

# Continuity and Change in Norwegian Vocational Education and training (2)

Håkon Høst (ed.)



© NIFU STEP Norsk institutt for studier av innovasjon, forskning og utdanning  
Wergelandsveien 7, 0167 Oslo

Rapport 6/2010  
ISBN 978-82-7218-675-2  
ISSN 1504-1824

The publications of NIFU STEP are available at [www.nifustep.no](http://www.nifustep.no)



Norsk institutt for studier av innovasjon, forskning og utdanning  
Norwegian Institute for Studies in Innovation, Research and Education  
Wergelandsveien 7, 0167 Oslo  
Tlf. +47 22 59 51 00 • [www.nifustep.no](http://www.nifustep.no)

RAPPORT 6/2010

Håkon Høst (ed.)

# Continuity and Change in Norwegian Vocational Education and training (2)



## Preface

This report deals with recent research on some essential themes regarding vocational education and training in Norway (VET). These themes are also essential to European cooperation in these areas, of which Norway is a participant where VET is concerned. The delegating authority behind the report is the Directorate for Education and Training, which wished to have a background report as a basis for the Directorate's own report to Cedefop for Refernet concerning developments in Norwegian VET.

Håkon Høst has been the project coordinator and editor of the report. We must also mention that the researcher Miriam Evensen was co-author of chapter 6, and Terje Næss has selected and processed data from the employment register to be exploited in chapter 4.

A similar report with the same title was published in 2008. Håkon Høst was also responsible for that report. This year's report concentrates on recent knowledge and research, which has arisen since the previous report in 2008. Many of you will therefore benefit from reading both reports.

Oslo, February 2010

Bjørn Stensaker  
Assistant Director

Eifred Markussen  
Head of Research



# Contents

<b>1</b>	<b>Introduction to the chapters.....</b>	<b>7</b>
<b>2</b>	<b>Lifelong Learning in Norway: Just as common for adults to take a vocational competence exam as it is for young people .....</b>	<b>9</b>
	2.1 Vocational training throughout life - variations between women and men .....	11
	2.2 Summary .....	13
<b>3</b>	<b>A Certificate of Practice in VET.....</b>	<b>14</b>
	3.1 One measure with various objectives, and an unclarified target group .....	14
	3.2 First experiences from the experiment.....	16
	3.2.1 Who were the young people that participated in the pilot project? .....	16
	3.2.2 The Certificate of Practice Scheme’s experimental curricula .....	17
	3.2.3 Different adaptations at a local level .....	18
	3.2.4 The certificate of practice candidates at the companies .....	19
	3.2.5 The number of candidates in the Certificate of Practice Scheme.....	20
	3.3 Final assessments .....	21
	3.3.1 What kind of candidates?.....	21
	3.3.2 Does the Certificate of Practice threaten the standards of the trades?.....	22
	3.3.3 The reform process .....	23
<b>4</b>	<b>The attractiveness of vocational education and training in Norway.....</b>	<b>25</b>
	4.1 Low status: recruitment of unskilled labour into industry and health care .....	25
	4.2 General studies are ranked highest.....	26
	4.3 The apprenticeship scheme persevered at the expense of other traditions.....	27
	4.4 A segmented labour market for young people .....	28
	4.5 The apprenticeship scheme as a basis for entering working life?.....	30
	4.5.1 A large youth labour market – few apprentices.....	31
	4.6 Summary .....	32
<b>5</b>	<b>The Knowledge Promotion Reform: Structural changes to strengthen the connection between VET and the labour market.....</b>	<b>34</b>
	5.1 Introduction .....	34
	5.2 Background .....	34
	5.2.1 The gradual rationalisation of Norwegian vocational education.....	34
	5.2.2 A new order arises from Reform 94 .....	35
	5.2.3 The Knowledge Promotion Reform: The new structure shall solve the problems .....	36
	5.3 The In-depth Study Project .....	39
	5.3.1 The In-depth Study Project at county level .....	39
	5.3.2 In-depth Study Project for Cookery.....	40

5.3.3 In-depth Study Project for Carpentry .....	41
5.3.4 In-depth Study Project for Motor vehicle mechanic, light vehicles .....	42
5.3.5 In-depth Study Project for Health Work.....	43
5.3.6 Main features and models .....	44
5.4 From specific courses to comprehensive courses in VET .....	45
5.4.1 The counties' assessments .....	46
5.4.2 Students' first choices not met.....	47
5.4.3 Little change in recruitment patterns .....	48
5.5 Broader courses and more specialisation: having it both ways?.....	49
<b>6 Challenges to research .....</b>	<b>51</b>
6.1 The status of vocational training and different ways to enter the system .....	51
6.2 Is the quality of vocational deucation and training better after The Knowledge Promotion Reform? .....	52
<b>References .....</b>	<b>53</b>
<b>Appendix</b> Upper Secondary Education and Training in Norway, including (IVET)	

# 1 Introduction to the chapters

This report will serve at least two distinct purposes. First of all, it should be said that the report was ordered and financed by the Directorate for Education and Training to serve as background information for the Directorate's own reporting to Cedefop for Refernet.

Reporting to Refernet concerns developments in Norwegian vocational education and training (VET) regarding some essential themes such as lifelong learning, inclusion of vulnerable groups, the relationship between VET and the labour market, and the present status of VET in Norway. All these themes are relevant to EU's so-called Copenhagen Process. Secondly, we hope this report can be equally useful for others who are interested in reviewing recent research and statistics about essential aspects of VET in Norway. As mentioned in the preface, this is the second report of its kind. The first, with same title as this report, was published in 2008.

The report is organised as follows:

Chapter 2 of this report deals with an important aspect of lifelong learning in Norway; that is, adults who enrol in basic vocational education and training. Lifelong learning is one of the most important priority areas for VET in EU countries and one of the areas where the member countries and partner countries frequently report on development. Regardless of that, this is an extremely important aspect of vocational education and training in Norway. We represent an unusual case compared with most countries around the world, considering the greater openness our VET system traditionally has had regarding the wide range of ages and age groups that participate in the system. This theme was also discussed in the 2008 report, but this chapter presents comparatively new data and developments of problems around the situation of adults in the education system.

Chapter 3 of this report deals with endeavours to introduce a *Certificate of Practice Scheme* into the vocational education and training system. This is currently one of the most significant attempts by Norwegian authorities to reduce declining numbers of upper secondary students, which is being given a lot of political attention in Norwegian these days. The Copenhagen Process includes this within its goal to create a VET system characterised by equity, social cohesion and active citizenship.

Chapter 4 of this report deals with how interested Norwegian students are in vocational education and training. Attractiveness of VET is a significant parameter for measuring developments in different countries in relation to the Copenhagen Process. This theme was also discussed in the previous report. This report expounds on the idea that the attractiveness of VET differs a lot between different trades internally in the Norwegian VET system, which is obviously a hindrance to the system gaining a better foothold than it has had previously.

Chapter 5 deals with structural changes to vocational training through the so-called *Knowledge Promotion Reform* (Kunnskapsløftet); fewer and broader courses, and the

introduction of the so-called *In-depth Study Project*. One of the main reasons for introducing these measures was to strengthen the links between VET and the labour market in Norway. This is a very important goal for VET systems in most countries and is important to the Copenhagen Process.

Chapter 6 is an attempt to point out some important questions for further research in vocational education and training in Norway. This list takes its starting point in the problems that are discussed in the report, and is thus in no way exhaustive. VET research in Norway has however not come very far, and there are still many challenges. Simply considering the questions asked by Cedefop, we are also guilty of neglecting a number of items.

Some questions that are included in Refernet are also of interest and are being evaluated by other projects at NIFU STEP, such as career guidance and evaluating the Lifelong Learning Programme. However, the deadline for finishing this report did not allow us to include the results from these items.

## **2 Lifelong Learning in Norway: Just as common for adults to take a vocational competence exam as it is for young people**

*Håkon Høst*

The Norwegian VET system is relatively far more open to adult students compared to EU countries like Germany; this is a distinctive and interesting phenomenon (Michelsen and Høst 2002, Høst 2008). Historically, there has never been any segregation based on age within the Norwegian system. Some vocational educations in particular at upper secondary level did have mainly adult candidates. This structure was however changed by the educational reform of 1994 (Reform 94). An important goal of this reform was that vocational education at upper secondary level mainly was to be carried out by students 16-19 years of age; legislation on legal rights and the flow of resources were adjusted to achieve this goal (Michelsen, Høst and Gitlesen 1998). One assumed that traditional patterns, with horizontal movement through the educational system and with many adults in this type of vocational education, was something that would abate in time as young people earned the right to a place in these programmes. After that, basic vocational training or general education at the upper secondary level would form the platform for further lifelong learning for everyone, characterised by vertical mobility.

Things did not go as planned. Adult Norwegians continued to flock to the VET system. Even though the increase in the number of apprenticeships were allocated to young people under the age of 20, there were not fewer adults among apprentices, graduates from school-based or experience-based training<sup>1</sup>. With a starting point in the statistics from all craft and journeyman's examinations, as well as diplomas from school-based vocational education and training, we have created a figure of the age spread of those persons who passed their vocational exams at upper secondary level by end of 2007-2008.

---

<sup>1</sup> School-based vocational educations are mostly found in Health and care work, with the Auxiliary nursing education as the largest, but also smaller courses within some other study areas. The Auxiliary nursing education is since 2006 a part of the new, apprenticeship based education for Health Care Worker.

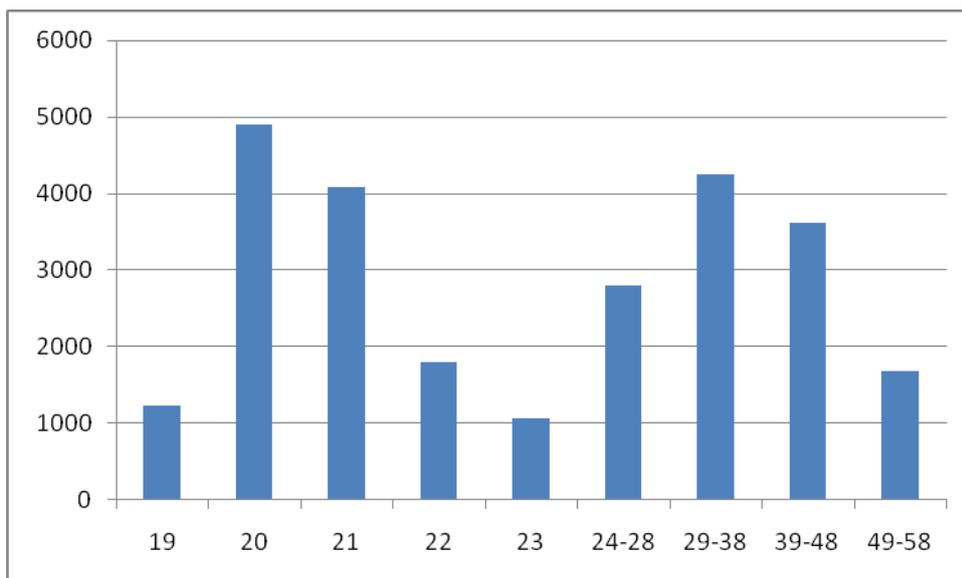


Figure 2.1: Persons who completed vocational education at upper secondary level according to age for school year 2007-2008

Source: Statistics Norway 2009

As Figure 2.1 implies, the candidates are mainly divided in two very similar groups based on age: those older and those younger than 24 years of age, respectively. The numbers show that 53 percent of those who completed a craft exam or ended their vocational education programme with a diploma from upper secondary were 24 years or older, while 47 percent were 23 years or younger.

In comparison, 95 percent of those who completed a programme for general studies were 23 year or younger – most of them aged 19.

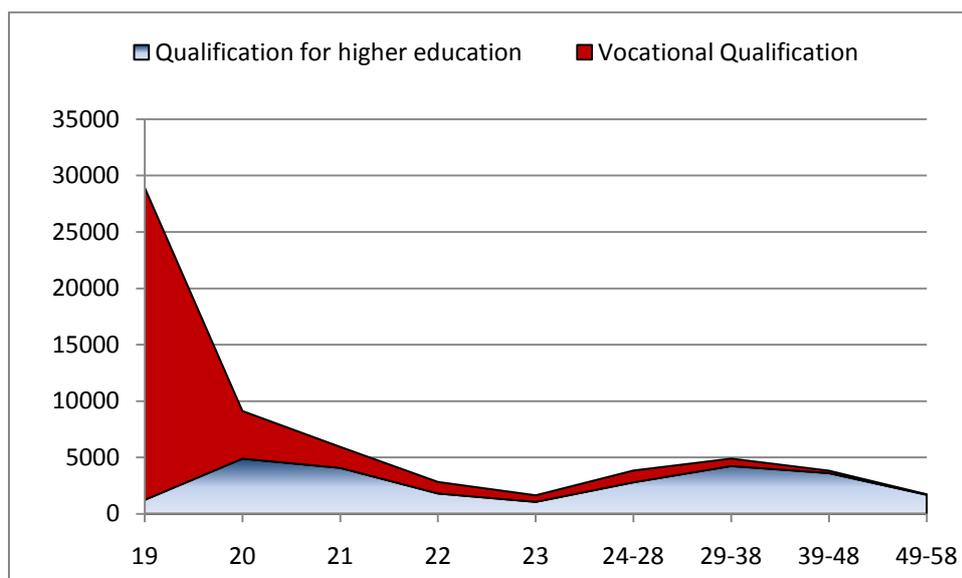


Figure 2. 2: Persons educated from general and vocational education programmes according to age for 2007-2008

Source: Statistics Norway 2009

Figure 2.2 shows that while programmes for general studies are dominated by young people, the vocational programmes prove equally attractive to adults.

