45-50%. In order to bring early school leaving levels to its target various measures are described (Government Offices of Sweden, 2018). For example,

- To bolster state funding for preschool classes and compulsory school.
- To improve access to high-quality educational programmes, to promote equality in education, and to reduce segregation in upper secondary schools.
- To strengthen the right to study mentorship in newly arrived pupils' native tongue.
- To reinforce the upper secondary school introductory programmes
- The OECD drafted in 2015 a series of recommendations for skills policy in the country (OECD, 2015a). Some of these recommendations are:
- To ensure that the adult education training system provides flexible opportunities for all individuals to guarantee employed individuals can upgrade their skills.
- To increase the engagement of employers with the employment and skills system.
- To improve the link between the supply and demand of skills.

Regional examples from Sweden

Västernorrland

Västernorrland region includes the supply of skills and competences as a focus area in its *Regional county development strategy 2011-2020*. The main target in this regard is to achieve an effective supply of labour and competence through a system of collaboration and matching. To do so, the following measures are suggested:

- To develop industry councils and a regional competence and skills platform for increased information, planning and collaboration within the skills and educational area
- To promote new vocational education jointly developed by employers, employee organisations and education coordinators
- To build a system for conducting skills analyses as a common basis for planning and decision-making to optimize matching.

Learn more: <https://www.lansstyrelsen.se/vasternorrland/tjanster/publikationer/futur-vasternorrland-regional-county-development-strategy-2011-2020.html>

Skåne

In the regional development strategy "The Open Skåne 2030", Skåne region has set a target of becoming a sustainable growth engine with a good international reputation. In that regard, increasing the region's innovation ability, improving matching in the labour market, building a strong education region, attracting investments and financing opportunities, and enhancing the opportunities to start and run business, are some of the goals to be achieved in the next decade.

Learn more: <https://utveckling.skane.se/publikationer/strategier-och-planer/the-open-skane-2030---skanes-regional-development-strategy/>

Teknikcollege

Several competence centres (Teknikcollege) are spread throughout the country. This is an example of cross- sectoral partnership where education providers and companies work together to upgrade the technological skills of future employees through the provision of high-quality vocational education courses designed by regional companies.

Learn more: <http://www.teknikcollege.se/teknikcollege-i-english/>

3.6 Greenland

Priority areas

- Increase the effectiveness of vocational education by increasing the percentage of completion in all courses and the number of internships, as well as by reducing the mean age of graduation (Naalakkersuisut, 2018)
- Develop educational offers targeted at providing the fishing industry with skilled workforce (Naalakkersuisut, 2018)
- Develop real-time competence assessment and introduce competence development courses (Naalakkersuisut, 2018)

Key policies/strategies

- Ilinniartitaanermut pilersaarut II 2018 (*Education Plan II 2018*)

Key actors

- National Business and Labour Market Council
- Ministry of Education, Culture and Church
- Greenlandic Educational Guide (Sunngu)

The Ministry of Education, Culture and Church of Greenland has drafted the Education Plan II since 2014 and it carries out a yearly follow-up to include reforms aimed at achieving the goals set. The last follow-up was done in 2018 and it contains numerous initiatives geared towards increasing the skills provided in education. In that regard, vocational education is of high importance and many of the initiatives are framed in that sector. For example, it contemplates the possibility to offer shorter vocational education courses aimed specifically at providing the competences and practical work experience in companies.

Regional examples from Greenland

PKU – Projekt Kompetenceudvikling for Ufaglærte (Development project for unskilled)

PKU is primarily aimed at unskilled workers in the workforce who are over 25 years old. There is a focus on unskilled people, who have jobs within occupations with declining employment opportunities and are therefore at risk of becoming unemployed. The purpose of PKU is that unskilled people can build up competencies that are demanded in the industry, such as the building and construction area, the raw material area and tourism. The courses, however, also have the purpose of contributing to the development of competencies within other professions in the municipalities.

Learn more (in Danish): <https://sunngu.gl/da/Opkvalificering/Kurser/PKU>

Table 1 (p.20) provides an overview of the actors working with skills in the Nordic countries at the different levels of governance.

