



Nordic Council
of Ministers

Vocational education and training in the Nordic countries

**Knowledge and interventions to
combat gender segregation**

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Summary

Both the labour markets and the education systems in the Nordic countries are highly gender-segregated. This has been the case for a long time. This segregation is both vertical and horizontal, meaning that women are found in different courses and study programmes and sectors of the labour market than men, and also find themselves in different positions in the hierarchies of education systems and working life. This gender segregation has consequences for study and working conditions, pay, and the distribution of power and resources. In the Nordic countries' labour markets, there are both highly male-dominated and highly female-dominated sectors, and many education pathways are dominated by either young men or young women. This is particularly apparent in vocational education and training (VET). VET programmes involve many practices where sex and gender have significance. This applies to the VET programmes themselves as well as associated occupational practices in the workplace, and also applies to the people involved in these.

The focus of this report is on gender and VET. The gender perspective is used to shed light on the gender segregation in VET and associated sectors of the labour market. The gender perspective foregrounds questions of how men, masculinity, women and femininity are conceptualised, and the aspects of power linked to this. The first part of the report compiles knowledge about VET and gender in the Nordic countries based on current research. It also describes how the education systems in the Nordic countries function, and how they grew and developed. The second part of the report gives examples of interventions aiming to break patterns of gender segregation in VET in the Nordic countries. The final part of the report comprises an analysis of its different parts, and highlights a number of different research perspectives on sex, gender and VET. It also contains recommendations and overall reflections on what needs to be taken into account in future work for change so that interventions can successfully prevent gender imbalances in VET and the labour market.

Sex, education and work

In order to understand the gender segregation in education and the labour market, it is important to make clear the connections between society, education and the labour market. When describing education systems, they need to be put into a context that also includes the labour market and the history of how education and work have developed and been governed by policy. The education systems in the Nordic countries have many fundamental similarities, but also a many differences, especially when it comes to the way in which VET programmes are organised and their place in the education system and working life. The Nordic countries' education systems have always cherished the fundamental idea of neutralising social disparities as far as possible through education. Having said that, the second fundamental idea has been that education should lead to a job, which also means that the supply of education and how it is organised needs to match demand on the labour market. On the one hand, there are demands from the labour market for certain knowledge and skills that skilled workers in the future will need. On the other

hand, there are ideas about social equity and a universal education system, where everyone should be given the opportunity to pursue higher education in order to reduce social inequalities at the community level.

Common to all the Nordic countries' education systems is that they have a universal education system where all pupils complete compulsory school together. When pupils in the Nordic countries are roughly 15-16 years old, they transition to upper secondary school. This means that pupils at upper secondary level can complete either a university preparation stream and then go on to study further at a higher education institution, or complete a VET stream in preparation for entry into the labour market after leaving school, or some kind of combination of these streams. One of the major dividing lines between the countries is how strong the divide is between a VET stream and an academic stream at upper secondary level. Another area in which these countries differ is in whether or not it is possible after completing a VET qualification to be admitted to higher education, which is tied to their somewhat different ways of dealing with the issue of social inclusion and equity.

One of the most striking similarities in VET in the Nordic countries appears to be the numbers of boys and girls studying in different areas of VET. Gender imbalances in sectors of the labour market do not just magically arise, nor do they only become apparent at the transition point from leaving upper secondary school to entering the labour market. These differences are clearly apparent already in upper secondary schools. The statistics presented in this report show great similarities in the areas where boys dominate and where girls dominate, and that boys generally exhibit a greater dominance when present. In the energy, industry, building and construction sectors, for example, almost total dominance by boys is apparent. It should also be noted that in most countries, these programme areas have a very large number of pupils compared to many of the other programme areas that far fewer pupils study. Girls instead dominate in the area of health and social care. It is also interesting to note that in the areas of service and administration, there is generally a more even distribution of boys and girls.

There are several explanatory models for why gender segregation in VET occurs. What is clear is that sex, VET and work are interlinked. The explanations form a complex fabric in which the individual level and societal level interact; in which policy, governance and labour market forces interact; and in which the individual's choices are constrained and curtailed both directly and indirectly.

Strategies and interventions to combat gender segregation in VET

In the Nordic countries, interventions to reduce gender imbalances in working life and education are largely implemented as part of overall policy strategies. These interventions are often not confined to specific sectors, occupational groups, or girls as a group or boys as a group, but instead take their starting point in policy on gender equality, anti-discrimination and education. These kinds of gender mainstreaming strategies are reflected in most policy texts and other action plans related to education. In the Nordic countries, there are wordings at an overall and in

some cases detailed level on how gender equality is to be achieved in and through the school system in different types of Acts concerning gender equality, anti-discrimination and education. Combating gendered educational choices is an area that is mentioned specifically, for example in connection with work in schools to counter gender stereotypes and in connection with study and vocational guidance counselling in schools.

This report also describes and analyses various types of targeted interventions to combat gender segregation in VET in the Nordic countries. Many of these interventions take a broad approach and have an overall focus on gender equality measures to directly or indirectly affect gender imbalances in VET and work. Other interventions focus on combating gender segregation in specific sectors. The analysis shows that many of these interventions aim to encourage the under-represented sex to choose differently. However, few of them focus on the gender coding that exists and is reproduced in VET programmes and in the workplaces associated with them. This gender coding is closely tied to how the work is valued. Traditions, tasks and cultures in occupations and in VET are associated with masculinity or femininity, which is not something that is automatically changed when the proportions of women or men in a particular sector changes.

Countering gender imbalances in VET programmes and their associated labour markets in the Nordic countries is a complex process. The research highlights several possible interacting explanations for the differences. When the differences are formulated as problematic, different strategies to counteract them appear as more, or less, desirable. However, it is clear that this complexity requires strategies and interventions at a number of levels and in most areas, regardless of what the problems look like in the forefront. A focus on individuals alone within the under-represented group in a particular sector appears to be a poor solution to the problem. Instead, a more comprehensive and distributed focus on norms and attitudes seems to be required, targeting actors and practices at a number of levels in the labour market and in the countries' education systems.

Sammanfattning

I Norden är både arbetsmarknaden och utbildningssystemen starkt könsuppdelade. Så har det varit över lång tid. Uppdelningen är både vertikal och horisontell, vilket innebär att kvinnor och män befinner sig inom olika utbildningar och branscher på arbetsmarknaden, samt på olika positioner i utbildnings- och arbetslivets hierarkier. Könsuppdelningen får konsekvenser för bland annat studie- och arbetsvillkor, löner och fördelning av makt och resurser. På de nordiska arbetsmarknaderna finns både utpräglade mansdominerade och kvinnodominerade branscher och många av utbildningsspåren domineras av antingen pojkar eller flickor. Inom yrkesutbildning är detta särskilt tydligt. Yrkesutbildning innefattar många praktiker där kön och genus får betydelse. Det gäller såväl yrkesutbildningen som de därtill kopplade yrkespraktikerna ute på arbetsplatser, inklusive de personer som är involverade i dessa.

Fokus i denna rapport är kön och yrkesutbildning. För att belysa könsuppdelningen på yrkesutbildningar och branscher på arbetsmarknaden används genusperspektiv. Med genusperspektiv hamnar frågor om föreställningar kopplade till män, maskulinitet, kvinnor och femininitet i förgrunden, liksom maktaspekter kopplade till detta. I rapportens första del sammanställs kunskap om yrkesutbildningar och kön i Norden utifrån aktuell forskning. Vidare beskrivs hur utbildningssystemen i de nordiska länderna fungerar och hur de har vuxit fram. I rapportens andra del ges exempel på insatser för att bryta könsuppdelningen på yrkesutbildningar runtom i Norden. I rapportens avslutande del följer en analys av de olika delarna och olika forskningsperspektiv på frågan om kön, genus och yrkesutbildning lyfts fram. I rapportens avslutande del ges även rekommendationer och sammanfattande reflektioner över vad som behöver beaktas i det framtida förändringsarbetet för att insatser ska leda till att motverka sned könsfördelning i yrkesutbildning och på arbetsmarknaden.

Kön, utbildning och arbete

För att förstå könsuppdelningen inom utbildning och arbetsmarknad är det viktigt att kopplingen mellan samhälle, utbildning och arbetsmarknad görs tydlig. När utbildningssystem beskrivs behöver de sättas i ett sammanhang som också beskriver arbetsmarknaden och hur utbildning och arbete historiskt har utvecklats och styrts politiskt. De nordiska ländernas utbildningssystem har många likheter i grunden, men också en hel del olikheter, inte minst när det kommer till hur olika yrkesutbildningar är organiserade och placerade i utbildningssystemet och arbetslivet. De nordiska utbildningssystemen har burit med sig idén om att så långt som möjligt utjämna sociala skillnader genom utbildning. Med detta sagt har den andra bärande idén varit att utbildning ska leda till jobb, vilket också innebär att utbildningsutbudet och hur det organiseras behöver matcha den efterfrågan som arbetsmarknaden har. På den ena sidan finns arbetsmarknadskrav på vilka kunskaper och färdigheter framtida yrkesarbetare behöver. På den andra sidan finns idéer om social jämlikhet och enhetsskolan där alla ska ges möjlighet till högre utbildning för att sociala klyftor ska minska på samhällsnivå.

Gemensamt för de nordiska ländernas utbildningssystem är att de har en enhetsskola där alla elever läser grundskolan tillsammans. När eleverna i Norden är ungefär 15–16 år sker en övergång till gymnasienivå. Då finns det möjlighet att antingen ta del av något högskoleförberedande utbildningsspår på gymnasienivå, för att därefter kunna studera vidare på högskola, eller ta del av något yrkesutbildningsspår på gymnasienivå som förberedelse för inträde på arbetsmarknaden efter utbildningen, alternativt någon slags kombination av dessa spår. En av de stora skiljelinjerna mellan länderna är i hur stark uppdelningen är mellan ett yrkesutbildningsspår och ett akademiskt utbildningsspår på gymnasienivå. Ett annat område där länderna skiljer sig åt är vilka möjligheter det finns att få högskolebehörighet vid avlagd examen inom en yrkesutbildning, vilket hänger samman med de delvis skilda sätten att hantera frågan om social inkludering och jämlikhet.

En av de mest slående likheterna mellan yrkesutbildning i de nordiska länderna syns vara fördelningen mellan pojkar och flickor i olika yrkesutbildningsområden. Könsskillnader i branscherna på arbetsmarknaden är inte något som inträffar och visar sig först vid övergången från gymnasieskola till arbetsmarknad, utan dessa skillnader syns tydligt på gymnasiet. Den statistik som presenteras i rapporten illustrerar stora likheter både vad gäller vilka områden pojkar och flickor dominerar, och att pojkar generellt har en starkare dominans. Inom energi, industri, bygg och anläggning syns exempelvis en nästan total dominans av pojkar. Det bör också noteras att dessa utbildningsområden i de flesta länderna rymmer ett mycket stort antal elever, jämfört med många av de andra områdena där långt färre elever studerar. Flickorna dominerar istället inom vård- och omsorgsområdet. Det är också intressant att notera att det inom områdena service och administration generellt finns en jämnare könsfördelning.

Det finns flera förklaringsmodeller till varför könsuppdelning inom yrkesutbildning sker. Vad som står klart är att kön, yrkesutbildning och arbete hör samman. Förklaringarna bildar en komplex väv där individnivå och samhällsnivå samverkar, där politik, styrning och arbetsmarknadskrafter samverkar, och där individens valmöjligheter styrs och kringkärs såväl direkt som indirekt.

Strategier och insatser för att motverka könsuppdelning inom yrkesutbildning

Ansatser för att minska könsskillnader i arbetsliv och utbildning sker i hög grad som en del av övergripande politiska strategier i Norden. Dessa ansatser är oftast inte avgränsade till särskilda branscher, yrkesgrupper inom skolan, eller till flickor som grupp eller pojkar som grupp, utan tar istället sin utgångspunkt i policy om jämställdhet, diskriminering och utbildning. Sådana strategier för jämställdhetsintegrering syns i flertalet policytexter och andra handlingsplaner som rör utbildning. I de nordiska länderna återfinns formuleringar på övergripande och bitvis detaljerad nivå om hur jämställdhet ska uppnås i och genom skolan i olika typer av lagar om jämställdhet, diskriminering och skola. Motverkande av könsbundna studieval är ett område som specifikt nämns, exempelvis i samband med skolans arbete med könsstereotyper och i samband med skolans studie- och yrkesvägledning.

I denna rapport beskrivs och analyseras även olika typer av riktade insatser för att motverka könsuppdelning inom yrkesutbildningar i Norden. Många av insatserna tar ett brett grepp och har ett övergripande fokus på jämställdhetsarbete för att direkt eller indirekt påverka könsskillnader i yrkesutbildning och arbete. Andra insatser är inriktade på att motverka könsuppdelning inom specifika branscher. Analysen visar att många av insatserna syftar till att få det underrepresenterade könet att välja annorlunda. Det är däremot få av dem som fokuserar på den genuskodning som finns och återskapas i yrkesutbildningarna och på arbetsplatserna kopplade till dem. Genuskodningen är nära sammanlänkad med hur arbetet värderas. Traditioner, arbetsuppgifter och kulturer i yrkena och i yrkesutbildningen kopplas samman med maskulinitet eller femininitet, vilket inte är något som automatiskt förändras i och med att andelarna kvinnor eller män inom en viss bransch förändras.

Det är komplext att motverka könsskillnader i yrkesutbildningen i Norden och den därtill kopplade arbetsmarknaden. Forskningen lyfter flera möjliga samverkande förklaringar till skillnaderna. Beroende på hur skillnaderna formuleras som problematiska framstår olika strategier för att motverka dem som mer eller mindre önskvärda. Det framstår dock med all tydlighet att komplexiteten kräver strategier och insatser på flera nivåer och inom flertalet områden, oavsett vilken problembild som finns i förgrunden. Att avgränsa strategier och insatser till ett ensidigt fokus på enskilda individer inom den underrepresenterade gruppen i en särskild bransch framstår som en bristfällig lösning. Istället verkar ett mer omfattande och distribuerat fokus på normer och attityder krävas, som riktas mot aktörer och praktiker på flera nivåer på arbetsmarknaden och inom utbildningssystemen.

Introduction

In the Nordic countries, both education and the labour market are strongly gender-segregated. This segregation is both vertical and horizontal, meaning that women are found in different courses and study programmes and sectors of the labour market than men, and also find themselves in different positions in the hierarchies of education systems and working life. This gender segregation has consequences for study and working conditions, pay, and the distribution of power and resources.

Combating gender bias is one of the strategic areas of intervention in official Nordic cooperation in the area of gender equality. The Danish Presidency of the Nordic Council of Ministers in 2020 therefore initiated a project that shed light on gendered educational choices in the Nordic countries. The Nordic Council of Ministers co-operation body Nordic Information on Gender (NIKK), located at the Swedish Secretariat for Gender Research, was commissioned to conduct a study focusing on gender segregation in VET in the Nordic countries.

