Learning for Jobs

OECD Reviews of Vocational Education and Training

NORWAY

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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Summary: Strengths, Challenges and Recommendations

This review of vocational education and training (VET) in Norway is part of "Learning for Jobs", the OECD policy study of VET, a programme of analytical work and individual country reviews designed to help countries make their VET systems more responsive to labour market needs. The review of Norway assesses the main challenges faced by the VET system and presents an interconnected package of six policy recommendations. Each recommendation is described in terms of the challenge, the recommendation itself, supporting arguments, and issues of implementation and resources.

Strengths

Norway has a well-developed upper secondary VET system linked to apprenticeship, which enjoys a high degree of confidence among stakeholders. In particular:

- There is strong tripartite co-operation at national, county and sectoral levels.
- The VET system is supported by a high level of trust among stakeholders.
- By international standards, the system is relatively inclusive and little stigma is attached to VET tracks in upper secondary education.
- In the current exceptionally tight labour market employers are keen to attract apprentices.
- The literacy level of the adult population is high by international standards (IALS, ALLS).

Challenges

At the same time, the system faces a number of challenges:

- Student choice may limit the responsiveness of VET to the labour market.
- Dropout is a problem.
- The ageing of school-based trainers makes it difficult to recruit new trainers fast enough to match the retirement rate.
- Quality assurance mechanisms for VET are inadequate.
- There are no qualification requirements for enterprise-based trainers and career counsellors.

- The available data are insufficiently exploited and gaps in the data need to be filled.
- PISA results indicate that the basic skills of those entering the VET system are relatively weak.

Recommendations

1. To improve the match between VET provision and labour market needs, student choice should be better guided and channelled. The planning of VET provision should take account of the availability of apprenticeship places; counties, as advised by county vocational committees, should reduce programmes that attract few apprenticeships. Students should receive good quality career guidance from well-qualified staff in lower and upper secondary school.
2. To tackle dropout, interventions in the early childhood and school systems to assist those at risk of dropping out later should be strengthened. The system's flexibility should be used to keep VET students in school while avoiding initiatives that might increase inequity. Better data should be collected on the flow of students through education and on the labour market performance of dropouts.
3. Norway's employers receive relatively substantial subsidies for apprenticeship training. Steps should be taken to ensure that the quality of the training provided is commensurate. A systematic study of the costs, benefits and quality of apprenticeships in Norway should be undertaken.
4. The introduction of the Knowledge Promotion Reform provides a useful opportunity to reinforce assessment procedures. A standardised national assessment of apprentices' practical skills should be introduced.
5. Workplace supervisors and trainers of apprentices should receive some obligatory training.
6. Norway should enhance data and analysis relating to VET and ensure they are more routinely employed in the development of policy and career guidance. Consideration should be given to the establishment of a dedicated centre for VET data and analysis.

Chapter 1

Introduction

This chapter describes the OECD policy study of VET in Norway, summarises the main features of the Norwegian VET system in upper secondary schools and sets out an assessment of its strengths and challenges.

1.1 The OECD policy review of Norway

This is one of a series of reviews of vocational education and training (VET) in OECD countries (see Box 1.1). Its terms of reference are in Annex A.

Box 1.1. Learning for jobs: the OECD policy study of vocational education and training

This study seeks to help countries **increase the responsiveness of VET systems to labour market requirements**. It aims to improve the evidence base, identify a set of policy options, and develop tools to appraise VET policy initiatives.

A programme of *analytical work* draws on evidence from all OECD countries. It includes an international questionnaire on VET systems, reviews of previous OECD studies and the academic literature on topics such as costs and benefits of VET, indicators to assess the quality of VET provision and analysis of labour market outcomes based on statistical data from labour force surveys and PISA (the OECD's Programme on International Student Assessment).

Country policy reviews that provide country-specific policy recommendations will be carried out for Sweden, the United Kingdom (England and Wales), Hungary, Australia, Norway, Mexico, Korea and Switzerland between the end of 2007 and the end of 2008.

The results of both the analytical work and the country reviews will feed into the *initial comparative report* which will be available on the OECD website in 2009.

A *second phase* of this work, with further country reviews in Austria, Belgium (Flanders), the Czech Republic, Germany, Ireland, the Netherlands and the United States (South Carolina and Texas), will take place in 2009 and 2010. The *final comparative report*, drawing together all the conclusions of the study will be published in 2010.

The website for the activity is *www.oecd.org/edu/learningforjobs.*

The review follows the standard methodology established for the OECD policy review of VET. At the outset, the Norwegian authorities were invited to complete a detailed questionnaire. Equipped with the questionnaire responses and other background information, two members of the OECD Secretariat went to Norway on 5-7 May 2008 for an initial fact-finding visit to assemble information about the characteristics of VET and, within the terms of reference, to identify the main policy challenges. This initial research provided the basis for a return visit. The same team, plus two independent experts, conducted a return visit to Norway on 9-13 June 2008 to develop policy recommendations (see Annex A for the biographical details of the team and the programme of visits). This review presents their analysis and recommendations.

The review deals with a deliberately limited set of issues. The topics were defined by the terms of reference agreed with the Norwegian authorities, and limited to issues on

which the review could draw on international experience or could otherwise usefully add value to the domestic policy debate.

Publicly funded VET in Norway is concentrated at the upper secondary level, although there are also some post-secondary programmes, such as vocational technical colleges, and a limited amount of tertiary-level VET. This review concentrates on the upper secondary level.

The review takes place at a time of educational initiatives in Norway which aim to improve career guidance, reduce dropout and make co-operation by the tripartite bodies more effective. The Norwegian government has established a committee to evaluate upper secondary VET with a focus on dropout, transition to higher education and research. The committee will deliver a White Paper in autumn 2008. This nearly simultaneous OECD review cannot compete with the work of the committee in terms of detailed knowledge of Norway and its educational system. Instead, its aim is to add value by drawing on international evidence and experience. It is necessarily selective, concentrating on aspects of the VET system on which the OECD team felt it could make a useful contribution.

1.2 The structure of the report

This first chapter places the Norwegian review of VET in the context of the OECD policy study of VET, presents the structure of the report, describes the main features of Norway's upper secondary VET system, and examines its strengths and challenges. The second chapter proposes policy recommendations

Each policy recommendation is set out as:

- *The challenge* – the problem that gives rise to the recommendation.
- *The recommendation* – the text of the recommendation.
- *The supporting arguments* – the evidence that supports the recommendation.
- *Implementation and resource implications* – a discussion of how the recommendation might be implemented, including the costs to different parties.

1.3 A snapshot of the system

Nearly all students leaving lower secondary school enter upper secondary education. Around half choose one of three general academic programmes, the other half follow one of nine vocational programmes (Utdanningsdirektoratet, 2007).

The statutory right to education (Youth Right) guarantees that students who are 15 years old and have completed primary and lower secondary education have the right to three years of upper secondary education in one of the three programmes of their choice out of the 12 available. In 2006, in the first year of upper secondary education, 68% of applicants were given their first choice (Utdanningsdirektoratet, 2007).

Upper secondary education, including VET and vocational technical colleges, is the responsibility of the 19 Norwegian counties. County authorities receive a lump sum covering all central government expenditure on primary and secondary school education, health services (except hospitals) and culture. Education in public institutions is provided free of charge at all levels (EURYDICE, 2007). With a few exceptions, public upper secondary schools offer both general education and VET, and 95% of upper secondary

students attend public schools. The private sector caters mainly to students in general programmes.

The standard model for upper secondary VET, often described as the 2+2 system, is two years in school followed by two years of apprenticeship in a company. If a student has finished the two-year school VET programme and cannot find an apprenticeship, he/she must be offered a third year of practical training in school, although relatively few students make this choice. Both an apprenticeship and a third year of practical training in school lead to the same vocational qualifications. Around one third of students who finish the two-year VET school programme opt for a third year in the "general" programme. Upper secondary VET students who wish to enter university need to take a supplementary year after completing their vocational studies, while students with VET qualifications may move directly to vocational technical colleges (*Teknisk Fagskole*) (ISCED 4).

The first year in upper secondary VET provides general education and introductory knowledge of the vocational area. During the second year, VET students choose specialisations and the courses are more trade-specific (Table B.1 in Annex B).

The two-year apprenticeship takes place with an employer (or employers) and follows a national curriculum. Legally, apprentices are employees of the enterprise, with conditions specified in a contract that is signed by the student, the company and the county. Apprentices receive a wage negotiated in collective agreements (Cedefop, 2006) that ranges from 30 to 80% of the wage of a qualified worker, the percentage increasing over the apprenticeship period (OECD, 2008a).

Employers taking on apprentices receive direct subsidies from the county. The basic subsidy is NOK 94 448 (c. EUR 12 000) per apprentice/trainee. This covers the two years of the apprenticeship and is equivalent to the cost of one year in school. In addition to the basic subsidy, the training company receives up to NOK 41 568 (c. EUR 5000) per apprentice/trainee in traditional crafts[1], such as goldsmith (Utdanningsdirektoratet, 2007).

Training Offices (TO) *(opplæringskontor)* are owned by companies and usually relate to specific trades. TOs work actively to identify possible new training companies and establish new apprenticeship places, supervise companies with apprentices, and train staff involved in the tutoring of apprentices. Many training offices organise the theoretical part of the apprentices' training. They often sign the apprenticeship contracts on behalf of smaller training enterprises, thereby becoming accountable for completion of the training and its results (Norwegian Directorate for Education and Training, 2008a).

Upper secondary VET ends with a final examination which leads to a craftsman/journeyman certificate. The examination is prepared and assessed by a trade-specific examination board appointed at the county level. In 2006, 96% of those who sat for the examination passed it. Students who received the third year of practical training in school were the least successful candidates (Utdanningsdirektoratet, 2007).

