



Nord-VET – The future of VET in the Nordic Countries

Key challenges for Norwegian VET: the state of play

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Nord-VET – The future of Vocational Education in the Nordic countries

The purpose of the Nordic research project, Nord-VET, is to generate new knowledge on the strengths and weaknesses of the different models of vocational education and training (VET) at upper secondary level in the four Nordic countries. This research is expected to strengthen the knowledge base required for developing VET for the future.

The main purpose of this project is to shed light on the different Nordic ways of handling the key dilemma of providing double access to the labour market and to higher education in vocational education. More specifically it seeks to determine how the different ways of handling this dilemma have an impact on social equality, inclusion and the esteem of vocational education.

The project is publishing three sets of country studies on Finland, Denmark, Norway and Sweden. The first set of reports is on the historical emergence of vocational education (VET) in the four countries. The second set of reports is on the current challenges for VET in the four Nordic countries. This is the Danish report. The third report to be published February 2015 is on innovations in VET.

For more information visit the homepage: www.nord-vet.dk

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Introduction¹

In this report we discuss the current state of what we in the Nord-VET project address as key challenges for the Nordic VET systems. The first of these are the double challenge generated by the goals of, on the one hand, maintaining a good fit between education and labour market and securing students easy access to skilled employment and, on the other hand, preventing the VET tracks from becoming educational dead ends, and securing options for further and higher education progression. These challenges are closely related to two others, the goal of achieving parity of esteem between general and vocational upper secondary education and the strong concern for social inclusion and addressing high dropout rates.

All these questions have been on the agenda in public and political debates about Norwegian VET over the past few decades. While the first question has been a constant baseline for these discussions, the second came to the forefront in the 1990s when the current VET system was constructed, with options for transitions from VET to general studies (mainstream education). And while the challenge of dropout rates was the overwhelming theme a couple of years ago, it is the question of prestige that dominates the headlines today. This latest turn of the debate is very much caused by a clear decline in applications to VET programmes in recent years and a corresponding increase in general study programmes. Since this decline also affects traditionally strong VET programmes like building and construction, key actors within these branches have raised warnings over the future supply of skilled workers, and the long-standing concern in the field of VET over the general lack of recognition of practical skills and occupations has entered the broader public debate.

Changes can be observed – changes which may indeed signal a deeper transformation of Norwegian VET as a whole – but the overall picture which will be drawn in this report can still be characterized by stability and continuity. This may seem surprising considering the ambitious reforms that upper secondary education in general and VET in particular have undergone over the last 20 years. What we want to underline, however, is how the relative continuity we can observe can be explained by structural features of Norwegian VET, and seen as expressions of these. The most important of these features is the disparity within the system around the relation between educational programmes and the labour market. More precisely, there is a disparity between the vocational skills and identities developed in VET and the actual occupational structures and division of labour in different workplaces and fields of work. In craft and industrial work the link is made by effective occupational categories and carried by lively institutional networks. In services and in the health and social care sectors on the other hand the picture is very different; here the relationship is rather loose and unstructured. These differences are very significant when it comes to the challenges analysed in this project. The presence or absence of strong and sustainable occupational identities shapes them all in decisive ways.

¹ The authors are responsible for different parts of the report. Ole Johnny Olsen wrote the introduction and sections 1, 5 and 6, Håkon Høst wrote section 4 and the first part of section 2, and Anna Hagen Tønder wrote section 3 and the second part of section 2. The authors were greatly helped by Asgeir Skålholt (NIFU) with much of the statistical analysis. Asgeir Skålholt and Torgeir Nyen (Fafo) are coauthors of an earlier text that forms the basis for part of section 3. The authors of this report greatly appreciate their contributions.

After a short outline of the institutional architecture of Norwegian VET, we present and discuss the current situation in relation to each of the four challenges.

1. Institutional architecture

Educational aims of general and specific curricula

The educational aims of Norwegian VET have all the characteristics typical of most modern VET systems. VET is to contribute to individual development, relevant labour market skills and skills for democratic participation and social equality (see Baethge et al. 2006). This is explicitly formulated in the common “core curriculum” for Norwegian primary, secondary and adult education, based on specific articles in the Education Act as well as in the principal aims in this law regarding vocational training in particular. The section with “*The objectives of education and training*” (1-1) in the Educational Act reads:

Education and training in schools and training establishments shall, in collaboration and agreement with the home, open doors to the world and give the pupils and apprentices historical and cultural insight and anchorage.

Education and training shall be based on fundamental values in Christian and humanist heritage and traditions, such as respect for human dignity and nature, on intellectual freedom, charity, forgiveness, equality and solidarity, values that also appear in different religions and beliefs and are rooted in human rights.

Education and training shall help increase the knowledge and understanding of the national cultural heritage and our common international cultural traditions.

Education and training shall provide insight into cultural diversity and show respect for the individual’s convictions. They are to promote democracy, equality and scientific thinking. The pupils and apprentices shall develop knowledge, skills and attitudes so that they can master their lives and can take part in working life and society. They shall have the opportunity to be creative, committed and inquisitive.

The pupils and apprentices shall learn to think critically and act ethically and with environmental awareness. They shall have joint responsibility and the right to participate.

Schools and training establishments shall meet the pupils and apprentices with trust, respect and demands, and give them challenges that promote formation and the desire to learn. All forms of discrimination shall be combated. (Amended latest by Acts of 19 Dec 2008 no. 118).

In the curricula for the VET programmes the aims for particular vocational skills are specified. But at each level of these programmes there are also specific objectives for developing different kinds of personal or social skills. As an example we present the following extract from the general objectives for bricklayers (at the Vg3 level, apprenticeship training):

“Bricklaying shall contribute to building masonry constructions and rehabilitating old masonry and brickwork. The subject shall help protect buildings from weather and wind, and contribute to a good indoor climate.

Learning in the subject shall contribute to competence in masonry work on façades,

fireplace, chimneys and when laying tiles. Furthermore, learning in the subject shall develop competence in bricklaying, block wall masonry, plastering, laying tiles, wetroom work, slating and natural stonework, as well as caring for aesthetical and cultural values.

Learning in the subject shall also contribute to promoting creativity, good working habits and the ability to communicate with customers, colleagues and other collaborators. Furthermore, learning in the subject shall instruct in the subject's wide range of traditional crafts. Learning in the subject shall uphold requirements for environment, health and safety.”

This wide-ranging set of aims for VET was gradually developed before the overall reform of upper secondary education in 1994, when the VET programmes were radically restructured and the VET system as a whole was integrated into a common system for all upper secondary education. With the 1994 reform, however, the general aims of VET became more significant, not least since VET was transformed from a relatively independent vocational (or occupational) education, with programmes followed by rather mixed age groups, to a mainly upper secondary education primarily for cohorts of 16 to 19-year-olds.

As a basis for our discussion of the four challenges, we need to give a short outline of the main characteristics of the programmes and the governance structure of VET since the 1994 reform.

Programme structure

The general prerequisite for entering VET programmes is compulsory primary and lower secondary education (ten years), which is organized in comprehensive schools. At the upper secondary level the Norwegian educational system is separated into two types of programmes. Since 2006 there are

- 3 programmes for general studies, providing access to higher (third-level) education and
- 9 programmes for VET, providing routes to trade certificates or journeyman's certificates.

This overall structure is in existence since 1994, when Reform 94 launched significant new student rights and new educational structures:

- Graduation from primary and lower secondary school gives all students a statutory right to enter upper secondary education (to particular programmes and schools depending on students' results from lower secondary school and the number of school places on offer).
- Curricula and educational structures were designed to enable possible crossover from VET programmes to general programmes during students' education through supplementary studies qualifying for higher education. One year of such supplementary study is also available to VET students after graduation.
- Since 2006, the subjects in the school-based part of VET are divided into about one-third of “common core subjects” (maths, language, etc.) and two-thirds of specific vocational subjects. These latter are divided into “common programme subjects” and specialization in a so-called “in-depth study project”. The in-depth study project is preferably carried out in cooperation with employers (with students deployed at workplaces).

- What is called a "main model" for VET was implemented in 1994, with 2 years of schooling followed by 2 years of apprenticeship in workplaces. Exceptions are as follows:
 - Students who don't get an apprenticeship are offered an alternative course of training organized by schools.
 - Under certain conditions apprenticeships may start after the first year, or even during the first year. They are then organized in a traditional dual model, with one or two days at school and the rest as apprentices in workplaces. This alternative model has become more widespread in the last 5-10 years, especially in the fields of building and construction.
 - Some trades have a 4 ½ year programme.
 - Some (very few) additional students are not regulated by the dual system and graduate with another certificate than the trade/craft one (for example health secretaries).
- In the 2+2 model, after one year at school (Vg1) students choose their specialization among the programme areas at Vg2. After two years, at the level of Vg3/school or in apprenticeships, curricula are organized around trades ("training occupations", *Ausbildungsberufe*).
- Another distinctive trait of the Norwegian VET system should be mentioned. Since 1950 an experience-based trade certification scheme is in existence, giving adults the right to pass the trade or journeyman's examination upon proof of long and relevant practice. This scheme has been very popular and it has played an important part in establishing new trades or training occupations.