The study provides an introduction to what we know about VET and gender as an area of knowledge, describes how VET in the Nordic countries is organised, and gives examples of how these countries have worked to break patterns of gender segregation and to retain pupils who belong to the under-represented sex. The study also includes a concluding analysis section which discusses the results of the survey conducted against the background of current knowledge in the field.

The study was carried out by Angelica Simonsson, PhD in Pedagogical Work and senior investigator at the Swedish Secretariat for Gender Research. This report on the study is based on a selection of literature on VET, sex and gender. In addition, key actors such as the central school authorities in the Nordic countries, researchers with a range of knowledge about VET, gender and educational choices, and actors involved in VET were consulted during the work of gathering the material for this report.

Introduction to VET in the Nordic countries

The education systems in the Nordic countries have many fundamental similarities, but also quite a number of differences, especially when it comes to the way in which VET programmes are organised and their place in the education system and working life. This general introduction provides a perspective on these similarities and differences.

The education system is part of how a state governs and organises a society. When describing education systems, they need to be put into a context that also includes the labour market and the history of how education and work have developed and been governed by policy. The focus of this report is gender and VET. It is therefore all the more important to make clear the link between society, the labour market and education, since both education and the labour market are clearly gender-segregated.¹

The first part of the report describes in broad terms how the labour market and education are interconnected and, more specifically, how VET, the labour market, and gender are interconnected. The Nordic countries' VET programmes at upper secondary school level are then described so that some comparisons can be made between the countries' different VET systems. Some statistics are presented in this section to illustrate the gender distribution in upper secondary school VET programmes.

As mentioned above, the Nordic countries differ in how they manage and organise VET. To simplify matters, this report will consistently refer to VET at upper secondary school level. This refers to VET programmes at ISCED level 3² which are intended for young people who have completed compulsory school. The report therefore does not focus on adult education, since it was not possible to accommodate such a comprehensive focus within the time frame for the assignment. Questions concerning adult education in general, establishment on the labour market for foreign-born adults, and the interplay between gender and adults and occupation choices are examples of matters that are therefore not addressed in this report. Questions concerning adult education are important aspects of the overall function of VET in the welfare state, and for the issue of the gender-differentiated labour market in general. Despite the limits that have been set, some difficulties remain in describing and comparing the VET systems in the Nordic countries. The descriptions here are therefore not all-inclusive and deviations from these general descriptions do occur. One example is that in the Nordic countries, adults are given access to VET at upper secondary level, but in that case partly or wholly through another school type such as some type of adult education institution.

1. Statistics on the Nordic countries' male- and female-dominated occupational areas can be searched for on the Nordic Statistics website <https://www.nordicstatistics.org/labour-market/>
2. UNESCO, 2012.

Education systems, labour markets and gender in the Nordic countries

To be able to describe VET and gender in the Nordic countries in a relevant way, they need to be placed in their societal context. The Nordic countries' education systems do not consist of just basic compulsory school followed by upper secondary education for children and young people and then higher education. Their education systems also include basic education for adults; various types of customised continuing professional development provided by both public and private institutions; courses and study programmes in folk high schools that both broaden and deepen knowledge; specific VET courses at upper secondary, post-secondary and higher education levels; and so on. Changes in the labour market and changes in education systems are very much interlinked. The following section presents a perspective on the relationship between education, work and gender.

Education and the welfare state

Education can be said to have two distinct functions in the Nordic countries' communities. Firstly, education systems play a fundamental role in maintaining and progressing democracy by transferring the requisite civic values to future generations³. Secondly, education systems play a fundamental role in the development of society by providing present and future generations with the necessary knowledge and skills to be able to participate in and develop working life. But at the same time, these two functions belong together to a high degree.

Throughout the growth of the Nordic education systems, especially from the post-war period onwards, education has played a key role in shaping the welfare state⁴. Universal welfare, where the state offers citizens protection from poverty and unemployment through access to education, health care, sickness benefits and pensions, is what is usually meant by the term 'the Nordic model'. A defining feature of the Nordic model has been that welfare is not contingent, that everyone has the right to access education health care and various types of payments. Research, however, points to a shift in the 1990s, after which the idea of universal welfare has been partly displaced by a focus on labour market participation in order to get access to the benefits of the welfare state. This shift is sometimes described as a shift "from welfare to workfare"⁵. The aim of educating people for work, in addition to educating them to be functioning citizens in a democracy, is thus a strong feature of education systems in the Nordic countries today. The short description above highlights clear links between education and work. It follows from this that the needs of the labour market are closely tied to how the education system is organised into different streams. The education system's responses to the needs of the labour market's sectors also means that the divisions based on gender and social background that arise as a result of the education system's different streams can be understood as a reflection of the composition of the labour market, and as shaping it.

3. See for example Jarl and Larsson, 2020; Nylund, Ledman and Rosvall, 2020.

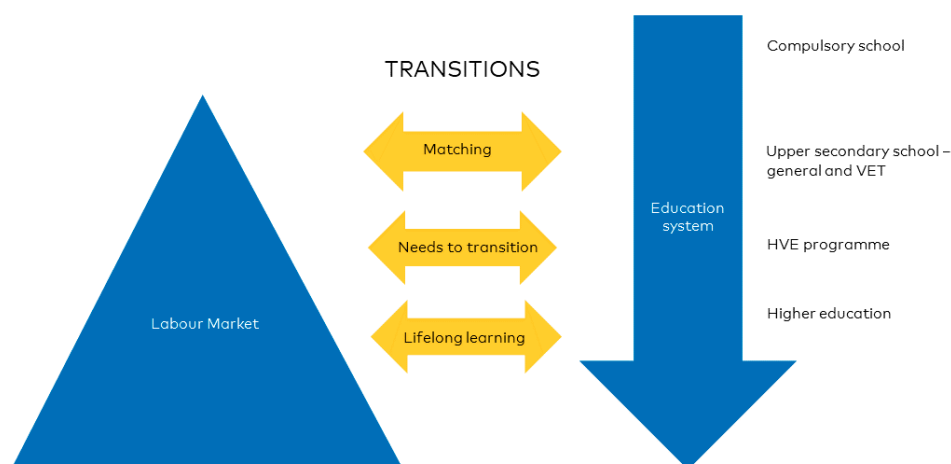
4. Helms Jørgensen, 2018a.

5. Helms Jørgensen, 2018a, p 10.

Transitions between the education system and the labour market

The model below shows in a simplified way how working life and education systems are interconnected. After compulsory school, the majority of pupils go on to some form of upper secondary education, even though the upper secondary school options differ between the Nordic countries. All the Nordic countries have comprehensive schools that provide compulsory schooling, but after this point the countries differ in some respects in terms of how coherent their upper secondary school system is. It is not until after compulsory school that the first differentiation occurs when pupils are divided up in various ways into more or less vocational or higher education-oriented streams, where some VET streams give qualifications that permit entry to higher education and others do not.

Model 1: Labour market and education system



In general, therefore, for various reasons, there is no 'once and for all' transition from the education system to the labour market; instead transitions from and to the education system and the labour market can take place at many times at different ages and in different phases of people's lives. One example of the road between education and the labour market not being a one-way street is how new digitalisation requirements have meant a need for adjustment in certain sectors, which has placed new demands on workers being trained to meet these demands or being able to switch to another sector. In this context, the concept of lifelong learning functions on many levels. These days, national education systems are prepared to offer education initiatives – through various types of privately and publicly operated schools – that respond to the needs of the labour market locally, regionally and nationally. Pupils are encouraged to pursue lifelong learning right from compulsory school which prepares individuals for taking responsibility for changing track and learning new things later in their working lives, if this is what the labour market demands. Regular transitions between work and education may also be the result of people continuing their professional development through specialisation, such as specialist courses for nurses or other types of supplementary courses and

study programmes, such as engineers who complete supplementary teacher education in order to become certificated teachers. Naturally, it might also be the case that the labour market steers people to change track through training to solve labour shortages in certain occupations. Or that people's interests change and broad education systems allow people to change track or specialise later in their working lives. Other examples of transitions may be prompted by ill-health, meaning that people quite simply are forced to change their occupation, which in today's Nordic knowledge society very often means that some type of education or training is needed in order to qualify for employment in another sector. In the Nordic countries and the Netherlands, participation in continuing professional development and further education is highest when compared to the rest of the OECD countries.⁶ In pace with lifelong learning being presented in an increasing number of contexts in both national and international partnerships⁷ as one of the solutions to current and future challenges in the labour market due to rapid change, more transitions can be anticipated at ever-later stages of people's working lives in the future. This is also related to the demands for skilled labour in the workforce in the Nordic countries, where validated knowledge and skills are becoming increasingly important in order to formally qualify for employment.

Sex, education and work

Education systems today are thus responding to a high degree to the changing needs of labour markets. But we also know that both the labour markets and education systems in the Nordic countries are highly gender-segregated and have been for some time. Labour markets in the Nordic countries have both highly male-dominated and highly female-dominated sectors⁸. The two figures below show the proportions of the under-represented sex in male- and female-dominated sectors in the Nordic countries. The reliability of the data underlying the figures is relatively low⁹ because these are compilations of vague clusters ("male-dominated and women-dominated sectors") and therefore must be interpreted with a degree of caution. However, these figures are assessed as giving an indication of the proportions of men and women in male- and female-dominated sectors, seen as clusters. Figure 1 shows the proportion of men in female-dominated sectors in the Nordic region in 2020:¹⁰

6. Kahlroth, 2019, p 16.

7. See for example the European Commission, 2000.

8. Male-dominated and female-dominated sectors are described by Nordic Statistics among others: https://pxweb.nordicstatistics.org/pxweb/en/Nordic%20Statistics/Nordic%20Statistics__Labour%20market__Employment/LABO06.px/?rxid=4bd7ba15-3c4a-4793-8711-6db1fc878223. This describes male-dominated sectors as a cluster that includes agriculture, forestry and fisheries, mining, manufacturing, waste management, design, transport, and information and communications. This describes female-dominated sectors as a cluster that includes education, health care, social work and service occupations.

9. https://pxweb.nordicstatistics.org/pxweb/en/Nordic%20Statistics/Nordic%20Statistics__Labour%20market__Employment/LABO06.px/?rxid=4bd7ba15-3c4a-4793-8711-6db1fc878223

10. The figure is based on data from Nordic Statistics. Data retrieved 2021-10-13: https://pxweb.nordicstatistics.org/pxweb/en/Nordic%20Statistics/Nordic%20Statistics__Labour%20market__Employment/LABO06.px/?rxid=4bd7ba15-3c4a-4793-8711-6db1fc878223.

Figure 1. Proportions of men in female-dominated sectors (%), 2020

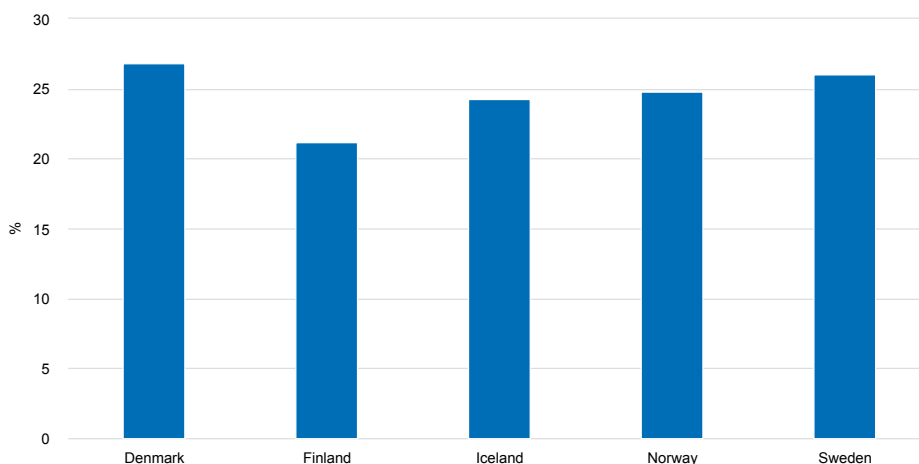
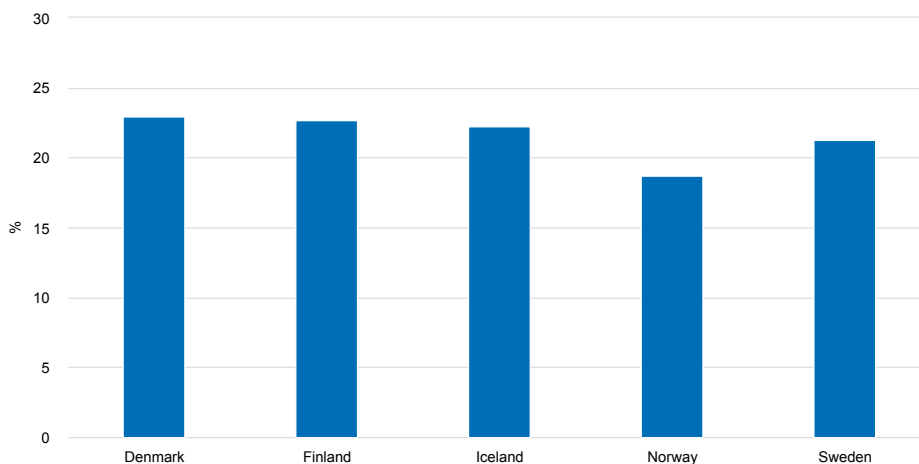


Figure 1 illustrates how the proportion of men in female-dominated sectors in the Nordic countries (comparable data is not available for Greenland, the Faroe Islands or the Åland Islands) varies between 19 and 27 per cent. The obverse is shown in Figure 2, which gives an idea of the proportion of women in male-dominated sectors in the Nordic countries in 2020.¹¹

Figure 2. Proportions of women in male-dominated sectors (%), 2020



As Figure 2 illustrates, the proportion of women in male-dominated sectors (comparable data is not available for Greenland, the Faroe Islands or the Åland Islands) varies between 21 and 23 per cent.

The gender imbalances in the labour market's sectors are also evident in the

11. The figure is based on data from Nordic Statistics. Data retrieved 2021-10-13: https://pxweb.nordicstatistics.org/pxweb/en/Nordic%20Statistics/Nordic%20Statistics__Labour%20market__Employment/LABO06.px?rxid=4bd7ba15-3c4a-4793-8711-6db1fc878223.

distribution of the sexes within and between the different study streams in upper secondary school.¹² There are upper secondary school programmes linked to certain sectors where women are in the majority, and similarly there are programmes linked to certain sectors where the proportion of men dominates.