The ratio of adults to young people in vocational education stayed practically the same from 2002 to 2008. There has been a large increase in the number of young people becoming apprentices, but this is compensated by more adults having received a diploma from school-based education. The largest school-based education, comprised predominately of adults, is the education for auxiliary nurse – which at any rate is being phased out and included in the apprenticeship based education for Health Care Worker. There is a great deal of uncertainty as to whether the vocational training scheme for adults (the so-called Experience-based Trade Certification Scheme), will be able to attend to all the needs of this programme to educate adults with the same level of quality as the previous education for auxiliary nurse did (Høst, et al. 2009).

From the vocational educations most attractive to adults, the Auxiliary Nursing and the Care Worker educations, we know that about half of those people that finished these as adults had completed an upper secondary education before, either a qualification for higher education or a vocational education (Høst 2004). Most of the remaining people had a partially complete education.

## 2.1 Vocational training throughout life - variations between women and men

If we look at figures for age distribution over a lifetime (Figure 2.3)<sup>2</sup>, we see that the most active period for taking vocational education is between the ages of 20 to 24.

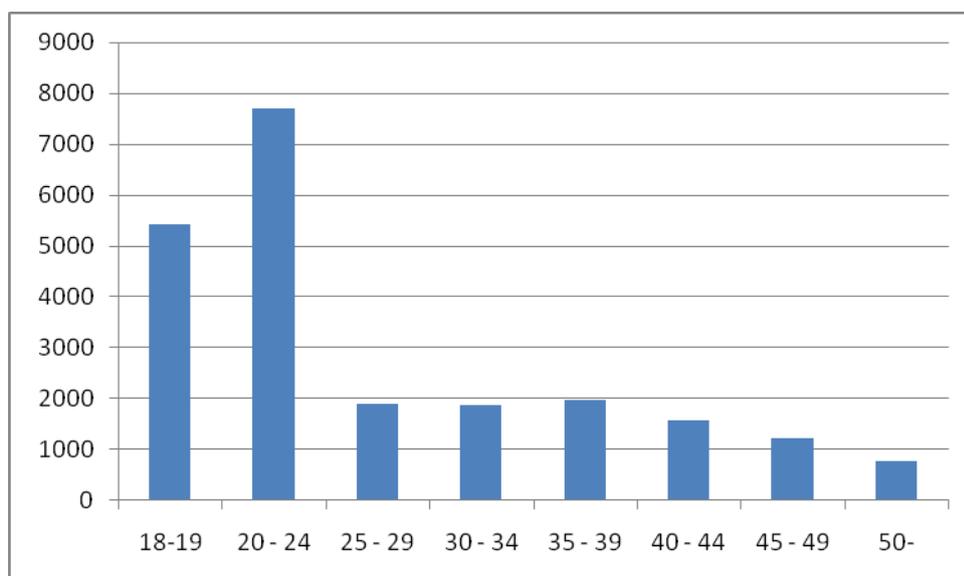


Figure 2.3: Age distribution of persons who received a craft or journeyman's certificate in 2006-2007

Source: Statistics Norway 2008

<sup>2</sup> Here we must base our findings on data that is available, which is 2006-2007 figures and five-year intervals

This period is characterised by what may be called a somewhat delayed adolescent education, and the beginning of the phase that is normally associated with adult education. After that, we see steady development over the next 20 years, reaching its peak at the age of 35-39. These numbers include great variations in gender, area of study and geography. We will be looking at gender in particular, in this case.

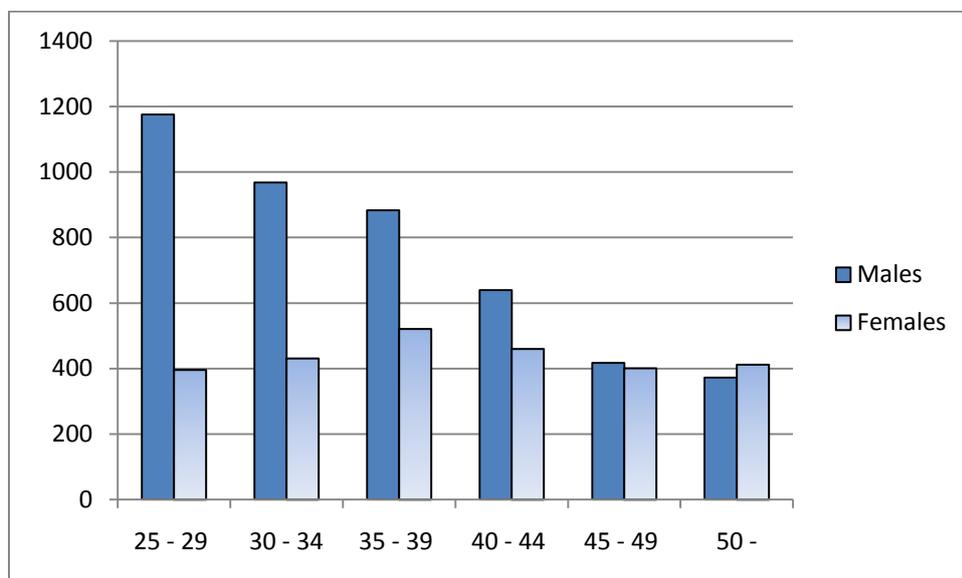


Figure 2.4: Craft or journeyman's exams taken by adults 2006-2007

Source: Statistics Norway 2008

Distribution by gender in statistics for adults over 25 years of age shows that men take a craft or journeyman's exam at a far younger age than adult women do (figure 2.4). The greatest number of adult men is found in the age range of 25-29 years, while most women are 10 years older, 35-39 years of age. For men, the data shows a notable declining curve for taking exams after age 30, while the curve for women is generally stable to the age of 50.

Men are however overrepresented in statistics for adults over 25 who complete a craft or journeyman's exam. This reflects the fact that men are overrepresented in apprenticeship based part of the VET system. If we include the school-based education programmes, this picture will be completely different. Then we find that overall, more women take a vocational education as adults than men do. This is especially true for the auxiliary nursing, but also programmes for health service secretaries and pharmacy technicians, which also have many adult women.

If we include the Auxiliary Nursing Programme, which is the only one for which we have age distributed numbers, we find that women are in a majority among those who pass a vocational exam at upper secondary level. We also see that the gender/age profile is reinforced. Women reach the peak of vocational training at an age of 35-39, where they are now in large majority. Female dominance continues to increase with age.

## **2.2 Summary**

Adults amount to a significant portion of the people who have taken a vocational exam, a craft or journeyman's certificate in Norway. It is just as common to graduate from vocational education at upper secondary when one is over the age of 25 as younger. Consequently, it has been documented that - despite the age structuring of Reform 94 - the vocational education system is still relatively open for adults using different mechanisms and opportunities. Figures also show that in particular adult women take advantage of these opportunities.

If we consider gender distribution, men are far younger than women are when they finish a vocational education at adult age. The presence of men in this field of education decreases after the age of 30, while women continue to take part in vocational education and training at upper secondary level in the same numbers until about the age of 50.

## 3 A Certificate of Practice in VET

*Håkon Høst*

VET in Norway has been in the spotlight in recent years because of the great number of students who begin studies but who do not complete these, or who study but do not pass the final exam. Less than half of those who started a vocational education programme in 2002 had successfully completed the programme 5 years later; only half of them had achieved a vocational qualification and the other half a qualification for higher education (Markussen et al. 2008). Attention around these problems led to measures being introduced to change this trend.

The currently most prominent political measure that are implemented in this area is the introduction of a Certificate of Practice, which is a certification of vocational competence of lesser standing than a full Craft Certificate. Ideally, this certificate will be the first step toward a bona fide Craft Certificate. A preliminary evaluation by NIFU STEP shows that the young people themselves, schools and companies are very pleased with this initiative, and dropout rates in this respect have lessened (Markussen, Høst, Prøitz and Evensen 2009).

The problem of dropouts is however widespread and complex, and there are powerful interests involved in the schooling and the in-service training aspects of this problem. This is why there are somewhat different opinions about which goals and target groups the measure should be directed at (Markussen, Høst, Prøitz and Evensen 2009, White paper 16, 2003-2004, White paper 44, 2008-2009).

### 3.1 One measure with various objectives, and an unclarified target group

A committee appointed by the Ministry of Education and Research, the GIVO Committee<sup>3</sup>, delivered a proposal in 2006 that contained recommendations for improving completion rates for upper secondary education. One of the measures recommended was the so-called Certificate of Practice. This would come in addition to the already well established but little used Training Candidature Scheme. While the latter of these involves candidates receiving individual curricula with limited competence aims compared with ordinary curricula, and hence an individual Certificate of Competence, the Certificate of Practice would be based on a common curriculum, but with fewer competence aims than are found in the ordinary curriculum. A central argument for a standardised Certificate of Practice was that it would create a form of recognisability in working life. By establishing something that resembles a Craft Certificate, but at lower levels, one will immediately activate various interests and constellations of interests. Employers were positive in the beginning, showing a great need for

---

<sup>3</sup> "Measure to improve completion rates for upper secondary training", August 2006.

this, while workers' organisations were sceptical because this could threaten established trade standards, as well as being an all-too-easy solution for many young people who take vocational education. From a more pedagogical perspective one could say that a new category in working life for students that might drop out is a necessity, and that such questions must be addressed by professionals in the educational sector and not by the social partners in the working life.

Still, there is at present no political or academic consensus about which students and pupil groups are prepared to complete their education and which are not prepared, to what extent this is due to innate abilities, socially acquired habits earlier in life, or created by the educational system itself. Seen in this way, recommendations and measures in this area often involve a number of compromises and ambiguities.

The GIVO Committee had concluded by recommending a Certificate of Practice that would be a further development of the Training Candidature Scheme with limited vocational competence based on a two-year and mostly practical training. Still, it was decided that the scheme would be organised in a way that made it possible to students to build further on the certification and complete a Craft Certificate at a later time. The social partners were supposed to negotiate on the category's position in the salary and wage tariff system. This deals with giving the group the recognition it deserves. In this way, the scheme would also be subject to control by the social partners.

The wording in White Paper 16 of 2006-2007 concerning GIVO Committee recommendations for the pilot project for this scheme sounds as if the Certificate of Practice would be for students who run the risk of dropping out of general studies or vocation-based upper secondary schooling. The white paper however says that this scheme shall also include other students than those involved in the Training Candidature Scheme, but without lowering learning expectations. It is also asserted that the opportunity to continue toward a complete Craft or Journeyman's Certification must be included in the model. The wording allows for both limited and broad interpretations of the final goals and target groups.

Using an open process of implementing the Certificate of Practice Scheme, the authorities then permit different key actors like employers, employees, county government agencies, schools and companies to have a say in the process. The Certificate of Practice has therewith been defined and redefined many times. To coordinate this pilot project, the Ministry of Education and Research has established a pilot group with representatives from the local vocational training councils for the selected subjects in which the experiment will be carried out, and in the selected counties where the pilot project will be tested. In this way the process has been run under the influence of the county governments, the trades and interested parties from working life. The most important actors involved in this project have agreed that a Certificate of Practice shall not involve lowering ambitions or lead to any dead ends. Instead, the parties involved will continue to emphasise the need for this scheme to be seen as a first

step on the road to a bona fide Craft or Journeyman's Certificate for adolescent students who in the beginning need goals that are easier to achieve.

The counties that are testing the project have different opinions about what this means and for whom the measures shall apply. Some counties agree with the Ministry, believing this leads to a need to cull students one assumes are in danger of dropping out of upper secondary education, but who still seem to have the potential to finish schooling if conditions are properly arranged to help them. Other counties believe that the measure's target group should be the same as the target group for the Training Candidature Scheme. This target group has not yet been fully clarified, but the prevalent opinion is probably that this scheme shall include students one is certain will not complete and pass all upper secondary education's requirements for competence. However, neither the first nor the second type of clarification gives a clear answer as to what the measure's target group should be. There will continue to be different view as to the extent students should be selected in this manner.

The following ambiguities were formulated as a point of departure for NIFU STEP's analyses after evaluating experiences with this scheme so far (Markussen, Høst, Prøitz and Evensen 2009): Should the Certificate of Practice Scheme be considered a distinct alternative to the Craft Certificate; an alternative path toward the Craft Certificate or the expression of a solution to the drop-out problem found in innovative schemes with greater autonomous dynamics closer to the field of work?

## **3.2 First experiences from the experiment**

### **3.2.1 Who were the young people that participated in the pilot project?**

The young people who were chosen to participate in the pilot project for the scheme have as a whole a poor basis, measured by criteria like grades and absence. The typical candidate has a grade point average just above failure to pass. A questionnaire was answered by the certificate of practice candidates in three counties, Akershus, Vestfold and Rogaland, and the results were compared with a selection of ordinary vocational training students. The certificate of practice candidates had a significantly lower grade point average and significantly higher absence rates compared with the ordinary group of vocational training students. Certificate of practice candidates also proved to be more motivated for practical work than vocational training students. They brought a weaker educational basis with them from primary and lower secondary school than the vocational training students, and they had been given more guidance and help. The differences seen here were considerable. It was also found that the certificate of practice candidates in some areas were more similar to vocational training students than one would have believed. They had experienced different aspects of the teaching situation at lower secondary level in relatively the same way, they evaluated themselves equally regarding some skills, and they spend their free time on the same type of activities. Furthermore, they have parents/guardians with about the same attitudes toward education and upbringing, and both groups acknowledged that education is worthwhile with a

thought to future work opportunities. Another important finding was that the Certificate of Practice does not seem to be the final goal of education for most of the candidates who participated in the experimental scheme. 65 percent answered that they will study toward a Certificate of Practice, and after that finish the craft certificate exam, while 31 percent answered that they will only study toward a Certificate of Practice.