Table 1. The 9 VET programmes (Vg1) and numbers of Vg2 specializations and of trades in each specialization area (Source: <http://www.udir.no/Lareplaner/Finn-utdanningsprogram/>)

Vg1	Vg2 specializations	Vg3/Apprenticeship. Trades
Technical and industrial production	16	59
Building and construction	9	22
Electricity and electronics	5	20
Restaurant and food processing	2	12
Services and transport	4	8
Design, arts and crafts	15	51
Healthcare, childhood and youth development	6	9
Agriculture, fishery and forestry	7	10
Media and communication	1	3

The distribution of students between those starting on VET programmes and those on general study programmes has been about 50-50 since the 1990s. However, only about one third of the students starting with VET stay the course and finish with a trade or journeyman certificate within 5 years; about one third change course to a general study programme along the way; and one third drop out or fail the examinations (see section 5). These paths are, as we shall see, heavily affected by the diversity between programmes, which must already be underlined.

Differences between VET programmes

Norwegian VET was traditionally divided between two different areas: the vocational (full-time) school system and the dual system with a main focus on training in workplaces. The school system consisted on the one hand of special vocational schools for handicraft, food, nutrition and home economics, health- and child care, and business and administration, with programmes lasting from 1 to 3 years.

On the other hand there were vocational schools for industrial trades and crafts, mostly of 1 or 2 year duration, in some cases 3 years. Graduation from the second type of school could be integrated into preparation for and/or part of the vocational programme for the skilled worker's certificate in the dual system. There was also an apprenticeship school where students went once or twice a week during the 3-4 years of apprenticeship.

In Reform 94 all the independent school traditions were reorganized and integrated in a common, principally "dual" model. The main model, as presented above, presupposes a dual model approach in all VET areas, including its institutional order of apprenticeships, trades and vocational structures. These conditions, however, vary considerably between different sectors of trade and industry:

- The programme for media and communication and the programme for agriculture, fishing and forestry, for instance, actually have a rather weak VET dimension. These programmes all have integrated pathways towards transition to and graduation within general study programmes, which most students entering these programmes already have in mind from the start.
- Within the programme for health and social care (now known as healthcare, childcare and youth development) many students also change over to general studies. However, this programme represents one of the "new" programmes constructed by Reform 94 and has significantly contributed to the growth of apprenticeships within Norwegian VET.
- For the programme for services and transport, on the other hand, there is still a long way to go in establishing a sustainable apprenticeship system that would be significant for the sector.
- The strongholds for apprenticeships and the main model in general are still crafts, industry and construction, as well as programmes for electricians.

Altogether, Norwegian VET is clearly segmented, heavily structured by the diversity of occupational structure and recruitment in different sectors of the economy. This is already visible when we look at numbers of students in school (during the two first years) and the numbers of applicants for apprenticeship the following year (table 2). When looking at the numbers of those graduating and entering further education, this picture of segmentation is even stronger (see sections 3-5).

Table 2. Distribution of students on programmes in Norwegian VET²

	Applicants to second year, 2013	Applicants to apprenticeship and third year, 2014
General studies*	31,641	
Building and construction	4,076	3,004
Design, arts and crafts	1,966	1,014
Electricity and electronics	4,596	4,220
Healthcare, childhood and youth development	8,217	3,462
Media and communication	3,187	153
Agriculture, fishing and forestry	1,341	481
Restaurant and food processing	1,718	1,132
Services and transport	4,541	2,379
Technical and industrial production	6,723	4,779
TOTAL	68,006	20,624

*including sports and arts. Source: Norwegian Directorate of Education

Policy governance of the national VET system

The Norwegian VET system has a mixed governance structure, with input from the market, social partners and the state. The state and the regional authorities play the dominant role in the formal structuring of the system as a whole and especially in the school element. The social partners have a significant role in the structure and content of the training occupations and apprenticeship system in particular. The market has an independent role in relation to the number of apprenticeships and the extent of trades in different sectors.

All primary and secondary education – VET and general studies – is regulated by a single law, the "Act relating to Primary and Secondary Education (Education Act)" (last amended 17 June 2005). Via this act, the state (via the Ministry of Education and the Directorate for Education and Training) decides on and regulates the VET structure and the relevant curriculum/subject syllabus.

The public authorities at county (*fylke*) level are responsible for determining the scale of school and VET provision, for dispensing the VET financing provided by the state budget (including apprenticeships), for providing apprenticeships, for supervision and for appointing the examination boards.

The apprenticeship part of VET is partly financed privately and partly by the state. Apprentices enter into contracts with employers and are paid by them according to scales regulated by the social partners. The state subsidises employers for apprenticeships (about €500 per month per apprentice).

Norway has a VET system built upon the principle of tripartite cooperation. A system of cooperation, mandated by the Education Act, is established both at national and regional level, in-

2 The statistics for apprenticeship contracts and examinations are still based on the 2006 programme structure. The numbers of applicants in 2007 and 2008 give a fair picture of the size of the programmes.

volving both employers and trade unions. At national level the National Council for VET, a body for cooperation on vocational education and training appointed by the Ministry, gives advice and takes initiatives within VET. One vocational council exists for each of the nine VET programmes. At regional level there are county vocational training boards, one in each of the 19 counties. These boards have specific advisory tasks set out in the Education Act. The organization of pupils/apprentices is represented in both the National Council for VET and in the county vocational training boards.

Both public and private workplaces take apprentices and are approved as training workplaces by the county. “Training offices” (employer driven/organized units for cooperation ensuring the provision of apprenticeships and formal contract fulfilment) have become very common.

Traditionally monitoring the quality of the training occupations / trades and apprenticeship system has been the task of the corporate county apprentice councils and their administration, in particular through approval of workplaces as training places and through the appointment / licensing of examination boards for trade or journeyman’s certificates (all regulated by a separate law for vocational training). Today, however, this approval and licensing are under the administration of the county educational authorities and the task of the apprentice councils is reduced to guidance and general supervision. At national level a primary goal for state authorities is to develop instructions and guidelines for the examination boards.

The Education Act sets out regulations for teacher qualifications in upper secondary school. The general rule is that those teaching general subjects shall be qualified at university / university college level and have accrued at least 60 ECT points in the subject in question. Teachers for VET programme subjects shall have either a university college education in the actual field or – as historically most common – a trade or journeyman certificate plus four years of work practice plus at least two years of theoretical occupational education on top of their trade/journeyman certificate. Both routes require additional pedagogical qualifications.

For instructors and workplace supervisors there are (today) no formal qualification requirements. The issue is covered by section 4-3 of the Education Act, regulating the conditions for “approval of training establishments”. It says that “a training establishment must be able to provide training that satisfies the requirement laid down in regulations (of content and assessment) and have in its employ a professionally qualified person who has responsibility for and supervision of training”.

2. Transitions from VET to the labour market

In this section, we discuss how transition patterns from VET to the labour market vary between different educational programs, occupations and trades in Norway. The main questions asked are to what extent vocational education and training provides access to relevant jobs and occupational careers and how the transition patterns for VET graduates vary between different educational programmes and different parts of the Norwegian labour market.

In the years after the implementation of Reform 94 the number of people obtaining their trade certificate through a combination of school based education and apprenticeship training has varied between 11,000 and 16,000 per year. In addition, we should remember that 6,000-7,000 people obtain their trade certificate each year through an experience based trade certificate scheme outside the school system. This latter group mostly consists of adults (aged 25 and older). In this report, however, we concentrate on those obtaining their trade certificate through the Norwegian dual model, with a combination of school based education and apprenticeship training.

As already noted, there are considerable differences between different sectors of trade and industries in relation to the strength of the apprenticeship system. Before looking at labour market transitions and rates of employment in particular, we shall give some further indications on the significance of apprenticeship and skilled worker employment in the different branches.

Strong and weak apprenticeship branches

In previous work we have divided the vocational field in Norway into four categories: artisan trades, industry, retail and home economics/health and social care (Michelsen et al. 2014). Of these, only the craft sector and parts of the industrial sector had any tradition of apprenticeship before 1994.

Another, quite similar set of categories was applied in a study comparing the proportion of young people between 17 and 19 years who were either apprentices or unskilled (Michelsen and Høst 2012). The study aimed to show how far efforts to introduce apprenticeships had succeeded in different parts of the labour market. The areas defined were industry, building and construction, retail/consumer goods, hotel and restaurant, and health and social care. What these five areas have in common is that they are subject to government policies for the generalization of apprenticeship across all sectors of work. A comparative analysis of the number of young people between 17 and 19 in the labour market in general and the proportion of apprentices in each of the different labour market segments allows us to draw conclusions about the direction of change.

Table 3. Employment and apprenticeships among all 17-19 year olds (N=173,997), 1994

	In employment ³	The share of those employed being apprentices
17-19 year olds in all sectors	8,652	3,979
Industry	1,718	1,645
Building and construction	666	1,270
Retail/consumer goods	1,377	3
Hotel and restaurant	1,173	224
Health and social care	389	5
Total for the five sectors	5,323	3,147

Source: Michelsen and Høst 2012 ⁴

The industrial sector, as well as the building and construction sector, have developed labour markets which are heavily structured through crafts and apprenticeships. The social organization of work in the building and construction sector is mainly based on traditional crafts. In these crafts the division of work provides limited space for the unskilled.