1. Companies to be eligible for an additional subsidy for an apprentice should comply with one of the following criteria:

   – The profession is threatened and knowledge may die out because of lack of recruitment.

   – The profession is a tool in maintaining traditional craft techniques, materials and methods.

   – The profession has a cultural value that should be transmitted due to societal causes.

The social partners participate actively in the development of VET policies at all administrative levels. The National Council for Vocational Education and Training advises the Ministry of Education on the general framework of the national vocational education and training system. The Advisory Councils for Vocational Education and Training are linked to the nine vocational education programmes provided in upper secondary education; they advise national authorities on the content of VET programmes and future skill needs. The local county vocational training committees (*yrkesopplæringsnemnd*) advise on quality, provision, career guidance and regional development in VET.

1.4 Strengths and challenges

The Norwegian system has many strong points:

- There is strong tripartite co-operation at the national level, where the social partners play a very active (typically leading) role in policy development, as well as at regional (county) and sectoral levels.
- The VET system is supported by a high level of trust among stakeholders.
- The current 2+2 system was developed in close collaboration with the social partners, and commands their support.
- By international standards there is little stigma attached to VET tracks in upper secondary education.
- The system is relatively inclusive and there is little tendency for the VET programmes to be used as weaker tracks for the less able.
- Currently, the VET system is underpinned by an exceptionally tight labour market, which means that employers are willing to work hard to attract apprentices.
- The level of literacy in the adult population is high by international standards (IALS, ALLS).

Its weaknesses are:

- The emphasis on the right of Norwegian pupils to choose their VET programme may limit responsiveness of upper secondary VET to the labour market.
- Dropout is a problem.
- As in many countries, there are problems surrounding the recruitment and retention of school-based trainers and updating of their skills, in addition many school-based trainers are approaching retirement age.
- Quality assurance mechanisms for VET are inadequate. There is no standardised national assessment[2] and no qualification requirements for enterprise-based trainers and career counsellors.
- The available data are insufficiently exploited, and gaps in the data need to be filled.

2 For the definition of standardised national assessment see recommendation 4, section 2.4.

- The basic skills of those entering the VET system, as indicated by PISA results, are relatively weak: 15-year-olds in Norway perform below the OECD average in science, mathematics and reading (see Table B.2 in Annex B).

Chapter 2

Policy Recommendations

The Norwegian VET system has many strengths, with a well-established apprenticeship framework which receives strong support from students, employers and trade unions but would benefit from reform to enhance the quality of VET training, better link provision of VET to the labour market and improve use of evidence in VET policy making. To this end we propose a set of six interconnected recommendations.

First we propose to strengthen connections between VET and the labour market by adjusting VET provision to reflect more fully the availability of apprenticeship places, and through better career guidance to students. Second, the issue of many students disengaging and dropping out in upper secondary should be tackled primarily by early interventions to deal with learning problems. We note the need to use the current system flexibly to engage young people, but have reservations about the proposed new Certificate of Practice.

We note the relatively substantial subsidy received by employers supervising apprentices, and suggest that it should be reflected in the quality of training received. Two recommendations are designed to this end: obligatory training of trainers in companies and a national framework for standardised assessment.

Implementation of these recommendations should be underpinned by good quality data and sound analysis. Consideration should be given to the establishment of a dedicated centre for VET data and analysis.

2.1 Encouraging local schools and counties to respond to employer needs

Challenge

The Norwegian economy is healthy, with low unemployment and strong demand for labour (Figure B.1 in Annex B). Norway's wages are compressed, so the wage premium for additional qualifications is relatively small by international standards (Tables B.3 and B.4 in Annex B). As a result, any mismatches between VET provision and labour market needs will be masked, but they will surface in the event of a recession.

Counties, which own the public upper secondary schools, take the final decision on VET provision. County VET committees advise county administrations on the provision of VET, but the extent to which the demand for apprentices influences VET provision varies across counties. Counties have to balance the pressure from students and parents to satisfy students' choices with employers' willingness to offer apprenticeship.

Provider capacity is an important constraint, particularly in the short-run. This includes the capacity to offer a VET programme commensurate with the facilities and VET teachers available at schools.

The number of apprenticeship places offered in companies and the number of applicants awarded apprenticeships has increased in recent years. However, in 2008, 12% of those who applied for an apprenticeship failed to obtain one (Norwegian Directorate for Education and Training, 2008b). Recent research has shown that employers screen potential future apprentices on the basis of their grades and absenteeism from school. Students without problems in these areas can find apprenticeships in most sectors (Høst, 2008).

An increasing number of VET students (now around one third) choose a general supplementary course in the third year which gives direct access to tertiary education instead of applying for an apprenticeship. The extent to which this represents a positive choice on the part of students rather than "imposed" by the lack of available apprenticeships is not clear. One-third of VET students in the general third year do not complete it (Støren, Helland and Grøgaard, 2007). It may be that students who foresee difficulties in finding an apprenticeship opt for a general third year rather than vocational training in school, which they may consider a potentially stigmatising low status option for poor performers.

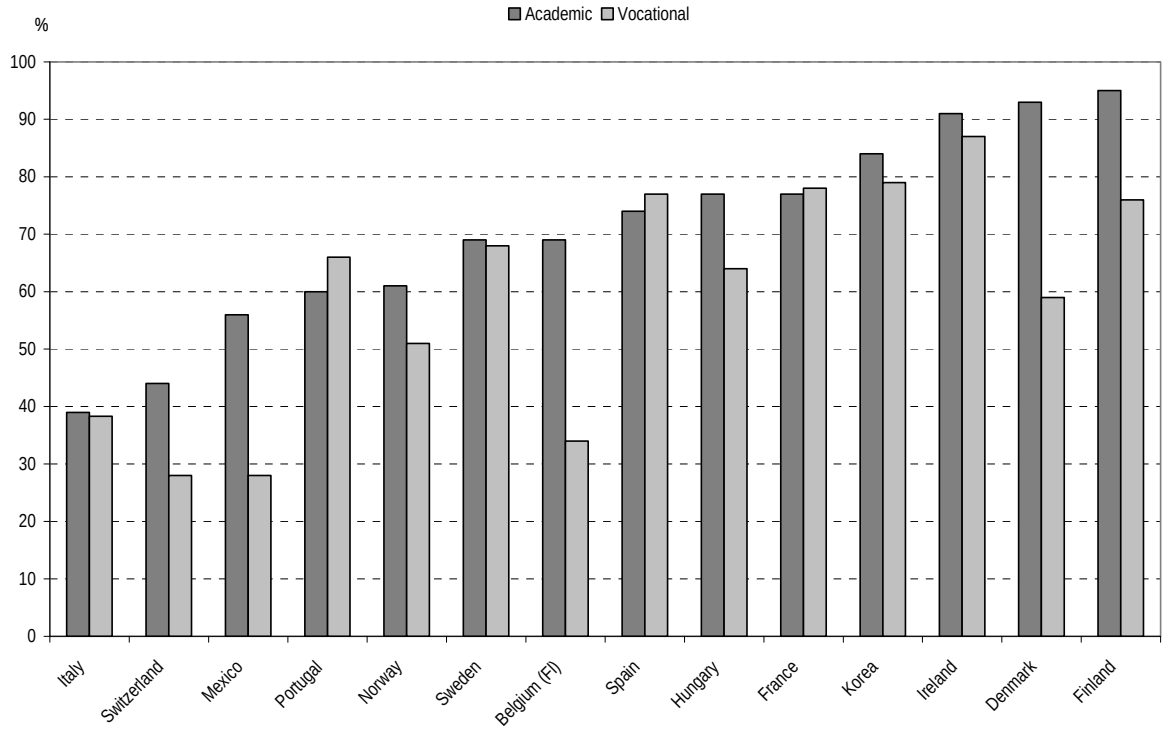
Some areas and sectors suffer from an inadequate supply of apprentices. Difficulties in finding apprentices for particular firms or types of work may occur either because the relevant information does not reach students or because they find the type of work or workplace unattractive. Students may avoid jobs with lower social status, poor career perspectives, low wages, or harsh or difficult working conditions.

The Norwegian authorities believe career guidance does not adequately succeed in matching student aspirations and labour market needs in lower and upper secondary school (Norwegian Directorate for Education and Training, 2008a). Previous OECD work suggests that career guidance suffers from inadequate preparation of counselling staff (OECD, 2002, 2004). Training of school counsellors is carried out on a voluntary basis by

the municipalities or counties and the quality of service varies as a result. Most school counsellors only have in-service training or no specific counselling training at all (Norwegian Directorate for Education and Training, 2008a)[3].

In comparison with other OECD countries, Norway rates high in the provision of career guidance to 15-year-olds[4] (see Figure B.2 in Annex B), but at the upper secondary level students receive relatively less attention than in many other OECD countries (Figure 2.1). Upper secondary VET students are even less likely to receive career guidance than their peers in general programmes (OECD, 2004). Yet, career guidance would be beneficial to upper secondary VET students as they have to choose among many different options in the course of their studies, including apprenticeship placements.

Figure 2.1. Percentage of upper secondary students in academic and vocational programmes who receive individual career counselling, 2002



Note: Academic programmes refer to those general education programmes classified as 3-AG in ISCED97, *i.e.* those designed to lead to tertiary education. Vocational programmes refer to those classified as 3-BV or 3-CV in ISCED97, *i.e.* non-academic (pre-) vocational programmes. However in Italy, Sweden and Finland the reference is to those programmes classified as 3-AV in ISCED97, *i.e.* academic (pre-) vocational programmes.

Source: OECD (2004), *Career Guidance and Public Policy. Bridging the Gap*, OECD, Paris.