### **3.2.2 The Certificate of Practice Scheme's experimental curricula**

Some decisive and fundamental recommendations were made about work done on curricula for this scheme. First of all, there should be a certain number of common core subjects from the ordinary curriculum included. Secondly, that the competency goals from the ordinary curricula of the programme subjects were to be selected as they were without any adjustments. The reason for this lies in the ambition with the Certificate of Practice functioning as a practical pathway to a complete Craft Certificate, reached through various stages. To be able to study further and complete the Craft Certificate after achieving a Certificate of Practice, it was thought necessary for the young people to have documented competence in all the aims in vocational subjects and a few certain common core subjects. Without finishing the common core subjects after two years, it is considered very difficult to finish a complete craft certificate education, including the common core subjects, in a period of four years.

It is clear that the experimental curricula have content that prioritises training toward vocational competence through practical activities. The study also indicates that distinct characters of the vocations that were investigated were preserved in the experimental curricula. However, it is not within the scope of the analysis of whether the candidates can or will achieve vocational competence that the labour market will find a use for.

The analysis has shown that the experimental curricula are strongly anchored in the ordinary national curricula for vocational education and training. More or less all of the competency goals from the defined programme subjects and main subject areas in the ordinary vocational curricula in the six trades are represented in the experimental curricula. On the other hand one may question whether the strong foundation in the ordinary national curricula gives the flexibility needed in an alternative practical scheme.

Considerations of how demanding the curricula of the Certificate of Practice Scheme are depend on which target group the scheme is meant for. According to the policy documents defining the scheme, different types of target groups can be inferred. The first target group could be pupils with a poor starting point unable to follow ordinary education for different reasons. If this is students with different functional disabilities or other challenges that make ordinary schooling difficult, then the content of the experimental curricula seem quite demanding. However, if the target group consists of students that can be characterised as *underachievers* in ordinary schooling, the competency goals would not necessarily seem so demanding. All this depends of course on how learning is organised, and to what extent teachers and trainers cope with guiding the students toward a vocational education and

motivating them through practical activities so that essential theoretical knowledge can be learned.

The experimental curricula seem to have been designed mainly with the educational system and the needs of the labour market in mind. Vagueness when it comes to target group for the scheme makes it difficult to evaluate the content of the curricula based on the intentions of the scheme. It may seem as if the needs of the educational system and the working community has been prioritised in the experimental curricula, instead of the target group(s) need for practical learning and training. Whether this will be reflected in practice remains to be seen. Implementation and testing of the curricula in schools and at companies that host in-service training can help balance the students' needs with the needs of the educational system and the the labour market.

### **3.2.3 Different adaptations at a local level**

The preliminary recommendations on how to implement the Certificate of Practice Scheme are not so clear that they have given the scheme the same profile in the different counties that have implemented the pilot project. On the contrary, they made ample room for county government policies which led to the counties choosing experimental solutions for the Certificate of Practice in many different ways. This is true whether the scheme has been placed within the school or in training firms. This is also true when emphasising the Certificate of Practice either as a goal in itself or as a means for young people to finish vocational studies and pass a complete craft certificate exam. The counties do not agree on which students the scheme is set up for. Vestfold and Rogaland express that the Certificate of Practice is meant for those who are able, but who do not perform well in school, and that the scheme shall be a pathway to complete the Craft Certificate for these students. Akershus on the other hand believes that the scheme is a parallel to the Training Candidature Scheme and directed at students that are assessed as not at all having the capacity to pass the craft certificate exam. One county, Oslo, withdrew from the project. The reasoning for this, they say, is that they have more faith in their own measures to deal with such students and that they are afraid the Certificate of Practice will become what could be defined as a low-status education.

Oslo and Akershus chose to run the project from their offices for student administration. Classes were established for certificate of practice candidates, and the plan was to introduce students into companies from these classes. There have been serious problems achieving training places in both counties, and the problems in Oslo are so great that these probably contributed to terminating the experiment. In Rogaland and Vestfold the vocational training board was given responsibility for the project. In Rogaland this led to a lot of pressure to establish a Certificate of Practice Scheme that ran close to ordinary apprenticeship. All young people in the Certificate of Practice Scheme would be sent to training at companies from the schools. In Vestfold, being a certificate of practice candidate meant being in a tied to a specific traineeship at one company, not in school. The young people involved here did not belong to a school class but were sent right out to companies. At the same time, some

certificate of practice contracts were established through contact directly between young people and training firms. Among the counties, Rogaland seems to have an advantage with its strong tradition in vocational training. Of great importance here was that the schools recruited training places in firms for the students. In Akershus, the students were left on their own to be responsible for this.

The schools that participate in the experiment signed up on their own, or were chosen because the municipal county administration believed, based on previous experience, that they would be able to carry out the project. The certificate of practice candidates at the four schools were chosen in slightly different ways. They were selected for the project based on low grades at school and a lot of absence from 10<sup>th</sup> year level, but they also had to show a willingness to participate.

### **3.2.4 The certificate of practice candidates at the companies**

The training establishments for practice candidates investigated in the evaluation project clearly have some features in common (Markussen, Høst, Evensen and Prøitz 2009). First, they were all quite small. Secondly, these are companies and trades in need of labour that find it difficult to recruit sufficient numbers of ordinary apprentices. They are therefore looking for or have already developed alternative recruiting methods. They also have in common that they consider certificate of practice candidates as labour. This does not mean they would not want to contribute to training. The understanding of how this task can be solved varies, however, with each trade's recruitment and qualifications systems. It is apparently influenced much less by the curricula that has been prepared.

In summary, one may say that the trades where the candidates find traineeships seem to be the most important factor for what kind of Certificate of Practice Scheme is made available to young people and companies. In regions where a particular trade is strong and there is no particular need for semi-skilled workers, the Certificate of Practice Scheme tends to move in a direction similar to the already existing 0+4 Scheme, which means a practical path toward completing an education ending with a Craft Certificate. This applies to trades like cooks and tinsmiths. In areas where vocational training is weak, the Certificate of Practice Scheme tends to become a pathway into dominant labour categories found in the area, such as shop assistants in retail. The working life therefore seems to be stronger at structuring the Certificate of Practice than the educational system, which is not surprising when the intention of the scheme is to raise the demand and interest for such candidates in the firms.

Seen from the perspective of a Certificate of Practice candidate, it is the career opportunities in the individual trade that will determine whether this scheme is attractive or not. To what extent can one assume that the attitudes of the business leaders we questioned can be seen as representative for all companies? The companies were generally recruited as participants in the scheme either by having connections with a guild or craft union, the candidate's family, acquaintances, or previous work place. The companies still did not give an impression that they only wanted to help the local school system. Even if the companies understood the need

for ongoing training, it had to be relevant to a company's own need for labour. It must also be said that the subsidies for this scheme are so generous and the salaries of the certificate of practice candidates so moderate, at least during the first year of work, that these new employees do not represent a great expense for a company.

The young people selected have only been working at the company for about a year. It is therefore premature to say anything about how this will finally develop; if they will quit before they have received a Certificate of Practice, if they will complete the certificate and keep working, or if they will continue studying toward a complete Craft Certificate. There are actually many positive aspects to this situation. Young people, among those who are at risk of (or already are) leaving school are drawn into a binding course of training which they enjoy. Companies and schools praise the certificate of practice candidates, and there are so far very few seem to be dropping out. Most certificate of practice candidates already have a stronger identity as employees in working life than as students in school. The students' conciliatory attitude toward going to school once a week to study general subjects seems due mostly to their traineeship placements. Most already seem motivated to complete the craft certificate programme within the normal four-year period. What the students wanted from a Certificate of Practice was more uncertain. The minority did however say that a Certificate of Practice was an okay goal to start with. It is still too early to tell if everyone who aims toward a bona fide Craft Certificate will be able to obtain this and finish also the general subjects, and how much time they needed for this. All the students that were interviewed thought, however, they would be able to attain this in one way or another. Evaluations by the county municipalities and among teachers were somewhat more nuanced concerning the students' progress in general subjects. As of today, there are no precise dropout figures for young people who follow the Certificate of Practice Scheme. The immediate impression is that dropout figures are very low, and primarily caused by illness and not lack of mastery or maladjustment.

### **3.2.5 The number of candidates in the Certificate of Practice Scheme**

A survey of all the county municipalities in Norway showed that for school year 2008-2009 there were certificate of practice candidate programmes in four county municipalities; Rogaland, Vestfold, Akershus and Nordland. The county municipalities reported 77 certificate of practice candidates. These were distributed among 6 educational programmes and 14 different vocations. 81 per cent of certificate of practice candidates were boys. The gender distribution is similar to standard patterns.

This same survey found that there were 957 training candidates spread throughout all of Norway's county municipalities. The county with the most training candidates is Vestfold. Two-thirds of the training candidates were boys. The gender distribution in vocational subjects and education programmes followed traditional patterns.

### **3.3 Final assessments**

The young people that participate in the certificate of practice pilot project, teachers and trainers at companies summarised the scheme as very successful, thus far. It is still too early to make any true evaluation, and one should therefore show caution not to draw any substantial conclusions yet. In conclusion, we shall discuss and elaborate on some other findings and additional problems raised in the report.

#### **3.3.1 What kind of candidates?**

One question that can be asked is if greater emphasis on the Certificate of Practice as a subsidiary objective on the pathway to completing a bona fide Craft Certificate permits the scheme to be taken over by students that are better performing, and that some students who could otherwise benefit from the scheme will be supplanted.

Only after the intentions and goals of the pilot project have been filtered through the county administrations' own processes, and partly subject to the different schools' own view of how the scheme should be organised - only then are the candidates selected and approved to participate in the experiment. There is an apparent difference between how the county municipalities' interpret which target group is viable and valid, and what kind of students actually chosen. While one of the counties believed it had chosen students that performed so poorly that one could not expect them to complete the certificate of practice programme, the other counties believed they were adhering to the scheme's most important intention to select students that had the capacity to complete not only the certificate of practice programme, but also the Craft Certificate studies. The investigations show that these differences are not found in when comparing these findings with grades or absence from lower secondary.

The data tells that the pilot project has found a group of students with –on average - very low grades and a lot of absence from lower secondary school. Based on the characteristics mentioned here, there is no doubt that the young people who participate in the experiment amount to a potential dropout group. At the schools visited, the students had been selected from among those on the waiting list for a spot in the programme, or who were admitted to programmes that were often their second or third choice. The programmes they were accepted to did not set high standards for grades. Some of the candidates did not show up during the start of school in autumn 2007. In reality, they had already dropped out.

As a preliminary viewpoint, it does not seem that the scheme has been taken over by a group of better performing students. This despite signals at state and county levels that may be interpreted as a change in target group. There are not enough information about the general level of performance among training candidate category, to tell whether this group have an even poorer starting point than those who have until now been recruited to the Certificate of Practice Scheme. It is therefore difficult to conclude whether the Certificate of Practice Scheme recruits from the same or a different target group than the training candidature scheme.

An important question is whether academic demands placed on the students are set at the correct level, or if they are too high or too low. The empirical basis on which one would base any findings about this is still limited. Only when one first get results in the form of grades from the candidates in general subjects, or passed/failed on the certificate of practice exam and/or the craft exam, or receive a job offer or apprenticeship contract, only then is it possible to say something substantial about this. For the time being, however, it appears that those students that are accepted to the pilot project are doing surprisingly well, especially in aspects of vocational practice, but also in their performance in general subjects. Despite their weaker starting point, the candidates themselves, their teachers and instructors believe that most of them will be able to obtain not only the Certificate of Practice but also a bona fide Craft Certificate. There is a majority opinion among these youngsters that the Certificate of Practice is a pathway that leads to a completed Craft Certificate.

### **3.3.2 Does the Certificate of Practice threaten the standards of the trades?**

Organising the Certificate of Practice Scheme is not as problem-free a process for vocational training institutions. Branches with the highest numbers of unskilled labourers, who would potentially benefit most from a Certificate of Practice Scheme, are probably the same that have difficulties trying to establish an effective apprenticeship scheme. Sectors like the consumer goods and retailing sector, areas of industry, or nursing and elderly care currently employ hundreds of thousands of unskilled labourers<sup>4</sup>, which is also a result of these sectors being unable to recruit apprentices. The question is whether a Certificate of Practice Scheme would make it even more difficult to establish a labour force of skilled workers with good recruitment levels in these trades. It is probably too early to tell. There are signs that the Certificate of Practice for Salesmanship (consumer goods and retailing) is becoming a training for shop assistants. Still, it is not certain this will undermine the possibility of develop a trade in Salesmanship later on. In trades with strong traditions for using apprentices, there may be some fear that a Certificate of Practice will weaken and undermine trades. Norway's VET system is based precisely on vocations and occupations with predetermined entry standards. Whether there is room for a permanent category of assistants, without this undermining the VET system must be evaluated empirically for each occupation. What may be observed up to now, however, is that the Certificate of Practice Scheme instead tends to be co-opted in areas with well-established trades, and in this way does not germinate into a new category. In other trades, such as carpentry, important actors like the Training Office in Oslo have been negative to the scheme.

If on the other hand it is true that a Certificate of Practice generally becomes a practical pathway toward completing a bona fide Craft Certificate, will it not then be easy to confuse this scheme with the complete in-service training programme for apprentices, the so-called 0+4 Scheme? Do we then really need this scheme at all? It is apparent that this scheme in some places appears to be very similar to the apprenticeship scheme's 0+4 model. The biggest

---

<sup>4</sup> SSB Employment Statistics for 2008.

difference is that extra subsidies are given to certificate of practice candidates and that they are watched closely by the vocational teachers at schools. This difference seems to have been significant for the possibility of finding a company for the in-service training of the Certificate of Practice candidates. The county municipality of Rogaland chose to look at the problem in a different way, where the idea is that vocational training might be able to learn something from the experience with the Certificate of Practice Scheme; that regular contact with the school and contact with other young people of one's same age at school can be a form of support for 16 year olds that participate in the 0+4 apprenticeship scheme.