Hotel and restaurant work has historically been structured by a mix of traditional crafts or craft-related trades, supplemented by a considerable number of unskilled workers. The figures for 1994 show a modest number of employees aged 17-19. One out of five of these were apprentices. The health and social care sector has been characterized by a strong vertical division of labour between the professions on the one hand and the auxiliary crafts and the unskilled on the other. Formal education has been of great significance in this type of work, since public registration represents the only road to a permanent position. Still, a sizable part of the labour market below that of registered nurses, where registration is based on the completion of three years of nursing education at university level, consists of unskilled but experienced female labour in temporary positions. The most usual pattern of entry into care work is through years of job experience followed by formal certification (Høst 2006). This recruitment pattern has provided a continuous inflow of unskilled workers in care work, often with substantial experience from care work/maternal work at home. Education for health and social care has not been the preferred choice of adolescent girls. However, the growing number of kindergartens has provided an increasing number of jobs for unskilled women, with an increasing proportion of 17-19 year olds. Retail also has a long tradition of hiring the unskilled and providing on-the-job-training. The retail sector has been dominated by young people, most of them working part-time, with hardly any apprentices.

3 Employed: 17-19 year olds having paid work as their main activity.

4 These figures might look excessively low. But other sources also provide similar figures, although not this low. The Youth Survey from 1990 estimated the youth employment rate to be 8 % in 1990. The apprenticeship figures for 1994 match the figures presented in the historical statistics from the National Council for Vocational Training (RFA) reasonably well.

2008: A large increase in the number of young employees and apprentices

The distribution of youth employment and apprentice recruitment across the selected sample of sectors of working life in 2008 also shows considerable cross-sectoral variations (table 4).

Table 4. Employment and apprenticeships among all 17-19 year olds (N=188,007), 2008

	Employed	Apprentices	Apprentices and employed
Total 17-19 year olds in all sectors	14,551	21,294	35,845
Industry	613	3,862	4,475
Building and construction	79	8,015	8,094
Retail/consumer goods	3,851	492	4,343
Hotel and restaurant	1,485	1,146	2,631
Health and social care	678	2,114	2,792
Total for the five sectors	6,706	15,629	22,335

Source: Michelsen and Høst 2012

As far as the industrial and building and construction sectors are concerned the 2008 data looks very similar to the 1994 data as regards the dominant position of apprentices. The difference is the fivefold increase of apprentices aged 17-19. The building and construction sector now represents a “pure” case of occupationally based labour market inclusion, as the number of youth employees and the number of apprentices are almost identical.

In the industrial sector the situation is somewhat different. Again we find that apprenticeship has a strong position. However, the industry category is broad and comprises a variety of different branches. Most branches of industry gravitate towards the apprenticeship model, with the food industry being the most notable exception. Here new recruitment patterns based on apprenticeship have not developed significantly so far, and very few apprentices have been recruited. Most companies in the food industry continue to recruit according to traditional patterns of hiring unskilled workers.

In the hotel and restaurant sector the youth labour market has doubled in size. The share of apprentices among 17-19 year-olds has also increased and now amounts to 44 %. The branch is characterized by a mixture of traditional crafts or craft-related trades, with new service trades in addition to fields of unskilled work.

In health and social care we can see a large increase in the number of young people recruited, but from a very low starting point in 1994. Three out of four 17-19 year-olds are apprentices, and only one out of four holds a position as an unskilled worker. But even if apprenticeship is not large in absolute numbers, the apprenticeship schemes can be said to have opened up new possibilities for young people for certification in this field of work.

In retailing too, there is a large increase in employment among 17-19 year olds. Almost 4500

are fully employed. The apprenticeship schemes in this sector do not, however, seem to appeal to young people. Only 11 % are registered as apprentices.

Youth labour market inclusion measured by the proportion of the 17-19 year old cohort in employment provides a similar picture. While the percentage in employment in 1994 was a meagre 5 %, the percentage had risen to 19 % in 2008. The share of apprentices had risen even more, from 2 % to 11 %.

Table 5. The ratio of 17-19 year-olds in employment and apprenticeship in 1994 and 2008

	1994	2008
Employed	5 %	19.1 %
Apprentices	2.3 %	11.3 %
N	173,997	188,007

Source: Michelsen and Høst 2012

The main points from the discussion of the results for tables 3-5 may be summarized as follows: The ratio of young people employed in a sector to apprentices in the same sector may be interpreted as an indication of the strength of the institutionalized place of skilled worker categories in the sector. Typically, within health and social care and in service industries the programmes for apprenticeship training had just been initiated and played a minor role. But in hotels and restaurants too there was a rather low rate of apprentices. What the numbers of 2008 show is that the number of apprentices has risen in these sectors, as has the total numbers of apprentices. But the number of young people employed outside VET has however increased considerably, not least in the retail/consumer goods sector, where it is typically young unskilled people of all ages who make up the base for staffing the firms. Compared to the total number of those employed in this sector, apprenticeship would appear to be of even lesser significance. This also holds true for the sectors of health and social care and hotels and restaurants. What should also be noted is the relatively low overall numbers of those employed in 1994. This may largely be explained by the general labour market situation at the time, which was very difficult for young people. In fact this difficult situation was one important reason for the broad support for the introduction of statutory educational rights in Reform 94. (This right replaced the general “youth guarantee” introduced in the 1970s, which, however, was then expanded to include the 20-24 age group.) We should note not only the low numbers in 1994, but also the overall high numbers in 2008, which indeed contradict the statement often made in public discourse, that there are no jobs for young people in the upper secondary school age bracket.

Employment rates⁵

We have analysed register data from Statistics Norway linking data from the national register

5 The text in this section is based on a chapter in a Norwegian research report: Nyen, Skålholt & Tønder (2013).

on education, the national register on employers/employees and the national population register (Nyen, Skålholt & Tønder 2013). Our analysis shows that a large majority of the three cohorts who obtained their trade certificate in the three year period from 2009 through 2011 were employed shortly after they obtained their trade certificates. One year after graduation the employment rate was at 85 % or higher. The percentage in employment increases slightly during the second and third year after graduation.

The composition of the group outside the labour market varies from one year to another. Only 3.9 % of the graduates from vocational education in the 2009 cohort were outside the labour market in both 2009 and 2010. Only 1.6 % were outside the labour market for the three consecutive years covered by our analysis. Only 1.8 % were registered as unemployed for three consecutive years. This is slightly below the national average unemployment rate at 2.3 %. In the 20-24 age group, which is more comparable to the group graduating from VET, the unemployment rate was significantly higher, at 7.3 %. Only 0.1 % of those who obtained their trade certificate in 2009 were unemployed for three consecutive years after graduation. Thus, unemployment among VET graduates in Norway in the time period analysed must be characterized as very low.

The employment rate varies between education programmes but the variation is not substantial. Graduates from the services and transport programme and from the technical and industrial production programme have the lowest employment rates (at 82 and 83 % respectively). The proportion of those neither in work nor in education the first year after graduation is significantly higher in some vocational programmes than in others. The proportion is highest for graduates from the services and transport and from the technical and industrial production programmes. However, the group of those neither in work nor education is considerably reduced from the first to the second year after graduation.

Female VET graduates in part-time work

The majority of graduates who are employed are working full-time, but there is also a significant proportion in part-time work. Full-time work is defined here as more than 32 working hours a week. A working week between 20 hours to 32 hours is defined as long part-time work, whereas fewer than 20 hours a week are defined as short part-time work. In November 2011, about 67 % of the graduates from the 2011 cohort were working full-time. 9 % were working in long part-time positions, whereas 11 % had short part-time work. The remaining 13 % were either unemployed or outside the labour force.

Table 6. Employment in full-time/ part-time work in 2011, by education programme. Trade certificate in 2011. Figures in percentages⁶

	Employed, full-time	Employed, long part-time	Employed, short part-time	In education	Not in employment or education	Total	N
Building and construction	83.1	2.9	5.6	3.3	5.0	99.9	2,287
Electricity and electronics	80.6	2.4	3.8	4.6	8.6	100.0	1,973
Technical and industrial production	70.6	5.6	6.8	4.1	12.9	100.0	2,874
Agriculture, fishing and forestry	69.2	7.1	11.5	7.5	4.8	100.1	253
Restaurant and food processing	60.2	11.3	15.5	4.8	8.1	99.9	792
Design, arts and crafts	59.0	18.2	15.0	4.0	3.8	100.0	673
Services and transport	57.7	10.4	13.5	5.6	12.8	100.0	1,087
Media and communication	37.7	9.4	22.6	11.1	19.1	99.9	54
Healthcare, childhood and youth development	27.1	30.4	30.9	4.9	6.7	100.0	1,845

The analysis reveals that there are large variations between different vocational programmes in upper secondary education in terms of the proportion of VET graduates in full-time work. The proportion working full-time is particularly low among graduates from the vocational programme in healthcare, childhood and youth development. The low proportion working full-time should be viewed in the context of the general prevalence of part-time work in the relevant sectors. Within health and social services in the municipal sector only one in three women are working full-time (Moland & Bråthen 2012). Although the choice of part-time work is often voluntary, the limited availability of full-time positions is often a challenge to young people who need to move into a more stable and secure position in the labour market (Skålholt et al 2013).