Table 1. Actors involved in skills policies in the Nordic countries

	Denmark	Finland	Iceland	Norway	Sweden
Local level	<ul style="list-style-type: none"> • Local Employment Councils • Lokale uddannelsesudvalg (Local training committees) 	<ul style="list-style-type: none"> • Local authorities • TE-palvelut (Public Employment Service) 	<ul style="list-style-type: none"> • Local authorities 	<ul style="list-style-type: none"> • Local authorities 	<ul style="list-style-type: none"> • Arbetsförmedlingen (Public Employment Service) • Local authorities
Regional level	<ul style="list-style-type: none"> • Regionale Arbejdsmarkedsråd (Regional Labour Market Councils) • Styrelsen for Arbejdsmarked og Rekruttering (Agency for Labour Market and Recruitment) • Regional councils 	<ul style="list-style-type: none"> • ELY (Centres for Economic Development, Transport and the Environment) • AVI (Regional State Administrative Agencies) • Regional councils 		<ul style="list-style-type: none"> • NAV (Labour and Welfare Administration) • Regional councils 	<ul style="list-style-type: none"> • Regional councils
National level	<ul style="list-style-type: none"> • Kommunernes Landsforening (Local Government Denmark) • Disruptionrådet (Disruption Council) • Ministry for Children, Education and Gender Equality • Ministry of Employment 	<ul style="list-style-type: none"> • Kuntaliitto (Association of Finnish Local and Regional Authorities) • Opetushallitus (National Education Board) • Labour council • Ministry of Employment and Economy 	<ul style="list-style-type: none"> • Samband (Association of Local Authorities) • Vinnumálastofnun (Directorate of Labour) • Menntamálastofnun (Directorate of Education) • Nýsköpunarmiðstöð Íslands (Innovation Center Iceland) 	<ul style="list-style-type: none"> • Utdanningsdirektoratet (Directorate of Education and Training) • Employers' associations and trade unions • Kompetanse Norge (Skills Norway) • Innovasjon Norge (Innovation Norway) • VOFO (Association for Adult Learning) • Ministry of Labour and Social Affairs 	<ul style="list-style-type: none"> • Sveriges Kommuner och Landsting (Association of Local and Regional Authorities) • Tillväxtverket (Agency for Economic and Regional Growth) • Ministry of Employment • Ministry of Education and Research

4. Analytical framework for the study of skills

As we have seen in Section 2, skills are both complex and instrumental. The skills spectrum is wide, and it ranges from basic skills, such as literacy or numeracy, to digital skills. Socio-emotional skills such as teamworking, communication, or creativity, and cognitive skills such as technical knowledge or analytical thinking are included in the range of skills. As the illustration of national strategies showed, the development of skills and governance of skills take place in multiple sectors, such as the education and the labour market sector, and at multiple levels, such as the national, regional, or local level. A result of multiple actors working at multiple levels, is that skills become a mean for different actors to achieve different objectives in accordance to their sector-specific goals.

In this study two analytical frameworks will be used; an institutional framework and network governance framework.