The economic incentives from extra apprenticeship subsidies should ideally be good enough to help pay extra costs at companies that take in very young people who have not finished an upper secondary education. At the same time, the subsidies must not be too good so that certificate of practice candidates become a category of cheap labour. So far, there are no signs of this latter problem at any of the companies investigated. The subsidy indeed does cover a large amount of costs; in some places almost all the expenses the in-service training establishments have for wages for certificate of practice candidates. However, the companies are obligated to contribute to proper training, which apparently they do, albeit in somewhat different ways. This is a risk one must watch for in the future.

### **3.3.3 The reform process**

As illustrated in the introduction, the Certificate of Practice can from one point of view be understood as a spin-off of the Training Candidature Scheme. This scheme was established for young people who are at risk of dropping out of school, giving them the opportunity to get training based on their own abilities and to help them document attained individual competence through a certificate of competence. When the Certificate of Practice is mentioned as a spin-off or further development of the Training Candidature Scheme, this is because this was the target group that got primary focus during the GIVO Committee's work. Looking at things from that perspective, the target group of the Certificate of Practice during the implementation phase has been expanded or changed to include young people who need an alternative practical pathway to follow to complete a Craft Certificate, where a Certificate of Practice is a goal to reach along the way. The expression change does not indicate an illegitimate displacement brought about by particularly strong actors coming in and taking over the project (Selznick 1984). This has more to do with a change of emphasis in the many different aims and goals that the authorities had for the pilot project in the beginning, as an opportunity for students to gain formal competence and qualifications at lower levels, and getting more students to complete their upper secondary education.

From a perspective of innovation, greater emphasis on the Certificate of Practice as a subsidiary objective on the pathway toward completing a bona fide Craft Certificate can be seen as very relevant in relation to the test counties and the advisory boards' experiences during implementation. This also shows us that policy formation is something that is done during the entire implementation process. The relative openness during the implementation process of the certificate of practice project has permitted test counties and the working

community to make changes based on own interests. This has probably been a significant aspect of the relative success of the experiment so far in counties where the pilot project is carried out.

Even though they all had different reasons for supporting the project at the beginning, all the primary actors did finally agree that the Certificate of Practice would be a subsidiary objective on the pathway to completing the Craft Certificate. The target group has now been defined as students known as so-called underachievers, and not students seen as unable to manage to complete the certificate under any circumstances. But while educational authorities assume that the scheme shall be extended and while they are already marketing the scheme to politicians as a major initiative to fight dropout rates at upper secondary level, the Norwegian Confederation of Trade Unions (LO) holds that this scheme should only include a moderate share of Norwegian students. If the scheme is expanded, LO is afraid it will tempt many students to choose the easy way out, and the scheme will put pressure on salaries and working conditions of skilled craftsmen and professional labourers.

The empirical review in the report shows that the different perspectives form a good basis for contextualising the Certificate of Practice Scheme and the experiences developed so far. In short, we can summarise by saying that all the perspectives have explanatory power and something valuable to say, yet said in different ways. While the political context for establishing the Certificate of Practice Scheme may simply have been to create an alternative to the Craft Certificate, the formulation of aims and goals for the experiment were designed so one could also allow the scheme to take on other objectives. During implementation, it has also been found that many actors see the Certificate of Practice Scheme as a step along the pathway to a bona fide Craft Certificate, but we have also been able to find examples of the scheme contributing to innovative thinking in the interaction between the educational sector and the field of work, and that companies that host certificate of practice students see the special usefulness of just this type of training measure. In connection with this, the Certificate of Practice Scheme has actually become a number of *different* schemes, because we see diversity in how students, schools and companies have made changes to the scheme and how they use it in different ways.

## 4 The attractiveness of vocational education and training in Norway

*Håkon Høst*

There are different ways to judge just how attractive vocational education and training in Norway and its developments are. Because vocational education is currently directed mostly towards young people, it is logical to look at its status among this group. One way to do this is to look at the percentage of 18 year olds who apply for apprenticeships in companies (Høst 2008). The percentage seems to be relatively stable at about 17-19 percent of the 18 year olds for the period from Reform 94 to the present day, which puts us somewhere in the middle of European statistics, far below the strongest vocational training countries like Germany, Austria, Switzerland and Denmark, but also far above countries where apprenticeship schemes tends to play a role as a socio-political instrument.

It is one thing to talk about how many students apply for vocational education and training in general, but it is yet another thing to look at the applications and status of the individual trades. There are great dissimilarities here internally, not least when one considers the size of the working fields covered by some trades. More light is shed on this by Norway's contribution to the Nordic Council of Ministers' report entitled *Young people's pathway from school to working life (Ungdomars Väg från skola til arbetsliv)* (Olsen, Høst and Michelsen 2008 in Olofsson and Panican 2008), which this chapter to a large extent is based upon.

### 4.1 Low status: recruitment of unskilled labour into industry and health care

But what really is the historic background for the relatively weak position of vocational education and training, and why are there such great differences between the trades? Historically, not only the apprenticeship scheme, but the and Norway's VET system in general been considered of low status (Lindbekk 1992). This relative weakness indicates its relationship to both to general education in Norway and to vocational education and training in other countries. The reasons for this weaker position can be traced back to a number of conditions. References have been made to causes like historically late national industrialisation and the low status that industry and training in technical disciplines had during the nation building process in the 1800s. The limited interest to elevate technical vocations has also been explained by the structure of Norwegian industry, dominated by small companies (ibid.). In addition to this come the introduction of mass production in Norway; this occurred at a relatively low technological level, something which required less vocational training.

The different characteristics and peculiarities of Norwegian working life have had and are still obviously having a great significance for the status of vocational education and training in general, and how this varies from region to region. For example, it is true that a formal education has historically not been very important for jobs and promotions within the industrial sector, and a job as an unskilled labourer was often the most important route to a job as a skilled worker (Korsnes 1996). To the extent the status of skilled workers was formalised in these careers, it was done through the so-called *Section 20 Scheme*, which paved the way for the Experience-based Trade Certification Scheme of today (Michelsen and Høst 2002). In certain areas that were not regulated by the Apprenticeship Act of 1950, such as the nursing and care sector, formal education has still always been of great significance, because of the authorisation schemes established for health care personnel. At a level just below authorized nurses, entry to employment has generally gone by way of jobs as unskilled labourers. The tradition here was for unskilled labourers with years of experience to take a one-year school-based education in Auxiliary nursing (Høst 2006). There are actually many similarities between industry and the care and nursing sector despite their dissimilarities. One is that employing unskilled labour has always been necessary to compensate for underproduction of vocationally trained young people. In the Norwegian system, these students have been absorbed by different schemes to educate and certify adults with many years of work experience. This has also contributed to the formation of a strong pattern for how one enters an occupation, which seems difficult to break.

## **4.2 General studies are ranked highest**

The Steen Committee of 1965 worked to establish the upper secondary part of the Norwegian school system. The opinion of the committee was that general studies had greater potential than vocational courses (Lindbekk 1992). The main strategy chosen, which was to elevate the working class using middle class educational privileges, was more influenced by the British system than the German model, and also closer to the Swedish than the Danish. Vocational education programmes were integrated into a common and publicly financed and organized upper secondary school system together with the gymnasium and with mandatory study elements in general studies.

Integration of upper secondary education in the 1970s was, however, far from complete. Most important was that the apprenticeship scheme was not included in this model. Trades with an apprenticeship scheme now got two tracks, one school-based and one based on apprenticeship training, without these being systemised at the start, or even being closely associated.

Some areas outside of the industrial and craft sectors that had school-based traditions for vocational education and training were integrated into the new and comprehensive upper secondary school: Housework, Domestic crafts, Commerce and Office skills, Health and social care. When these studies were integrated into upper secondary schooling, they brought with them their traditions, teachers and established bases for recruitment. One prominent example of this is Auxiliary nursing, which mostly had adult applicants to the programme.

These adults followed the programme into upper secondary schooling which, combined with the younger applicants, contributed to making Auxiliary nursing the most attractive ( most applications) vocational education in the 1980s (Høst 2006). This education could select and reject applicants at will, and therefore appeared to have a certain status.

### **4.3 The apprenticeship scheme persevered at the expense of other traditions**

Through Reform 94, the apprenticeship scheme became an integrated part of upper secondary education, and the aim of the reform was to be a regular pathway with two years of schooling and two years of apprenticeship training, including education for all different areas of working life. The school-based traditions were weakened extensively. Housework and Domestic crafts as subjects were integrated into new areas of study, some into Arts, Crafts and Design, and some into Health and Social Care. The commercial business schools were phased out.. In the Health and Social Care study programme, the school-based Auxiliary nursing programme was kept alive some more years, but a parallel education for care worker training was established through the apprenticeship scheme. Today, both of these educations are integrated into the common study area called Health Care Worker under the apprenticeship scheme. This illustrates how the apprenticeship scheme has prevailed, while at the same time other forms of education within VET have been declining. What has happened in the new areas for recognised trades? What kind of status and how many applicants do they have?

In the report to the Nordic Council of Ministers (Olofsson and Panican 2008), the development of the apprenticeship scheme in Norway is analyzed and explained by the segmented labour market (Olsen, Høst and Michelsen 2008). The point of departure for the analyses is the very uneven distribution of apprenticeships among different areas of working life in Norway. Figure 1 shows the number of new apprenticeships divided into the categories Crafts, Industry and Other trades. The last category consists of trades arriving since the 1990s, which generally represent new sectors of vocational training. The figure shows us that the trades in the Crafts and Industry continue to be the most important in pure numbers. The new trades that arrived in the 1990s rose quickly to about 4000 after their introduction, which for most occurred about the same time as implementation of Reform 94. After this, there has not been any significant increase worth talking about. Among the new trades (in figure 4.1 called “Other trades”) it is the trades in Health and Social Care that are most significant in terms of numbers, after which comes Maritime subjects, as well as Retailing, Office skills, ICT and Transport driving.

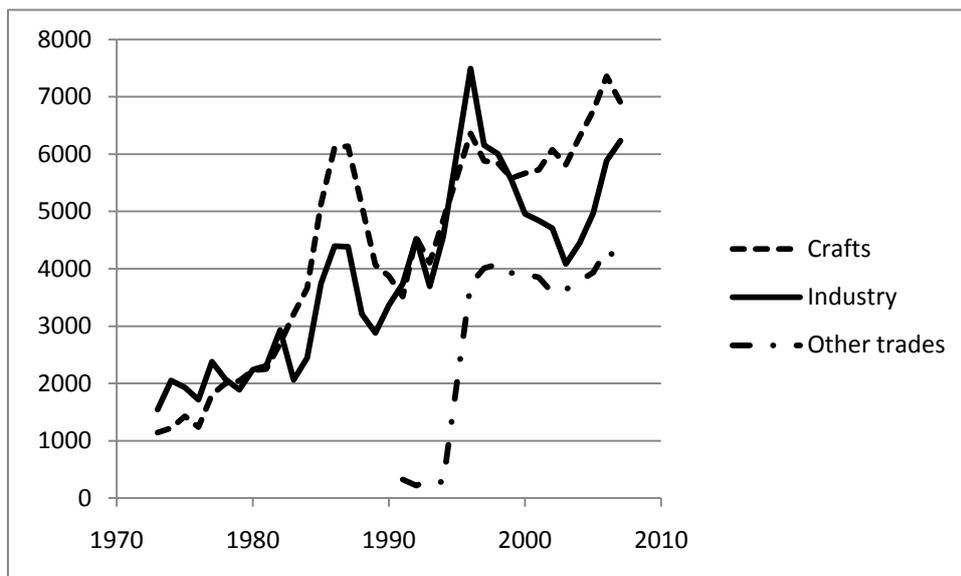


Figure 4.1: New apprenticeship contracts per year for 1973-2008, distributed between Crafts, Industry and Other trades

Sources: RFA's annual report, Linda Fagoppl ring, the Directorate for Education and Training, Statistics Norway

In some areas, we have been successful in connecting traditional trades to upper secondary school after Reform 94. Here we see that the normal pathway to an occupation has gone from upper secondary school followed by apprenticeship. This is especially true for the larger crafts and industrial trades, which represent the majority of apprenticeships. New trades in industry, which were established in the 1980s, have, with a few exceptions not been successful in establishing an apprenticeship scheme as the main pathway into the trade. In some of the new areas like Health and Social Care, the apprenticeship scheme has managed to gain a foothold but without becoming the main entryway into the occupations (H st 2004). In the Maritime area of study, we see however that there has been success in establishing apprenticeship as a form of recruitment based on traditional recruitment patterns that were established during previous schemes (Brandt 2008). In the Consumer goods and retail sector, which is one of the largest trades with hundreds of thousands of employees, recruitment of apprentices is relatively insignificant compared with recruitment of unskilled young people and adults with different backgrounds who are trained on the companies' own internal systems (Olberg and Jordfald 2000). Having a Craft Certificate then means almost nothing here compared with areas where vocational training and apprenticeship has gained foothold (Hagen, Nadim and Nyen 2008).