Analysis at the level of individual trades shows that well-established vocational trades normally lead directly into full-time positions. Plumbers, motor vehicle mechanics, electricians and carpenters are examples of trades where between 80 and 90 % of the graduates go directly into full-time positions. In health care work, however, only 18 % enter full-time employment after obtaining their trade certificate. Other trades with a high proportion of part-time workers are childcare and youth work, ICT service operations, and sales.

Part-time work can be an indicator of challenges in the transition from apprenticeship training to full employment. However, part-time work can also be related to the fact that work is not the main activity for all graduates from vocational training. We find that a large number of graduates

⁶ This table has previously been published in Norwegian: Nyen, Skålholt & Tønder (2013:170).

combine education and work. In this context it is interesting to investigate more closely the different transition patterns from vocational training to higher education (see section 3).

Conclusion

The analysis of transition patterns from vocational training to the labour market reveals that the vast majority of those who obtained a trade certificate in the years 2009 through 2011 started work shortly after they obtained their trade certificate. These high employment figures suggest that vocational training in general provides skills and qualifications that are in demand in the Norwegian labour market. Still, we should be cautious when drawing conclusions from the analysis of register data solely from these three cohorts.

In the period we have investigated here, unemployment in Norway was low, including youth unemployment. Unskilled workers had access to jobs in open segments of the labour markets. From the register data analysed here we do not know to what extent the skilled workers actually needed their trade certificate in order to get their current job. Investigating transition patterns in a more difficult labour market situation would give a more robust test of the relevance of and demand for skills from vocational training in Norway. In order to get a more complete picture of the role of vocational education in different parts of the labour market, the analysis of register data should be supplemented by other types of qualitative and quantitative data.

Although the vast majority of those who have obtained a trade certificate are either in work or in education, there is also a significant group who are outside both education and work. The percentage falls during the three year period from 9 % to 6 %. Compared with most other countries, this is a small group. Still, it is important to investigate this group more closely, both in terms of individual characteristics and what kind of education they have pursued.

Some specific transition problems can be identified through our analysis of register data. To some extent, transition problems seem to be gender related. Norway still has a strongly gender segregated labour market. In several trades it is difficult for VET graduates to get access to full-time employment after completing their apprenticeship. Several studies have documented that health care workers in particular have difficulties finding full-time or long part-time jobs. This could be part of the explanation of the growing tendency among talented students, and female students in particular, to look away from vocational training and move towards higher education.

3. Transitions to further education

In most European countries there is a tendency for a growing proportion of youth cohorts to attend higher education. However, education systems in different countries vary in terms of when students are separated into academic or vocational tracks and in terms of opportunities to move from one track to another. In the Norwegian education system, access to post-secondary education varies considerably between different vocational programmes. In some areas, mainly within technical trades, there are well established and transparent vocational pathways to post-secondary education. In other areas there are no such opportunities. Instead, those who have obtained a trade certificate have to return to upper secondary education for another school-based year in order to qualify for entry to higher education. In the latter case, vocational training and apprenticeship training can be perceived as a detour from higher education.

Table 7. Percentages in different types of education after the trade certificate, by education programme, 2011 cohort⁷

	Not in education	Upper secondary, not supplementary year	Upper secondary, supplementary year	Tertiary vocational education (fagskole)	Higher education	Total	N
Building and construction	90	3	2	4	1	100	2,287
Electricity and electronics	84	3	2	7	4	100	1,973
Technical and industrial production	76	4	2	16	3	100	2,874
Agriculture, fishing and forestry	77	4	2	10	7	100	253
Restaurant and food processing	85	7	7	1	1	100	792
Design, arts and crafts	89	4	5	1	1	100	673
Services and transport	78	4	11	3	5	100	1,087
Media and communication	65	9	13	4	9	100	54
Healthcare, childhood and youth development	82	3	11	1	2	100	1,845
All vocational programs	83	4	5	6	3	100	11,838

⁷ This table has previously been published in Norwegian by Nyen, Skålholt & Tønder (2013:187).

Return to upper secondary education

In the Norwegian initial VET system it is possible to choose a third supplementary year qualifying for higher education instead of applying for an apprenticeship after two years in vocational education. In the vocational programmes for healthcare, childhood and youth development and in services and transport almost half of the students choose this third supplementary year after the first two years of a VET programme. In other words, many students never enter apprenticeship training. Some students do not even apply for an apprenticeship. Others do apply but are not offered an apprenticeship place (Frøseth et al 2010). Our analysis of graduates from vocational training shows that a large majority have work as their main activity during the first year after they obtain their trade certificate. We find the highest proportion continuing in education in programmes that also have high rates of transition to the supplementary school year after two years in vocational education. These are media and communication, health care, childhood and youth development, and services and transport. Within these programmes around 10-15 % of graduates return to the education system within one year after obtaining their trade certificate. At the level of the individual trade we find that the proportion returning to upper secondary education is particularly high for those who have been trained in office and administrative work (15 %), ICT services (13 %), childcare and youth development (12 %), and health care work (11 %). These are all relatively new trades without strong traditions of apprenticeship training. The return to upper secondary education can probably be related to the perceived labour market opportunities for skilled workers within these trades. Health care workers and childhood and youth workers both enter into occupational labour markets characterized by clear differentiations between different educational groups combined with a segment for unskilled workers. VET graduates may perceive that there are limited career opportunities for those without academic qualifications within these forms of work organizations. Instead, health care workers typically want to train as nurses, whereas a large number of childhood and youth workers want to become kindergarten teachers (Skålholt et al 2013). For those who have been trained in either ICT services or office and administrative work, the situation is somewhat different. These VET graduates do not necessarily enter into typical occupational labour markets. Nevertheless, they may have formed the impression in the course of apprenticeship training that their career opportunities might be limited without a general academic education.

Transitions to post-secondary education

Most graduates from vocational education are not formally qualified to enter higher education, and direct transition from vocational training to universities and colleges is therefore not an option. A more relevant alternative is the training offered at post-secondary vocational colleges, called *fagskoler* (ISCED 4). The duration of courses and programmes in post-secondary vocational education is between six months and two years. Vocational colleges are regulated by separate laws and are not formally part of the higher education system in Norway. The proportion continuing with vocational training in a vocational college after obtaining a trade certificate is highest in technical and industrial production (16 %).

Conclusion

A challenge for many countries with apprenticeship training is that students who perform well in school tend to opt out of vocational pathways in order to keep their options open for higher education (Busemeyer & Trampusch 2012). In Norway the turn towards higher education is most evident in the health care and childhood and youth development programmes. The number of young people turning towards academic programmes and higher education is also increasing in other areas. Quantitative as well as qualitative studies show that it is important for young people not to be locked into a particular educational or occupational position, but to be able to keep their options open as long as possible. These strategies may also be related to the structuring of the labour markets and the position of skilled workers in the organization of work. The construction of pathways and bridges from vocational training to higher education is therefore a key issue in terms of developing vocational education for the future.

4. The prestige and position of vocational education in Norway

We have already discussed the prestige of VET and its different parts. In the following, we will present supplementary indicators of VET's prestige and position in Norway.

Criteria for assessing parity of esteem vary. One central indicator is the number of applications to the different types of study programme recognized as vocational or general. Application patterns can in turn be assessed from the various individual level choice situations provided by the educational system. For the individual, the transition structure takes the form of a sequence of choices which have to be made at specific branching points. The so called "unitary school principle" in Norway today means that everybody goes through the same basic education between the age of six and sixteen. The educational choice for a Norwegian young person comes when entering upper secondary education after the completion of compulsory education, where students have the choice between study programmes defined as general or VET. Access to the different tracks is regulated by school marks, but there is a statutory right to enter one out of the individual's three choices.

Available numbers show that more than half of each cohort has applied for a study programme defined as vocational from 1994, up to around 2005⁸. Since then there has been a gradual increase in the numbers, and the proportion of the cohorts, who choose general education.

It is difficult to make a good evaluation of the prestige of Norwegian VET. First of all the definition of VET is by no means clear because the boundaries between VET and general education are blurred and not stable. Secondly, at what point should the comparison be done: the first year, the second or the third? The variations in numbers are large. Thirdly, one may ask if the prestige of VET and general education can be measured by the students' choices.