3. The Directorate for Education and Training is currently establishing guidelines for schools stating the minimum educational requirements for hiring new guidance counsellors in lower and upper secondary schools.

4. At age 15, most students in Norway are in the final year of lower secondary school.

Recommendation 1

To improve the match between VET provision and labour market needs, student choice should be better guided and channelled. The planning of VET provision should take account of the availability of apprenticeship places; counties, as advised by county vocational committees, should reduce programmes that attract few apprenticeships. Students should receive good quality career guidance from well-qualified staff in lower and upper secondary school.

Supporting arguments

Four main arguments support this recommendation. First, an element of practical training in companies improves the quality of VET, and the availability of apprenticeship places should therefore be reflected in the planning of VET provision. Second, skills provision based solely on student choice does not guarantee a match between VET and labour market needs. Third, students' freedom to choose a programme is not a remedy for dropout. Fourth, good career guidance helps students better match their preferences to demand in the labour market.

Practical workplace training improves the quality of VET

International evidence shows that school-based VET combined with on-the-job training tends to yield better labour market outcomes than purely school-based VET (Aarkrog, 2005; Barnett and Ryan, 2005; Wood, 2004). Evidence from Norway confirms this finding. A national study (Støren, Helland and Grøgaard, 2007) points out that students who carried out their third year in school-based alternative vocational courses were much less likely to pass the final vocational examination than students who had received an apprenticeship, even when controlling for previous performance.[5]

Skills provision based solely on student choice does not guarantee a match between VET and labour market needs

Satisfying student choice is important for at least two reasons: well-informed students choose programmes that correspond best to their abilities and interests; and students exert pressure on labour and apprenticeship markets by avoiding programmes of poor quality or programmes leading to unattractive or poorly paid jobs.

Yet student preference, on its own, is not enough. While information on labour market opportunities is influential, other factors, such as family background, age, gender, geographical distance and peer pressure, also affect student choice (Heckhausen and Tomasik, 2002; Dustman, 2004; Støren, Helland and Grøgaard, 2007; Borghans, De Grip and Heijke, 1996).[6] Examples from other countries show that systems based entirely on student choice can result in a mismatch between VET and labour market needs. In

5. Alternatively, higher failure rates among students who received the school-based training might be explained by the organisation of the final practical examination. If final tests are organised in a training company and mainly assess skills offered by the firm, apprentices from this firm will be more familiar with the tasks tested than students trained elsewhere.

6. Each of these factors can increase or decrease the relevance of a student's choice to labour market needs. For example well-educated and well-informed parents can provide better advice to their children than parents with poor knowledge of available options. Although not the focus of this study, it is worth mentioning that students' choices which are not optimal in terms of labour market outcomes may be preferable if other criteria such as happiness are taken into account.

Sweden, the mix of provision in upper secondary VET is regulated in principle by students' preferences. The OECD policy review of VET in Sweden (Kuczera et *al.*, 2008) argues that students' choices are imperfectly matched with labour market needs since the demand for some programmes remains high despite employers' lack of interest in the skills acquired and poor labour market outcomes.

Employers' willingness to offer apprenticeships is one indicator of short-term labour market needs. In Germany and Switzerland, student demand and the supply of training places are automatically balanced as students have to find an apprenticeship in order to start a dual VET programme. The Norwegian 2+2 system, in which most students transfer to apprenticeship two years after entering a VET programme, allows the initial mix of programmes to depend on undiluted student demand.

Students' freedom to choose the programme is not a cure for dropout

In Norway close adherence of VET provision to choices made by students is sometimes defended on the grounds that students who get their first choice are less likely to drop out. On this basis it is sometimes suggested that students should get a place in a programme of their choice even if the chances of an apprenticeship and a job in a targeted profession are bleak.

In fact there is little evidence for this viewpoint. There are indeed more dropouts among Norwegian students who are not given their first choice but it has been shown that grades have the strongest statistical effect on completion rates (Utdanningsdirektoratet, 2007). This is unsurprising since those with weak grades are less likely to get their first choice of VET programme (when the programme is oversubscribed). Studies on other national VET systems confirm that students' prior level of schooling significantly affects dropout rates (Bessay and Backes-Gellner, 2007).

It is questionable whether disengaged or struggling students should be placed in VET programmes with poor apprenticeship prospects (for more information on dropout, see section 2.2). It may also be asked whether moving after two years in a VET programme back into a general third year is the best option for an increasing proportion of the cohort. In both cases, the key (unanswered) question is how well this can meet the career needs of the students involved. If outcomes for vocational students who move back to general programmes are comparable to those who have remained throughout in general programmes, this would suggest that the system works well and that the flexibility to move across pathways is beneficial to students. However, poor outcomes might imply that VET students choose the third general year not because they are attracted by general studies but because they did not obtain an apprenticeship (or feared they would not do so). If this is the case, a stronger link between the availability of apprenticeship places and the dimensions of VET programmes would promote better labour market outcomes.

Good career guidance is a key to better student choice

Good career guidance helps students to match their interests and ability to the available career opportunities (OECD, 2004; Autor, 2001). One Dutch study of junior secondary technical education found that students adjust their career choices in the light of information about wage levels and the probability of getting a job in different specialisations. Also, it showed that the impact of information on wages and employment on students' choices depends on the labour market structure (Borghans, De Grip and Heijke, 1996). In Norway where wages are compressed and therefore have less weight in career decisions, information on the characteristics of different jobs (in addition to

information about wages and employment opportunities) may be particularly relevant in helping students to decide which programmes to choose.

Career guidance in school has traditionally focused on educational decisions and less on the transition from school to the labour market. Accordingly, labour market issues have often not been a part of school counsellors' training, which has instead centred on psychological and sociological training. Yet, to make informed choices students need good, up-to-date information on outcomes from programmes in which they are interested (OECD, 2004). This includes information on earnings, employment opportunities, and other aspects of working conditions such as career paths within different professions. Information on the labour market destinations of former students would help students to evaluate the employment prospects associated with different programmes.

Relative to other countries, links between lower secondary school and local business are well established in Norway (Figure B.3 in Annex B). From autumn 2008, lower secondary students will learn about different educational and career options by sitting in on classes in upper secondary school or through work placements in local companies (*Utdanningsvalg*). Work placements in particular should be encouraged, since they give a better idea about the profession than participation in a school class. Career guidance offered only by local upper secondary schools may be biased towards programmes offered at the institution (OECD, 2004).

Implementation and resource implications

The current, well-developed institutional framework for social partners' involvement with county vocational committees at local level should be better used to link VET provision to the supply of apprenticeship places. This is in line with the recent changes introduced by the Norwegian government granting county vocational committees an advisory role in respect of the provision of upper secondary VET.

There are no obvious resource implications for adjusting VET provision to the offer of apprenticeships, as the cost to government of a student in the third year at school is the same as in two years of apprenticeship. Spending on VET may rise if better availability of apprenticeships has a positive impact on completion rates, as this would increase the total number of students in upper secondary education. However, this cost would be balanced by lower spending on follow up-services and reactivation programmes for young people not in education or in employment.

Clearly, the effectiveness of the VET system should not be judged solely by the number of students who obtain their first choice – long-term outcomes are more important. The quality of VET should therefore also be measured by indicators such as the number of students who obtain apprenticeships and graduates' labour market performance. These elements should be strongly emphasised in counties' communication strategies and in career guidance for students.

As mentioned, some sectors have problems finding apprentices. Depending on the reasons, this issue might be addressed through better career and apprenticeship guidance for students and/or the introduction of labour market measures to improve the attractiveness of unpopular professions, for example by better wages, a matter for employers rather than VET policy makers.

To improve the effectiveness of career guidance services, the government needs to be involved in defining the role of the career guidance workforce and its qualifications. A comprehensive career guidance framework should indicate clearly the required level of

practitioners' knowledge and skills, including knowledge of the labour market and of different careers (OECD, 2004). Canada, for example, has developed a comprehensive competency framework that provides standards and guidance for career practitioners (for details, *www.career-dev-guidelines.org*).

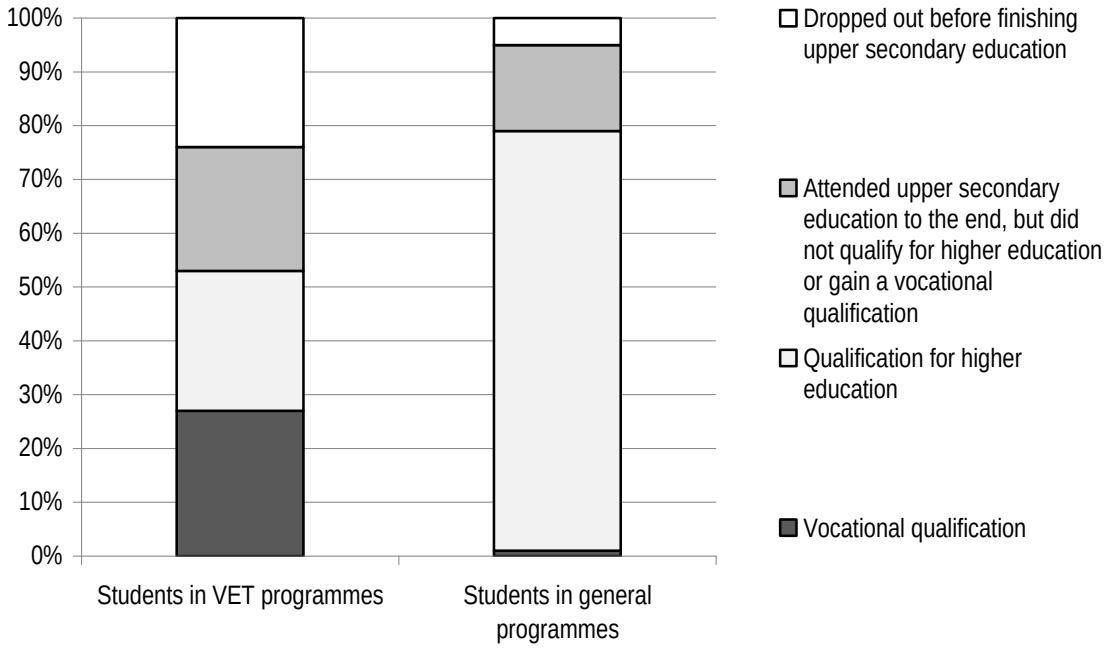
Development of better training for career counsellors at the lower and upper secondary level would require an increase in public spending, an investment that should pay off in the long term through the better labour market performance of VET graduates (OECD, 2004).