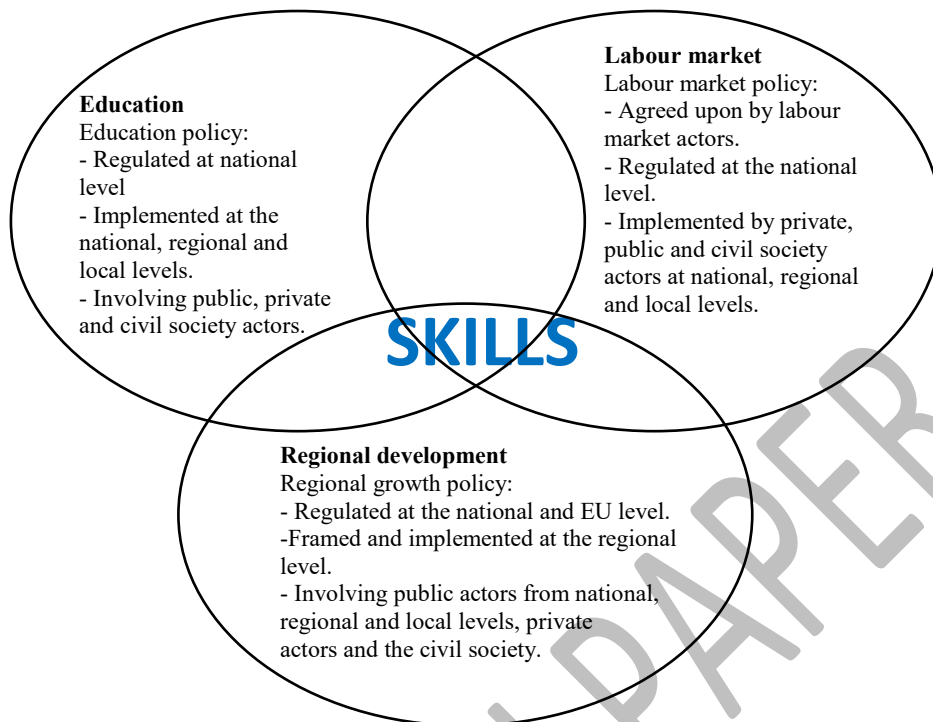
In order to understand how skills are framed within different sectors, each with their specific goals, norms and rules and logics of appropriateness, an institutional framework will be used. The relevance of new institutional theory is that it bridges structures to agency. According to North (1990), 'institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction' (p.3). March and Olsen (1989) point at the normative aspects of institutions, "(A)n institution is not necessarily a formal structure but rather is better understood as a collection of norms, rules, understandings and, perhaps most importantly, routines." (March and Olsen, 1989, p 29).

Despite critiques towards different branches of new institutionalism (e.g. Peters, 2005), for not being sufficiently clear (e.g. Goldmann, 2005; Hodgson, 2017) and for measurement problems (e.g. Voigt, 2013 and Voigt, 2018), the theory of new institutionalism has become a widely used theoretical framework for understanding the regularity of human behaviour, as human behaviour to a large extent is created and shaped by formal and informal social rules (Peters, 2005).

Institutions in this study can be understood at different levels. One example is the globalisation of labour markets. Through the global economic interconnectedness and interdependency of nation states, national institutions are forced to re-adapt their training systems in order to remain competitive in the global arena. In this regard, national approaches to opportunities and challenges posed by globalisation, as the re-adaptation of training systems will follow divergent paths rather than convergent ones (Lauder et al., 2008). Labour markets comprise a set of international and national laws and regulations on the relation between labour and capital and the national states have the capacity to reform their training systems to accommodate their outcomes to the labour markets. Institutions can be either formal or informal, setting the rules of the game in which organisations such as regional councils, firms, trade unions, or schools operate, and, are hence a relevant aspect in the governance of skills. For example, by attributing different competences to the regions in terms of skills, nation-states create institutional frameworks that shape the way in which regions work with skills in order to assess and anticipate, develop, match, and govern skills.

Below, figure 1 illustrates how skills are linked to the different policy areas of education, labour market and regional development policy – each with their specific norms, rules and logic contributing to the institutional framework of skills. The skills discussion revolves around the areas of education systems, labour markets, and regional development strategies and is mediated at the national, regional, and local levels. In addition to the complexity, both public, private and civil sector actors operate within the institutional framework.

Figure 1. Illustration of institutional framework of skills.



However, actors and organisations do not operate in a vacuum, but in governance networks based on the organisations' autonomy and interdependence. In order to understand how actors interact and cooperate, multi-level governance and network governance are commonly used tools (e.g. Marks & Hooghe, 2004; Hedlund & Montin, 2009; Olausson, Nyhlén, and Bolin 2015; Sørensen and Torfing, 2007).