#### 4.4 A segmented labour market for young people

The fluctuating and somewhat limited expansion of the apprenticeship system in the public and private service sectors reflects the differences in how the transition from education to working life is structured for the different fields of work. One can here speak of a segmented

labour market for young people. This segmentation is constructed and reconstructed by the institutional relations between work and education. In general terms, the labour market in this context may be divided into three categories:

First of all, there are the areas where the apprenticeship system has gained a strong foothold, which is to say where skilled workers are the dominant category of employees, with a designated position within the companies' division of labour. Here, companies recruit employees to these fields from vocational education through the apprenticeship system, and access through apprenticeships for students from upper secondary school is good. This is currently true - with some exceptions - only for craft and industrial trades of a certain size and with long traditions of apprenticeships. Seen from the educational system's perspective, this is the only area where the apprenticeship scheme is established as the main educational pathway for young people in upper secondary school.

The second category is areas where the division of labour, at least to a certain extent, is structured by trades, but where recruitment does not primarily occur by recruiting apprentices from upper secondary school. This is particularly typical today of the health and social care sector, but also in the field of transport activities and parts of industry. In these fields there is established categories for skilled worker such as health care worker, childcare and youth worker, skilled workers of different types, and bus and lorry drivers. In these occupations there are being made efforts to recruit through the apprenticeship scheme, but the supply of skilled workers is often ensured by recruiting unskilled adult or young adult workers who later qualify through the so-called Experience-based Trade Certification Scheme. This involves a large degree of openness to accept unskilled workers – also young people – but this method also weakens the possibility of establishing a standard for training through an apprenticeship scheme.

A third labour market category - which is the largest market for young people - covers a large part of the service industry, not least of which is the consumer goods and retailing sector. It is very difficult to establish vocational training. The need for technical expertise of this vocation's profile is still unclear, there is limited access to apprentices and there is no fixed place in the companies' division of labour for these types of skilled workers. Unskilled labourers, often students, are employed in the same jobs. There is a weak vocational identity among existing and still small groups of skilled workers.

If we look at all these labour markets as a whole, they amount to a market populated by workers who have not taken higher education. Only part of it can be said to be structured by the apprenticeship system, while in other parts the border between skilled and unskilled worker is unclear.

## 4.5 The apprenticeship scheme as a basis for entering working life?

In general, one must assume that a completed vocational education gives young people an advantage in areas of the labour market where such an education is relevant. At the same time, it is true that also unskilled young people find work in fields that have vocational training schemes. Very little research has been done to shed light on the relationships between education and work, and recruiting patterns in individual trades in Norway. With a point of departure in the age and trade distribution found in employment register from Statistics Norway and statistics on age distribution among apprentices<sup>5</sup>, we can get a picture of the position of the apprenticeship system in the different parts of the youth labour marked in Norway.

We have selected five branches where employment numbers and apprenticeships for young people in the age groups 16-19 were collected. The branches chosen are considered as a whole the most important labour markets for young people, with 70-75 percent of employed young persons in the age group 16-19. Apprentices are counted as employed, but are not a separate category in the employment register. They are categorized in the statistics according to which trade they belong to, not where they work. However, most trades have a quite strong connection to a specific branch, and the apprentices will probably have the strongest connection. The categorization of apprentices according to branch therefore is based on this.

*Table 4.1: Employment among 15-19 year olds 2008*

Employment sector	Number
Industry	11 000
Building and Construction	11 000
Consumer goods/retail	41 000
Hotel and restaurant	14 000
Health and social care	17 000
Total	139 000

Source: Statistics Norway employment register 2008

The register data includes all employees regardless of working hours. The percentage of part-time work is particularly high in areas like the consumer goods and retail sector, hotel and restaurant trades, and the health and social care sectors. Many of those persons included in the statistics, especially in these trades, are taking an education while working part-time. By limiting the group defined as employed to those with more than 20 weekly working hours, we see a dramatic decline in the number of employees, down to 38 000. Compared with the SSB's regular AKU-survey, which says 53 000 employees aged 15-19 in 2008, this may seem a bit too low<sup>6</sup>.

---

<sup>5</sup> Source: VIGO statistical system for upper secondary education

<sup>6</sup> AKU Statistics Norway 2009

Table 4.2: Employed and apprentices aged 15-19, selected branches 2008

Employment sector	Working more than 20 hours a week	Apprentices	Apprentices as a share of the employed
Industry	4734	3902	82 %
Building & Construction	8220	8102	99 %
Consumer goods/retail	4666	488	10 %
Hotel and restaurant	2895	1146	40 %
Health and social care	2839	2116	75 %
Totalt 15-19 år	37664	21369	57 %

Source: The employment register/NIFU STEP 2008, VIGO

The figures give an estimate of the apprenticeship scheme's scope in different sectors. Not surprisingly, these show that vocational training is strongest in the area of Building & Construction, while it is weakest in the area of Consumer Goods and Retail. But these figures also support the fact that a large labour market exists for young people who do not have vocational training, also in sectors where vocational training has got a foothold, such as in industry. Apprenticeship statistics show however that there are great dissimilarities between the different industries where the extent and significance of vocational training is concerned. While the apprenticeship scheme is strong in the mechanical industry, it is weak in the large food industry. According to the employment register, most of the unskilled young people in the industry are found just in the food industry.

Until Reform 94, there was a provision in the Vocational Training Act that established that *"...anyone under 20 years of age who is not subject to compulsory education will be considered an apprentice when carrying out work in a vocation that is subject to this act"*<sup>7</sup>. After the reform there are other provisions other than the requiring an apprenticeship contract so that someone is considered an apprentice. This means that in formal terms any company may employ unskilled workers without giving them an apprenticeship or training contract. The average for all trades shows that just above half of those who consider themselves employed as their main activity are apprentices. The rest is comprised of unskilled employees without an apprenticeship contract.

#### 4.5.1 A large youth labour market – few apprentices

The apprentices contributes to a large part of the young, employed within traditional core areas of the apprenticeship scheme in craft and industrial trades, but only a small percentage of employees in the largest labour market for young people in the hotel and restaurant trade, and consumer goods and retail sector. I health and social care there are few 16-19 years employed, but most of them are apprentices. The major recruitment in this sector consists however of unskilled adults.

<sup>7</sup> Source: Lærlingehåndboka (Apprentice Manual) 1994, Dolven and Salte (ed.) (1994)

There may be two main explanations for the fact that branches with a lot of unskilled labour do not recruit apprentices. First, that the apprentices and skilled workers are not in demand at companies, and secondly, that young people are not very interested in becoming apprentices and holding Craft Certificates in these trades.

In Health Work, the municipalities stated in 2009 that they offered more apprenticeships than the number of contracts signed (*ibid.*). Very many municipalities did not get as many apprentices as they had planned for. There is little doubt that the low status of this trade among young people is the main reason for the low recruitment rate of apprentices. This apprenticeship scheme is well known because Health Work is associated with the previous auxiliary nursing category and is part of the authorisation scheme for health personnel. We do not have corresponding figures for the consumer goods and retail sector. Fewer people are acquainted with the apprenticeship scheme here compared with the health and social care trades. At any rate, there is a great demand for young people as workers in the consumer goods and retail sector, and this sector has expressed interest in apprentices and skilled workers (Høst and Evensen 2009, Markussen, Evensen, Høst and Prøitz 2009). In addition to this, the Programme for Service and Transport is, together with the Programme for Health and Social Care where the most students apply for a transfer from vocational education to the Supplementary Programme for Qualification for higher Education. All this clearly points toward the main problem being a lack of applicants because young people do not think being an apprentice in the consumer goods and retail sector is an attractive option. In the areas of Health and social care and in Consumer goods and retail studies, there are many conditions that would give young people plausible reasons not to choose a career as a skilled worker. While one can find the same type of job as an unskilled worker in the consumer goods and retail sector, one problem in the health and social care sector is that skilled workers have a very limited area of work compared with people educated at colleges and universities (Høst 2006).

## **4.6 Summary**

Through Reform 94, all initial vocational training (IVET) was integrated into a common system for upper secondary education in Norway. Almost all areas of the working life were also subject to vocational training and the apprenticeship scheme. While vocational educations traditionally had their characteristics from many different fields, through this reform the educational system began to take charge. Vocational education and training was standardised according to educational models, content and the normal age for studying. The number of apprenticeships grew significantly, helped by times of high economic growth and activity, and these places were made available to students who had already finished a two-year period of schooling. Thus far we can say that the educational system is a powerful structuring force.

The number of apprenticeships however developed unevenly. It was mainly in vocations with long traditions for using the apprenticeship scheme that were responsible for the increases. The new vocations, especially in the public and private service sectors, are finding it difficult to get a foothold. This can be due to how students choose and value the trades. While there is heavy competition in some vocations to get an apprenticeship, in other vocations there are not nearly as many apprentices as one might need.

In the new, comprehensive upper secondary school system, the surmised inferiority of VET is manifested in different ways, not least by students' choosing between programmes leading to qualifications for higher education or vocational qualifications the year they reach 16 years of age. There is little doubt that young people generally rank general education higher than vocational. The next step we see occurring is also an internally hierarchisation of vocational courses; first through the students' choice of education programmes and then through choice of vocation. Even if the school context influences the students' choices, they also get many different impulses from outside the school, not least from the working community itself. But one may also ask the question whether or not the educational structure in itself has something to do with giving vocational studies lower status. The clearest example of this is probably the auxiliary nursing education, which is now included in the study programme and trade called Health Care Worker. This field of study mostly recruited older students and adults until Reform 94, who had more ways to enter the study programme than just upper secondary school. This education programme clearly had the largest number of applicants throughout the 1980s. After the Reform 94, it was associated only with upper secondary education and students aged 16-19, something which gave the programme lower status and fewer applicants than it had before. This is an especially peculiar case, but the problem is still echoed in other areas.

# 5 The Knowledge Promotion Reform: Structural changes to strengthen the connection between VET and the labour market

*Håkon Høst and Miriam Evensen*

## 5.1 Introduction

Integration of VET into one comprehensive system at upper secondary level started as early as the 1960s in Norway. In the beginning, integration only covered vocational education and training at schools, while the apprenticeship scheme was excluded from this – being governed by the social partners. This led to an expansion of education in schools that was more or less disengaged from access to apprenticeships - and the need for manpower - in working life. Reform 94 led to the apprenticeship scheme being integrated into upper secondary education, and educational authorities were given a far more central position in relation to vocational education and training, including the apprenticeship scheme. This did not mean however that the problems of planning vocational education for the needs of the labour market.

With The Knowledge Promotion Reform came a number of new measures to strengthen the connection between VET and the labour market. In this chapter, we will be taking a closer look at the status of knowledge based on research in this area.

This includes:

- establishing a structure that includes broader education programmes in order to ensure that the demands of the labour market is met within a system with clear provisions regarding students free choice of education
- introducing the so-called In-depth study programme to promote opportunities in specialisation within broader reaching courses, and at the same time strengthening student contact with the working life
- modifying how the social partners influence decision-making in VET in order to strengthen the connection between the demands from the labour market and the way the educational structures are shaped

## 5.2 Background

### 5.2.1 The gradual rationalisation of Norwegian vocational education

While the *Gymnasium* was always relatively homogeneous in its organisation, the Norwegian VET system was very heterogeneous when the process of establishing a unified upper secondary system started in the 1960s. VET was based on completely different traditions for

learning in crafts, industry, commerce and office skills, shipping, domestic crafts, housework, and health work, to mention some of the most important fields. Even within the area considered as the core of the vocational education system, the traditional craft and industrial trades, the heterogeneity was and is great. This may be due to many distinctive *Norwegian* factors

- a small country in terms of population without any particularly large cities, with the population spread over large areas that were difficult to reach
- a country that far into the previous century had a relatively weak economy and much agriculture

These are hardly the most favourable conditions to start with when developing a streamlined system for vocational education. The apprenticeship scheme was also limited to urban areas until 1980. The vocational training scheme is still to this day characterised by containing very few of the big trades, with very many minor trades which in themselves were quite small. This can in many ways be seen alongside Norway's company structures which are greatly dominated by small companies (Spilling 1997).

In connection with forming a unified upper secondary school system a number of committees were established to look closely at the structure of a vocational education and training system. For vocational training, the so-called Schönberg Committee<sup>8</sup> recommended setting up more comprehensive and broader foundation courses based on what we call vocational trade families. This recommendation however was not supported by the most important actors involved in vocational education and training. With the exception of the *Machinery and Mechanical* trade area, that was vocational schooling's general education course, established as early as 1958, very little happened in the way of establishing broader introductory courses in craft and industrial trade studies. On the other hand, broader foundation courses were established in the areas of Health and social care, Commerce and Office skills. One did not have trades in these areas; one used school-based vocational educations lasting for different lengths of time.

In the areas of Industry and Craft trades, one continued to build on what was considered the strongest foundation of the Norwegian VET system, which is to say a close relationship and symmetry between the structure of courses in school and the structure of the trades, and between the school courses and trade categories in working life. This led to all trades having their own foundation courses and advanced courses in school.