2.2. Reducing dropout

Challenge

Around 20% of 20-to-24-year-olds have not completed upper secondary education in Norway, more than in other Nordic countries where the comparable figure is around 10%. Leaving upper secondary school before completion is more common among VET than among general students (Figure 2.2).

Figure 2.2. Educational outcomes five years after entering the upper secondary programme,[1] 2007



Note: Data on completion rates broken down by programmes come from a study following 9 749 young people in the south-eastern part of Norway.

Source: Høst, H. (2008), *Continuity and Change in Norwegian Vocational Education and Training (VET)*, NIFU STEP, Oslo.

At present, people without upper secondary education can relatively easily get a job in Norway. There are also opportunities to re-enter education thanks to a well-developed adult education system, as well as opportunities to obtain a craftsman/journeyman

certificate through recognition of prior practical experience.[7] The cost to a student of dropping out is therefore not very high in terms of labour market performance and some students may take more time to complete upper secondary education for that reason.[8] The completion rate increases with time: for the cohort that started in 2002 the completion rate within four years was 62% and one year later it was 70%. Particularly in an economic upswing, dropping out of school to take a job may sometimes be a valid decision. Conversely, dropouts in Norway are still slightly more likely to be economically inactive than persons with higher levels of education and less likely to participate in further education (Hagen, Nyen and Skule, 2004; see also Table B.5 in Annex B).

Recommendation 2

To tackle dropout, interventions in the early childhood and school systems to assist those at risk of dropping out later should be strengthened. The system's flexibility should be used to keep VET students in school while avoiding initiatives that might increase inequity. Better data should be collected on the flow of students through education and on the labour market performance of dropouts.

Supporting arguments

There are five arguments in support of this recommendation. First, the cost of dropping out remains high for individuals and society. Second, dropout is best tackled early. Third, flexible VET adapted to students' needs prevents student disengagement. Fourth, the new Certificate of Practice (explained below) may pose equity problems and should be carefully evaluated before its introduction. Fifth, good data and evidence will help to identify the scale of the problem.

The cost of dropping out remains high for individuals and society

Although in Norway many of those in the labour market who lack upper secondary education seem to be in a relatively good position today, they would be the first to suffer in a downturn, given their weak educational qualifications. International evidence underlines this point. In all OECD countries, including Norway, persons who lack upper secondary education are less likely to be in work and earn less in work than those with better educational attainment (Figure 2.3). They also participate less in continuing education and training (OECD, 2007). Across countries, many research studies confirm these findings (Chuang, 1997; Pastor and Peraita, 2000; Jarvinen and Vanttaja, 2006; Schütz and Wößmann, 2006).

There are also social costs, with a clear association between school dropout and higher criminality, alcohol and drug abuse, and health problems (Janosz, 2000; Lochner and Moretti, 2004). Dropping out is associated with lower government income from taxes, lower productive capacity and higher spending on social security payments, health care and criminal justice. While the scale of the problem varies from country to country, dropouts could represent a heavy cost for Norway.

7. Those with five years of work experience can sit for an examination leading to a certificate equivalent to an upper secondary VET certificate.

8. Good labour market opportunities for unqualified young people may sometimes encourage early school leaving (Mocan and Rees, 1997).

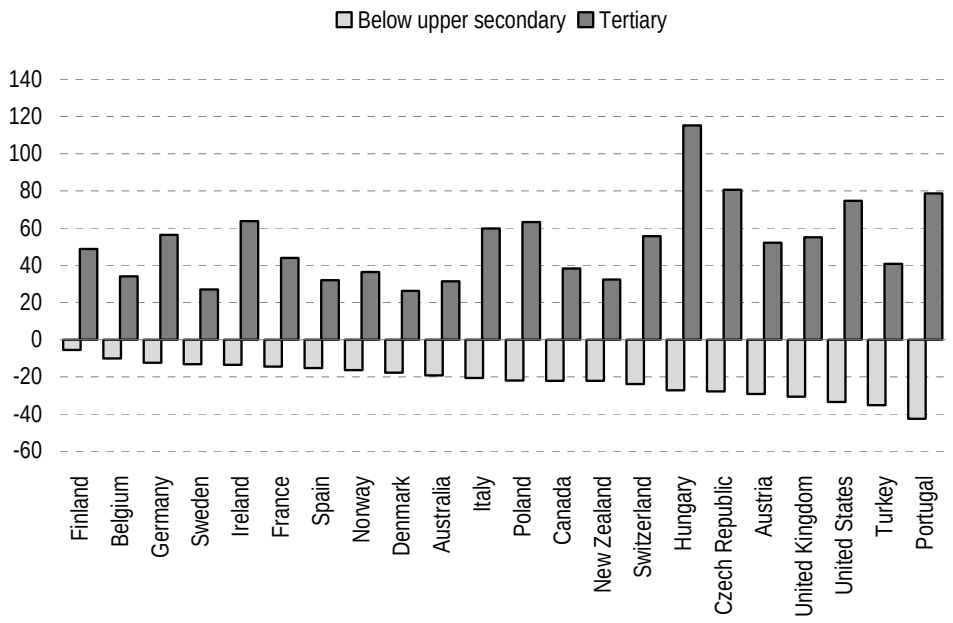
It is more effective to deal with potential dropouts early

In Norway, while upper secondary school is the responsibility of the county, compulsory education is the responsibility of the municipality. The county authorities are moreover legally obliged, to follow young people between the ages of 16 and 21 who are neither in education nor in employment (Norwegian Directorate for Education and Training, 2008b). Co-operation and exchange of information between municipalities and counties is necessary to ensure that students identified as potential dropouts in compulsory school are followed up by upper secondary schools and county relevant services.

Research from many sources suggests that disengagement from school starts early (Alexander and Entwisle, 2001; Rumberger, 2004) and poor performance in school is one of the main determinants of early school leaving (Woods, 1995; Rumberger, 2004). In Norway compulsory school performance is not as good as it should be. On the PIRLS assessment of reading competencies, 10-year-old Norwegians perform worse than students from the other OECD countries participating in the study. In the PISA 2006 more than 20% of Norwegian 15-year-olds performed poorly in science, mathematics and reading (below or at level 1 on PISA scales). This is more than the OECD average in all three subjects. The head of one big VET school confirmed to the visiting team that reading difficulties affected around half of the first-year students and was the leading cause of dropout.

Figure 2.3. Earnings of the adult population (2004-05)

By educational attainment, for 25-to-64-year-olds
(upper secondary and post-secondary non-tertiary education = 100)



Source: OECD (2007). *Education at a Glance*, OECD, Paris..

Given the difficulties of tackling dropout in upper secondary education, the evidence of problems in earlier stages of education in Norway, and evidence from other countries that early interventions to prevent dropout are more cost-effective (Heckman, 2000),

Norway should give priority to early interventions to improve school performance and engagement and tackle dropout[9].

VET programmes adapted to students' needs may help to prevent student disengagement

The 2+2 VET model is simple and clear to students and employers but this comes at the price of flexibility.[10] Research suggests that alternating school- and work-based learning improves student motivation and supports a successful transition from school to work (Schütz and Wößmann, 2006; Kemple and Willner, 2008). Students who dislike more academic learning may not wish to spend two years in school before entering the workplace. More flexible VET provision might make the system more attractive to such students by offering more practical workplace training in the first two years and by validating shorter periods of learning with a recognised diploma. There are already initiatives in this direction. The In-depth Study Project allows students to receive workplace experience during the first two years of school-based VET. Also, within the mainstream 2+2 model students appear to be able to choose other forms of learning and training provision, *e.g.* they can sometimes alternate apprenticeship with courses at school from the beginning of upper secondary education.

The Certificate of Practice may pose problems in terms of equity

To offer more opportunities to students who are discouraged by academic learning, the Norwegian government might introduce a new qualification (the Certificate of Practice). It is intended to serve the needs of young people who are judged likely to drop out of school. It is a two-year programme primarily consisting of work-based learning. It is at a lower level than a craftsman/journeyman certificate, but graduates may subsequently complete their upper secondary education if they wish to do so.

While there is value in recognising shorter periods of coursework, there is a risk of stigmatising students who choose this route and thus undermining the commendably comprehensive quality of Norwegian schooling. The initiative could introduce, in effect, a selective track system. In one of the counties participating in the pilot, the team heard that students as well as employers mistrusted the new programme because it was designed for poor performers. The OECD team recommends that current pilot and evaluation take these issues into account. A better solution would be to tighten the links between school and work for all VET students, and to recognise, through a formal record of students' courses, what they have achieved by the time they leave school if they do so before completing.

9. Norway has put in place a number of initiatives aiming to tackle dropout. Among other things the Knowledge Promotion reform focusing on early intervention and basic skills, competence criteria for career counsellors and the partnership for counselling, Certificate of Practice (Praksisbrev), higher teacher density and obligatory tests mapping out core competencies such as reading and mathematics in years 1-4.