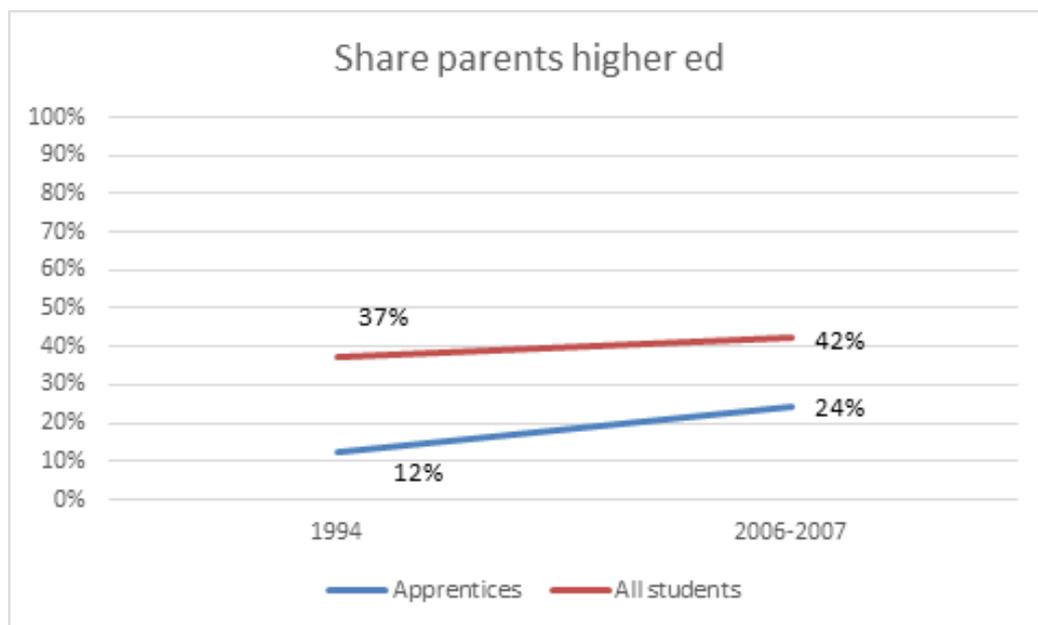
Stability or change?

Besides the fact that the share of the youth cohort applying for apprenticeships seems to have been stable over the past 10 years, it is much more complicated to make a general assessment of the status of the Norwegian apprenticeship system or to see if this has changed. Different ways of measuring this can be chosen. One indicator could be the percentage of Norwegian youth who receive vocational education through an apprenticeship. This percentage has increased greatly from the early 1970s until today, from around 5 % to 30 %, calculated in relation to the 18 year old cohort, or from around 3,000 to over 18,000 individuals. The age span within which apprenticeship education is completed is broad (see section 4).

Another method would be to investigate the social background of VET students compared with students in general education, and see if this changes over the years. We have data from the years 1994 and the 2006/2007 cohorts.

8 NOU 2003: 13, Vibe et al.

Figure 1. Students who are apprentices in the third year, compared to all students in the third year of vocational education⁹



This figure shows that there has been a bigger increase in the family education level of apprentices, compared with the student population as a whole. This indicates that the prestige of VET has indeed increased. There are, however, several reasons to be careful concluding that this is the case. In 1994 the data covers fathers' education, while in 2006-2007 includes also mothers' education. In the first case data is collected through a survey, in the second it is based on register data.

The seemingly increase in parents' education levels is directly related to the fact that a bigger part of the cohort are applying for apprenticeships. This is also connected to another important aspect, namely the state's increased interest in the apprenticeship system, which has contributed to the fact that much greater resources have been invested in the system, and that the educational structure has been structured to help young people take advantage of this educational path. Politically, the apprenticeship system has gone from being practically doomed in the 1960s (Michelsen 1995) to holding a central place in upper secondary education today. While there has been a gradual increase in the number of apprenticeships from the 1970s until today (as shown in section 2), the change in political attitude was first noticed in the 1980s (Olsen 1996), and was clearly expressed through the focus on the apprenticeship system in Reform 94. This may also indicate increased status. However, the status of the apprenticeship system can also be evaluated in relation to which trades it is and is not linked to, along with the development in status of these trades. Compared with certain other countries, the system in Norway is clearly narrower. Comparable trades that do not want to be a part of this system in Norway are part of the apprenticeship system in other countries.¹⁰

9 Data from 1994, Father's highest education (Vibe mfl. 1997). Data from 2006-2007, based on mother or father's highest education. Data 2006-2007 based on (Vibe mfl. 2012). Data in 1994 based on survey (N=2284 of whom 14 percent apprentices). Data in 2006-2007 based on register data on all students

10 In Germany in particular, vocational education covers a much larger area than in Norway (Michelsen 1995). A case in point is bank officials (Michelsen and Olsen 2007).

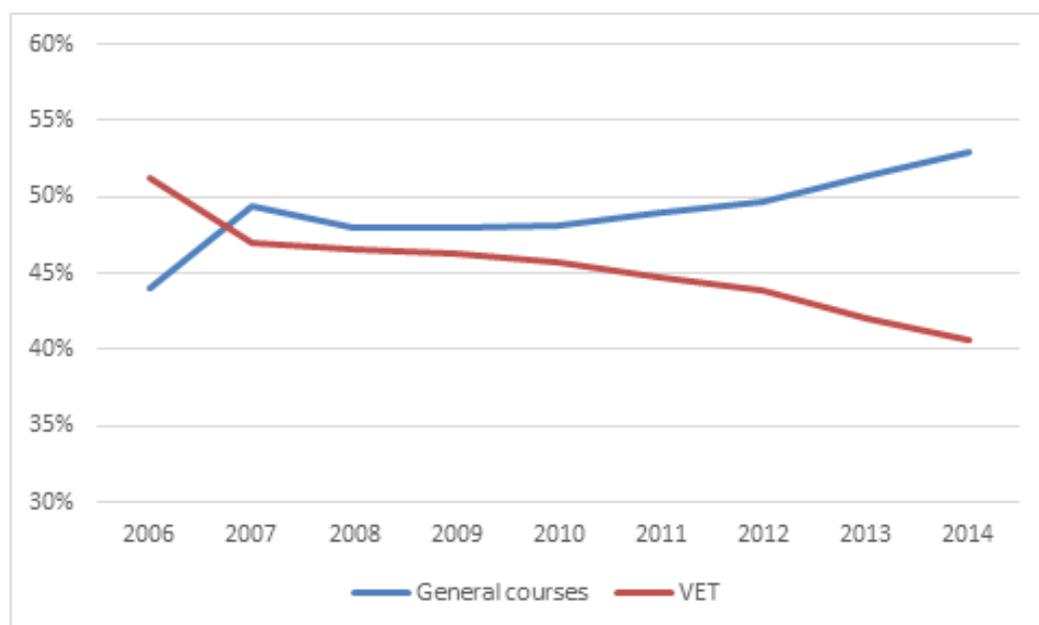
In order not to make matters too difficult, we will apply the official definition of VET and general education here, as it was in 2006 the last time it was changed. It is about to be changed again from 2015, when the now vocational programme in media and communication will be defined as a general study programme. We make a diachronic comparison of the number of applications for VET programmes with the number of applications for general education programmes, from 2006-2010. In addition to this, we analyse the number of 18 year olds applying for apprenticeships in 1996 and 2008. We also look at the share of 18 year olds switching from vocational to general education in the same years instead of applying for apprenticeships. The reason for choosing 18 year olds only is to provide comparability from one year to the other. The age mix is still rather wide among apprentices.

We will also discuss how the position of VET varies in the different parts of the labour market. To illustrate the varying extent to which the apprenticeship system has managed to gain ground in different branches and sectors we will present a comparative, diachronic analysis of the number of young people between 17 and 19 in the labour market and the ratio of apprentices in four different labour market segments (Michelsen and Høst 2012).

The choice of programme

Figure 2 shows that the share of 16 year olds applying for programmes categorized as vocational as against those applying for general programmes has oscillated around 50-50, but the trend in recent years is that vocational programmes have lost some ground.

Figure 2. 16 year olds applying to general and VET programmes, as percentages of all 16 year olds



Source: Directorate of education, SSB (Statistics Norway)

As we have shown, around half of applicants to upper secondary education apply for courses that

normally lead to vocational certification. However, many students in the third year of vocational programmes eventually switch to a course of study that leads to academic certification. For example, the programme for media and communication, which falls within the vocational track, is a course of study in which only a few people apply for an apprenticeship. In addition to the aforementioned problems, there is the issue that through the Knowledge Promotion Reform from 2006 some courses have been redefined and moved from being considered as vocational to being programmes for general studies. This makes it quite complicated to compare status and interest over time on the basis of a study programme.

Applicants for apprenticeships

Reform 94 set the goal of one-third of the age cohort entering education leading to an apprenticeship in a workplace.¹¹ At the same time, it was emphasized that the apprenticeship system, which during the 1980s and first half of the 1990s had been dominated by young people over the age of 20, should be connected to upper secondary education, and thereby provide apprenticeships primarily for those under 20.

In the Blegen Committee (NOU: 1991: 4), which discussed the need for apprenticeships, the main focus was on structural limitations in schools' and workplaces' ability to reach the goal. Questions about young people's own interest in the apprenticeship system were raised, but because of the difficulties of measuring this the question was never followed up. As we can see in figure 3 the share of 18 year olds applying for an apprenticeship has been quite stable at a level of 17-19 %, which means it is far below the goal of one third.