The majority of pupils studying health and social care are women.¹³ In the Energy, Industry, and Building and Construction sectors, there is a predominance of men. This predominance is in most cases much greater than in sectors where women dominate.¹⁴ Segregation is also apparent in university preparation programmes, where girls are often in the majority in social studies programmes.¹⁵ The gender segregation in higher education STEM programmes can be seen in particular in the choices made between different specialisations within these programmes, where the engineering programme stands out, for example.¹⁶ There are also clear differences in the proportions of girls and boys in VET programmes and in university preparation programmes. The number of girls and boys admitted to their first choice among the upper secondary school's VET programmes and university preparation programmes for the school year 2019-2020 in Sweden can be taken as an example, as illustrated in Figure 3:¹⁷

Figure 3. Sweden: Number of men and women admitted to VET and to university preparation programmes (first choice), October 2019

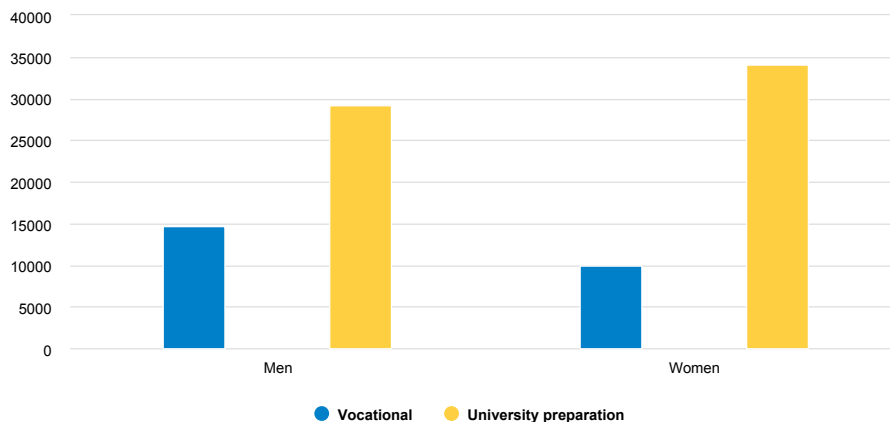


Figure 3 shows that a larger proportion of girls apply for and are admitted to university preparation programmes compared to boys, while a larger proportion of boys apply for and are admitted to VET programmes compared to girls. By way of comparison, the figures in Denmark are similar. In 2021, 12 per cent of girls and 28 per cent of boys applied for VET programmes.¹⁸ The proportions of men and women in higher education show a similar pattern. Continuing with Sweden as the example, women appear to be in the clear majority among new students in higher education

12. See also Jansson and Sand 2021; Mellén, 2021; Mellén and Angervall, 2021.

13. See figures in the descriptions of the Nordic countries' VET models later in this report.

14. See figures in the descriptions of the Nordic countries' VET models later in this report.

15. Swedish National Agency for Education Table 3 A: Pupils admitted to their first choice (starting upper secondary school year one on 15 October 2019) in the school year 2019-2020, by sex. This applies to Sweden. <https://www.skolverket.se/skolutveckling/statistik/sok-statistik-om-forskola-skola-och-vuxenutbildning?sok=SokC&verkform=Gymnasieskolan&omrade=Skolor%20och%20elever&lasar=2019/20>.

16. Mellén, 2021; Mellén and Angervall 2020.

17. The figure is based on the data in Swedish National Agency for Education Table 3 A: Students admitted to their first choice (starting upper secondary school year 1 on 15 October 2019) in the academic year 2019-2020, by sex. Table retrieved 2021-10-28. <https://www.skolverket.se/skolutveckling/statistik/sok-statistik-om-forskola-skola-och-vuxenutbildning?sok=SokC&verkform=Gymnasieskolan&omrade=Skolor%20och%20elever&lasar=2019/20>.

18. Ministry of Children and Education Denmark, 2021.

in the academic year 2019-2020, where 58 per cent of new students were women, while 42 per cent were men.¹⁹ In Finland, however, there is no similar pattern of gender imbalances in choice of VET and university preparation programmes. In 2018, 52 per cent of those who finished a VET programme and passed the exams were women.²⁰ However, it should be pointed out that it is difficult to compare statistics in this area, as the VET programmes in the various Nordic countries differ a great deal in terms of how they are organised, their orientation, model for learning, qualifications, and so on.

The point of departure for what is presented in this section was to describe education based on a binary gender model and focusing on where women as a group and men as a group are found within different education pathways. In the next section, which describes the different VET programmes in the Nordic countries, the focus is also on describing where women as a group and men as a group are largely found within different VET programmes linked to specific sectors. These descriptions do not provide any explanations as to this skewed distribution, nor do the descriptions frame this skewed distribution as problematic. To be able to say something about possible explanations and the ways in which this skewed distribution can be seen as problematic, the questions asked need to be looked at from the gender perspective. The conditions in VET programmes, the workplaces associated with them and the labour market in general, and the possibilities of changing the gender imbalance, will therefore be discussed in the analysis in the final part of this report using examples from research in this field.

VET and work

VET in the Nordic countries sits very much at the intersection between ideas about education, work, social equity, social inclusion and the various policy methods used to implement these ideas in practice. The description above shows how the Nordic countries have historically viewed the function of education as linked to social equity and the notion of the compensatory task of education. In other words, there has been a fundamental idea that a person's background should not have any bearing on their opportunities to educate themselves and get a job. Throughout the growth and development of the Nordic countries' education systems in the 20th century, they have always cherished the fundamental idea of neutralising social disparities as far as possible through education. Having said that, the second fundamental idea has been that education should lead to a job, which also means that the supply of education and how it is organised needs to match demand on the labour market. In short, there are on the one hand the demands of working life and the labour market concerning what knowledge and skills future skilled workers need. On the other hand, there are ideas about social equality and a universal education system, where everyone should be given the opportunity to pursue higher education in order to reduce social inequalities at the societal level.

VET²¹ has developed in slightly different ways in each of the Nordic countries in relation to these two functions of education, in particular from the 1970s

19. UKÄ, 2020: <https://www.uka.se/download/18.65fbdad5175926cbdd07e2e/1606382272162/Statistisk-analys-201024-Nyborjare-i-hogskolan.pdf>

20. Finnish National Agency for Education, 2021: <https://www.oph.fi/en/education-system/finnish-vocational-education-and-training>

21. As previously described and justified given the scope of this assignment, upper secondary VET programmes for young people is what is referred to here. The organisation of adult education is not included in this descriptive part of the report.

onwards.²² In practice, VET has been organised with one of these two functions as the more or less superior principle, but without losing sight of the other one. The idea of one school system for all is at odds to some extent with the idea of education's goal being to assure the nation's competitiveness. The goals of VET therefore lie somewhere at the intersection between education for economic growth, for full employment, for equal educational opportunities for all, and for democratic empowerment. The way in which VET is organised in each of the Nordic countries relates slightly differently to these goals. They all have in common that they are related to the needs of working life, and this is also emphasised as important in international cooperation. For example, the OECD stresses the importance of taking into account the needs of employers when matching VET to the labour market.²³ That VET should lead to employability is often highlighted²⁴.

As an example of how VET in the Nordic countries has developed in different directions, Denmark is often compared with Sweden²⁵. Denmark is often described as having VET that is based on apprenticeships and learning on the job in companies with closer ties to working life; while Sweden is described as having VET that is part of its comprehensive school system, with school-based learning in focus²⁶. These two types of VET make apparent what one of the biggest differences in practice often in fact comprises different ways of organising VET, its governance and how VET is positioned in relation to working life and the education system; as well as pedagogical approaches in practice, where learning takes place mostly in a workplace or mostly in a school setting. The models utilised by the different countries will be described in more detail in the next section.

VET and gender in the Nordic countries

When describing differences in VET and gender between the Nordic countries, both the VET systems themselves and the labour markets in each of the countries need to be considered. The question of whether a Nordic model of VET can be identified must also consider the question of whether or not there is a Nordic labour market model. The Nordic countries' labour markets differ in some respects, but within the broader context of a Nordic model in which central negotiations and strong employee protections are common denominators.²⁷

The VET offered and completed thus has strong ties to the occupation for which the pupil is being trained. Many occupations and sectors are highly gender-segregated, and the vertical and horizontal segregation of the labour market between women and men²⁸ is linked to VET and the gender segregation that can be found there. There are several explanatory models for why gender segregation occurs in VET. The research sought answers by investigating individual-based factors such as interests and abilities, and also to a certain extent by exploring structural explanations.²⁹ What is clear is that gender, VET and work are interlinked. The explanations form a complex fabric in which the individual level and societal level are

22. Helms Jørgensen, 2018a.

23. OECD, 2010.

24. Rosvall, 2020.

25. Michelsen, 2018.

26. Michelsen, 2018.

27. Helms Jørgensen, 2018a.

28. Reisel, Hegna & Imdorf, 2015.

29. Reisel, Søråas Skorge & Uvaag, 2019.

interwoven; in which policy, governance and labour market forces interact; and in which the individual's choices are steered and curtailed both directly and indirectly.

The Nordic countries' VET models, seen in the context of their labour markets and their welfare states, are currently facing somewhat conflicting policy demands concerning what they are supposed to achieve.³⁰ Depending on the aim that is given the greatest prominence when justifying a VET programme, its content and how it is organised, the issue of gender balance also gains importance in slightly different ways.

Because the focus in the Nordic countries is increasingly on training for work³¹ generally speaking, the issue of gender segregation in VET is often raised as an issue of labour shortages. When the role of education is primarily to ensure that the labour market has access to the skilled labour that it requires, the issue becomes largely about occupations where there are shortages and problems recruiting sufficient numbers of skilled workers in specific sectors. One response to the shortages that has emerged in certain sectors in different Nordic countries is thus to increase the recruitment base by ensuring that more people from the under-represented sex apply for VET. As the introduction showed, there are generally more boys in VET, since VET programmes focus on training a labour force for male-dominated sectors, which has resulted in many interventions being implemented in various ways to attract girls to these VET programmes.

If the focus of VET is instead social equity and equal opportunities for jobs and a life unencumbered by gender stereotypes, the issue is instead framed as a rights issue. One answer to the problem would then be to improve the conditions for boys as well as girls where they are in the minority in a sector. Another would be to work to dispel misconceptions and prevailing gender norms linked to specific sectors and occupations and the VET programmes linked to them. Herein lies also questions about how different occupations are valued and how this can work differently to the advantage of men and women. Yet another response would be to focus specifically on the work environment in occupations and industries and the VET programmes linked to them.

A description of VET models in the Nordic countries

The Nordic countries' education systems have in common that they all have a comprehensive school where all pupils attend together in primary and lower secondary levels (ISCED 1-2).³² In other words, there are no transitions between the first (ISCED 1) and second (ISCED 2) levels where pupils are streamed into different schools depending on their interests or performance.³³ This means that it is only after completing compulsory school that a transition occurs that results in pupils being streamed into different education pathways. When pupils in the Nordic countries are about 15-16 years old and once they have passed through ISCED 1 and ISCED 2, there is a transition to upper secondary school level (ISCED 3). This means that pupils can complete a university preparation stream at upper secondary school

30. Helms Jørgensen, 2018b.

31. Helms Jørgensen, 2018a, p 10

32. European Commission/EACEA/Eurydice, 2018, p 5.

33. This does not mean that there are no individual choices in the programmes at these levels.

level (ISCED 3), and then go on to further study at a higher education institution (ISCED 6 and 7); or complete a VET stream at upper secondary school level (ISCED 3) in preparation for entering the labour market after leaving school; or some kind of combination of these streams.³⁴ Below are descriptions of how VET at upper secondary level (ISCED 3) for young people is organised in each of the Nordic countries, as well as a brief description of how it has developed.

The descriptions also include statistics that show the proportions of boys and girls in different programmes, but this descriptive part does not contain any analysis of possible explanations for the gender distribution. The statistics reported for each country are not directly comparable because VET in each of the Nordic countries differs, for example, in the way in which the programmes are studied, the certificates and qualifications they give, the way in which they are assessed, opportunities to continue on to higher education, etc. The available data are therefore presented in different ways for each of the different countries. There are also differences between the countries regarding, for example, the involvement of private and public actors, which is not reported in these descriptions. The statistics and descriptions are instead intended to provide *indications of the proportions of boys and girls* in different programmes that target specific sectors of the labour market. Despite the differences between their VET systems, there is reason to point out the similarities that exist in the proportions of young men and women in the different programmes that target specific sectors of the labour market.

Denmark

Brief history

At the beginning of the 20th century, the social partners were those who mainly organised VET in Denmark. After the Second World War, the development of VET was influenced by the challenges of getting the baby-boom generation of young people into work and by the high demand for skilled labour in burgeoning industries.³⁵ From the 1960s, the state became increasingly involved in the reform of VET.³⁶ In Denmark, nine-year comprehensive school was introduced in 1975, but a comprehensive school type model for upper secondary VET has never existed.³⁷ There have been proposals to reform VET in order to strengthen the opportunities for VET pupils to gain the entry requirements for university education, but the strategy that has influenced the design and development of the VET system in Denmark the most has instead focused on attempting to strengthen the VET stream and its status. The aim of this parallel education system has been to strengthen social inclusion by improving the transition between VET and work. Apprenticeships have therefore played a prominent role. In comparison with the other Nordic countries, Denmark has a stronger divide between its academic education stream and VET stream at upper secondary level, with the other countries being closer to the ideas of a Nordic education model.³⁸

34. As mentioned above, this report will not describe all the types of VET programmes that exist in the Nordic countries in general, including those for adults at ISCED levels 3, 4 and 5. Many of these VET programmes are organised at the regional or local level. It was not possible to include a description of all these education pathways within the scope of this assignment.