10. The visiting team heard good arguments for the 2+2 model: its structure is simple and easy to manage; employers prefer to offer apprenticeships to more mature students; in rural areas it would be very difficult to manage alternating school and workplace training because of the large distances between the home, the school and the workplace.

Good data and evidence help to identify the scale of the problem

Dropout matters when it does long-term damage. To assess the long-term impact requires longitudinal data to identify patterns of schooling and labour market participation. While there are data on students' pathways up to six years after entering the programme, some students may postpone completion of upper secondary education beyond this period. Ideally, dropout needs to be followed up to the age at which the share of the cohort without upper secondary education stabilises.

A first step in diminishing upper secondary dropout rates is to set up a system for identifying those with risk factors as early as compulsory school. This requires data on characteristics such as poor performance, truancy and disadvantaged family background. For example, research in Philadelphia, Pennsylvania, found that a 12-year-old with a failing grade in a major subject or with great deal of truancy or "unsatisfactory" behaviour had at least a three in four chance of dropping out of high school (Balfanz, Curran Neild and Herzog, 2007).

Implementation and resource implications

Effective school leadership and targeted resource allocation can help improve the performance of children with learning difficulties. Schools may receive financial incentives to improve the performance of their weakest learners and their completion rate. This would not necessarily imply higher public spending but rather better resource allocation (see chapter 5 in Field *et al*., 2007). For example, in one county schools receive extra funds for every student with a disadvantaged background (migrant background, low performance and special needs). Such funding stops when students drop out. As regards teaching methods of students struggling in school, Finland provides an example of an effective and comprehensive approach to children with learning difficulties (Field *et al*., 2007). In this approach the role of a teacher is essential and therefore teachers might need help in adapting to the new requirements and work conditions. Development of data and research evidence is discussed in section 2.6.

2.3. Getting the best out of Norway's investment in apprenticeship training

In a comparative perspective, Norwegian employers receive a generous government subsidy for the apprenticeship training they undertake, equivalent to the cost of a student spending one year in school-based VET – around EUR 12 000 (Table 2.1).

In spite of the substantial public investment, quality assurance of apprenticeship training is weak. There is a statutory requirement on counties to monitor apprenticeship training, but there are no regular inspections of apprenticeship training by government authorities (training offices undertake inspections, but these are owned by employers), no requirements on the qualifications of apprentice supervisors, and limited arrangements for ensuring that apprentices have obtained a standard set of competencies. There are also few mechanisms – either in the form of market competition or state-determined targeting – to ensure that the subsidies go to priority areas (for example based on equity or efficiency considerations)[11]. The challenge is to ensure that the high level of public investment in apprenticeship training in Norway is matched by quality in the outcomes.

11. There is an additional subsidy for apprenticeship training in traditional craft trades.

Table 2.1. Funding arrangements for apprenticeship training

	Public funding		Firms' collective contribution (*e.g.* training levy)
	Direct subsidy	Tax deduction	
Australia	No	Yes	No
Austria	Yes	Yes	In some sectors
Denmark	No	No	Yes
Finland	Yes	No	No
Norway	Yes	No	No
Netherlands	No	Yes	-
Switzerland	No	No	In some sectors

Source: OECD VET International Questionnaire.

Data and analysis on these issues, in terms of employers' incentives to offer apprenticeships and the quality of the training provided, are limited.

Recommendation 3

Norway's employers receive relatively substantial subsidies for apprenticeship training. Steps should be taken to ensure that the quality of the training provided is commensurate. A systematic study of the costs, benefits and quality of apprenticeships in Norway should be undertaken.

Supporting arguments

There are two arguments for this recommendation. First, since Norway is not inclined to pursue market-type solutions to improve efficiency, it should ensure that the level of subsidy is matched by an equivalent quality in provision. Second, a study of the costs, benefits and quality of apprenticeships would provide valuable information for developing policy in this area.

The current level of subsidy should be matched with provision of equivalent quality

In many apprenticeship systems, a quasi-market operates, with employers competing for the best apprentices with offers of good wages and training conditions. In Norway this market is relatively weak, since most apprenticeship wages are regulated through a national system of collective bargaining and training conditions may not be transparent to prospective apprentices. This means that there may be few tools available to encourage apprentices to go to areas where apprentices are most wanted and needed. One exception to this is the special scheme whereby an additional sum of up to NOK 41 568 (ca. EUR 5 000) is given to companies providing training to apprentices in traditional crafts.

An evaluation of costs, benefits and quality would help when developing VET policy

The standard subsidy for apprenticeship places has two potential weaknesses. First, the financial support, or part of it, may go to investments that would have been made

without it; *i.e.* the employer would have delivered the training even without the public policy (deadweight loss). Second, subsidised firms may reduce other types of training that are less generously subsidised (substitution effect).[12] Evidence from other countries suggests that the effectiveness of a subsidy, as an incentive for a firm to train, is mixed. In Switzerland, for example, subsidies apparently have an impact only on firms that are not involved in apprenticeship but have no effect on the supply of apprenticeship training in firms that train already (Mühlemann *et al.*, 2005). One way of using these resources more efficiently would be to vary the level of subsidy according to different targets and objectives. Norway does not appear keen to free up apprenticeship markets or target the subsidy more precisely. In these circumstances, if waste is to be avoided, effective mechanisms are needed to ensure that employers provide very good training in return for the subsidy. Two concrete measures to this end are proposed in sections 2.4 and 2.5.

In line with international best practice, a systematic study of the costs and benefits of apprenticeships to employers is recommended as a way to cast light on employers' incentives to take on apprentices. This would reveal which types of employer gain most by the subsidy and help policy makers understand the dynamics underlying the provision of apprenticeship places. It could usefully be supplemented by research on the quality of apprenticeship training, as perceived by different actors – apprentices themselves, the training company, and employers who take on apprentices who have trained elsewhere.[13] This work would provide important guidance on the quality of training and how it might be improved.

Implementation and resource implications

Implementation of this recommendation is mainly embodied in the implementation of recommendations 2.4 and 2.5 below.

2.4 Enhancing the common basis for assessment

Challenge

In the 2+2 framework, the quality of the first two years of schooling is relatively well monitored, but less is known about the quality of subsequent apprenticeship training (Utdanningsdirektoratet, 2007). A key element in quality assurance is the final examination, which is designed to ensure that the apprentice has acquired the competencies prescribed by the curriculum.

Locally, county examination boards organise examinations on the basis of national curriculum guidelines so assessment arrangements are variable. The visiting OECD team was told that these boards needed more guidance and training in how to undertake this challenging task.

Decentralisation of responsibilities and a focus on outcomes are the major elements of the Knowledge Promotion Reform launched in 2006. The team heard that the new curricula, which include guidelines for assessment, were imprecise and left too much room for discretion. The reform was accompanied by the establishment of a national

12. In Norway the subsidy for providing apprenticeships for adults is lower than the subsidy for apprenticeship training for upper secondary students. This may reduce adult learners' likelihood of receiving apprenticeships.

13. The Norwegian Directorate for Education and Training has already undertaken the Apprentice Survey and Instructor Survey.

quality assessment in basic education; this includes general upper secondary education but omits upper secondary VET (Norwegian Directorate for Education and Training, 2008b).

Currently, there is a risk that firms may provide apprentices with narrowly defined, company-specific skills. Hiring apprentices may be a relatively inexpensive way of adding labour to the firm, especially if training costs are reduced either by generous government subsidies or by low apprentice wages. Askilden and Nilsen (2005), using Norwegian data, find some evidence for this hypothesis. Firms have a disincentive to provide wider skills, since these skills make apprentices employable elsewhere.

Recommendation 4

The introduction of the Knowledge Promotion Reform provides a useful opportunity to reinforce assessment procedures. A standardised national assessment of apprentices' practical skills should be introduced.

Supporting arguments

There are five arguments for this recommendation. First, standardised national assessments improve VET outcomes. Second, a standardised national assessment should be more cost-effective than the current local examinations. Third, decentralisation needs to be balanced by accountability mechanisms to avoid variations in quality. Fourth, a standardised national assessment would provide examination boards with clear guidance. Fifth, a standardised national assessment would facilitate recognition of informal and non-formal learning.

A "standardised national assessment" needs some explanation. Its purpose is to provide a consistent method to assess the learning outcomes for apprentices, and thereby to ensure that the same mix of competencies have been acquired at the same level in different learning contexts. Our recommendation leaves open the question of how this consistency is to be achieved. Countries adopt various approaches to achieve consistent national standards. These might include periodical inspections of VET providers, inspection of examination bodies, random evaluation of student performance, self-evaluation of providers and peer reviews. An extreme possibility would be a centrally established test undertaken by all students on the same day in similar conditions. More plausibly, there might be examinations developed locally but subject to clear national guidelines. Box 2.1 describes an assessment arrangement used in Saskatchewan, Canada.

Standardised national assessment improves VET outcomes

While the quality of apprenticeship training in Norway may vary from place to place, as may the mix of competencies acquired, these differences are not currently reflected in students' failure rates on the final examination, which nearly all students pass successfully. Those who fail usually pass on a second attempt. In this context a national assessment using a marking scale (e.g. three to six levels of performance) could be a valuable source of information on the quality of apprenticeship and VET in general. The point is not for the national assessment to reduce the pass rate but to ensure that a high pass rate guarantees quality.

Box 2.1. Assessment of apprentices in Saskatchewan (Canada)

All apprentices in a trade carry out a common set of tasks during an examination, depending on their apprenticeship level. The competencies are developed by the training organisation, with the overview and acceptance of the provincial Trade Board. The apprentices start with the basics in the first level which they build on in levels two and three. In all areas a written examination tests apprentices' knowledge of theory. In practical subjects apprentices have to demonstrate that they have acquired the skills required at a given level. For example cookery apprentices at the fist level should, among other things:

- Demonstrate that they can prepare, bake, serve and store biscuits (cookies). They must use the creaming method and make the dough up into dropped, bagged, rolled, moulded, icebox and sheet cookies.