### **5.2.2 A new order arises from Reform 94**

With Reform 94 we got a new structure that included the right to three years of upper secondary education for all 16-19 year olds, and a close connection between the school and the apprenticeship scheme. It was decided to establish 13 foundation courses to replace the

---

<sup>8</sup> The committee presented two public reports on the future of vocational education in 1976, NOU 1976: 10 and NOU 1976:31

old structure with 109 courses. At the same time, all counties were ordered to offer students all the vocational foundation courses. Furthermore, it was recommended that the more than 100 courses in existing Level I Advanced Courses in vocational education be reduced to about 30-50 courses, which was seen as a more reasonable number. The parliament presumed that reorganisation of the course structure would be done in cooperation with the social partners. Cooperation with these parties about the structure of the advanced courses however ended with the creation of as much as 80-90 courses at Level II (VKI), or about twice as many as what the Ministry felt was reasonable. In addition to establishing a relatively complex and specialised structure at Level II, one did away with the possibilities to move from one foundation course to an advanced course in another foundation area, or be able to apply for an apprenticeship and have school hours from another study area counted than only the course one had already finished. This had to do with the new system where vocational education were now subject to more systematic and extensive curriculum plans, and students were legally required to receive an education that was based on and related to these plans. Add all these changes up, and you get a relatively stiff structure (Høst, Michelsen and Gitlesen 1998). It set difficult demands on planning, not only because the number of students admitted in the beginning had to correspond with the number of students that finally graduated at the other end in the form of apprentices. The counties did their utmost to comply with the students' choices at admission, often going farther than they were required based on their obligation to give students one of three choices. Honouring the students' first choice was in many ways the most important criteria for success for the county municipalities after the reform. The result was that the number of students that entered the many different courses did not correspond with the number of apprenticeships available. This in turn led to establishing expensive and, as would be known later, almost useless Level III (VKII) courses in schools as alternatives to apprenticeships - in order to ensure that students were given their required three years of training at upper secondary level<sup>9</sup>. There were also many companies at this time that did not get apprentices because there were not any students studying in their discipline. The concept *mismatch* was introduced to describe this situation. The authorities had introduced a number of interventions so companies would now only recruit apprentices that came from Level II from upper secondary. For this reason, companies that did not get any apprentices from school were correct in criticising the structural changes for hindering them from obtaining apprentices. Among the trades that complained about the lack of apprentices were the craft trades that in the past had been recruiting apprentices from different age groups and with different school backgrounds, and companies that lacked or had little tradition of using the apprenticeship scheme and recruitment.

### **5.2.3 The Knowledge Promotion Reform: The new structure shall solve the problems**

In the subsequent White Paper 30 *Culture for Learning*, these principles are developed further and through The Knowledge Promotion Reform a new model is introduced. The levels of

---

<sup>9</sup> One of every four apprenticeship applicant was in 1997/1997 offered an alternative VKII (new Level 3) in school (Vibe, Edvardsen and Sandberg 1997)

upper secondary education were given new names to highlight this change. Upper secondary level 1, 2 and 3 were introduced to replace foundation course, VKI and VKII (Level 1,2 and 3)<sup>10</sup>. At new Level 2 (vg2), it was recommended that the individual courses should be much broader in scope than the previous ones. The authorities and the social partners acted quickly to have the number of all courses reduced by half. The courses shall be divided into the following blocks:

- One block of general subjects
- One block of common programme subjects, which are vocational subjects common for all recognized trades inside the programme
- The In-depth Study Project, where students are given the possibility to make more detailed studies in a recognized trade or general subject that one is really interested in, also gaining more extensive knowledge about a different trades

The main reasons in the Ministry's proposal for structural changes in White Paper 30 (pp. 67-68) were that more entry points would improve the possibility of being accepted to the wanted programme regardless of geography, social background or gender, which can be characterised as *comprehensive school* reasoning. Secondly, it gave the possibility of postponing the student's final choice of trade as long as possible. On the other hand, the structure must also provide students that have made their choice with the opportunity to practice this trade from the first year of education.

If one looks at the needs of the labour market, it is asserted that a structure offered with broader courses would contribute to educating enough employees within the different trades and professions. It was thought to satisfy the labour market when students had both adequate specialised vocational training enough to be considered valuable labour, and at the same time a sufficiently broad range of competences to be able to adapt to reorganisations at a company, in the trade and in society.

And finally, the White Paper emphasised that the structure would arrange for efficient use of all resources in upper secondary education. This deals with making planning work easier, ensuring that classes are filled with students and avoiding extraordinary classes in school as an alternative to apprenticeships at companies.

In White Paper 30, the Ministry recommended that the number of Level 2 courses remain between 35 and 50. In the beginning of 2005, educational authorities reached an agreement with employer and employee organizations about a reduction in the number of courses at Level 2 from 86 to 56. That the resistance to give up trade-specific courses could be defeated so quickly can probably be explained by the establishment of a new structure of advisory boards. The social partners took responsibility for rationalisation of vocational training internally. Rationalisation to a great degree deals with replacing what can be called the

---

<sup>10</sup> Se attachment for the new study structure

*vocational principle* with the *course principle* as the structural foundation for how courses are constructed. When vocational training in schools historically has been structured on trades and vocations within working life, this means that the education given would be as similar as possible to the trade as this is practiced and as determined by working life. This had a number of implications. When one strove for teaching that was as close to the practical tasks of a vocation as possible, experienced skilled workers were preferred as teachers in the school subjects. These preferably also had good connections with companies in the trades, and it was easier for them to find traineeships and apprenticeships, or equipment and practical working tasks for the schools and students.

Because of Reform 94, the vocational principle was replaced by the course principle in the foundation courses, which meant that the school structure got more independent of the trades. Service vocations and many of the industrial trades accepted this. They had to a large extent already established broad courses. The craft trades, which in many ways had been the model for the vocational principle and for vocational training in general, were however negative to the change, but finally accepted the change with some exceptions<sup>11</sup>. Most of the trades despite everything kept their own courses at Level 2 (old VKI). That meant keeping the tradition of recruiting skilled workers from the crafts for teaching positions. The only academic requirement was that these people had completed vocational pedagogy studies.

The Knowledge Promotion Reform introduced the idea that most of the remaining trade-specific courses would also be combined as broader courses at Upper secondary Level 2. This is for example true of the craft trades in building and construction, where 10 crafts lost their trade specific VKI courses and were included in more general and broader courses. In Hotel and Food processing trades, five craft programmes and one industry course were replaced by two general courses for Restaurant and Food processing respectively. In the industrial vocations, the broader course structure at Level 2 (old VKI) made its arrival earlier in connection with Reform 94. The changes here mostly consisted of restructuring even though there was also some further merging of courses.

These structural changes also affected the content of the separate educations. One may consider a number of different ways to carry out such mergers. One way is to join subjects in common courses based on directly overlapping elements. There are limits to how far one can go with this method, because the distinctions between trades are related to the different fields of work they cover. To the extent there are vocations, crafts or trades that overlap in real working life, it would be most logical to begin at the other end, which means by joining vocations together. Another way would be to find general elements at a higher level. This might mean common knowledge for various vocations about markets and clients or customers, about the trade, Environment, Health and Safety issues, principles of production processes, about raw materials or similar. By removing such elements from their original

---

<sup>11</sup> One exception is plumbers, who have continued to work with a different training programme than the educational system by establishing their own schools, among other ways.

practical context for teaching these in a common course, one puts them into an altogether different context – based on branch or broader educational programme.

However, The Knowledge Promotion Reform involves no complete confrontation with the vocational principle. Even if the course principle now dominates, one recognises the necessity of a certain specialisation in a trade when teaching at school. This problem is solved partly by teaching all students a few hours about each and every trade, and partly through introducing the new subject called In-depth Study Project (Dæhlen, Hagen, Herzberg 2008). The In-depth Study Project amounts to 20 percent of all teaching hours at level 1 and 30 percent of the hours at Level 2. The idea behind the In-depth Study Project is that students ideally will be able to receive teaching in their desired recognized trade, either at their own school or at a nearby school, or at a company that works within this vocational area.

### **5.3 The In-depth Study Project**

The In-depth Study Project is the theme of a research-based sub-evaluation in The Knowledge Promotion Reform (Dæhlen, Hagen, Herzberg 2008). The first evaluation report investigated the extent to which and in what way the In-depth Study Project has influenced that part of learning that occurs in schools, and how this new subject influences student motivation and conditions to complete a full course of education and training.

Four education programmes and single trades were selected for deeper analysis: Carpentry, Health Care Work, Cookery and Motor Vehicles (an education programme leading to a number of trades). Common for all these is that they are large, and that they – partly for this reason – have not experienced any hard rationalisation as a consequence of The Knowledge Promotion Reform. Carpentry once had its own course but has been joined together with Bricklaying, Concrete Work and Scaffolding after the implementation of The Knowledge Promotion Reform. Carpentry is however the predominant course among these. Health care Work is the result of joining the previous school-based Auxiliary nursing and Care worker, but this happened relatively independently of Knowledge Promotion. The cooking trade have been given a common Level 2 course with Waiting (waiter and waitress training), while the Motor Vehicle vocations already had a common course before the reform. The report does not shed light on the degree to which the In-depth Study Project can compensate for the reduced opportunity for specialisation that affects the smaller trades that have been included in the broader Level 2 courses, but to a greater degree how greater opportunities for practical work have developed in the vocational education.

#### **5.3.1 The In-depth Study Project at county level**

The report takes a particular look at the significance the In-depth Study Project has had on cooperation between schools and working life at a regional and local level, and how cooperation influences the content and organisation of the new subject. Basic data for this

report amounts to 98 qualitative interviews with school owners, head teachers, vocational teachers and trainers, students and the schools' collaborators in the working community. Those interviewed in the five counties consider the In-depth Study Project as a great opportunity to increase cooperation between schools and the working life. The In-depth Study Project is also seen as a possibility for business and industry to gain greater influence on how vocations are learned in schools so that young people are better prepared for what awaits them in working life. At the same time, school owners and head teachers agreed that there are great differences between the many education programmes. In some trades practical training in firms is extensive, in others not. Building and Construction and motor vehicle trades are examples of trades that have involved themselves most actively in developing the In-depth Study Project. This may be explained by their need for recruitment.

There is also some anxiety in the county municipalities that this new subject - alongside other changes brought about by Knowledge Promotion - shall lead to so much pressure on the learning capacities of in-service training establishments that apprentices may be negatively affected. The county municipalities therefore wish to coordinate the schools' use of in-service training to minimise this pressure.

A lot of the direct contact throughout the In-depth Study Project is based on networks and personal contacts between heads of departments, vocational teachers and the local business community and local industry. The business community also sets limitations to the variety of in-service training offered at the schools.

The county municipalities also expect the In-depth Study Project to contribute to the quality of students choice of an education. There are also expectations that this subject shall make theoretical learning easier, because the students gain a better understanding of how theory and practice interrelate. The In-depth Study Project can also function as an arena for introducing students to apprenticeships by connecting students with companies at an earlier stage in their education.

### **5.3.2 In-depth Study Project for Cookery**

Work placement was used extensively in vocational studies for Cookery even before the In-depth Study Project was introduced, and many teachers in Cookery have close contacts in the trade. Most have also previously worked as cooks. The In-depth Study Project in Level 1 Restaurant and Food Processing tend to be offered as a purely school-based subject. The argument for this is that students must have a certain knowledge base before they can begin working at companies. Despite the fact that in-service training is limited at Level 1, a lot of teaching time is spend visiting companies or being visited by companies at the school to inform the students about the existing possibilities for working experience and in-service training at these establishments. Technical in-depth study at school is limited to trades where one has vocational teachers and equipment.

At Level 2 Restaurant Service, students in the schools that were surveyed for this report are offered on-site training at a workplace. As mentioned earlier, many of the professional teachers in the subjects have good contacts in the trade through a well-established network, but at many of schools one has also entered into formal partnerships with local companies. Most of the schools do their work placement through the In-depth Study Project during one continuous period instead of single weekdays throughout a year. Experience shows that it is easier to find good traineeships in this way. One complies with the trade's wish to have students on site for a continuous period of time, at the same time as one feels the students gain better insight into what the trade consists of.

Students that are given work placement at level 2 generally get to participate in many of the tasks that are included in kitchen work at restaurants, and the schools also try to comply with company wishes to decide the times for work placement based on the tasks a company has to offer. Motivation and willingness to learn are considered by both teacher and employer as more important factors for accepting in-service training students than if the students are clever and have already learned a lot at school. Teachers do not set many requirements to company documentation or what curriculum goals the students will complete. Company's production is the guideline for work experience, and the company cannot be expected to make changes based on the students' curriculum goals.

Some teachers are sceptical as to whether weaker students are able to utilise the in-service learning. On the other hand many informants from employing companies and organisations also say that work experience can be particularly important for students who perform poorer at school. Work experience can help such students find apprenticeships at a later time. Companies are especially positive to the possibilities provided by the In-depth Study Project to meet and evaluate potential apprentices. Recruitment needs for this line of business are great.

### **5.3.3 In-depth Study Project for Carpentry**

Work experience as in-service training in the study area for Carpentry is not extensively used in the In-depth Study Project for Level 1 Construction Techniques. Instead, this is usually done at the schools using the so-called *practical approach*. One reason for this is that one does not want to overload the training capacity of the firms. Another reason is that it could be difficult in practical terms for students to find companies for their in-service training. At Level 2, work placement at companies in the In-depth Study Project is the norm. Options for in-depth study are limited by the opportunities at the school and in the local labour market, but most of the young people at the course have already decided to be carpenters.

At one school, the class is divided in two groups of students who alternate taking part in the In-depth Study Project at companies. Thereby the need for traineeships is reduced by 50 percent, and the teachers have fewer students to teach for a period. At another school, the students are given continuous work placement positions for periods of two weeks.

Companies and teachers tell us that the In-depth Study Project is not qualitatively new. Work placements have existed for many years, but there are now more of them. The schools state that the collaborations with companies are functioning well, and that contact with companies is more regular than before The Knowledge Promotion Reform.

As with Cookery, teachers in the Building and Construction Programme are more interested in developing the social competences of students than their academic skills before they head out to companies. In this programme, as well, it is company activity that sets the framework for what students learn, not curricula. Some demands are forwarded to the companies to prevent negative effects, like leaving the student alone or the work tasks being too monotonous. Companies are also concerned about this because this may have a negative effect on recruiting options in the future.

Cooperation with companies is not very formalised, but there have not been many big problems finding traineeships.

Both teachers and companies emphasise that practical work must have a starting point in what the company actually works with, and that one must be pragmatic about individual curricula requirements. Recruitment is also an important driving force for the carpentry companies to be open for work placement students.