35. Helms Jørgensen, 2018c, p 186.

36. Helms Jørgensen, 2018c, p 186.

37. Helms Jørgensen, 2018a, p 16.

38. Helms Jørgensen, 2018c, p 171.

Current model

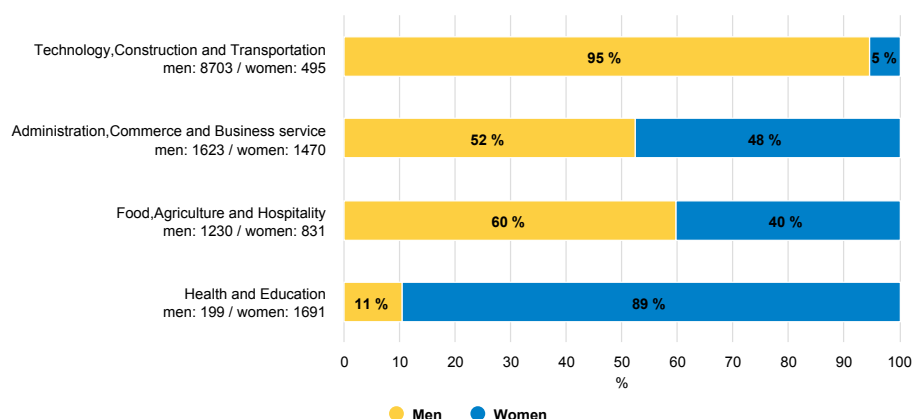
VET is organised in parallel with Denmark's upper secondary school system which qualifies pupils for entry to university in Denmark. The VET system in Denmark is largely based on apprenticeships and has strong ties with the labour market and employers.³⁹ Since there is a shortage of placements and full-time apprenticeship contracts, many training centres have been established where workplace training takes place.⁴⁰ The option of obtaining the entry requirements for university education is only available to a small proportion of the pupils in VET through a hybrid program introduced in 2011.⁴¹

Since 2015, there are four main VET subject areas:⁴² (1) Technology, construction and transportation, (2) Care, health and pedagogy, (3) Food, agriculture and hospitality, and (4) Administration, commerce and business service. These subject areas each contain a number of specialisations. Depending on the specialisation and its structure, the VET programme's length varies between 18 months to 5.5 years, but most frequently the programme is between three and four years long.⁴³

Girls and boys in VET programmes in upper secondary school

The following figure⁴⁴ shows the gender distribution of pupils, aged 17 or under, who started one of the four main VET subject areas in 2020:

Figure 4. Denmark: Admitted to VET programme, by sex (percentage/number), 2020



39. Helms Jørgensen, 2018c, p 171.

40. von Zweigbergk, 2021, p 12.

41. Helms Jørgensen, 2018a, p 16. For an overview of the education pathways, see for example the Ministry of Children and Education: <https://eng.uvm.dk/upper-secondary-education/vocational-education-and-training-in-denmark>

42. EUD - Vocational education for young people, that is, VET at upper secondary level that young people can start after finishing comprehensive school.

43. European Commission, Eurydice, 2021: https://eacea.ec.europa.eu/national-policies/eurydice/content/upper-secondary-and-post-secondary-non-tertiary-education-8_en

44. Figure 4 is based on data from the Ministry of Children and Education's education statistics on the number of pupils who had started VET on 30 September 2020. The figure shows only the number of pupils aged 17 and under in 2020. Data retrieved 2021-11-09. <https://uddannelsesstatistik.dk/Pages/Reports/1852.aspx>

Figure 4 shows clearly how boys and girls each dominate in two of these main subject areas, while the other two have a more even gender distribution. In Technology, construction and transportation, boys, who account for 95 per cent of the pupils, clearly dominate. In Care, health and pedagogy, girls, who make up 89 per cent of the pupils, dominate instead. In Administration, commerce and business service, the distribution between boys and girls is more even. The statistics do not provide any information on specialisations in these programmes.

Finland

Brief history

After the Second World War, Finland developed more and more into a welfare state and this development played a crucial role in the formation of its education policy.⁴⁵ The development of VET in Finland is also strongly linked to Finland's transformation from an agrarian society to an increasingly industrialised society, which demanded the right skills in the labour force.⁴⁶ During the 1970s and 1980s, the role of education in achieving social equity was a policy focus, and VET aimed to increase mobility and employability.⁴⁷ In the 1990s, VET switched focus more and more to employability and entrepreneurship, and to enabling entry into higher education.⁴⁸ From the beginning of the 21st century, VET has attracted more and more pupils and has thus grown, which is partly attributable to the increased opportunities for further studies that it provides both within higher vocational education and academic higher education institutions.⁴⁹

Current model

VET at upper secondary level is organised in parallel with academic upper secondary school programmes, and VET programmes are provided in vocational educational institutions. VET is usually three years in duration and successful completion gives the entry requirements for higher education.⁵⁰ The qualifications obtainable from a VET programme in a vocational educational institution can also be obtained through an apprenticeship, but approximately 90 per cent of students complete their studies at vocational educational institutions.⁵¹ Finnish and Swedish VET programmes thus have many similarities, with mainly school-based learning and relatively greater opportunities for entry to higher education, but with the difference that Finnish VET programmes are provided at different institutions than academic upper secondary programmes. Among other things, the 2018 reform aimed to increase the proportion of workplace-based learning in VET, but there is no provision for how much or little of the programme needs to be completed at a workplace.

45. Stenström & Virolainen, 2018, p 116.

46. Stenström & Virolainen, 2018, p 117.

47. Stenström & Virolainen, 2018, p 117.

48. Stenström & Virolainen, 2018, p 117.

49. Stenström & Virolainen, 2018, p 118.

50. European Commission, Eurydice, 2021. Retrieved 2021-11-08: https://eacea.ec.europa.eu/national-policies/eurydice/content/upper-secondary-and-post-secondary-non-tertiary-education-11_en

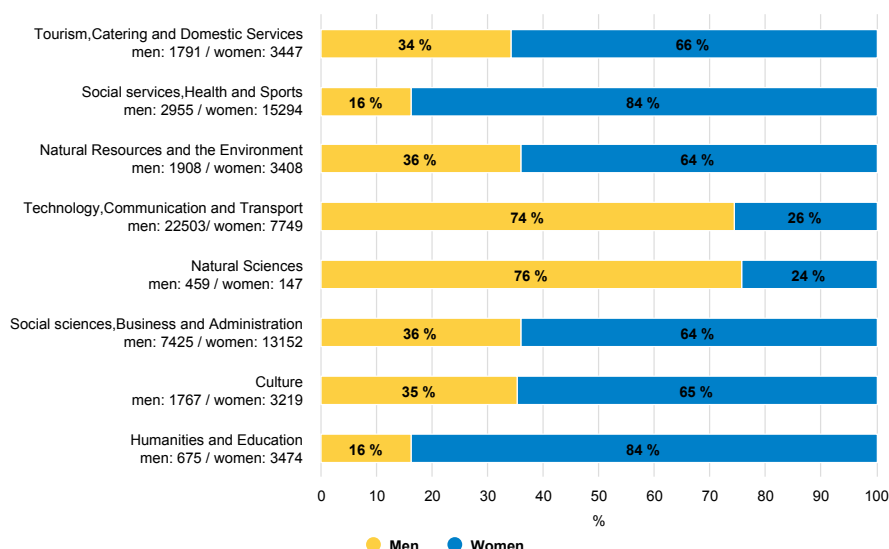
51. European Commission, Eurydice, 2021. Retrieved 2021-11-08: https://eacea.ec.europa.eu/national-policies/eurydice/content/organisation-vocational-and-technical-upper-secondary-education_en

Finnish VET consists of ten 'fields of education', which in themselves include one or more specialisations with the option of different types of qualifications.⁵² These are Education (specialist vocational qualification: driving instructor training); Humanities and Arts (handicrafts, music, circus, dance, theatre); Social Sciences (vocational qualification: library and information services); Business, Administration and Law (business, entrepreneurship, leadership); Natural Sciences (Nature and Environment), Information and Communication Technologies (ICT); Technology including (a) Architecture and Construction (Construction, Building Technology, Land Survey); (b) Mechanical, Process, Energy and Electrical Engineering (Vehicles, Mechanical and Industrial Engineering, Electrical Engineering), and (c) Process, Chemical and Materials Engineering (Food Sciences, Material Technology, Textiles and Clothing Technology); Agriculture and Forestry (Equine industry, Agriculture, Forestry, Horticulture); Health and Welfare (Social and Health Services, Welfare, Education and Guidance); and Service Industries (a) Personal Services (Hair and Beauty Services, Domestic Services, Hospitality and Catering, Tourism, Sports, Cleaning Services); (b) Security Services, and (c) Transport Services (Transport, Logistics, Maritime).

Girls and boys in VET programmes in upper secondary school

The following figure⁵³ shows the gender distribution among new pupils in Finland in 2020 in the different fields of education:

Figure 5. Finland: Admitted to VET programme, by sex (percentage/number), 2020



52. More information about the different fields of education: <https://studyinfo.fi/wp2/en/vocational-education-and-training/fields-of-vocational-education-and-training/>

53. Figure 5 is based on the number of newly admitted pupils in different fields of education in 2020 and shows the grand total of pupils, i.e. including those from Vocational upper secondary qualifications, Further vocational qualifications, and Specialist vocational qualifications. Data for the figure was retrieved on 9 November 2021. https://vipunen.fi/en-gb/_layouts/15/xlviewer.aspx?id=/en-gb/Reports/Ammatillinen%20koulutus%20-%20uudet%20opiskelijat%20-%20koulutusala_EN.xlsx

Figure 5 shows that girls or boys dominate in some fields of education, while others have a more even gender distribution. In Technology, Communication and Transport, 74 per cent of pupils are boys. In Social services, Health and Sports, 84 per cent of pupils are girls. The statistics do not provide any information on specialisations in these programmes.

Iceland

Brief history

From around 1910 to the 1970s, there were two main types of upper secondary school in Iceland: the traditional upper secondary school that led to a high school diploma which gave entry to higher education, and schools that issued apprenticeship completion certificates.⁵⁴ In the 1970s, a third type of upper secondary school was developed which offered both academic and VET programmes. This comprehensive school model was developed in part to make it easier for pupils to switch between different types of programmes.⁵⁵ From the 1970s, there has been a gradual convergence between VET and academic education in upper secondary schools. The most recent reform of upper secondary schools, which occurred in 2008, aimed to make the status of academic programmes and VET programmes more equal and increase opportunities for pupils in VET programmes to also obtain the entry requirements for higher education by studying for the national high school diploma.⁵⁶ This endeavour to increase the attractiveness of VET has existed ever since the amendment to the law on compulsory schooling in 1946, but the various initiatives have not been successful.⁵⁷

Current model

There are currently over 80 different VET programmes to choose from in upper secondary school in Iceland.⁵⁸ The programmes are between one and four years in length, depending on their specialisation.⁵⁹ Teaching in the VET programmes is both theoretical and practical, and includes both general academic subjects and theoretical and practical studies in the VET programme's specialisation. The number of courses in the VET programmes varies depending on the specialisation chosen.⁶⁰ A qualification from a VET programme does not automatically provide the entry requirements for further study in higher education, but the entry requirements can be obtained by studying for a high school diploma in addition to the VET programme. For occupations requiring certification, there is the option of an apprenticeship completion certificate, while qualifications obtained from completing other VET programmes result in various kinds of licenses for employment in specific occupations.⁶¹

54. Jónasson & Óskarsdóttir, 2016.

55. Jónasson & Óskarsdóttir, p 18, 2016.

56. Jónasson & Óskarsdóttir, p 18, 2016.

57. Jónasson & Óskarsdóttir, p 27, 2016.

58. Jónasson & Óskarsdóttir, 2016.

59. European Commission, Eurydice, 2021. Retrieved 2021-11-08: https://eacea.ec.europa.eu/national-policies/eurydice/content/organisation-general-upper-secondary-education-24_en

60. European Commission, Eurydice, 2021. Retrieved 2021-11-08: https://eacea.ec.europa.eu/national-policies/eurydice/content/teaching-and-learning-vocational-and-technical-upper-secondary-education-0_en

61. European Commission, Eurydice, 2021. Retrieved 2021-11-08: https://eacea.ec.europa.eu/national-policies/eurydice/content/assessment-vocational-and-technical-upper-secondary-education-0_en

Girls and boys in VET programmes in upper secondary school

The following figure⁶² shows the gender distribution of pupils in different VET programmes in Iceland at the start of the school year in 2015-2017:

Figure 6. Iceland: Admitted to VET programme, by sex (percentage/number), aggregated 2015-2017

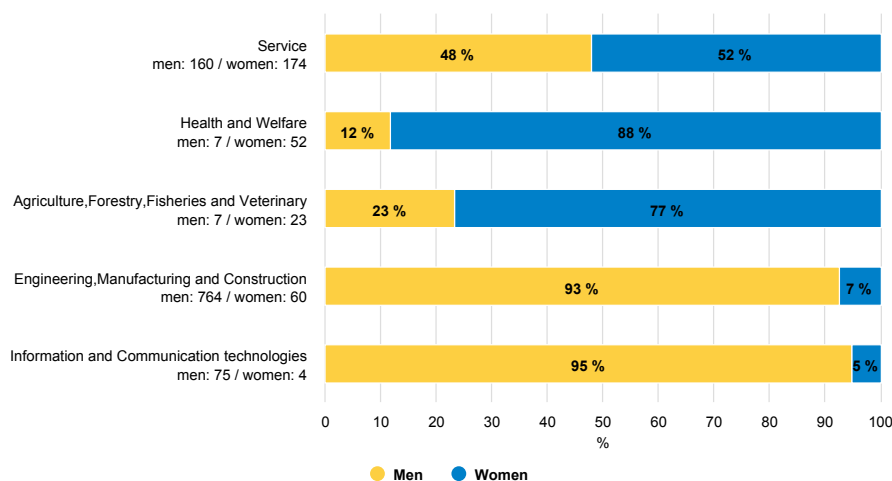


Figure 6 shows how boys dominate in certain VET programme areas and girls in others. However, the number of pupils on which the figure is based is low, given the total population.

The figure shows that boys are in a clear majority in Engineering, manufacturing and construction, where 93 per cent of the total 824 newly admitted pupils are boys, and in Information and communication technologies where 95 per cent of the 79 newly admitted pupils are boys. Girls are in a clear majority in Agriculture, forestry, fisheries and veterinary where 77 per cent of the 30 newly admitted pupils are girls, and in Health and welfare where 88 per cent of the 59 newly admitted pupils are girls. In Services, the balance between boys and girls is relatively even. The statistics do not provide any information on specialisations in these programmes.

62. The data for the figure is based on the number of 16-year-old pupils admitted for the first time at upper secondary level and registered in Statistics Iceland's student register for the school years 2015-2016, 2016-2017 and 2017-2018. Because the numbers of pupils are so low, three school years have been combined to form the basis for the figure. Data retrieved 2021-11-08. https://px.hagstofa.is/pxen/pxweb/en/Samfelag/Samfelag_skolamal_3_framhaldsskolastig_0_fsNemendur/SKO03110b.px/?rxid=5f13c518-9136-4d85-8938-a5c0b3d9c125

Norway

Brief history

The Norwegian VET model is a kind of hybrid model where VET has features of comprehensive school, since pupils are not divided into an academic or a VET stream until after their first two years in upper secondary school. At this point, strong elements of apprenticeship schemes come in, since the next two years can be studied entirely as an apprenticeship in the workplace. The option is also available to supplement an apprenticeship with university entry requirements through one more year's theoretical studies, which further accentuates the comprehensive school model in Norway's upper secondary school VET.

Historically during the post-war period, VET in Norway has been heterogeneous, where certain specialisations have been controlled and organised by the state, while other orientations have emerged as parallel pathways outside the state school system.⁶³ In the 1990s, school-based VET was integrated into a more comprehensive upper secondary school, but apprenticeship training was still provided outside the school. As a result of the 1994 reform, apprenticeships were also included in upper secondary schools and the 2+2 model (see below) was introduced.