Figure 3. 18-year-old applicants for apprenticeship, as a percentage of all 18-year olds



Source: Directorate of education, SSB (Statistics Norway)

11 See St.meld. (White Paper) nr. 22 (1996-97).

If we look at the proportion of 18 year olds in apprenticeships (figure 3), we get a similar picture, characterized by stability.

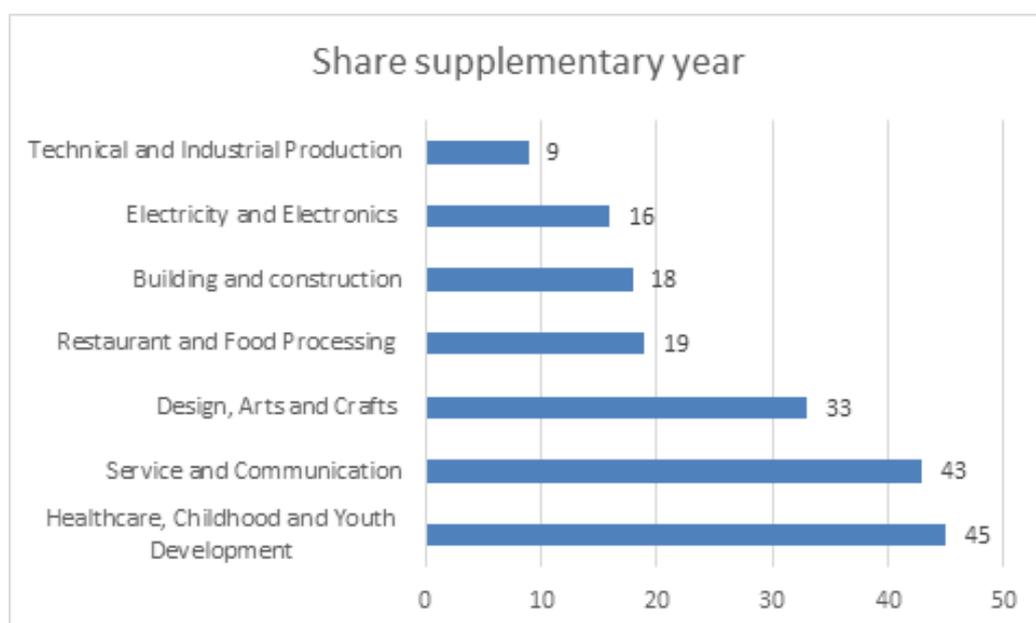
In the Norwegian system, students have the option of switching to the supplementary course qualifying for higher education in the third year, instead of applying for an apprenticeship. As table 8 shows, the proportion of 18 year olds from the vocational courses entering this supplementary course instead of apprenticeships quadrupled between 1996 and 2009.

Table 8. Number of VET students (aged 18) attending the supplementary course in general education relative to all 18 year olds

	1996	2006	2007	2008	2009
Supplementary course	2 %	8 %	8 %	8 %	9 %

If the proportion of students applying for apprenticeships is stable during the same period, this illustrates that the leakage from vocational to general courses mainly comes from those courses which are still school based, or those which were changed from being school based to being apprenticeship based during the past 20 years. This last category, for instance health and social studies and services and transport, has only managed to increase the number of apprentices to a very limited extent, while the majority of students in these programmes switch to the supplementary general course.

Figure 4. Proportion taking the supplementary course third year, 2010. Based on Vibe et al. 2011



The Reform 94 model for vocational education of two years of schooling followed by two years of apprenticeship has never established itself as a dominant pattern among students in the programme for health and social studies or that in services and transport. Instead, the majority choose

the option of switching to general education in the third year of the programme. In many ways this may be seen as a reproduction of earlier patterns, and as a result of this programme being historically quite close to general education.

Geographical differences

The balance between demand and supply of apprenticeships is different in different parts of Norway. In Oslo there are many more apprenticeships available than there are young people applying for them. To a great extent this opens up the availability of apprenticeships for young people not only from the neighbouring county, Akershus, but from all parts of the country. This is fact an old tradition, established long before anything called upper secondary education existed. In 2013, among 18 year olds settled in Oslo only 335 had signed an apprenticeship contract.¹² This constitutes about 6 % of the cohort, while in a county like Rogaland around 21 % of 18 year olds hold an apprenticeship. The average for the whole country is around 14 % of 18 year olds. Thus, the numbers not only show an imbalance between supply and demand for apprenticeships, but also suggest that the apprenticeship system has relatively lower status among young people in the capital compared with other parts of the country.

¹² Source: Statistics Norway 2007: Statistikkbanken.

5. Inclusion and completion

As already mentioned, under Reform 94 all young people who graduate from compulsory lower secondary education have a statutory right to three years' upper secondary education. For VET paths/courses with apprenticeships this right extends to four years. During their education students are allowed to change courses, but restricted by the limits set to the extension of this right. The statutory right should be fully claimed within five years (six years for VET with apprenticeship) and before reaching 24 years of age. The right to three (four) years may be extended, but only by one year. "Following an application for a change of course, the right to upper secondary education and training will be extended by a maximum of one school year." (Education Act, 3.1.)

This statutory right to education had an enormous impact on the structuring of Norwegian VET. In order to supply the same kind of programmes nationwide, the numbers of introductory / basic VET courses were reduced from around 100 to 13 and after 2006 to only nine. At the level of the second year there was a substantial reduction in 2006. The amount of places offered in each programme is based on a combination of assessments of need, resources and demand at the level of each county (the so called "school owner"). The number of places offered is calculated on the bases of grades from the lower level of education (grades from compulsory/lower secondary school for Vg1, grades from Vg1 for Vg2).

A primary goal for county authorities has been to meet the demand from the students, and indeed to fulfil their first wishes/priorities. This has, naturally, been easier for the first year than for the second. Of the three programmes for general studies, those for music and for sport require high grades. Some of the VET programmes also require good grades (media and communication, electricity and electronics), while others are also open for low achievers (building and construction).

While the question of meeting the students' demands as such (as a statutory right) was very much in political focus during the first years after the introduction of Reform 94, over time this question became part of the more general problem of inclusion and completion. One of the factors explaining dropout rates could of course be that students didn't get access to their first choice of programme or Vg2 course. To some degree this may be a relevant factor. Applications for changing courses, however, are likely to be based on the experience during the year of education telling students that "this was not for me". Reports from studies of educational decisions before applications for upper secondary school give the strong impression that to a large extent VET applicants do not have exact or specific ideas about their own interests. What they do know is that they do not want to apply for the general studies programme. Which VET programme they choose is for some rather a question of throwing a dice. Of course, behind these "indecisive decisions" we can observe the influences of social and cultural surroundings, whether it be family, friends, local/regional trade and industry, or – not least – gendered occupational identities. A distinct gender differentiation of these programmes is a lasting characteristic, where the programme for health and social care is dominated by young women, and those for technical and industrial production and for building and construction by young men.

The experience of "this is not for me" may result in an application to change course, or it may result in the decision to "take a break", or dropping out. The latter kind of decision may also be a

result of general lack of motivation and/or lack of successfully completed subjects. The reasons for changing courses, dropping out or finishing without successful course completions may vary a lot, from a straightforward acknowledgment of fields of interest to a general lack of motivation and being “tired of school” or specific experiences inside or outside education. Reports from studies of students’ motivational development and decisions over time during the course of their education or after dropping out present a very complex picture, both in respect of different kinds of reason for motivational development, dropping out etc. and of different experiences over time in the biographical course of the individuals (for an overview see Olsen et al. 2012 or Olsen 2013). The point is that the general picture of “dropouts” is rather stereotypical and must be specified and differentiated. Looking at the statistics there is no doubt that there have been high rates of dropout from the VET programmes, which is very well documented by a large amount of statistical analysis. Before presenting some of that material, one note of caution should be sounded.