#### **5.3.4 In-depth Study Project for Motor vehicle mechanic, light vehicles**

Level 2 Motor vehicles includes five vocations: Automobile Mechanic for Light-duty Vehicles and Automobile Mechanic for Heavy-duty Vehicles, Motorcycle Repairs, Vehicle Sprayer and Motor Vehicle Body Repair. At Level Level 1, this belongs to the Programme for Technical and Industrial Production, and as a cross-area specialization from the Programme for Electrical trades. Level 1 Technical and Industrial Production is mainly an extension of the old foundation course for Mechanical studies, which has a long history of being the vocational version of general studies. Through this programme and the new structure, the students can now choose among half of all the trades, 50- 60 of these directly through different Level 2 course within the programme, as well as a number of cross-area specializations to others. Many teachers are critical to this broad structure because teaching becomes a bit diluted. This is why the In-depth Study Project is seen as a possible solution, but mostly at Level 2. Three out of five schools have work placement at companies beginning at Level 1. This is generally a kind of vocational guidance. The others instead arrange companies visiting the schools. In Level 2 Motor Vehicles, all the schools use work placement at companies. There is also a lot of training going on at the school workshops.

Cooperation between the school and the trade is based on mutual dependence, and the last few years this cooperation has been somewhat more enhanced. The schools work quite a bit to give students good attitudes before they enter into a company, teaching skills like punctuality, correct greetings, bringing lunch bags etc. Teachers also believe that social competence

develops in students when they are out working at companies, but they also feel that academic content is limited during this time. In the same way, companies set few demands on the theoretical skills of students, but are interested in the trainees' social skills.

The study area for motor vehicle mechanics has changed a lot from being concerned with installing engines to now dealing with electronics and troubleshooting. Employers seem to be concerned with this information reaching the teachers and school advisors when they recommend the trade. Some representatives from employing companies feel that the students are far less capable today than some years ago. This is partly caused by the technological changes mentioned, but also by changes at schools and the educational model.

The motor vehicle trade is generally positive to more work placements at companies, and this greater interest seems to be traced back to a continued need for recruitment. There has been increasing cooperation between companies and schools independent of the In-depth Study Project. One example of this is that the companies started education for motor vehicle body repair by having trainees working three days a week for a period of three to four months.

### **5.3.5 In-depth Study Project for Health Work**

Health Care Worker has its own Level 2 course, which leads to the new recognized trade with the same name. The trade was created by merging the previous Auxiliary nursing education and Care worker. While the Auxiliary nursing education was school-based, yet with many weeks of practical working experience in the fall and spring semesters, Care worker was based on apprenticeship.

As with the other vocational studies, work placement at Level 1 for this the subject is generally limited to one day a week. The rest of the In-depth Study Project during the first year is done at the school. At Level 2, this subject stands out with lengthy practical work experience of up to seven weeks, which is very similar to the previous Auxiliary nursing education. Teachers in this area have a great deal of experience organising work placement and have networks that are necessary to get this done. The care and nursing sector needs employees and has a positive attitude towards to work placement. The problem rather resides in the fact that many of these students have already decided to quit the education and switch to the additional general course to get qualification for higher education. In-depth study in general subjects is also offered as an alternative to practical work experience.

Teachers from the Auxiliary nursing programme still see changes occurring because Health Care Worker is a trade, and not school based, which means they have to relinquish control to employers.

Before students head out for work experience they are often given some instruction in areas like professional ethics, hygiene, personal data protection and how to behave at work.

Teachers in this education believe that in-service work experience is of the greatest significance for the outcome of student learning because it gives a better understanding of the relationship between theory and practice. Through work placement, they are given the opportunity to understand more about the professional role. Considered in this way, they are positive to the In-depth Study Project and feel it can help students make the right vocational choice. Work placement can also be positive for students that perform poorly in theoretical work. It is an opportunity to show new sides of themselves and gain a sense of mastery and accomplishment in real life. At the same time, some scepticism exists to the idea that the work places should take too much responsibility for learning, especially because work is often hectic and work placement steals time from theory.

Students that took the In-depth Study Project at school say that they did not learn anything useful. A lot of time was spend on constructing theoretical problems instead of applying time to real working experience. Students at another school complained they felt confused when having only one day of work experience at a time, feeling that they had to restart in-service learning again every day. There was also very little variation in the working tasks.

Or they spoke of tasks at work which they were not allowed to do. There was always some downtime and they would often do tasks that were not related to the vocation like working in the kitchen instead of working with patients. Others tell of positive experiences where they were included in daily work.

### **5.3.6 Main features and models**

The In-depth Study Project at Level 1 in most places has been a kind of vocational guidance, while at Level 2 it is generally arranged as trade specific work experience. This practice is also concerned mostly with understanding the basic conditions of the vocation. Work placement, also at Level 2, is normally for such a short period that students will not be trusted to do particularly advanced work tasks.

For head teachers, teachers and companies, the In-depth Study Project is not seen as a qualitative new subject because work experience among Level 2 students was just as common before, even if the extent of its use has generally grown. One exception is the Auxiliary nursing education that had a very extensive work experience.

Both schools and companies are positive to the idea behind the In-depth Study Project, even though a lot of criticism is heard about the scheme for how it is implemented. That companies are willing to take students on such a large scale is in itself an important experience. This can generally be tied to the needs companies have for recruitment. The companies use work placement as an important measure to meet and try out potential apprentices. Through the In-depth Study Project companies may present themselves to the students as attractive places of work.

One aim in the first report has been to identify the different models of organising and executing the In-depth Study Project. The Evaluation Report (Dæhlen et al. 2008) has chosen to divide the In-depth Study Project into 4 different models: Classroom projects, Pseudo-companies/school workshops, Work experience, and Learning at work.

Classroom projects are mostly found at Level 1. This model has very limited vocational relevance and is sheltered from the demands and expectations of working life.

The pseudo-company or school workshop gives students the opportunity to practice aspects of a vocation while staying within the context of the school, and in this way is sheltered from the demands and expectations of working life. The workshop model for example is much used by the motor vehicle trade and in building projects for students from the Building and Construction Programme. Practical training at a workshop can be advantageous because students learn basic techniques before they enter working life. This model then is very relevant to the vocation.

The work experience model puts students to use at a place of employment as a learning arena, who are then better able to form an opinion about a vocation and make contacts for future employment. But being out in the working arena is not always synonymous with performing relevant vocational tasks. This report distinguishes between work placement that gives work experience and work placement that contributes to learning. Too little variation in tasks at work, for example changing winter tires for two weeks is used as an example that gives practical work experience but does not contribute much to learning. The same can be true of Health Care Worker students who are put to do work in the kitchen instead of working with patients.

Learning at work is, according to the report, the model that generally gives the most vocational relevance and a certain amount of exposure to the demands and expectations of working life. This model is the goal of most placements at Level 2. It allows students to participate in real working situations, something that they might benefit greatly from. But a high level of vocational relevance and being exposed to the demands of working environments is not in itself enough for young people to experience practical working life as meaningful and to have a good learning situation, because most students also need guidance and follow-up. There are examples of students being given tasks and responsibility that they are not trained to master, like students in Health care Work that are alone during rota duty.

## **5.4 From specific courses to comprehensive courses in VET**

As a contribution to the research based evaluation of The Knowledge Promotion Reform, the structural changes in vocational education with a movement towards broader courses at level 2 in school have been investigated (Høst and Evensen 2009). These changes amount to the most important structural changes in upper secondary education caused by the reform. An essential argument for the structural changes is that they should make it possible for most

counties and schools to cover a wider range of educations so that students - also within VET – will have equal access to all kinds of educational choices regardless of where they live in Norway. At the same time, the structural changes allow students to delay their final choice of trade until they apply for an apprenticeship. This rationalisation of the course structure should also make planning easier for the county municipalities. Last but not least, the breadth of the courses shall also raise the level of flexibility where companies are concerned to better be able to meet the needs and demands of the labour market, and the supply of apprenticeships. This is probably the most important reason, having its origins in the recurrent mismatch problem.

#### **5.4.1 The counties' assessments**

Three counties (Akershus, Rogaland and Hordaland) were investigated in order to gain a deeper understanding of how the structural reform affects the county municipalities. In general, one can say that, in Rogaland and Hordaland, the structure reflects a business structure with a significant industrial sector, to a certain extent seen in the students' choices of vocational education programmes. VET has a strong position in both these counties. Akershus on the other hand is a county with a large service sector. This is not, however, reflected to any great extent in the students' choice of education. One explanation for this could be that vocational training has a weaker foothold in the service sector, which means that vocational education and training is not considered a relevant career choice in this sector.

All three counties are worried that the students who take vocational training still switch to the supplemental academic course to obtain a qualification for higher education instead of applying for apprenticeships. Professionals are discussing the reasons for this, such as the increasing tendency of students to prefer going to school with students at their same age instead of entering the work force to learn.

It has become more difficult to say whether students in vocational education programmes wish to become apprentices. This also creates problems in planning and dimensioning the school places in the counties. Rogaland stands out as being the county that emphasises the supply of apprenticeships most as the basis for planning the educational capacity at the schools. In Rogaland one also introduced a pilot project with the right to have an extra year of supplemental academic course to obtain a qualification for higher education *after* completing the apprenticeship period. This has however not been enough to change the increasing trend toward qualification for higher education. The two other counties emphasizes the students' choices as most important. These priorities have a political foothold in the county municipalities. In Hordaland they stress maintaining small classes in areas where the students actually live. In all three counties, the Vocational Training Board participates in the process of dimensioning the school places. In Hordaland and Akershus they express dissatisfaction with the Vocational Training Boards not being listened to when they explain the needs of the labour market to the politicians. In Rogaland, vocational training and the Vocational Training Board have traditionally held strong positions. Here, one is more worried that the Vocational Training Board has lost its decision-making authority, and instead has taken on a policy-

advisory role. The general impression is that the Vocational Training Boards are in a process where they attempted to find their new role.

All the county municipalities believe broader Level 2 courses is a progress because this give more flexibility in organizing courses and makes it easier to satisfy the students' first choice at transition to Level 2. None of the county municipalities summarised however that the broader structure had thus far made any particular changes to the planning process. At the same time, it was summarised that in all the county municipalities there were negative attitudes from the working life towards broader courses. Most of the objections came from the craft trades, and dissatisfaction was related to students learning too little of the trade itself while in school. But there were also general objections to spreading professional resources connected to the specific trades all over instead of letting certain schools be experts on certain trades.

The counties had not yet summarised any changes in the distribution of apprentices on different trades after the reform. Preliminary counting of new apprenticeships in Rogaland and Hordaland however show a large degree of stability both in the total number of contracts and the distribution of these to the trades.

A survey directed at all the county municipalities and the upper secondary schools, confirm that The Knowledge Promotion Reform has not yet led to any great changes in the process of dimensioning school places. The importance of maintaining existing education offers is emphasised by both head teachers and county municipalities, while the new flexibility to establish school classes introduced by The Knowledge Promotion Reform seems to have had a rather limited effect or no significance at all. Broader courses are primarily seen as a measure to ease the county municipalities' planning process, and very few expects this will lead to better quality. Hopes for better quality in education and training are connected to measures as a greater emphasis on basic skills, and the In-depth Study Project. There neither any great belief that the structural changes will bring about less dropouts.

#### **5.4.2 Students' first choices not met**

The Knowledge Promotion Reform contributed to a wider range of educational offers at many vocational schools. We expected to find that this would allow the students better access to their first choice for a vocational study area. There is however no clear development in this direction. Based on a study of applicants from the classes that entered upper secondary school in 2006 and 2007, we see on the contrary that less students get their first choice in five out of the nine vocational education programmes at Level 2 compared with similar programmes before The Knowledge Promotion Reform. In cases where the very popular courses with many applicants were joined together with courses with few applicants, the *mismatch* has been eliminated if one limits one's investigation to Level 2. The classes that used to be very popular with many applicants, and where it has not been possible to find a suitable less-popular course as partner to create one common course, there are still too many applicants. This seems to be a frequently occurring phenomenon.

In the majority of counties, students were admitted their first choice to a lesser degree after The Knowledge Promotion Reform. There are large variations between the county municipalities in this area, which among other things can be due to some counties wanting to control the application process more than others do. One explanation is that despite trying to solve the problem by merging courses, there are still a lot of level 2 courses with too many applicants compared with the capacity the county municipalities are willing to offer for a course or programme.

### **5.4.3 Little change in recruitment patterns**

Four areas were investigated to take a closer look at effects of the structural reform where changes are the greatest at Level 2; Food & Beverages, Building & Construction, Climate, Energy & Environment, as well as Health Care Work.

Common for all these areas is that the reform has provided a broader range of educations offered at schools in counties studied. This has occurred because the schools that previously offered at least one of the subjects that are included in the new and broader courses after the reform now offer the new course, and because there has been a certain growth in new schools that also offer these courses.

Where recruitment into recognized trades is concerned, the preliminary figures for 2008 for apprenticeships show no significant change that can be related to the changes made by the reform. The relative differences between the trades generally seem to remain quite unaffected by the structural changes at the schools. The vocational areas that do not have a strong tradition of recruiting young people from upper secondary school still have problems with recruiting from here, even though it is now possible to recruit from more schools and more classes. The different fields of work continues to recruit based on traditional patterns; care and nursing mainly from among adult unskilled workers, the crafts like plumbers both from schools and outside of schools, and the food industry mainly from adult unskilled workers. In all, this shows that the reasons for making structural changes in The Knowledge Promotion Reform are not yet legitimated.

The distribution of students in the different trades does not seem to be significantly changed by the reform. Even though students follow broader courses, they seem to follow traditional patterns when applying for apprenticeships. The reform's goal that the new structure would provide a better match between students or apprenticeship applicants and the available apprenticeships seems for the present not to have been reached.