The current model

VET programmes in Norway are generally four years long⁶⁴, and are based on the 2+2 model where two years of theoretical studies are followed by two or three years of workplace-based learning. Pupils therefore structure their studies in different ways, and the first two years of theoretical studies can be followed by further studies, whereupon the pupil will gain the entry requirements to higher education after passing their exams. The first two years of study are followed either by two years of apprenticeship in a workplace, or by school-based learning in a VET specialisation.⁶⁵ Depending on how the individual pupil's programme is structured, with either apprenticeship or school-based learning, the pupil receives either a trade certificate, a journeyman's certificate, or a Certificate of Upper Secondary Education.⁶⁶ About half of all pupils study a VET programme in Norway, but only one third of them complete the training and receive some kind of certificate within five years.⁶⁷ Another one third of the pupils choose to switch to a university preparation stream, and the final third drop out of school.⁶⁸

Most of the VET programmes do not give entry requirements to higher education, but since there is an opportunity to supplement these programmes with a third year of theoretical studies, it is possible to obtain the entry requirements to higher education after the 2+2 years have ended.

In Norwegian upper secondary schools, from 2021 there are ten VET programmes:⁶⁹
Building and Construction; Electrical engineering and computer technology;

63. Helms Jørgensen, 2018a, p 14.

64. Björk-Åman, Holmgren, Pettersson and Ström, 2021, p 100.

65. Nord- VET - The Future of Vocational Education in the Nordic countries, 2016, p 15.

66. More specific information about the different orientations: <https://www.udir.no/utdanningslopet/videregaende-opplaring/>

67. Nord- VET - The future of Vocational Education in the Nordic countries, 2016, p 16.

68. Nord- VET - The Future of Vocational Education in the Nordic countries, 2016, p 16.

69. For more information, see the website of the Norwegian Directorate for Education and Training: <https://www.udir.no/laring-og-trivsel/lareplanverket/forsok-og-pagaende-arbeid/ny-tilbudsstruktur-i-fag--og-yrkesopplaringen/>

Hairdressing, floral, interior and retail design; Healthcare, childhood and youth development; Handicraft, design and product development; Information technology and media production; Agriculture, fishing and forestry; Restaurant and food processing; Sales, service and tourism; Technological and industrial production.

Girls and boys in VET programmes in upper secondary school

The following figure⁷⁰ shows the gender distribution of pupils in the different VET programmes in Norway in 2020:

Figure 7. Norway (pupils): Admitted to VET programme, by sex (percentage/ number), 2020

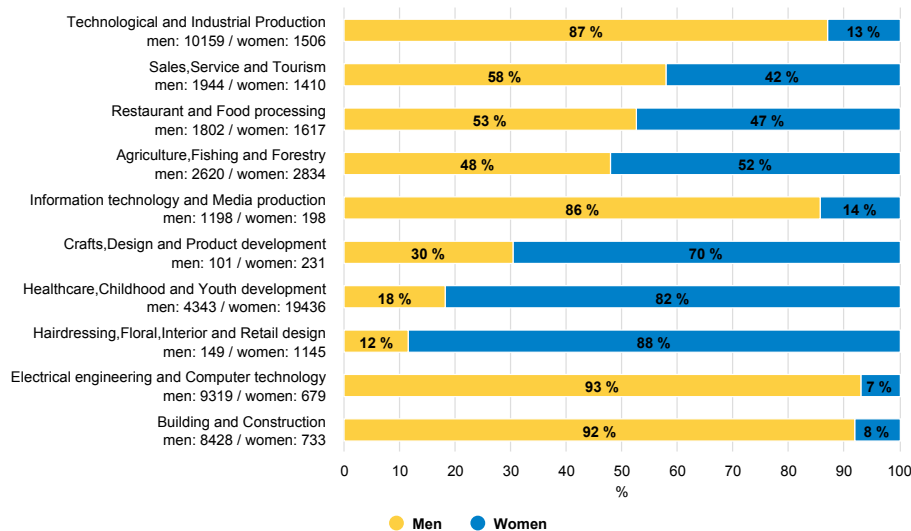


Figure 7 shows clearly how boys or girls dominate in some of the VET programmes. In some of the programmes, boys are in the clear majority, and in other programmes girls are in the majority.

In Electrical engineering and computer technology, 93 per cent of pupils are boys. In Building and Construction, 92 per cent of the pupils are boys. In Technological and industrial production, 87 per cent of pupils are boys. In Information technology and media production, 86 per cent of pupils are boys. In Hairdressing, floral, interior and retail design, 88 per cent of pupils are girls. In Healthcare, childhood and youth development, 82 per cent of pupils are girls.

The most evenly balanced VET programmes are Restaurant and food processing (53 per cent boys), Agriculture, fishing and forestry (48 per cent boys), and Sales, service and tourism (58 per cent boys), where the proportions of boys and girls are almost equal. The statistics do not provide any information on specialisations in these programmes.

70. The figure is based on data in Table: 13159: Pupils, apprentices and trainees in upper secondary education, immigrants and Norwegian-born to immigrants, by sex, education programme, contents and year: <https://www.ssb.no/en/statbank/table/13159/> In the interests of clarity, only data for the distribution between men and women listed as pupils in 2020 is shown. Note that pupils are categorised differently depending on where in their course of study they are. Table retrieved 2021-10-29

Sweden

Brief history

The starting point for the structure of the Swedish model is the goal of basic educational equality. Against the background of the reforms in the 1960s, the former vocational schools and upper secondary schools were merged in the early 1970s⁷¹ and all the programmes were placed in the same organisation until 1994. The upper secondary school was divided into a higher education entrance stream, and a VET stream, which did not give entry to higher education. In 1994, the upper secondary school was changed. The VET programmes were made into three-year programmes and until 2010 all national upper secondary programmes, including VET programmes, prepared pupils for entry into higher education in that passing the exams provided the entry requirements to higher education. This changed in 2011, when a division into different streams was instituted again, but where there was the option of studying the courses required for entry to higher education as part of VET programmes. Over the past 30 years, Swedish welfare and education policy has changed greatly, and Sweden has moved from having one of the OECD's most centralised education systems to having one of its most decentralised systems, with by comparison very strong free market elements.⁷² This has meant that Swedish upper secondary schools today are highly competitive, but the welfare state model remains apparent, for example, in the values communicated in education.⁷³

In 2011, the reform introduced a slightly different model where apprenticeship programmes were now offered in upper secondary schools. In apprenticeship programmes, a larger part of the training is carried out in a workplace, which means that these programmes do not lead to the pupil having the entry requirements for higher education.

Current model

VET programmes in Sweden are three-year programmes and today most of these programmes primarily use school-based learning (87 per cent), while a smaller proportion use workplace-based learning (13 per cent).⁷⁴ Workplace-based learning must be part of all VET programmes. 28 per cent of all pupils in upper secondary school are completing a VET programme, 3 per cent are completing apprenticeships, and 72 per cent of these two categories graduate after 3 years.⁷⁵ These VET programmes can be completed in the form of apprenticeships, in which case more than half of the programme must be workplace-based. Apprenticeships and VET provide the same vocational qualifications.

In Sweden's upper secondary schools, there are 18 national upper secondary school programmes, 12 of which are VET programmes: Child and Recreation programme; Building and Construction; Business economics and management; Electricity and energy; Vehicles and transport; Business and Administration; Handicraft; Hotel and Tourism; Industrial Technology; Natural Resource Use; Restaurant Management and

71. For a description of these reforms, see Larsson, 2020.

72. Lundahl, Erixon Arreman, Holm, & Lundström, 2013.

73. Lundahl, et al., 2013.

74. Björk-Åman, et al., 2021, p 100.

75. Björk-Åman, et al., 2021, p 100. However, note that this depends on how you calculate, making exact comparisons difficult to do.

Food; HVAC and Property Maintenance; Health and Social Care.⁷⁶ In addition to these 12 VET programmes, there are a number of nationwide recruitment programmes in aeronautics, marine technology, maritime shipping, rail technology, Sami industries and professional dance, but only a very small number of pupils are admitted to these programmes.

Girls and boys in VET programmes in upper secondary school

The following figure shows the gender distribution of pupils in the various VET programmes in Sweden in the school year 2019-2020:

Figure 8. Sweden: Admitted to VET programme, by sex (percentage/number), 2019

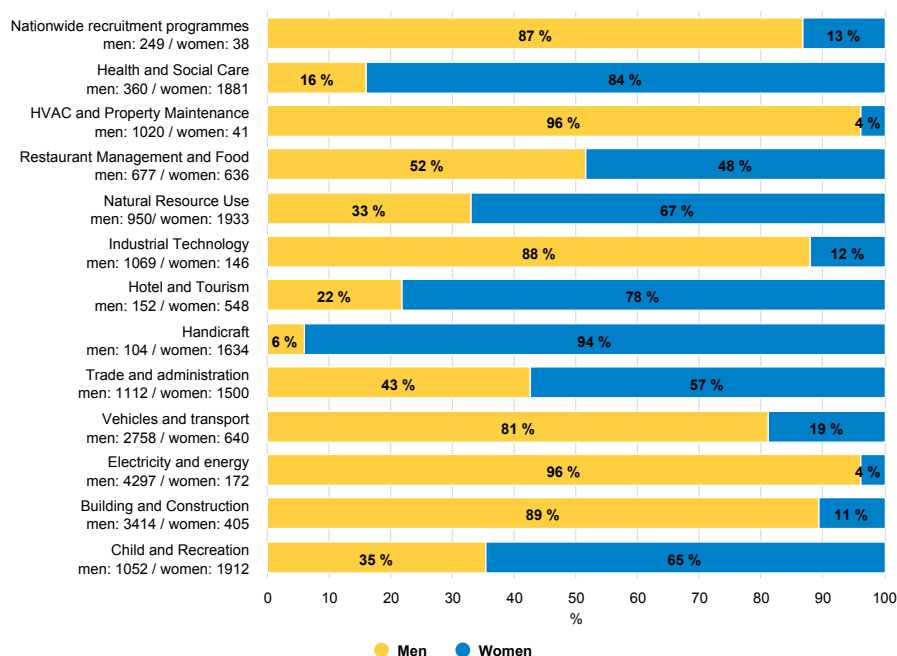


Figure 8⁷⁷ shows clearly how boys or girls dominate in some of the VET programmes. In some of the programmes, boys are in the clear majority, and in other programmes girls are in the majority.

The gender imbalance is greatest in the HVAC and Property Maintenance programme. In this programme, 97 per cent of pupils are boys. The gender imbalance is essentially the same for the Electricity and energy programme, where 96.5 per cent of the pupils are boys. In Building and Construction, 90.6 per cent of the pupils are boys. In the Industrial Technology programme, 89 per cent of the pupils are boys. In the Vehicle and Transport programme, 82 per cent of the pupils are boys. In the Handicraft programme, 93.6 per cent of the pupils are girls. In the Health and Social

76. For more detailed information about these VET programmes, see the Swedish National Agency for Education page in Swedish on upper secondary school programmes: <https://www.skolverket.se/undervisning/gymnasieskolan/laroplan-program-och-amnen-i-gymnasieskolan/gymnasieprogrammen>

77. The figure is based on the data in the Swedish National Agency for Education Table 3 A: Pupils admitted to their first choice (starting upper secondary school year one on 15 October 2019) in the school year 2019-2020, by sex. Table retrieved 2021-10-28. <https://www.skolverket.se/skolutveckling/statistik/sok-statistik-om-forskola-skola-och-vuxenutbildning?sok=SokC&verkform=Gymnasieskolan&omrade=Skolor%20och%20elever&lasar=2019/20>

Care programme, 75 per cent of the pupils are girls. In the Hotel and Tourism programme, 74 per cent of the pupils are girls. In the Natural Resource Use programme, 67.5 per cent of the pupils are girls. In the Child and Recreation programme, 62 per cent of the pupils are girls.

The most gender-balanced VET programmes are Restaurant Management and Food and Business and Administration, where the proportions of boys and girls are almost equal. The statistics do not provide any information on specialisations in these programmes.

General summary

At the overall level, it appears that some areas can be identified where it is interesting to note that they differ or are similar in the different Nordic countries. One of the similarities is that the education systems of the Nordic countries have developed as part of the development of the welfare state. In all these countries, VET continues to have strong ties to the ideal of the welfare state while also responding to the needs of the labour market. There are clear ideas about the status of VET needing to be improved, and that VET needs to also produce employable labour that is in demand in the labour market. One of the major dividing lines between the countries is how strong the divide is between a VET stream and an academic stream at upper secondary level. But this is also an example of how the Nordic countries relate to ideas about how education systems can and should function when the aim is both welfare in general and continuing, strong economic development. The starkest opposites are seen in the differences between Sweden (mainly before 2011) and Denmark, where historically the organisation of VET in Sweden's case has been under the same umbrella as academic stream upper secondary education; while historically Denmark has had parallel systems where VET has been organised and offered alongside academic stream upper secondary education. Another area in which these countries differ is the option of gaining entry requirements to higher education in VET qualifications. This is linked in part to the countries' different ways of dealing with the issue of social inclusion and equity. This issue encompasses the question of how young people should be best encouraged to stay in upper secondary school so that they leave with a qualification.

One of the most striking similarities in VET in the Nordic countries appears to be the numbers of boys and girls studying in different VET areas. The statistics presented show great similarities in the areas where boys and girls dominate, and in boys generally having a stronger dominance. In energy, industry, construction and engineering, for example, almost total dominance by boys is seen. It should also be noted that in most countries these VET areas have a very large number of pupils compared to many of the other areas in which far fewer pupils study. Girls instead dominate in the area of health and social care. It is also interesting to note that in the areas of services and administration, there is generally a more equal balance between the sexes in the Nordic countries.

Interventions to combat gendered educational choices in Nordic VET

This second part of this report describes examples of interventions implemented to combat gendered educational choices in VET in a variety of ways. It is not entirely easy to describe such interventions, partly because VET is organised in such different ways in the different Nordic countries. It is also not easy because these interventions can be very different and what is and is not an intervention is open to interpretation. In addition, many similar interventions are implemented in the Nordic countries. For these reasons, a selection has been made with the aim of creating a basis for further discussion of the challenges and opportunities for work to reduce gender imbalances in Nordic VET and working life associated with VET.

The interventions have been selected to be broadly representative of the Nordic countries, to represent a variety of sectors in the labour market and, finally, to represent a variety of methods, target groups and objectives in the interventions. The interventions selected are ongoing or have concluded in the last six years. The time period was limited to ensure that the interventions presented are current and aligned with current legislation, particularly legislation on discrimination. These initiatives are ones that focus on VET at upper secondary school level and the choice of VET programme, to remain in keeping with and relevant to the overall focus of this report on VET at upper secondary school level for young people. The information on which the descriptions are based was derived from the websites and reports referred to in the text and footnotes.