- Demonstrate that they can prepare, bake, serve and store quick bread pour batter using the muffin method of mixing and make it up into popovers.

The decision as to how much weight is assigned to a particular competency is made by a trainer in line with the guidelines of the Cook National Occupational Analysis (NOA).

The NOA, set up at the federal level, identifies and groups the tasks performed by skilled workers in particular occupations in every province. It aims to ensure transferability of skills and mobility of employers across the country (see www.red-seal.ca/Site/english/pdf/Cook_2003.pdf).

For more information see: *www.saskapprenticeship.ca/.*

A standardised national assessment of students' performance would also increase the signalling value of the certificate and the transparency of qualifications, a benefit for both employers and students. Empirical evidence from Germany shows that a certificate based on performance in a national assessment is a better predictor of actual productivity than a diploma obtained in a local assessment (Backes-Gellener and Veen, 2008). Standardised assessments also ensure that students receive general skills in addition to job-specific training while the link between the certificate and the labour market would be more straightforward as information on labour market outcomes from education would be much easier to interpret. Clarity regarding outcomes would facilitate students' choice of a VET pathway. The evidence also confirms that minimum quality standards are more stable in countries with a standardised national assessment (Bishop, 2006; Wößmann *et al.*, 2007; Backes-Gellener and Veen, 2008).

National assessment is more cost-effective than local examination

A standardised national assessment should also be more cost-effective. The examination boards in each of the 19 counties currently develop examinations separately for craftsman/journeymen certificates. Setting up a common set of tasks or questions for all students in the same programme would reduce costs.

Decentralisation should be balanced with accountability mechanisms

The 2006 Knowledge Promotion Reform emphasises the outcomes of education and gives counties more discretion over the tools used to reach those outcomes. Within this

framework, the final examinations for craftsman/journeyman certificates are developed at local level according to the guidelines of the national curriculum. The shared responsibility for assessment aims to ensure that the system is flexible enough to respond to local labour market needs.

Wößmann *et al.* (2007) evaluate the impact of autonomy and accountability on student outcomes[14] in terms of the freedom with respect to learning content as an aspect of local autonomy. They argue that more local responsibility for content is advantageous as it mobilises local knowledge. But this is balanced by the risk that local actors may favour their own interests at the expense of those of students. The study concludes that external assessment neutralises any potential negative effects by imposing a control on local players.

Without robust national standards, the training received may be too narrow. In Norway the visiting team saw examples of final examinations set up at the firm level even though they are developed in principle by an examination board external to the training company. Such examinations may mainly measure firm-specific skills rather than the full range specified in the curriculum.

A standardised national assessment is thus an important complement of a decentralised system. Other countries provide examples of how such arrangements combine local and national elements. In Germany an apprentice obtains three certificates: The *employer certificate* is a work reference provided by the employer based on workplace performance measured against occupational and training standards. The *school certificate* reflects continuous assessment of the student by the local education institution. Each region (*Land*) includes local elements in this school certificate. The *final certificate* is based on a uniform national examination (the journeyman test), administered to all apprentices, and aims to assess minimum competences (Cedefop, 2008).

Standardised national assessment would provide examination boards with clear guidance

As mentioned during the visit the OECD team heard complaints about the level of preparation of examination boards. Members of examination boards generally represent a specific trade or industry and might not be readily able to establish examinations covering the full range of skills in the curriculum. In the Netherlands, where assessment is decentralised and VET examinations are devised locally, work-based trainers were found to lack the technical competencies to develop the tests. Consequently, examinations for work-based VET were less good than those for school-based VET. Furthermore, in the Netherlands as in Norway, examinations are based on the national VET framework which clearly indicates the targets to be attained. In the Netherlands, these were sometimes too generally defined, resulting in huge variations in assessment (Nijhof and van Esch, 2004).

The Netherlands sought to improve the quality of VET by controlling the examination process and bodies but without reducing local responsibility for the examinations. The control combined a self-evaluation of examination bodies with an audit by national institutions. However, the results of this initiative were unsatisfactory because of the

14. The analysis is based on PISA data measuring performance of 15-year-olds in areas such as mathematics, science and reading. These findings would presumably also apply to VET courses.

considerable bureaucratic burden it created for the examination bodies (Nijhof and van Esch, 2004; Maes, 2004).[15]

National standardised assessment would facilitate recognition of informal and non-formal learning

Currently, a person who is not in apprenticeship or training can pass a craftsman/journeyman examination after five years of relevant work experience. In a system with a national standardised assessment, where tested competencies are established and recognised by the sector, the process of work experience recognition could be accelerated and rationalised. A person could pass the examination at any time to prove his/her ability to work in a trade.

Implementation and resource implications

For Norway the introduction of a standardised national assessment should improve quality, and it could easily be introduced within the current structure in Norway.

Norway has an impressive institutional framework for involvement of the social partners. Representatives from different sectors determine or advise on many aspects of VET, including the appointment of examination boards. Adding the development of a national standardised assessment to the list of social partners' responsibilities would not require the creation of new bodies, although it would require more work by the existing national bodies. Each sector would decide which skills are indispensable in the profession they represent and agree how students' competencies are assessed and evaluated. In some trades – electricians for example – all students wishing to enter the profession already have to pass a national examination to verify their theoretical knowledge of electricity. The easiest way to introduce a national standardised assessment would be to provide existing examination boards with detailed instructions on how examinations should be conducted and support this with relevant training and guidance.

A national standardised assessment would not be a tool to control companies but extra help for providing VET of good quality. It can be used alongside other forms of assessment developed at company and local levels.

2.5 Providing training to the trainers and supervisors of apprentices

Challenge

There are no formal training requirements for the trainers and supervisors of apprentices besides the status of certified worker. Training for trainers is offered in some counties and by some training offices but quality, availability and take-up vary. According to a survey of a small number of trainers, 56% participated in relevant courses. Another survey reveals that two-thirds of companies considered such training useless (Høst, 2008). Conversely, anecdotal evidence collected during the visit indicates that trainers value courses that help them to improve their work with apprentices.

15. In response to the persistent issue of the quality of examinations, the system was further reformed. We are not aware that it has since been evaluated.

Recommendation 5

Workplace supervisors and trainers of apprentices should receive some obligatory training in order to obtain a licence to take on apprentices.

Supporting arguments

Four arguments support this recommendation. First, those responsible on behalf of Norway for the training of many young people should acquire the necessary skills. Second, such training improves the quality of apprenticeship training. Third, a strong economy provides the opportunity to reinforce the requirements for trainers in companies. Fourth, training for trainers would create a pool of trained people in industry who could contribute to teaching and training in schools.

Those responsible for young apprentices should acquire relevant skills

Teaching and training require special competencies. Young people 16 or 17 years of age have a wide variety of intellectual and emotional needs, and persons who are directly involved in their supervision and development carry a substantial responsibility on behalf of Norwegian society. This should be reflected in a suitably professional approach to the supervision of apprentices, particularly given the significant financial support employers receive from the Norwegian government. This requires training.

Box 2.2 shows, as an example, a Swiss approach to trainers' training.

Box 2.2. The training of VET trainers in Swiss companies

In Switzerland, firms need to meet quality standards to be licensed to take apprentices. For those who supervise apprentices, there is a required course of 100 learning hours covering pedagogy, law, the education system, problems with drugs and alcohol, etc. Supervisors cannot look after more than two apprentices and have to have a certain level of education. Cantonal inspectors enter companies to ensure that the apprentices are learning something useful. If there is a problem, the cantonal staff provides some "coaching" to the company. The companies see that this is to their advantage, in that if they train the apprentices better, the apprentices do better work for them.

Training for trainers has an impact on the quality of apprenticeship

The role of trainers goes beyond informing apprentices about the company's work methods. Trainers convey theoretical and practical knowledge relevant to the profession, familiarise apprentices with the social norms and codes of the workplace and manage the apprentices while they are at the company (Gérard *et al.*, 1998).

Research confirms that training of trainers improves their capacity to supervise and teach (Kilpatrick, Hamilton and Falk, 2001; Harris, Simons and Bone, 2000). One UK study reports that occasional supervisors who lack the relevant training tend to teach specific occupational skills but neglect key social competencies such as communication and teamwork. They also perceive their supervisory role as an addition to their main job (Evans, Dovaston and Holland, 1990). An Australian study reports that apprentices highly value the social and personal skills of their supervisors, such as the capacity to deal with conflict, in addition to their knowledge of their trade. At the same time, the supervisors

interviewed felt they lacked the skills needed to meet students' expectations (Harris, Simons and Bone, 1998; for more information see Kis, 2008).

In Germany until recently, employees who wanted to work with apprentices had to pass a national examination (preceded by optional training). This requirement has been suspended for five years as firms complained that the arrangement was burdensome. Preliminary evaluations of the suspension have not been positive. Dropout rates among apprentices are higher in companies that have no qualified training staff, and the same companies complain about the poor performance of their apprentices. A survey of sectoral organisations of social partners revealed that they associated the suspension of formal qualifications for trainers with a deterioration in the image of VET and its overall quality. Both training and non-training companies considered formal requirements for trainers a guarantee of minimum standards (BIBB, 2008).

A number of points about the Norwegian context support the importance of training for trainers. First, the visiting team heard from employers that when training for trainers is provided it has extremely positive results. Second, the Knowledge Promotion Reform gives localities and individual institutions more freedom, but places an additional burden on trainers to define the content and methods of apprenticeship training. Trainers need to be prepared for this task. Third, training for trainers not only develops the competencies of those directly involved but has been shown to contribute to the dissemination of knowledge and competencies to other people in the company, who typically participate actively in the training of Norwegian apprentices (Cort, Härkönen and Volmari, 2004).