Informants are cautious saying anything about quality changes due to the new structure, even if more of them are questioning the consequences of the new and broad courses. It seems as the schools have chosen various ways to adapt. While some schools attempt to create courses with a broader profile - either through providing wider-reaching common themes or small

pieces from all trades - it seems that more schools continue to teach mainly the trade or the trades they did previously, due to their teaching staff.

## **5.5 Broader courses and more specialisation: having it both ways?**

One of the main reasons behind the structural changes with broader and more comprehensive courses in vocational education was the recurrent problem of the lack of accordance between the choices of the students and the needs of the companies. The response in The Knowledge Promotion Reform was evident; broader courses also at the second year of vocational education would bring greater flexibility to everyone; the county municipalities, the schools, the students in their choices, and finally the companies in their recruiting. The structural reform would hardly have been accepted as justifiable by the trades if not also including measures to ensure a minimum of in-depth knowledge about the trade. The main response to this was the so-called In-depth Study Project. This measure raises expectations that students would experience a win-win situation, and have it both ways in terms of more breadth and more specialisation in education.

168 hours would be set aside for in-depth study during the first year of school, when the programmes are so broad that many subjects can hope for little more than being mentioned. How to solve this for the programme for Technology and Industrial Production, that covers almost half of the 180 trades in its vocational training? Most schools seem to have responded to this problem by using the In-depth Study Project as a kind of extended vocational guidance, at school and not in a company. In the broadest reaching programmes, out of necessity the attention would be concentrated on some of the trades, while for the smaller programmes it is possible to extend across them all. To the extent the in-depth study is done in a company, it seems to be arranged as company visits and not work experience.

In Level 2, the courses normally cover from 3 and up to 7 trades, but there are Level 2 courses that also cover as many as 12 subjects. The In-depth Study Project has been extended to 253 hours throughout the second year of school. The most common practice is to send students to companies through work placements for shorter or longer periods at this time. The choice of in-depth study subjects is however not entirely free but limited to the school's teaching competence and equipment, as well as the opportunities available in nearby companies, and possibilities at other schools. The intention of creating greater flexibility is limited by the pattern that vocational teachers still have their professional basis in one trade – not in a course or in general vocational pedagogy. Apparently, the main pattern is that students within this system make their choices quite early, and that these choices are quite traditional. This despite the intentions that the choices would be postponed, done by students being better informed, and in this way more diversified.

Practical work placement by way of the In-depth Study Project has established a more formal arena for interaction between the schools and companies. Work placement still seems to

follow general and traditionally well-travelled paths. Established networks of companies are being exploited, and the distinctive characteristics of work experience are characterised by previous schemes, like when students in Health Work are sent for about 7 weeks of work experience at a nursing home. It is an important finding in the investigation that companies are very positive to taking students for practical work experience, even though there is not always agreement about work tasks and work load. There is a great deal of heterogeneity as to what kind of work experience the students are offered, both at the schools and at companies. Some work experience is closely related and relevant to the actual vocation, while some work has no relevance at all. The most important reason for companies being so positive seems not to be the content of practical training; students do not gain much in-depth knowledge about a vocation. Work placement is still too fragmentary. Instead, it deals more with meeting, considering and connecting with students, to prepare for recruiting some of them as apprentices. Beyond this, practical work experience helps the young ones getting socialized to working life, if we are to believe the informants who have provided their viewpoints about the In-depth Study Project.

The Knowledge Promotion Reform has strengthened the relationship between schools and companies, and placed practical work experience into a more formal system. Neither of the two evaluation projects has however found anything that points towards The Knowledge Promotion Reform giving a better match in terms of content in school education and the needs of the labour market. Neither is it found a better correlation between the number of applicants and the number of apprenticeships offered in different trades. In-depth practical experience at a nursing home, for example, often seems to convince the student not to be an apprentice, but apply for the supplementary general course to get a qualification for higher education instead. More informed choices, if that would be the result, do not necessarily mean that the mismatch problem is solved. But one might say it is valuable in itself?

## 6 Challenges to research

*Håkon Høst*

### 6.1 The status of vocational training and different ways to enter the system

Chapter one of the report shows that it is just as common to take a craft exam as an adult (yet in the adult's case based mostly on practical experience) as it is to take the exam at a young age, specifically here designated as 19-23 years of age (based on a formal educational pathway).

The adults' position reflects a long tradition in Norwegian working life and vocational training characterised by pragmatism when choosing between experience-based competence versus school-based competence. It can be said that the traditional flexibility and openness of the Norwegian system has many qualities, in any case compared with the more rigid and closed VET systems where those who do not make it through the system at young age, remains outside.

At the same time, there is a lot of knowledge missing about what it was that brought about the Norwegian pattern and the consequences it has for the individual and for society. On the one hand, we have a number of trades in vocational education that could use many more young applicants. Students sneak away, preferring to choose the pathway toward a qualification for higher education, or not completing. On the other hand, we have systems to certify experienced adults to cover the need for skilled workers. What the connection is between these phenomena is still unknown. For example, one might ask oneself whether it is purposeful to have such a clear distinction between adolescent and adult education. Perhaps both schemes might profit from a closer integration, permitting greater flexibility in the way training is organized.

One common finding of the evaluations of The Knowledge Promotion Reform and the Certificate of Practice pilot project is that many companies have a positive attitude towards hiring young people under the age of 18. A lot of experimentation is happening in the county municipalities and schools with new combinations of theory and practice in VET for young people. On the other hand, there are worries that the Experience-based Trade Certification Scheme is not enough to ensure adults the necessary professional expertise, and that it is not flexible enough for recruiting adults who need re-schooling. This is especially true for many immigrants. In Oslo, almost 40 percent of employees in the nursing and care sector are immigrants (Homme and Høst 2008, Høst et al. 2009), and most of them are unskilled.

Some paradoxes in today's schemes deserve more attention. For example, a lot of resources, time and energy have been invested in establishing vocational training in the consumer goods

and retail sector, without young people seeming to be standing in line to take apprentice positions here. At the same time, young people in great numbers are applying for unskilled jobs in the same shops. Even though many of these are students or students who work part-time alongside studies, there are also many young people who work in the consumer goods and retail sector without having completed an upper secondary education - and this also includes young people with other upper secondary educations already completed. The challenge here is to gain more understanding of what mechanisms maintain these recruitment patterns and why vocational training has not had been able to get a foothold in this field of work. In the care and nursing sector, we know a little more about the traditional recruiting patterns, dominated by adults. Great investments and efforts are being made to increase recruitment among young people. Instead the recruitment is declining. On the other hand, many adult unskilled workers are still recruited to this sector, who would like a vocational training. These people must in general accept the fact that they must work for 5 years before they can take an exam as an external candidate. Educational programmes for adults have been stopped, and many adults do not have access to publically funded courses.

## **6.2 Is the quality of vocational education and training better after The Knowledge Promotion Reform?**

The aspects of the Knowledge Promotion Reform that relate to the content of vocational education are maybe those that get the least attention from research evaluations. Structural evaluations look at how students move through the new structure, and how different actors and conditions contribute to this. The study that was made of the In-depth Study Project looked at how this measure was organised, primarily as an educational instrument and to a lesser degree how it influenced the quality of the specific vocational education, to compensate for the more comprehensive and generalised courses.

Both projects however give us a glimpse inside. We hear about teachers and schools that have not made any changes, even though the courses now cover more trades than previously. We hear about the In-depth Study Project more often taking the role of basic socialization than vocational specialisation, with a more pragmatic approach to what students should learn – and to a lesser extent controlled by the curricula. We hear about crafts that complain about student having less trade specific knowledge, and that some companies prefer to recruit young people without upper secondary vocational training. We also know that students who become apprentices in another trade than the one they took as in-depth study are not compensated for the lack of trade specific knowledge afterwards. Concerning the content of vocational education after The Knowledge Promotion Reform, the information is still impressionistic. How great are the changes? Will the quality of VET be better or worse after the changes to make courses broader and more comprehensive at Level 2? To what extent is this governed by educational authorities and the reform, and to what extent does the traditional flexibility of the system allow adjustments that young people and companies can benefit from? This is a challenge for future research.

## References

- Brandt, Ellen (2008): *"An education that can take you a long way" – maritime education in upper secondary schools, post-secondary schools and colleges*. Oslo. NIFU STEP.
- Dæhlen, Marianne, Anna Hagen and Dagfinn Hertzberg (2008): *In-depth Study Project – between schooling and working life. Interim Report 1. Evaluation of Knowledge Promotion*. Institute for Labour and Social Research memo, 2008:27
- Dolven, A. and G. Salte (ed.) (1994): *Apprentice Manual 1994*, Oslo. Kommuneforlaget.
- Grøgaard, J., E. Markussen and N. Sandberg (2002): *Six Years Later. Concerning achieving competence and the transition to work and higher education for the first REFORM 94 graduate group*. Norwegian Institute for Studies in Innovation, Research and Education (NIFU)
- Hagen, A., M. Nadim and T. Nyen (2008): *Use of technical expertise in the working community*. Oslo. Institute for Labour and Social Research (Fafo)
- Homme, Anne and Håkon Høst (2008): *Who cares for the elderly in Oslo?* Bergen. The Rokkan Centre.
- Høst, Håkon (2004): *Continuity and change in the nursing and care educational sector*. Report 4, 2004. The Rokkan Centre. University of Bergen.
- Høst, Håkon (2006): *Educational reforms as a modernising offensive. A historical study of auxiliary nursing recruitment and its formation, 1960-2006*. Dissertation thesis for Doctorate in Social Sciences, Institute for Administration and Organization, Faculty of Social Sciences, University of Bergen.
- Høst, Håkon (ed.) (2008): *Some developmental aspects to vocational education and training in Norway*. Oslo. NIFU STEP.
- Høst, Håkon and Miriam Evensen (2009): *New structure – traditional pattern? Concerning Knowledge Promotion's structural changes in the upper secondary education system, and designing programmes offered and planning by county municipalities*. Oslo. NIFU STEP.
- Korsnes, Olav 1996: *Industry and Society. Proposal for the programme for a Study of Norwegian Working Life*. Dr. of Philosophy dissertation, Department of Sociology - Group for multidisciplinary research in working life, University of Bergen.

- Lindbekk, Tore (1992): Differences in the systems for vocational education and training and education policy. Western European contrasts. In Halvorsen, Tor and Ole Johnny Olsen 1992: *A qualified society?* Oslo: Ad Notum, Gyldendal.
- Markussen, E, H. Høst, M. Evensen and T. Prøitz (2009): *Evaluation of the pilot project for the Certificate of Practice programme. Interim Report 1, 2009.* Oslo. NIFU STEP.
- Michelsen, Svein, Håkon Høst and Jens P. Gitlesen (1998): *Vocational training and organization, between reform and tradition. An evaluation of Reform 94.* Final report. Working life, History and Society (AHS) – Study group for multidisciplinary working life research, University of Bergen.
- Michelsen, Svein and Håkon Høst (2001): Some Remarks on Norwegian Vocational Education and Training Policies and Lifelong learning. In Harney, K., A., Heikkinen, S. Rahn and M. Schemman (eds.): *Lifelong Learning: One Focus, Different Systems.* Peter Lang, Europäischer Verlag der Wissenschaften.
- Michelsen, Svein and Håkon Høst (2002): Some remarks on Norwegian Education and Training Policies and Lifelong Learning. In Klaus Harney et al. (ed.): *Lifelong Learning: One Focus, Different Systems.* Frankfurt am Main: Peter Lang.
- Norwegian Act relating to Primary and Secondary Education and Training (The Education Act). LOV-1998-07-17-61. Last amended, LOV-2008-12-19-188 from 2009-01-01.
- OFFICIAL NORWEGIAN REPORT (NOU) 2003: 16, *I første rekke. Improved quality of basic education and training, for everyone.* Oslo: Ministry of Education, Research and Church Affairs.
- Olofsson, J. and A. Panican (2008): *Young people's pathway from school to working life. Scandinavian experiences.* TemaNord 2008:584. Copenhagen. Nordic Council of Ministers.
- Olsen, Høst and Michelsen (2008): Pathways from vocational training to working life. A study of the Norwegian transitional system's effectiveness. In Olofsson, J. and A. Panican (2008): *Young people's pathway from school to working life. Scandinavian experiences.* TemaNord 2008:584. Copenhagen. Nordic Council Of Ministers.
- Report to Storting 16 (2006-2007) ... og ingen sto igjen (and nobody stood alone). Early intervention for lifelong learning.* Oslo: Ministry of Education and Research
- Report to Storting 30 (2003-2004), *Culture for Learning.* Oslo: Ministry for Education and Research

Report to Storting 32 (1998–99), *Upper Secondary Education*. Oslo: Ministry of Education, Research and Church Affairs

Report to Storting 33 (1991–92), *Knowledge and Proficiency. Concerning certain aspects in upper secondary education*. Oslo: Ministry of Education, Research and Church Affairs

Report to Storting 44 (2008-2009), *Utdanningslinja*. Oslo: Ministry of Education and Research

Report to the Storting 268 (2003-2004), *Recommendations from the Standing Committee on Education, Research and Church Affairs concerning the Learning Culture*. Oslo: Storting.

Selznick, P. (1984): *TVA and the grass roots: a study in the sociology of formal organization / by Philip Selznick*. New York. Harper & Row.

Spilling, Olav (1997): *Facts about small and medium-sized companies*. Bergen. Fagbokforlaget

Vibe, Nils (1997): *After half an educational pathway is completed. Recruitment and passage in upper secondary education and training after Reform 94*. Norwegian Institute for Studies in Innovation, Research and Education (NIFU)

# Upper Secondary Education and Training in Norway, including (IVET)