Gender equality and governance in and through education

The governance, organisation and follow-up of education systems in the Nordic countries result from the different ways in which the Nordic countries are governed and the policies pursued. Therefore, the conditions for different types of interventions to reduce gender imbalances in education and working life are different. Factors such as national, regional or local governance of schools, the market's impact, the involvement of the social partners, etc., afford different opportunities and create different challenges in work to reduce gender imbalances in VET in the Nordic countries.

Interventions to reduce gender imbalances in working life and education in the Nordic countries are largely implemented as part of overall policy strategies. These interventions are often not confined to specific industries, occupational groups in schools, or girls as a group or boys as a group, but instead take their starting point in policy on gender equality, anti-discrimination and education. Such gender mainstreaming strategies⁷⁸ are apparent in most policy texts and other action plans relating to education. In the Nordic countries, there are formulations at an overall and, in some cases, detailed level on how gender equality is to be achieved in and

78. For more information on gender mainstreaming in Europe, see for example EIGE: <https://eige.europa.eu/gender-mainstreaming/what-is-gender-mainstreaming>

through the school system in different types of Acts concerning gender equality, anti-discrimination and schools. Combating gendered educational choices is an area that is mentioned specifically, for example in connection with work in schools to counter gender stereotypes and in connection with study and vocational guidance counselling in schools.

One way of steering towards gender equality at a slightly more detailed level is through the formulation of each country's curricula. In Sweden, for example, the curriculum for upper secondary school and thus for upper secondary VET will change (as of July 2022) in order to strengthen gender equality efforts in and through the school system.⁷⁹ The gender perspective of the curriculum is to permeate education as a whole and teaching, and this applies to education and training that takes place in schools as well as in the workplace. The formulations deal with work that needs to be done at several levels, in the organisation of education and teaching and its content, with the aim of preventing gendered patterns from limiting pupils' choices.

In other words, gender equality as a policy objective – formulated in terms of the Swedish school system combating gendered patterns, spreading knowledge about limiting norms and preventing sexism – must be put into practice in schooling, regardless of whether the teaching takes place at the school or in a workplace. As part of the school's mission, as written in the curricula, there are a number of actors (public authorities, administrations, private and public schools, private and public labour market players), all of which are expected to include, support and translate gender equality strategies into reality. Although the implementation of gender equality policy varies from one Nordic country to another, its main features are similar in all of the countries.

For example, in Norway's *Opplæringslova* (Act relating to Primary and Secondary Education and Training – the Education Act), there are formulations which establish that education must promote gender equality. From 2020, new curricula have been applied in Norway, and these have been developed with a focus, among others, on the school working to promote gender equality in society by developing gender-neutral content. The Icelandic curriculum for compulsory school includes aims to prepare both men and women for having the same opportunities for participation in society, family life and the labour market.⁸⁰ These formulations are based on the Icelandic Act on Equal Status and Equal Rights Irrespective of Gender, which specifically addresses the issue of educational choices.⁸¹

However, policy instruments to promote gender equality in and through the school are not solely in the form of direct formulations in education policy, but also in various types of commissions of inquiry and action plans. In Denmark, for example, a commission of inquiry was established in 2016 to identify development goals and propose initiatives aimed at speeding up progress towards gender equality being incorporated into the entire education chain.⁸² As part of the Danish Government's strategy to combat sexual harassment, from 2020 onwards the Ministry of Children and Education is going to implement many initiatives. Among other things, ways of identifying the challenges related to sexual harassment and education practices will

79. More information in Swedish about the changed curricula and syllabuses from the Swedish National Agency for Education: <https://www.skolverket.se/undervisning/grundskolan/aktuella-forandringar-pa-grundskoleniva/nytt-i-laroplanernas-inledande-delar-2022>

80. *Opplæringslova* 2016 Section 1.1 and the Icelandic national curriculum guide for compulsory schools – General section.

81. See specifically Article 15 on education and schooling: <https://www.government.is/library/04-Legislation/Act%20on%20Equal%20Status%20and%20Equal%20Rights%20Irrespective%20of%20Gender.pdf>

82. Ministry of Children and Education, 2017, p 4.

be strengthened, and dialogue will be conducted with sectors in which sexual harassment is particularly prevalent. This is also in line with the recommendations made in the Danish Institute for Human Rights report "Minority genders in vocational education"⁸³ (available only in Danish) to strengthen the psychosocial work environment and to target efforts at combating gender stereotypes in VET.

Study and vocational guidance counsellors are described here as having an important role to play in combating gendered educational choices, but the guidance they provide needs to be examined and may need to be developed so that greater knowledge of gender and gender equality is included. The commission of inquiry's report identifies norms and ideas in study and vocational guidance counselling as important to challenge, so that gendered educational choices can be challenged.

General interventions across all sectors

Many interventions to reduce gender segregation in VET and the labour market take a broad approach and do not focus solely on one sector. Instead, gender segregation in the labour market is framed as a problem, and many of the interventions often involve a focus on VET programmes and the gender imbalances that prevail there. It should be pointed out that some of these interventions do not focus solely on VET in the first instance but on the gender-segregated labour market, where VET is often included as part of the picture of the problem. Some of the interventions tend to target girls as a group and some target boys as a group, while others have not been limited to one or the other of the sexes.

#KVENNASTARF – Icelandic role models for more women in male-dominated occupations

The intervention #Kvennastarf is based on the idea that there are certain occupations that can be categorised as "women's work" and others as "men's work". "Women's work" has been used as a concept in naming the campaign, which offers descriptions of all jobs as women's work in order to challenge limiting notions that men and women cannot work in all occupations.

Goal: The overall goal of the intervention is to get more women to choose VET programmes in which currently an overwhelming majority of men are studying. Male dominance is greatest in engineering and industry in particular, where there is also a great shortage of labour. The intervention is part of a broader effort among VET schools in Iceland to increase the number of skilled workers and to induce 30 per cent of compulsory school pupils to choose VET by 2030. If the number of women in VET increases, the total number of pupils in VET will also increase, which is likely to lead to more skilled labour and thus have positive effects on the Icelandic economy.

Target group: Girls in comprehensive school are the primary target group, but there is a somewhat broader focus on attracting more individuals to VET in general. Compulsory school pupils are therefore the broader target group for the campaign.

Method: The campaign started in 2017, but is ongoing, mainly through the

83. Zuleta, Steffensen, Holte Kristensen, Maskell and Bjørnholm, 2020.

campaign's Facebook page. The initial idea was to draw attention to women who already work in male-dominated occupations in order to share positive role models. Interviews with women in male-dominated occupations are the basis of the campaign, which involved both bus stop poster advertising and a Facebook page in 2017. Today there are over a hundred stories to read on the campaign's Facebook page, where women in traditionally male-dominated occupations share their experiences. To draw attention to the extent of the gender segregation, statistics on how many men and women are currently studying selected VET programmes, such as programmes in electronics, metals engineering and sound engineering are presented on the campaign website.

Actors: All 13 VET schools in Iceland are part of the campaign, as well as some sector actors and government agencies.⁸⁴

For more information on the intervention, see the website (in Icelandic): <https://kvennastarf.is>

Mer plats! (more room) – Changing gender norms in Finnish VET schools

The project titled "More room! – Changing gender norms in VET schools" ran between 2018 and 2020 and came out of the gender segregation that exists in the Finnish labour market with female-dominated and male-dominated sectors, and a similar segregation at all levels of the school system. A fundamental question in the project was whether women are free to choose a male-dominated sector or men a female-dominated sector. The project has finished, but the web-based material it generated remains accessible on the website.

Goal: The overall goal of the project was to change gender norms in VET schools. By focusing on those who work in these schools, the aim of the VET programmes and materials developed and implemented within the project was to make it easier for teachers in VET to work with issues of gender equality, equity and equal treatment.

Target group: Staff teaching in VET programmes were the target group of the project.

Method: Continuing professional development courses were provided to staff working in VET, and web-based training material was created for VET teachers. The online material was given the name "everyone's occupations" and consists of self-tests, a knowledge bank, best practices, tips on links, etc. In the self-test, teachers can test how far they have come along the 'gender equality path'. The toolbox includes checklists for individual teachers and teams, ideas for reviewing teaching materials, exercises to do with pupils and colleagues, and best practice in teaching methods and solutions for learning, teaching materials, questionnaires and electronic systems, the school's facilities, assessment, language use and multilingualism, and finally interaction and treatment. The material also includes FAQs with tips on how to reflect on resistance to gender equality efforts among colleagues and pupils.

Actors: The project was financed by the Ministry of Education and Culture and was carried out by Ekvalita in cooperation with five different vocational education institutions.⁸⁵

84. For a complete list of partners (in Icelandic), see : <https://kvennastarf.is/samstarfsadilar/>

85. For a complete list of partners, see: <https://ekvalitaeducation.fi/sv/merplats-se/>.

For more information on the intervention, see the website (in Swedish): <https://ekvalitaeducation.fi/sv/merplats-se/>

FIU-Equality – mentoring to reduce gender segregation in the Danish labour market

This ongoing collaborative union-based intervention takes as its starting point the highly gender-segregated labour market in Denmark, and focuses on occupations in the metalworking, health care, trade and services sectors.

Goal: The overall goal of the intervention is to break the strong pattern of gender segregation in the Danish labour market. The intervention hopes to achieve this by supporting and motivating young working people.

Target group: The intervention targets young working people, including pupils and apprentices, who belong to the under-represented sex in occupations with a strong predominance of either men or women.

Method: Mentoring programme where young working people (and trade union members) apply for and receive support from a mentor, that is, someone who is older and has experience from the occupation, by meeting or just talking about once each month for six months. The mentor is either someone from the union or someone who works in the occupation and can provide advice and inspiration.

Actors: FIU-Equality, which is a partnership between the Danish Metalworkers' Union (Dansk Metal), the National Federation of Trade Unions in the Service Sector (Serviceforbundet), the United Federation of Danish Workers (3F), the Danish Nurses' Organization and HK Denmark, a Danish trade union representing clerical workers, workers in retail, and in related industries.

For more information on the intervention, see the website (in Danish): <https://fiu-ligestilling.dk/mentor/>

Breaking down the barriers: Reasons for young people's educational choices and ways of reducing gender segregation in educational and occupational fields

This now concluded research and change project (2017–2019) was based on the highly gender-segregated labour market in Finland. The project focused on explaining the gender segregation and making recommendations to change it based on research results.

Goal: The overall goal of the project was to reduce gender segregation in education and in the labour market. More specifically, the research project aimed to generate data on young people's perceptions of different occupations, with a particular focus on the differences in young boys' and girls' understandings of occupations linked to their lives in general. The project aimed to improve the general understanding of what lies behind gender segregation in educational choices and in the labour market. Another aim was to develop recommendations and methods to try to reduce gender segregation.

Target group: The main target group for the project was young people, but the

project and its recommendations also address decision-makers, employer and worker organisations, lecturers in teacher education, study and vocational guidance counsellors, compulsory schools and upper secondary schools, and actors involved in young people's recreation activities.

Method: As part of the research project, literature studies and interviews with study counsellors were carried out. The final report includes recommendations to make different sectors more attractive to young people, regardless of gender. The project also produced three policy briefs. One of the methods for reaching young people was to try to communicate with them on their terms. Some memes targeting young people were developed in order to draw attention to gender, educational choices and occupations. The project encouraged the use of these memes on social media to help stimulate discussion for example.

Actors: Finnish Youth Research Society.

For more information on the intervention, see the website :

<https://www.youthresearch.fi/research-projects/breaking-down-the-barriers>

Nordic cooperation on gender equality in workplace-based learning

The cooperation project ran between 2017 and 2018 and its starting point was similar challenges in schools and the labour market in the Nordic countries regarding gender-stereotypical educational and occupational choices. The background to the project was the patterns seen in traditional educational choices and also the fact that pupils who make non-traditional educational choices are more likely to drop out of the programme. The cooperation was partly financed by the Nordic Council of Ministers through the Nordic Gender Equality Fund.

Goal: The goal of the project was to map interventions in the area of gender equality in workplace-based learning (WBL), share experiences and identify best practices.

Target group: The main target group consisted of teachers, school principals and WBL instructors in the workplace, but the project also targeted sector organisations, interest groups and public administrations.

Method: Through four conferences experiences were shared in the project group and with invited participants from schools, sector organisations, government agencies and interest groups. Between these conferences, national groups discussed how the experiences shared could be put into practice in the national context. A conference was held in each participating country. Information about the experiences shared in the group was then shared with the organisations that had participated in the project group and through those invited to the four conferences. The Swedish National Agency for Education managed the project and communicated the shared experiences in its programme boards and through them to sector organisations. In Iceland, the information was communicated to sector organisations through the participant IÐAN and through communicating knowledge with the policy level. In Norway, knowledge was spread through study counsellors to schools. In the Åland Islands, information was communicated directly to schools, and in Finland the information has been disseminated further within VET and government agencies. The shared experiences have also been put into practice in various ways in the work

of the organisations that participated. For example, Swedish National Agency for Education has developed its web-based WBL instructor training inspired by the shared experiences in this project, and the University of Iceland has introduced a module on gender equality for teachers and study and vocational guidance counsellors.

During the concluding workdays of the project, its results were mapped and documented jointly by the project group. The mapping showed that there is a great need to support both pupils and vocational education teachers and instructors in their work with gender equality within the framework of WBL. The mapping also showed that there is a general lack of systematic work such as action plans and skills training to strengthen work with gender equality in organisations and at the structural level.

Actors: The organisations involved in the project were IÐAN (Iceland), Akkershus fylkeskommun (Norway), the Ålands gymnasium (the Åland Islands), the Ministry of Education and Culture, Helsinki (Finland), YA – the Vocational College of Ostrobothnia (Finland), and the Swedish National Agency for Education (Sweden).

For more information on this intervention, see the report link under “Nordic projects on gender equality” on the Swedish National Agency for Education website (in Swedish): <https://www.skolverket.se/skolutveckling/inspiration-och-stod-i-arbetet/stod-i-arbetet/jamstalldhet-i-apl#h-Nordisktprojektomjamstalldhet>.

Concluding remarks

The interventions described above have all in different ways had an overall focus on gender equality measures to directly or indirectly influence gender imbalances in VET and working life. The interventions are all based on the gender imbalances that exist, but with slightly different focuses. For example, labour shortages and their economic consequences are one reason for focusing on gender equality measures to reduce gender imbalances in education and occupation choices in order to secure the nation’s future skilled labour needs. Pupils’ rights were also seen as reason for focusing on gender equality, equity and equal treatment efforts, thereby improving the study environment and having an impact on gender imbalances in educational choices.

Sector-specific interventions

Below are some examples of interventions in specific sectors.