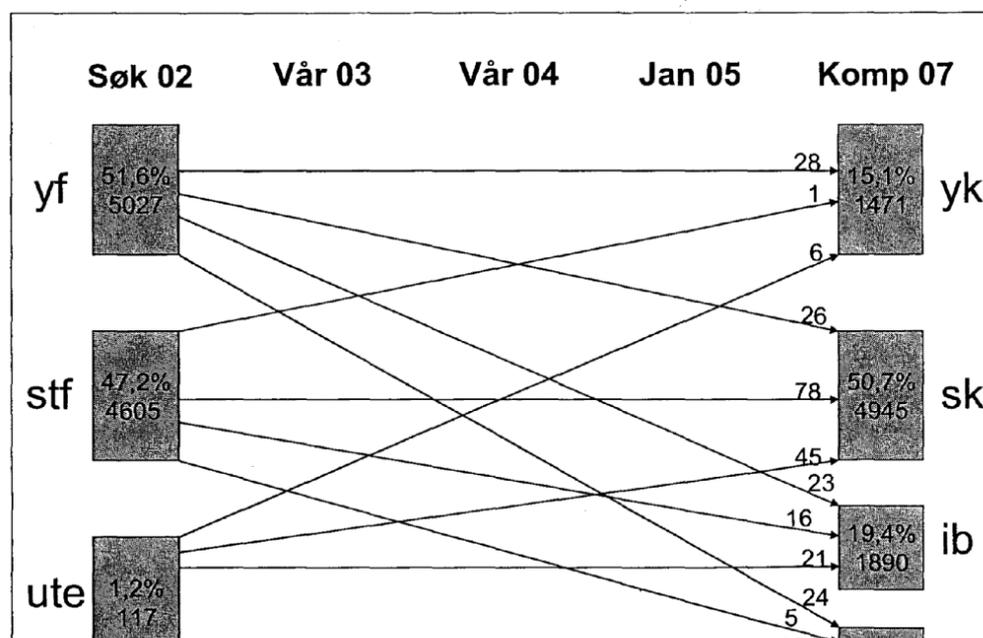
In the first few years after Reform 94 it was possible to report that the share of young people completing 3 years of VET and taking a trade certificate was rising. Some could argue that VET had a better rate of completion. This, however, was a kind of historical fallacy. The institutional “normalization” of three year integrated VET programmes, and indeed as a specific secondary education for young people, was implemented by the reform. Before this it had been (at least in some programmes) just as socio-culturally “normal” to take one year’s basic course and start working as to take courses that ended with a trade certificate. This rough outline of the dropout problem must be understood against the background of the rigid normalization of the 2+2 model on the one hand and on the other the institutional creation of “follow-up” systems for all those who deviated from the “normal track”, turning the right to education into an educational obligation.

The general picture of completion

The general picture of completion has been as follows over the last 10-15 years: While students starting at Vg1 break down about 50-50 between general studies and VET programmes, about 50% end up with general university/college admission certification but only 25 % with occupational qualifications/trade certificates. The remaining 25 % drop out or do not complete successfully (Støren et al. 2007:123). Looking at each types of programme separately, we find that the dropout rate is larger in the VET programmes than in the general study programmes. Furthermore, there is a considerable flow of students from VET programmes to general studies. Of all the students that started in VET programmes in 1999 a total of 37 % dropped out or did not complete successfully, only 44 % completed with VET certificates, while 19 % changed course to general studies. The following cohorts showed the same results (Støren et al. 2007:123).

The same picture was given by a large survey following students over the five years from 2002 to 2007. A very instructive figure was designed in this project, showing student routes from the first year of VET (yf), general studies (stf) or outside programmes (ute) through to completion of some kind of VET qualifications (yk), general study admission certificate (sk), unsuccessful completion (ib) or dropping out (sl).

Figure 5. Routes from time of application in spring 2002 to the educational outcome in autumn 2007 for 9,749 young students in the eastern part of Norway (Markussen et al. 2008: 62)



The figure should be read in the following way: of all students that started in VET only 28 % completed with VET qualifications/certificates, 26 % completed with the general study admission certificate, 23 % did not complete successfully and 24 % dropped out.

The flow of students from VET programmes to general study is discussed in section 3. It is very important to recall the differences by sector in this regard. It is media and communication, health and care and services and transport that provide the bulk students in this flow. As explained above, this has to do with the (lack) of integration / mismatch between the educational programmes and occupational structures. The educational programmes fit neither structurally nor culturally with the social identities and division of labour in the relevant organizations and labour markets.

For a later cohort, table 9 sums up much the same results as the figure above. Here we can also observe the internal differences within VET, where the figures for media and communication express the point we have mentioned, that it should in fact be counted as a general study programme. We can also see that along with healthcare, childhood and youth development and services and transport the programmes for design, arts and crafts and for agriculture, fishing and forestry score high on the proportion of students changing to general studies, relatively high on the dropout side, and correspondingly low on the rates achieving trade certificates. In these programmes there are options for specialization in areas without traditions of apprenticeship, alongside specializations with very strong traditions in this respect (as in the crafts). One programme has a special profile, the programme for restaurant and food processing. A commonly used explanation for the high dropout rate here is the somewhat unexpected work situation the students encounter in the workplaces, with an abrasive style, unusual hours, and hard work.

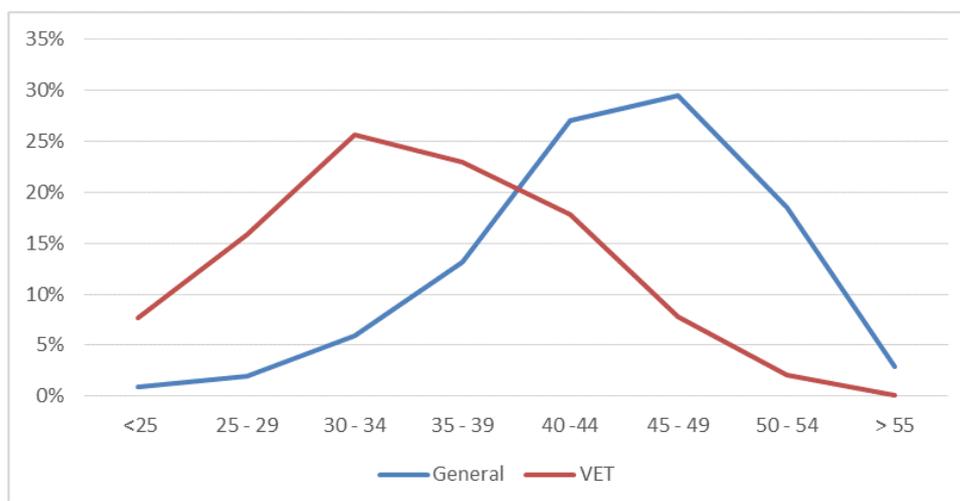
Table 9. Outcomes five years after starting upper secondary school. 2006-2007 cohort

	General diploma	Trade certificate	Still in upper secondary	Dropout	TOTAL
General studies*	84 %	1 %	4 %	11 %	100 %
Building and construction	10 %	44 %	15 %	31 %	100 %
Design, arts and crafts	25 %	26 %	15 %	35 %	100 %
Electricity and electronics	14 %	54 %	14 %	17 %	100 %
Healthcare, childhood and youth development	31 %	28 %	12 %	29 %	100 %
Media and communication	77 %	3 %	6 %	15 %	100 %
Agriculture, fishing and forestry	31 %	25 %	12 %	32 %	100 %
Restaurant and food processing	15 %	29 %	16 %	41 %	100 %
Services and transport	33 %	21 %	12 %	33 %	100 %
Technical and industrial production	6 %	47 %	14 %	33 %	100 %
Total	55 %	17 %	8 %	20 %	100 %

*Including sports and arts. Based on (Vibe et al. 2012)

The programme for electricity and electronics shows also a special profile when it comes to completion: high on certificates, low on dropout and relatively low on general diplomas. This might have to do with recruitment to the programme. Of all the traditional trade-based programmes, this programme requires highest grades from lower secondary education. And if there is one variable that shows special significance in the statistical analysis of educational processes at this level, it is the grades. Looking at the grade profile we see big differences between the students starting on VET programmes and general programmes.

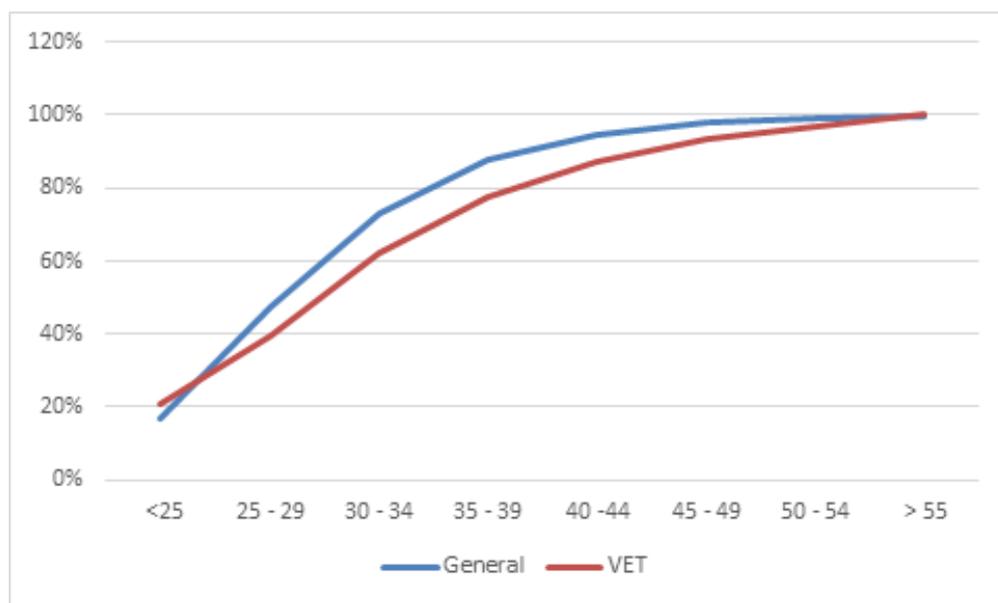
Figure 5a. Grade points from secondary school, students in general and VET programmes. 2008 cohort



Source: ssb.no

The average grade points for students in VET programmes are 10 points below the average for of students in general programmes. Even though the dropout rate is a lot higher in VET programmes, almost all of this difference can be explained by the difference in grade points from secondary school.