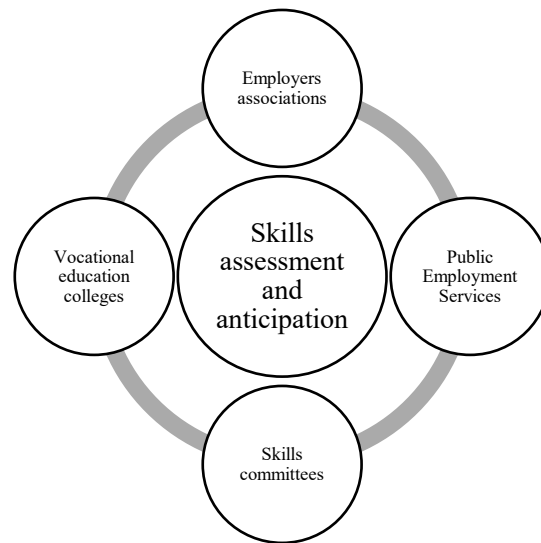
A formal definition of governance network that illustrate the complexity very well is provided by Sørensen and Torfing (2007):

Governance networks are complex and dynamic systems in which centripetal and centrifugal forces constantly undermine each other so that order and stability only exist as a partial limitation of disorder and instability (p. 26).

As it has been shown in this discussion paper, there are multiple organisations involved in skills policies. These organisations are part of the governance networks operating within institutional frameworks. For example, semi-independent bodies, national statistics bureaus or research institutes may carry out forecast and foresight analyses regarding skills assessment and anticipation that are used by policy-makers, public employment services, labour market councils, or skills committees.

Figure 2, below, illustrates one example of governance networks addressing skills assessment and anticipation. Several organisations with different roles carry out tasks that contribute to assessing and anticipating the skills needed in the future. For example, while research and analysis organisations produce forecasts and foresights based on the data obtained from employers or workers surveys, public employment services or vocational colleges can use their results to adapt their policies towards jobseekers or to modify their educational offer. Similar illustrations could be made for other arenas in which issues of skills are dealt with, such as skills mismatch, skills development, and skills governance. Depending on the arena and the institutional context, the governance networks will differ.

Figure 1. Example of skills governance network with regard to skills assessment and anticipation



Since our research questions are directed towards how regions in the Nordic countries work with skills, and responding to questions such as who the main actors are working with skills at the regional level and what enabling and hampering factors to strengthen skills development can be identified, the use of multi-level governance and network governance theories will help us in answering these because of their conceptual width and logic.

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5. Conclusions and next steps

The aim of this discussion paper is to introduce the topic of skills, to discuss different definitions and approaches, and to provide a knowledge overview of skills policies in the Nordic context. The aim has also been to introduce an analytical framework into which the upcoming in-depth study of how the regions in the Nordic countries work with skills can be framed.

A first conclusion is that skills are characterised by being both complex and instrumental (Bryson, 2017).

A second conclusion is that many challenges that the regions face regarding skills and skills development are similar, although the nature and extent of these changes, as well as the resilience and institutional capacity of dealing with these changes may differ among the regions.

Important challenges and perspectives that should be considered regarding how regions work with skills development are:

- **Demographic and socio-economic factors:** Skills development in all regions have to take the demographic and socio-economic changes into account, however the character of these changes will affect the regions differently.
- **Institutional factors:** Skills development is part of an international, national and regional socio-economic framework that to a large degree sets the rules of the game and the room for manoeuvre for the regions to work with skills development.
- **Governance:** Skills development is characterised by multilevel and cross sectoral governance, which implies important governance challenges as regards coordination, possible conflicts of goals, efficiency and accountability.

A third conclusion is that in the study of how regions work with skills four crucial themes are important to shed light on, namely how the regions work with:

- Skills anticipation;
- Skills development;
- Skills mismatch, and
- Skills governance.

The in-depth study of how regions work with skills will be conducted from August 2019 to March 2020. During the autumn 2019 case studies in six regions will be conducted: Värmland (Sweden), Hovestadsregionen (Denmark), Hedmark and Oppland (Norway), North Karelia (Finland), North East Iceland (Iceland) and Greenland. Some preliminary results are expected to be presented in the end of 2019, and the study will be finalised at the beginning of 2020.

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