Building, construction and installation

“Boss Ladies – rethink your skills” – Danish intervention for more women in the building, construction and installation sector

The Boss Ladies project ran between 2018 and 2021 and was a collaborative effort with interventions targeting both education and organisations. The starting point for the project was the shortage of labour in the sector in Denmark, which was anticipated to worsen over a ten-year period. Getting more women to apply to VET courses linked to the sector was a way of getting more skilled labour, which was expected to be beneficial for Denmark's growth. There were also many preconceptions that work in this sector was not suitable for women, which the project saw as a factor contributing to women not choosing these occupations.

Goal: The overall goal was to reduce labour shortages in the Danish building, construction and installation sector by motivating more young women to choose this occupational path. In light of the preconceptions about the sector, that these occupations were not suitable for women, the project aimed to stimulate cultural change so that young women would be more motivated to choose occupations in the sector. Furthermore, the project aimed to strengthen women's pride in their work and lay the foundations for improved well-being among women in VET related to the sector and occupations in the sector by responding to the challenges that women in the sector were experiencing.

Target group: The project focused mainly on young women who had not yet chosen an occupational path or upper secondary education. Some of the interventions also focused on teachers and staff in VET, as well as organisations and companies offering apprenticeships.

Method: Six different types of activities were carried out within the project.

- Boss Ladies Ambassadors consisted of 45 young women working in the sector who acted as role models by visiting compulsory schools, VET schools and specialised vocational centres. They shared their experiences and thoughts on the opportunities associated with being a woman in the sector. With the aid of project coordinators, some exercises were also carried out during these visits.
- Boss Ladies Internship consisted of a three-day internship for the oldest girls in compulsory school who had no connection to the sector through a relative, for example. The idea behind this was that girls who choose occupations in the sector have come into contact with the occupation through a close relative working in the sector. By offering an internship, girls were given the opportunity to try out an occupation in the sector in a local company.
- Learning Labs consisted of two training sessions targeting teachers, school managements, instructors and other employees in VET schools. The aim of the training sessions was to increase the participants' knowledge of what it is like to be a woman in the sector in order to give them tools to improve conditions for women in the VET they were providing. The training sessions provided examples of exercises and methods for bringing about change, as well as help in creating an action plan.
- Reverse Recruitment was a collaboration with organisations and companies offering apprenticeships where the aim was for these companies to make themselves more attractive to young women rather than the reverse. Boss Ladies helped to create networks between local VET schools, companies and young women seeking apprenticeships to assist them in getting an apprenticeship.

- Boss Ladies Talent Development targeted prospective ambassadors and consisted of an introductory course and mentoring offered to the ambassadors to provide them with vocational guidance and assistance in how to handle being a woman in a male-dominated industry.
- A New Narrative was about creating space for the voices of women in the sector to be heard in the media, thus enhancing the status of being trained in these occupations.

Actors: The project was run by a non-profit organisation *Foreningen Divérs* but was a collaboration between the organisation and a number of sector organisations, trade unions, schools and municipalities.⁸⁶

For more information, see the project's website (in Danish): <https://www.boss-ladies.dk/>.

Peabskolan in Gothenburg, Sweden – an intervention to promote gender equality in workplace-based learning

In view of the fact that pupils in workplace-based learning in VET programmes had identified the climate at Peab, a major construction company in Sweden, as sexist and racist, a knowledge-raising intervention was initiated throughout Peab, which is still continuing. All Peab's employees have thus benefited from the knowledge-raising efforts on gender equality, diversity and equal treatment. One of the starting points of the intervention was that the sector needs to be more inclusive in order to attract future employees, which is seen as a requirement for the sector to survive in the future.

Goal: The overall goal of the change project in the company is work that is more inclusive and conscious of diversity. More specifically, Peab wants to improve gender equality during the workplace-based learning that takes place in the company in order to improve the pupils' work environment while they are completing the workplace-based component of their programme of study.

Target group: The target group is employees of Peab. There is a particular focus on instructors in VET who have received special instructor training.

Method: A survey was carried out to increase understanding of the challenges and areas of risk throughout the company. Workshops and interviews with employees and pupils were conducted to gather information. Based on the survey, workshops were conducted with different sections of the staff on language use, norms and attitudes. Advanced courses on statutory responsibility for diversity and equal treatment were given to managers. There has been a particular focus on instructor training since the instructor is the link between the school and the company.

Actor: Peab.

For more information on the intervention, see the website (in Swedish) <https://peab.se/hallbarhet/manniska/mangfald-och-jamstalldhet/>. More information can also be found on the Swedish National Agency for Education website on gender equality in workplace-based learning.⁸⁷

86. For a full list of the partners involved, see <https://www.boss-ladies.dk/samarbejdspartnere>.

87. More information from the Swedish National Agency for Education (in Swedish): <https://www.skolverket.se/skolutveckling/inspiration-och-stod-i-arbetet/stod-i-arbetet/jamstalldhet-i-apl#h-Erfarenhetfranbranschenokajamstalldhetvidkompetensforsorjningochapl>

"Upplyst Sverige" (Enlightened Sweden) – Intervention against sexism and intolerance and for gender equality in the Electrical and Electronics sector

The background to this joint initiative was that the electrician trade is one of Sweden's most male-dominated trades, and that few girls apply for and complete the electricity and energy programme at upper secondary school.

Goal: The overall goal of the initiative is to make the electrical and electronics sector more gender-equal and modern so that both men and women feel equally comfortable seeking jobs in the sector. The aim is to attract more women to the sector and to bring about a change in the values and attitudes in the sector in order to eradicate sexism and intolerance.

Target group: The initiative has a broad aim to reach pupils in the Electricity and Energy programme, pupils who are about to choose programmes for upper secondary school, teachers and other staff within the Electricity and Energy programme.

Method: Through dialogue and participation in various forums, the intervention aims to draw attention to VET and the opportunities for cooperation to break patterns. Among other things, representatives of the initiative inform teachers in the Electricity and Energy programme.

Actors: The trade union Elektrikerna and the sector and employers' organisation Installatörsföretagen.

For more information on the intervention, see the website (in Swedish): www.upplystsverige.se

Kvinner i teknikk og håndverk – a network for girls in building and construction in Norway

Against the background of women being in the minority in building and construction, electronics and engineering, and industrial production, a women's network in these sectors was established in connection with the project *Jenter i bil og elektro* (Girls in the vehicle and electrical sectors) in 2010.

Goal: The overall goal of the network is to normalise the place of women in the building and construction sectors and in repair workshops.

Target group: The primary target group is girls choosing an occupational path, and therefore the network focuses its information campaigns on industry fairs, parent-teacher meetings and schools. During school visits, the information is also addressed to boys.

Method: The network runs information campaigns where they talk about what it is like to work in the occupations in this sector based on women's experiences, so that they can be role models to inspire more girls to choose building and construction, electronics and engineering, and industrial production as a VET focus.

Actor: Kvinner i teknikk og håndverk – women in engineering and trades.

For more information on the network, see the website (in Norwegian): <https://www.kvinnerith.no/om-oss/>

Healthcare, care and children

Nurses conducting school visits to encourage more boys to go into nursing and paramedic occupations in Iceland

Given that only about 3 per cent of nurses in Iceland are men, this initiative was launched with funding from the Gender Equality Fund.

Goal: The goal of the initiative is to increase the number of men who begin nursing and paramedic training to 20 per cent by 2030. More specifically, the goal is to change stereotypes about these occupations so that more boys apply for VET linked to these occupations.

Target group: Boys in grade nine who are choosing their upper secondary school programme.

Method: A group of nurses and paramedics make school visits in the Reykjavik area and the area around Akureyri. During the visits, workshops are conducted where boys in grade nine get an introduction to these occupations and they get to try out a range of related occupational practices. For example, they are taught how to perform cardiopulmonary resuscitation (CPR), they get to try out injecting with syringes, and are trained in how to perform the Heimlich manoeuvre.

Actors: Landspítali University Hospital, Faculty of Nursing at the University of Iceland and Faculty of Nursing at the University of Akureyri.

General information about the intervention can be found here (in Icelandic): <https://www.ruv.is/frett/2021/05/19/hnodad-sprautad-og-haemlikkad-i-hagaskola?fbclid=IwAR0ybF0TkUVr6KV1Uw1DfQdXfYcowKIXED5kFaFfrXUYEJE6ILxCTsFGi2k>

"Gör jämt i Vård- och omsorgscollege!" (Equality in health and social care college) – a toolbox for gender equality in the Swedish health and social care sector

In view of the high degree of gender segregation in the health and social care sector in Sweden and a shortage of labour, this initiative was taken to find new ways to make the sector more attractive. The vast majority of those working in health and social care in Sweden are women (four out of five) and boys more often drop out of the Health and Social Care programme than girls do.

Goal: The overall goal of the initiative is to create workplaces with a good, gender-equal work environment for all, and the initiative therefore aims to counteract gender-stereotypical expectations of women and men in these occupations and in the VET programme leading to them.

Target group: The material produced as part of the initiative targets management and staff in VET as well as workplaces.

Method: The initiative consists of a body of material that has been developed to support greater knowledge and how to work in VET and in the workplace with gender, gender equality and the gender-segregated labour market. The material produced is described as a toolbox. It contains information on the statutory basis for

working with matters of gender equality and non-discrimination. The material contains tips on what VET programmes and workplaces can do to make their communication more inclusive such as at trade fairs. The material also presents advice on how VET programmes can work from a value base and norm criticism in recruitment, during internships/placements, and in study and vocational guidance counselling, and how to retain pupils throughout the whole programme. The material includes a number of links to reference material that educators and workplaces are encouraged to refer to in their work.

Actors: Föreningen Vård- och omsorgscollege (health and social care college association), which is operated by Swedish Municipal Workers' Union (Kommunal) and the Swedish Association of Local Authorities and Regions (SALAR), Sobona (the municipal enterprise employers' association), Association of Private Care Providers (Vårdföretagarna) and Fremia (the employers' Association of Swedish co-operative and popular-movement owned enterprises, civil society organisations and partner-owned enterprises).

For more information on the intervention, see the website (in Swedish): <https://old2021.vo-college.se/dokumentbank/12851/1688?section=home>

"Lekeresurs" – encouraging boys to work in Norwegian preschools

In view of the fact that so few men work in preschools, an initiative began in 2009 in Lillehammer to increase the proportion of men in preschools in the long term. The resources developed need to be adapted to current gender equality and anti-discrimination legislation. Experiences from the project were gathered in 2015 and are now available as a resource.

Goal: The goal of the intervention was to give boys experience of working with children, and the long-term goal was to get more men to work in preschools.

Target group: The primary target group was boys in junior high school, but today the intervention would need to be open to applicants of both sexes because payment is offered. According to the initiative, boys should still be the group encouraged to apply for programmes that lead to work in preschools and the marketing of these programmes should be designed to attract boys.

Method: The project was carried out in many municipalities and in many different preschools. Boys were able to apply for a paid position as a *Lekeresurs* (play resource). The number of applicants exceeded the number of places available, and when the successful applicants started their positions, they were inducted into the workplace by a man working in the preschool. Once inducted, the boys functioned as play resources and were paid to play with the children. The project ended in 2015 with a national conference on the challenges and opportunities of recruiting and retaining men in preschools. An evaluation of the project was carried out and resource material was compiled so that the initiative can be continued by those preschools that wish to.

Actors: Today, the project has been further developed by the Centre for Equality (Likestillingssettret), Queen Maude University College of Early Childhood Education and the Eastern Norway Research Institute, along with a number of preschools.⁸⁸

88. For a complete list of the actors involved and the preschools, see the resource booklet: <https://dmmh.no/media/illustrasjonsbilder/for-barnehagene/lekeressurs-dmmh-web2.pdf>

For more information on the intervention, see for example (in Danish): <https://www.barnehage.no/dmmh-forskning-lekeressurs/lekeressurs-kan-oppfylle-tre-onsker-pa-n-gang/102517>

Forestry

Nettverk for unge skogkvinner under utdanning (Network for young women in VET in forestry) – Norway

In view of the fact that girls are almost always in the minority or even alone among boys in the forestry sector, there has been a need for a network for girls completing VET programmes in forestry. Therefore, in the winter of 2020-2021, a national network for girls in VET in forestry was established.

Goal: The network is as yet in its infancy, but aims to support and bring together girls completing VET in forestry and young women who have already trained in the sector.

Target group: Girls studying forestry in a VET programme and young women trained in forestry and working in the sector.

Method: Examples include network participants being offered a mentor, and a webinar being held.

Actors: Kvinner i Skogsbruket (Women in forestry) with funding from the administrations of six counties, Velg Skog, Stora Enso and the Landbruksdirektoratet (the agriculture directorate).

For more information on the intervention, see the website (in Norwegian): <https://www.kvinneriskogbruket.no/nettverk-for-unge-skogskolekvinner-under-utdanning>

Concluding remarks:

The above descriptions show that even in interventions targeting specific sectors, there are different starting points and, in particular, different target groups for the interventions. In the sector-specific interventions, the starting points are more universally ultimately about ensuring future access to skilled labour in the sector, which in many cases is also justified by the fact that this benefits the nation's growth as a whole. Since the sectors highlighted here are highly gender-segregated, the recruitment of men or women specifically to the sector is a way of increasing the prospects for a future good supply of skilled labour. Starting from this position, the different interventions have somewhat different focuses for achieving the goal of recruiting more of the under-represented sex to the occupations and the VET programmes associated with them. The examples include a number of interventions that involve highlighting role models, a number where work with fundamental values is in focus, and a number where communicating knowledge is central.

Gender analysis of the gender imbalances in VET

The report's descriptions of VET programmes in the Nordic countries are based on a binary gender model with a focus on showing how women as a group and men as a group are found in different programmes in VET to a very large extent. Figures 4–8 illustrate the dominance of women and men in different sectors, and that male dominance is generally stronger when present. This state of affairs is then reflected in the proportions of men and women in different sectors of the labour market (see Figures 1–2). However, descriptions based on a binary gender model that do not ask any other questions about the problem itself and its nature provide only a limited basis for further work to change the identified imbalances. This final analysis part of the report will therefore highlight some different research perspectives on the issue of sex, gender and VET. In addition, the interventions presented will be analysed and discussed *in general terms* on the basis of research on sex, gender and VET. In conclusion, a general reflection is presented on what needs to be taken into account in future interventions that aim to counteract gender imbalances in VET and the labour markets in the Nordic countries.