Figure 6. Completion rates five years after starting upper secondary education, relative to grades from secondary education. 2008 cohort, measured in 2013



Source: ssb.no

In some VET programmes (building and construction/industry and mechanics) the completion rate is actually higher once we control for grades from secondary school (Vibe et al. 2012). However, generally the completion rate remains somewhat lower in VET programmes when we control for grades. In other cohorts (the 2006 cohort), the completion of VET studies is better than for general programmes (Utdanningsdirektoratet 2014).

Discussion

These results fit well with many earlier projects based on survey or register data (see Støren et al. 2007, Markussen et al. 2008). Educational results from lower secondary school are the most decisive variable explaining rates of successful completion. There is also a clear correlation between parents' education and interest /support for their own children's education, with good results as an intervening variable. This is a well-known logic: those children who are motivated for school work and develop good study habits, supported by their parents, achieve good results – which in turn give experience of mastering subjects and further motivation for school work, with correspondingly good results. Social background plays a distinct role in these processes. There are also clear gender differences. Girls achieve better results than boys, especially in vocational education.

Studies of educational decisions, motivation and subjective experiences among students in

VET programmes show a general picture as follows: most students are uncertain of what specific programme they will choose, but on the other hand they do feel quite certain that they do not want to choose a general study programme. Typically they motivate their decision by the wish to learn “something practical”. They don’t want so much “theory”. Their disappointment is all the stronger when meeting a rather large amount of classroom teaching and “theoretical” subjects in their first year. However, if some present themselves as “fed up with school” or “not so good at theory” – which are typical self-descriptions for many – this does not mean that they in general see themselves as “school losers”. Generally students of VET seem happy with their educational choice and the experiences they get during the first years, many develop elements of occupational pride on the basis of practical experience in the first few years, and those who find out that “this is not for me” and want to change track often express an attitude of confidence that their future steps will turn out right (Olsen et al. 2013)

The most critical passage of the educational tracks in VET is the transition from Vg2 to the next step. Getting an apprenticeship contract is key to successful completion of VET and graduating with trade certificate. Not all applicants get an apprenticeship contract. Those students who don’t get a contract are guaranteed some other kind of education, either a third year of VET in school or a place in a general study programme. However, many do not accept this offer. Instead they take “a year off”, apply for jobs or apply for the military, while waiting for new offers of apprenticeships.

The reasons why only two of three applicants for apprenticeship get apprenticeship contracts are many and complex. In most trades, in fact, there are too few applicants to meet companies’ demands, while in others there are too many. This is not always due to actual demand. In the municipalities the number of apprenticeships is regulated by budgetary constraints (Høst et al. 2014). The mismatch between applicants and demand also differs geographically. If students are willing to move or travel a longer distance, they might get an apprenticeship contract. This happens for popular trades, not least in offshore related trades, while for less attractive trades it is not common.

Workplaces are also selective, but only in the most popular trades are grades used as criteria. The most used criteria are the rates of school absenteeism. High rates of absenteeism are interpreted as a lack of self-discipline, responsibility and capacity to endure unpleasant tasks. In interviews, the expression of good attitudes and relevant interest are important. Generally the communication and cooperation between the workplace, the school and the local community are of great importance. This is particularly decisive when it comes to accepting applicants who do not have the best results, have failed in many subjects, or even have high rates of school absence. In many branches there are long traditions of accepting these kinds of applicants too. Sometimes such decisions result, over time, in “sunshine stories” about young students becoming mature, self-confident, skilled workers. The socialising capability of the working life environment can be considerable (see Olsen et al. 2014).

The recruitment and training of different kind of apprentices illuminate the moral obligations of employers and working life actors in the field of VET. Their obligations are connected to a broad set of normative leads, from giving young people education, supporting local groups and families, feeling responsible for local schools, to being representatives for local industries or for traditional occupational traditions. The character and strength of these moral dimensions of VET

in working life should be seen as a key to understand how the different challenges of VET are met, not the least in the question of inclusion (see Olsen 2015 for further discussion).

Some special initiatives and institutional arrangements to meeting challenges concerning inclusion should be mentioned. Since Reform 94, beside tracks for completion with vocational qualifications (trade certificate) or with university and college admissions certification, new tracks have been introduced for qualifications of “lower level”, today termed “basic competence”. One of these is the track for “training candidates” starting in 2001. Students on this track get places for workplace training mostly through the local schools, often in cooperation with socio-political authorities. Employers offer places motivated by a combination of social obligations, commitments to local networks and the logic of wanting to support the quality of the future labour market. The training may follow individual programmes and does not last a fixed number of years. Matters are somewhat different with the initiative “the candidates for practice certificate”, which started as a pilot scheme in 2006 in four counties. This scheme was planned as a two year track particular for young people tired of schooling and without any plans for ordinary secondary education. The basic idea was to give these students a particular certificate for graduating the scheme. This idea met a rather hostile resistance from unions and has never become a clear-cut innovation with any broad significance. The programme in itself, though, showed interesting results. In counties with strong apprenticeship traditions the local training environment stimulated the candidates – informally, but still quite clearly – to see the track as the first step towards a normal apprenticeship. Quite a few of the candidates developed strong enough interest and skills to apply for such contracts – and got them. In other counties, with stronger school based VET traditions, the scheme was introduced and seen as a programme for definite graduation with a two years competence certificate (see Høst 2011). In later studies in counties with weak apprenticeship traditions, we also see less evidence of the goal of transitioning to apprenticeship among these candidates. For both types of candidates, however, there are good results when it comes to the transition to labour market. According to these studies, the programmes “pay out” for participants (Markussen 2014). In 2008/2009 the number of candidates for the practice certificate was about 80 in the four counties involved, while there were about 950 training candidates at national level. In 2012 the number of training candidates was 1,720. When we know that ongoing apprenticeships that year numbered 34,607 we can see that the number is small, but nonetheless significant.

The number of students in these special programmes or tracks, initiated by rather socio-political aims, should be compared to the growing number of students within the different alternatives to the “main model” for apprenticeship. These are the options for apprenticeship contracts in three or even four years, with adapted school programmes, where students attend school one or two days a week. These alternative models have much of the same integrating aim as the socio-political programmes, but have also a particular aim of supporting practical skills of apprentices. These alternatives have met with growing interest, especially within the trades of building and construction. In 2012 the total number of students in such alternative (workplace based) tracks was 3,754.

6. Trade-offs and dilemmas in VET

As a system for the production of relevant skills for the labour market, Norwegian VET has developed a relatively adequate capacity in the fields of craft and industry. The apprenticeship system is important for the recruitment of skilled workers to workplaces, and most graduate apprentices get an appropriate job. One can observe, however, a threat to these processes: a potential threat in industry, a very present threat in the craft sector, especially in building and construction. In the latter sector the use of foreign unskilled – and skilled – contract workers, directly in Norwegian firms or by foreign subcontractors, has increased so much that the whole sector appears as a “Polish sector”, an expression widely used by young people. This is not only a threat to the general prestige of the training among young people; it also threatens employers’ general commitment to their role as training enterprises. An indicator of the seriousness of the situation is that the strongest expression of concern often comes from the representatives of the employer organizations committed to the tradition of collective skills formation. In the parts of industry where the apprenticeship tradition and skilled based work organization have been strong, the situation is somewhat different but shows similar traits. Here too outsourcing, the use of sub contracts and strong fluctuations of employee numbers following the completion of different projects, tend to change the work organizations, both as learning environments and as places for future careers. This may bring uncertainty for the many, and a possibility for climbing the ladders as team leaders for the few. Parallel to this we can observe a general interest among many apprentices in taking higher education. They want to get “further up”, an often used expression. It is too early to determine if this tends to weaken the category of the skilled worker or bring further esteem to the industrial trades – showing that apprenticeship is no “dead end”.

If changes in the organization of work and in the labour market can be seen as factors (potentially) undermining the occupational identities and apprenticeship traditions in craft and industry, we can say that such changes are obstructing their development in the health and social care and the service sectors. Or perhaps more accurately, the increased tendency to use unskilled workers and contract – often foreign – workers is an expression of continuity in these sectors instead. In the health and social care sector one may argue that the reason for using many unskilled workers is the lack of availability of skilled workers. This can, however, easily be shown to be a deliberate misinterpretation. There are applicants who are not offered apprenticeships; the number of apprenticeships is strongly restricted by municipal budgets. On the other hand, it is true that ordinary VETs easily provides for the necessary employment in the sector. Not only this; there is a very strong tendency among students following VET courses in this sector to change course to general study programme or take this as a supplementary course. The same goes for students in the service sector programmes.

Overall we can observe how the double challenge of at the same time offering an easy transition both to the labour market and to higher education is strongly linked to the question of prestige and vice versa. Prestige is also connected to the question of inclusion. Simultaneously strengthening the conditions for completion among weak learners and the prestige of VET among strong learners has traditionally been seen as a main challenge for VET systems based on apprenticeship (Lutz 1994). For some time VET has been very much identified with the problem of inclusion. If VET has generally lost recognition through this discourse is difficult to say. But it has at least not gained.

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