The strong economy provides the opportunity to reinforce requirements for trainers in companies

There is a risk that obligatory training for trainers would discourage some employers – perhaps small companies in particular – from taking on apprentices[16] because of the additional costs. Against this, firms would reap benefits from better quality apprenticeship training and higher productivity of apprentices, and they receive a substantial government subsidy.

In Switzerland, companies can reap net benefits from apprenticeships despite the obligatory training for trainers and the lack of state subsidies (Mühlemann, Schweri and Wolter, 2006). A survey of French trainers who received training shows that many small firms participate in training of trainee supervisors; 52% of trained trainers worked in companies employing fewer than ten people, 18% in companies with 10 to 99 employees, and 30% in firms with more than 100 employees (Gérard *et al*., 1998).

Inevitably, obligatory training for supervisors of apprentices will deter some employers from taking apprentices. Typically these will be the firms that have less to gain from apprentice training because they do not face difficulties in recruitment or are simply not committed to the business of training apprentices. Given the current excess demand for apprentices this would be a positive outcome. Obligatory training for trainers would encourage companies to improve the quality of training and concentrate the limited number of potential apprentices in firms in which they are most needed and can be trained most effectively.

16. According to Eurostat, close to 70% of Norwegian workers in 2005 were employed in non-financial business firms with fewer than 250 employees. Compared to the European average (EU27), Norway has a higher than average share of firms with 10 to 249 employees and a lower than average share of micro firms with fewer than 10 employees.

Training for trainers would create a pool of trained people in industry who could contribute to teaching and training in schools.

The VET teacher workforce in Norway is ageing, as in many other OECD countries (Cort, Härkönen and Volmari, 2004). In 2001 half of the teachers in upper secondary schools were above 50 years old (Lyng and Blichfeldt, 2003). In one county the visiting team heard that some school VET programmes may be constrained by a shortage of VET trainers. To fill the gap, schools often hire skilled workers as school VET trainers on short contracts. The visiting team saw many examples of such positive arrangements between schools and local industries. Improvement of teaching and pedagogical skills in the trainer workforce would create a useful pool of trained people in industry who might also be able to contribute to school VET training either immediately or at some point in the future[17].

Implementation and resource implications

To evaluate the burden of training and how it should be funded, an analysis of the costs and benefits of apprenticeship should be conducted. In addition, obligatory training might be introduced initially in a couple of counties, and the impact on the supply of apprenticeship places evaluated.

Ways of funding training for trainers differ across countries. For example, in Austria big companies cover either all or part of the total costs of training. In Germany, the cost of courses to prepare for the trainer examination is mainly covered by the participants. Individuals are ready to invest in training as training qualifications lead to better career prospects and higher salaries (Gérard *et al.*, 1998).

In Norway training is currently provided at the county level. Training offices, already actively involved in apprenticeship training and trainers' preparation, can be of help to small firms for which obligatory training for trainers might be particularly difficult. A bottom-up approach would diminish the risk of making the training of trainers overly bureaucratic. Details of the arrangement, including the content and practical organisation of the training, should be decided in the tripartite bodies.

2.6 Enhancing the evidence base

Challenge

In Norway there are good VET data, given that a unique individual identification number is attached to each person and then to administrative records of all types. Despite this rich source of data, analysis of long-term outcomes of VET is weakly developed, and economic analysis of costs, benefits and incentives is rarely used to support policy making. Fragmentation of analytical capacity among various bodies and universities limits the scope for synergy. Relatively weak data on labour market outcomes of programmes and institutions inhibit effective careers guidance and limit students' ability to make choices informed by a solid understanding of possible career paths.

17. VET teachers in schools are required to have pedagogical diploma. Trainers from companies in order to have the status of VET teachers in schools should therefore receive equivalent pedagogical qualifications.

Recommendation 6

Norway should enhance data and analysis relating to VET and ensure they are more routinely employed in the development of policy and career guidance. Consideration should be given to the establishment of a dedicated centre for VET data and analysis.

Supporting arguments

Three main arguments support this recommendation. First, systematic data collection and analysis are essential to effective VET policy. Second, good data on educational and labour market opportunities are needed to support career guidance and inform student choice. Third, examples from other countries suggest that the establishment of a dedicated centre for VET research and analysis may be useful.

Systematic data collection and data analysis inform VET policy strategies and can make them work

Data on VET outcomes, such as employment/unemployment rates, wages, mobility and other job characteristics reveal whether upper secondary VET meets the needs of the labour market and more generally whether it provides individuals with the tools to function in Norwegian society. The data would ideally be collected at different points in time, both immediately after the completion of studies and in the medium and the long term. For example, the Swedish National Agency for Education (Skolverket) evaluates the educational and labour market outcomes of each upper secondary programme (Skolverket, 2002). Since the allocation of individuals to VET pathways is not random, longitudinal data on educational and family background are needed to eliminate unobserved individual characteristics, such as ability, which affect wages and correlate with training.[18]

Practical examples include:

- Data on labour market performance linked to information about VET careers can help to identify and monitor groups at risk in education and in the labour market, such as dropouts, migrants and VET students who move in the third year to general courses.
- As indicated in section 2.5, an analysis of the costs and benefits of apprenticeship to different types of employers would guide policy and practice on the supply of workplace training.

Good data on educational and labour market opportunities inform student choice

Data on the educational and labour market performance of former VET students as well as information on availability of apprenticeship training in different programmes will guide students and parents in the choice of upper secondary pathways. Career counsellors would also need this information to provide students with sound advice on future careers (see section 2.1).

18. See the discussion in Brunello, Garibaldi and Wasmer (2007), who also review the relevant empirical literature.

A dedicated centre for data and analysis?

Current research institutions, such as the Norwegian Institute for Studies in Innovation, Research and Education (NIFU STEP), the Norwegian Institute for Labour and Social Research (FAFO) or universities, can be encouraged to carry out more studies on VET and in particular to fill the gaps in the economic analysis of VET and apprenticeship. However, in a system with many independent research bodies there is a risk of dispersion and duplication of knowledge. The creation of an institution with responsibility for studies on VET would be another possibility. Box 2.3 shows examples of such institutes in Germany and Australia.

Box 2.3. National VET research institutes in Germany and Australia

The German Federal Institute for Vocational Education and Training (*Bundesinstitut für Berufsbildung*, BIBB) is a state-owned company directly financed from the federal budget and controlled by the Federal Ministry of Education and Research. Among other things, it analyses labour market trends, manages several VET research databases, conducts research on the German VET system, and supports training enterprises and VET training centres (BIBB, 2007a, 2007b).

The Australian National Centre for Vocational Education Research (NCVER) is a not-for-profit institution owned by federal, state and territory ministers responsible for vocational education and training. NCVER mainly collects VET statistics, manages a VET research database, and disseminates the results of research and data analysis (NCVER, 2007).

A national research institution would systematically collect evidence on VET, manage large data sets and attract the best researchers in the field - an important issue given that VET sometimes appears to have low status in academic studies. The short-term costs of such an initiative would be handsomely repaid if the result is better policy in this area.

Implementation and resource implications

As an initial step we propose that Norway scope the option of a dedicated VET centre for data and analysis. Better use of register-based data would be a relatively cheap and simple way to develop data, and exploitation of these data for VET purposes might be part of the core tasks for such a central body.

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Annex A

Background Information

1. Terms of references for Norway

The overarching objective is to improve the responsiveness of the VET system to labour market needs

1. Tripartite co-operation within VET – system perspective

How successful is tripartite co-operation on every level?

National level: Does tripartite co-operation ensure that the VET system meets the labour market's skills needs?

Regional level: The county vocational training committees' responsibilities have recently been altered by law. In light of these changes, how successful is tripartite co-operation at maintaining the link between education policies and the politics of trade and industry and labour-market, in particular:

- Regarding quality in the training as a whole, in schools and in training establishments?
- Regarding the dimensioning of school place provision, on the one hand, and available apprenticeships, on the other?

Local level: How does the social dialogue ensure the quality of training in training establishments?

2. Better follow through – individual perspective

Quality in VET:

- To what extent can VET be said to provide sufficiently for obtaining skills and access to jobs in a lifelong learning perspective (with particular focus on dropout issues)?

Evidence based VET policy

- How information on labour market outcomes from VET could be better used to reinforce the link between VET and the labour market (including the use of data to better guide students and apprentices).

2. Biographical information

Giorgio Brunello is a professor at the Department of Economics of the University of Padua. He is also a CESifo and IZA research fellow and a member of the European Network of Experts in the Economics of Education (EENEE). Previously Giorgio worked as an associate professor at Osaka and Venice University. He has a Ph.D. in economics from Osaka University and an M.Sc in economics, from London School of Economics. He is from Italy.

Simon Field has worked since 2001 in the Directorate for Education, OECD on issues including vocational education and training, equity in education, and human capital. His previous career in the UK civil service included a period heading the division for higher education, evaluation and international issues in the Department for Education and Skills, while in the Home Office he was responsible for creating and leading an Economics Unit, bringing the tools of economic analysis to bear on criminal justice issues. He holds a Ph.D. in philosophy and social policy from the University of Cambridge and an M.Sc. in Economics from Birkbeck College London. He was born and brought up in Belfast and holds joint British/Irish citizenship. (simon.field@oecd.org)

Nancy Hoffman is Vice-president of the Youths Transition Cluster and Director of the Early College Initiative at Jobs for the Future, a national non-profit organization. She holds a B.A. and Ph.D. in comparative literature from the University of California, Berkeley and has taught or been an administrator at Brown University, Temple University, Harvard Graduate School of Education, the College of Public and Community Service at the University of Massachusetts, Boston and MIT. She is from the United States.