Gender perspective in VET

Gender segregation in the Nordic countries' education systems is very apparent in the statistics available. However, the gender problem is more complex than the proportions of boys and girls within and between different educational options. VET involves many practices where sex and gender gain significance for educational choices and the workplace, including the people involved in these. Sex and gender play a role in the organisation and governance of education, educational choices, how knowledge is understood and created, the way in which different areas of knowledge and school subjects are defined, the reiteration of norms and practices associated with instruction in schools and in workplaces, etc.⁸⁹ Shining a light on VET from the gender perspective is a way of trying to understand the quite stable gender segregation over time in different VET programmes and sectors in working life. The gender perspective foregrounds questions on conceptions of men, masculinity, women and femininity, and the aspects of power linked to this.⁹⁰

Analytically, the research often involves a division between vertical and horizontal gender segregation, which can be called a gender system.⁹¹ Horizontal segregation refers to women as a group and men as a group finding themselves in different education programmes and in different sectors in the labour market. Vertical segregation refers to the fact that women as a group and men as a group have different places in hierarchies in education and working life, where men are more often in higher and more prestigious positions and where men's work is more often

89. See for example Mellén, 2021; Mellén & Angervall, 2021; Martinsson & Reimers, 2020; Paechter 2007; Wernersson, 2007; Paechter 1998.

90. Hedlin, 2021.

91. See for example Hirdman, 2001.

valued more highly.⁹² In the case of VET, horizontal segregation into different VET specialisations has consequences for vertical segregation in somewhat different ways. One of the issues is that male-dominated VET programmes tend to provide advantages in the labour market, such as higher pay and better working conditions.⁹³ Another aspect is that VET is often seen as a way of solving the issue of social inclusion for young people who do not go on to higher education. However, this appears to be at the expense of gender equality and equity, since the horizontal gender segregation in VET contributes to the social reproduction of gender imbalances.⁹⁴

Gender segregation in VET is understood and discussed in public debate and in research as problematic from different angles. Depending on the way in which the issue is problematised, different solutions will seem to be more or less reasonable. Put simply, it could be said that the way in which an issue is problematised always incorporates the horizontal segregation, but does not always attach much importance to the vertical segregation. Gender segregation is then primarily framed as a social problem in terms of being a recruitment problem in the economy, where major sectors are suffering labour shortages which a more even distribution of the sexes could remedy because it would increase the recruitment base. An excessively horizontal gender segregation in the total labour force thus creates an imbalance in matching jobs with people in certain sectors, which is a problem. This framing does not need to involve a vertical social analysis of the imbalance in order to be valid as an economic problem. However, sometimes the vertical aspect is also woven in, in order to more broadly describe this as a problem of gender equality. The horizontal segregation is then also understood as a societal and individual problem of justice and fairness in living and working conditions for women as a group and men as a group. This problematisation embraces the negative consequences of the vertical segregation, which is also the case when the problem is framed as a broader gender equality perspective on how power and resources are structured in the society based on factors such as class, ethnicity, sexuality, age, function and gender.

Generally speaking, when explanations for the gender segregation in education are studied and discussed, the question is often framed as being about occupational and educational choices, focusing on the young people who are doing the choosing and the circumstances surrounding the choice itself. The focus in the research is then on girls' and boys' individual interests and characteristics, but it should be pointed out that it is difficult to establish any causal links in studies that have attempted to show how interests, attitudes and choices correlate.⁹⁵ Differences in performance in school are a factor that has often been highlighted, as well as how people evaluate their own abilities and whether this could be linked to their educational choices.⁹⁶ However, educational choices are also influenced by structures in the society and social factors such as social background and migrant background.⁹⁷ Research has also focused on how the education system itself influences and reinforces gender imbalances through its organisation as well as its teaching practices.⁹⁸

92. See, for example, Reisel, et al., 2015; Hedlin, 2021.

93. Reisel, et al., 2015.

94. See, among others, Reisel, et al., 2015; Helms Jørgensen, 2018b; Panican & Paul, 2019.

95. Reisel, et al., 2019.

96. Reisel, et al., 2019.

97. Reisel, et al., 2019.

98. See, for example, in Reisel, et al., 2019; Mellén, 2021.

However, when VET is studied specifically, boys more often than girls have been the focus.⁹⁹ In order to illustrate the importance of including perspectives that problematise the practices that occur in VET and how these relate to conditions and prospects in working life, two examples of studies that have explored VET from a gender perspective are provided here. When gender systems are studied in education in general, the focus is on different processes of influence and how masculinity and femininity are created and learned in key arenas for children and young people such as the family, peer groups and school.¹⁰⁰ One example of how VET has been specifically studied from a gender perspective and with a focus on girls, femininity and norms are Klope's¹⁰¹ studies focusing on the hairdressing programme in Sweden. Klope¹⁰² shows how femininity is negotiated in the intersection between the hairdresser occupation and the hairdressing programme. In order to fit the image of a female hairdresser, the girls in the hairdressing programme position themselves as beauty experts, that is, as someone with the right specialist knowledge, but where this knowledge is also steeped in norms of sex and class. Klope shows how girls negotiate between feminine-coded care and beauty practices and the position as 'marketable', both for customers and employers.¹⁰³ The work of hairdressing instructors in the VET programme's intersection between the school's gender equality task and its task to train the pupils to become employable practitioners also emphasises the somewhat contradictory aspects of the hairdressing programme.¹⁰⁴ The skills and knowledge come from a tradition outside the school that instead plays on and strengthens gender norms, while the school's governing documents emphasise the importance of the programme challenging such norms and countering them when they are limiting.¹⁰⁵

Another example of a study that investigates VET programmes from a gender perspective is Ledman, Rosvall and Nylund.¹⁰⁶ By studying the syllabuses of different VET programmes in Swedish upper secondary schools, Ledman and colleagues show how the knowledge the pupils are expected to learn in the VET programmes is sometimes different in female-dominated and male-dominated subjects. The study shows how the male-dominated programmes contain more knowledge that can be more clearly linked to recognised disciplines and subject areas. The female-dominated programmes instead contain more vague knowledge such as entrepreneurship and creativity. The authors argue that these differences risk reinforcing gender imbalances in education and working life.

These examples clearly point to the problems inherent in VET, which at the same time is supposed to combat gendered educational choices and limiting norms in schools, and produce employable labour that is viable in the labour market. It also points out that if the problem includes both the horizontal and the vertical dimensions of gender segregation, efforts to combat gender imbalances need to be made on several levels, covering VET, the labour market and the workplace, with a focus that involves the conditions and prospects in the different occupational practices. These examples are important to consider in relation to the line of

99. Ledman, 2020.

100. Paechter, 2007.

101. Klope, 2020; Klope, 2021.

102. Klope, 2020.

103. Klope, 2020, sid. 249.

104. Klope, 2021.

105. Klope, 2021.

106. Ledman, Rosvall & Nylund, 2018.

argument initially set out in this report concerning the function of education in a democracy and to economically benefit society. As illustrated, there are clear tensions in the intersection where both pupils and teachers find themselves – where the school's gender equality task and the VET programme's task to create employable school-leavers collide somewhat.

Reflections on the interventions presented

In the examples of interventions described above, many seem to be primarily based on a problematisation that foregrounds the consequences of horizontal segregation for the sectors' challenges in matching people to jobs. Some of these also justify their efforts and methods with the broader challenge of gender equality in the society that emanates from the skewed distribution of the sexes. However, this perspective is often somewhat side-lined and the methods are then adapted to what is presented as ultimately problematic; the methods aim to get more individuals of the under-represented sex (which in most cases is girls) to choose a specific VET programme. The methods themselves vary, but common to many of them is that they target the under-represented group. Sometimes this group is supposed to be attracted to the VET programme with the aid of role models who show that it is possible to be the occupation and work in the occupation and in the VET programme even if you belong to the under-represented sex. Sometimes this group is supposed to be attracted to the VET programme by getting to try out the programme's or the occupation's practices in the hope of arousing interest, which arises very often from an explicit or implicit notion that individuals in the under-represented group have not tried anything like it before. In other cases, those who have already made a choice against tradition are supposed to be encouraged to stay in the VET programme and the occupation aided by the support of a network of others of the under-represented sex in the occupation and in the VET programme.

With a few exceptions, the interventions included in this report have not been evaluated and, in the vast majority of cases, there is not sufficient data either to evaluate the impacts of the interventions. In addition, measuring the impact in terms of the possible direct or indirect effects of the interventions on pupils' educational choices would constitute a considerable methodological challenge. The report's reflections therefore do not say anything about the possible impacts of the interventions. However, it is relevant to reflect on the focus of the interventions from a gender perspective. Basing them on the under-represented group and addressing the interventions to this group is, as has already been said, in most cases about inducing girls to choose differently. In other words, girls are more often the focus and there is a risk that the interventions create an impression that girls choose wrongly. Taking this analysis to its extreme, it could be said that a risk with such interventions being so common is that girls as a group are understood as incapable of taking responsibility for both their own best interests and that of society. With this understanding of the problem, they also implicitly assume responsibility for their future, less-favourable position in working life with lower pay and status by virtue of their traditional choices.

Another aspect of the many interventions targeting the under-represented group is that they risk recreating stereotypical ideas about these groups, which in most cases

is probably also counter-productive. Interventions based on boys and girls being different from each other, regardless of what this is due to, risk consolidating these differences through the ways in which they address these groups and their calls for change. Common to these interventions is that in many respects they focus on the individuals of the sex they want to attract, and consequently the interventions can have a gendering effect on both those individuals and those who are already working in the occupation or studying the VET programme. Another way of expressing this is that many of the interventions focus on women and men, but not on the gender coding¹⁰⁷ that exists and is reproduced in VET programmes and in the workplaces and labour markets associated with them. Traditions, tasks and cultures in the occupations and in VET are linked to masculinity or femininity, which is not in itself something that automatically changes when the proportion of women or men in a particular industry changes.¹⁰⁸ In addition, the gender coding itself is linked to the way in which the work is valued, that is, vertical gender segregation. In order to change the gender coding itself, a focus on limiting and exclusionary norms and attitudes is needed instead.

However, some of the interventions focus on changing exclusionary and limiting attitudes and norms in either the VET programme or its associated sector of the labour market, or in some cases both. Where the focus is on the conditions in the sector, there is also more often an explicit focus on challenging the conditions that prevail in the workplace and in the workplace-based component of the VET programme. When this is the focus, the problematisation in the interventions is formulated in terms of either a gender equality problem, or more of an individual-based understanding of rights. Thus, these interventions also more often address issues of discrimination, bullying and sexual harassment. Although there is little research on sexual harassment and its impact on VET,¹⁰⁹ there are studies that point to sexual harassment being a problem in education¹¹⁰ and there is every reason to think about the influence of sexism and sexual harassment on workplaces. Interventions that focus on norms and values in the sector, on workplace conditions, and on the norms and attitudes that pupils in VET programmes come into contact with during workplace-based learning, but also during the theoretical part of their studies of practical subjects, thus enable exclusionary and limiting norms to be countered. Such a focus also enables limiting interacting norms concerning sexuality, function, class, ethnicity, age and other systems of power to end up in the spotlight while also being combated.

An overall reflection on the focuses of the interventions is that a one-sided focus on the issue of gender imbalances in VET as an economic problem that needs to be solved in order to assist with future problems in matching jobs to people and promote economic growth risks not addressing the limiting and exclusionary working conditions in the workplace and in VET. These interventions then also run the risk of being counter-productive by reiterating and reinforcing gender stereotypes about men and women as a group in the way that they address pupils and call for change, rather than focusing on gender-coded practices in the occupations and VET programmes themselves. If the vertical dimension of segregation is included as part

107. Härenstam and Björk, 2021, p 24.

108. Härenstam and Björk 2021, p 24.

109. An interesting exception is an ongoing research project studying understandings of sexual harassment among pupils in the Swedish education system's Hotel and Tourism programme. <https://lnu.se/mot-linneuniversitetet/aktuellt/nyheter/2020/12-miljoner-till-forskning-om-sexuella-trakasserier-av-kroganstallda/>

110. See for example Gillander Gådin and Stein, 2019; Zetterström Dahlqvist, Landstedt, Young and Gillander Gådin, 2015.

of the problematising, methods that challenge the content of limiting and exclusionary norms at several levels will be needed. This is about the gender coding of occupations and their practices, about generating knowledge in schools – linked to the vocational subjects specifically and to overall values – about the sectors' responses, about how the VET programme is organised and what choices exist, and so on. Despite the differences in VET in the Nordic countries, there are common challenges in the persistence of the gender coding that different sectors exhibit. This means that interventions need to have their roots in problematisations that allow the use of methods and incentives to address the gender coding, conditions and prospects for everyone to be themselves and work in the sectors, regardless of their sex.

Recommendations for continued far-reaching change

Combating gender imbalances in VET in the Nordic countries and these programmes' associated labour markets is complex and the research raises a number of possible interacting explanations for the differences. How these imbalances can and should be counteracted can also be linked to how the problem itself is framed. When the imbalances are formulated as problematic, different strategies to counteract them seem to be more, or less, desirable. However, it is abundantly clear that this complexity requires strategies and interventions at a number of levels and in most areas, regardless of what the problem looks like in the foreground. A focus on the individual alone within the under-represented group in a particular sector appears to be a poor solution to the problem of defining strategies and actions. Instead, a more comprehensive and distributed focus on norms and attitudes seems to be required, targeting actors and practices at a number of levels in the labour market and in the countries' education systems. Based on the content of this report, the following can be distinguished as important elements to include in continuing work to combat gender imbalances in VET and associated labour markets:

- Legislation prohibiting discrimination and sexual harassment and requiring efforts to prevent discrimination and sexual harassment in workplaces and in education
- Sector organisations and employer parties actively taking responsibility for implementing efforts to prevent and combat discrimination and sexual harassment Effective support and follow-up in the implementation of the regulatory requirements
- Curricula and syllabuses that include developing skills in critical thinking and which provide VET pupils with tools to identify and counteract exclusionary norms and attitudes in their future occupational roles. A clear division of responsibilities in the education organisation regarding the implementation throughout the *entire* VET programme – in school-based as well as workplace-based components
- Basic requirements to acquire knowledge about norms and gender stereotypes in vocational teacher education. Special consideration for the complex and sometimes conflicting tasks of vocational education teachers in combating limiting norms and strengthening the employability of pupils
- Continuing professional development for active instructors and teachers in the

workplace-based components of VET programmes focusing on norms and gender stereotypes, and taking into account in particular the complex and occasionally contradictory nature of VET in combating limiting norms and strengthening employability

- Study and vocational guidance counsellors basing their guidance on awareness of norms and gender stereotypes in order to prevent their guidance from reiterating and reinforcing limiting norms, including both the specific guidance provided in study and vocational guidance counselling and what is provided in the context of normal teaching
- A focus on changing exclusionary norms, and improving prospects and conditions through networks targeting under-represented groups in specific sectors. Awareness of the risks of reinforcing gender stereotypes where there are separatist elements
- A generally stronger focus on counteracting gendered occupational traditions and cultures, rather than a one-sided focus on changing the numbers of actual people of both sexes represented in the occupation
- A focus on changing exclusionary norms, improving prospects and conditions through interventions targeting under-represented groups in specific sectors. Awareness of the risks of reinforcing gender stereotypes where there are separatist elements

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