Malgorzata Kuczera is a policy analyst in the OECD Directorate for Education where she works on 'Learning for Jobs' - the OECD programme of work on Vocational Education and Training. She is responsible for several country reviews, and for analysis of the comparative characteristics of VET systems, and has presented the results of this work in many international contexts. Prior to this activity, she co-authored the OECD review of equity in education 'No More Failures. Ten steps to Equity in Education'. She has an M.Sc. in political science from Jagellonian University, Poland, and a Master's degree in International Administration from the University Paris I, Sorbonne-Panthéon. She is from Poland. (malgorzata.kuczera@oecd.org)

3. Programme of the review visits

Fact-finding visit, 5-7 May 2008

Monday, 5 May, Oslo

Meeting with representatives of the Ministry of Education and Research

Meeting with representatives of the Ministry of Labour and Social Inclusion

Meeting with representatives of the Norwegian Directorate for Education and Training:

Meeting with representatives of the Norwegian Agency for Quality Assurance in Education (NOKUT)

Meeting with the Advisory Councils for VET (FR)

Meeting with research experts in VET and labour market, theme 1: "Follow-through and figures"

Meeting with research experts in VET and labour market, theme 2: "Evaluation of the Knowledge Promotion"

Tuesday, 6 May, County of Østfold

Visit to a school in Fredrikstad

Meeting with the enterprise providing VET: Jøtul

Visit to the tertiary vocational education institution: Østfold fagskole

Interview with county and Confederation of Norwegian Enterprise (NHO) representatives

Wednesday, 7 May, Oslo

Meeting with the representatives of employer organisations: Confederation of Norwegian Enterprise (NHO), Federation of Norwegian Commercial and Service Enterprises (HSH), Employers' Association Spekter

Meeting with Trade Unions: Norwegian Confederation of Trade Unions (LO) + Confederation of Vocational Unions (YS)

Meeting with Teachers' Unions: Union of Education Norway (Utdanningsforbundet), Norwegian Union of School Employees (Skolenes landsforbund)

Meeting with the Norwegian Association of Regional Authorities (KS)

Meeting with student representatives (Elevorganisasjonen)

Meeting with the representatives of the Ministry of Education and Research, and the Directorate for Education and Training

Main visit, 9-13 June 2008

Monday 9th June, Oslo

Meeting with representatives of the Ministry of Education and Research

Meeting with representatives of the Ministry of Labour and Social Inclusion and the Norwegian Labour and Welfare Administration

Meeting with representatives of the Norwegian Directorate for Education and Training

Meeting with representatives of the Norwegian Institute for Adult Learning (Vox)

Meeting with representatives of the Norwegian Agency for Quality Assurance in Education (NOKUT)

Meeting with VET Councils (FR)

Meeting with representatives of the National Council for Vocational Education and

Training (SRY)

Tuesday, 10 June, County of Nordland

Meeting with representatives of the County of Nordland: Education Director, the Norwegian Labour and Welfare Administration (NAV), Follow-up service, External Examiner, Employers Federation, Trade Union
Meeting with a representative of a Training Office
Visit to an upper secondary school
Visit to a training company REC Scan Wafer (solar panel producer)

Wednesday, 11 June, County of Nordland

Visit to a lower secondary school
Visit to an upper secondary school
Visit to a training enterprise

Thursday, 12 June, Oslo

Meeting with the representatives of employer organisations: Confederation of Norwegian Enterprise (NHO), the Federation of Norwegian Commercial and Service Enterprises (HSH), the Employers' Association Spekter
Meeting with Trade Unions: Norwegian Confederation of Trade Unions (LO), the Confederation of Vocational Unions (YS)
Meeting with the representatives of teachers' unions: Union of Education Norway (Utdanningsforbundet)
Meeting with representatives of the Norwegian Association of Regional Authorities (KS)
Forum with researchers and stakeholders

Friday, 13 June, Oslo

Visit to an upper secondary school (Sogn videregående skole)
Meeting with the representatives of Oslo County, Section for Education
Meeting with the representatives the Ministry of Education and Research and the Norwegian Directorate for Education and Training

Annex B

International and National Statistics

Table B.1. Distribution of subjects in upper secondary VET programmes

Vg3 (year 13 and 14)	Apprenticeship training			
	Apprenticeship training			
Vg2 (year 12)	Common core subjects (*e.g.* mathematics") 252 hours	Common VET Programme subjects 447 hours	In-depth study project 253 hours	
Vg1 (year 11)	Common core subjects (*e.g.* mathematics) 336 hours		Common VET Programme subjects 447 hours	In-depth study project 168 hours

Source: Norwegian Directorate for Education and Training (2008a), "Responses to the National Questionnaire", unpublished.

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Table B.2. Mean score and variation in student performance on the science, reading and mathematics scale (2006)

	Science scale				Reading scale				Mathematics scale			
OECD	Mean score	S.E.	S.D.	S.E.	Mean score	S.E.	S.D.	S.E.	Mean score	S.E.	S.D.	S.E.
Australia	526.9	2.3	100.2	1.0	512.9	2.1	93.7	1.0	519.9	2.2	88.0	1.1
Austria	510.8	3.9	97.9	2.4	490.2	4.1	108.2	3.2	505.5	3.7	98.1	2.3
Belgium	510.4	2.5	99.7	2.0	500.9	3.0	110.0	2.8	520.3	3.0	106.1	3.3
Canada	534.5	2.0	94.2	1.1	527.0	2.4	96.3	1.4	527.0	2.0	85.8	1.1
Czech Republic	512.9	3.5	98.4	2.0	482.7	4.2	111.3	2.9	509.9	3.6	103.2	2.1
Denmark	495.9	3.1	93.1	1.4	494.5	3.2	89.3	1.6	513.0	2.6	84.8	1.5
Finland	563.3	2.0	85.6	1.0	546.9	2.1	81.2	1.1	548.4	2.3	80.9	1.0
France	495.2	3.4	101.6	2.1	487.7	4.1	104.0	2.8	495.5	3.2	95.6	2.0
Germany	515.6	3.8	100.0	2.0	494.9	4.4	111.9	2.7	503.8	3.9	99.1	2.6
Greece	473.4	3.2	92.2	2.0	459.7	4.0	102.7	2.9	459.2	3.0	92.3	2.4
Hungary	503.9	2.7	88.2	1.6	482.4	3.3	94.4	2.4	490.9	2.9	91.0	2.0
Iceland	490.8	1.6	96.9	1.2	484.4	1.9	97.0	1.4	505.5	1.8	88.0	1.1
Ireland	508.3	3.2	94.4	1.5	517.3	3.5	92.4	1.9	501.5	2.8	82.0	1.5
Israel	453.9	3.7	111.5	2.0	438.7	4.6	119.4	2.8	441.9	4.3	107.4	3.3
Italy	475.4	2.0	95.5	1.3	468.5	2.4	108.8	1.8	461.7	2.3	95.8	1.7
Japan	531.4	3.4	100.1	2.0	498.0	3.6	102.4	2.4	523.1	3.3	91.0	2.1
Korea	522.1	3.4	90.1	2.4	556.0	3.8	88.3	2.7	547.5	3.8	92.6	3.1
Luxembourg	486.3	1.1	96.8	0.9	479.4	1.3	100.2	1.1	490.0	1.1	93.4	1.0
Mexico	409.7	2.7	80.7	1.5	410.5	3.1	95.7	2.3	405.7	2.9	85.3	2.2
Netherlands	524.9	2.7	95.6	1.6	506.7	2.9	96.6	2.5	530.7	2.6	88.6	2.2
New Zealand	530.4	2.7	107.3	1.4	521.0	3.0	105.2	1.6	522.0	2.4	93.3	1.2
Norway	486.5	3.1	96.1	2.0	484.3	3.2	105.1	1.9	489.8	2.6	91.6	1.4
Poland	497.8	2.3	89.9	1.1	507.6	2.8	100.2	1.5	495.4	2.4	86.5	1.2
Portugal	474.3	3.0	88.6	1.7	472.3	3.6	98.8	2.3	466.2	3.1	90.7	2.0
Slovak Republic	488.4	2.6	93.1	1.8	466.3	3.1	105.1	2.5	492.1	2.8	94.5	2.5
Spain	488.4	2.6	90.5	1.0	460.8	2.2	88.8	1.2	480.0	2.3	88.9	1.1
Sweden	503.3	2.4	94.2	1.4	507.3	3.4	98.2	1.8	502.4	2.4	89.7	1.4
Switzerland	511.5	3.2	99.3	1.7	499.3	3.1	94.1	1.8	529.7	3.2	97.4	1.6
Turkey	423.8	3.8	83.2	3.2	447.1	4.2	92.9	2.8	423.9	4.9	93.2	4.3
United Kingdom	514.8	2.3	106.8	1.5	495.1	2.3	101.9	1.7	495.4	2.1	88.9	1.3
United States	488.9	4.2	106.0	1.7	m	m	m	m	474.4	4.0	89.7	1.9
OECD total	490.8	1.2	104.1	0.6	483.8	1.0	106.8	0.7	483.7	1.2	98.2	0.7
OECD average	500.0	0.5	95.2	0.3	491.8	0.6	99.1	0.4	497.7	0.5	91.5	0.4

Note: S.E. – standard error; SD – standard deviation

Source: OECD PISA 2006 database.

Table B.3. Wage premium relative to no upper secondary education by educational attainment in Norway, Denmark and Finland

	Norway	Denmark	Finland
College education	0.364 (0.063)	0.460 (.051)	0..562 (.057)
VET but no college	0.213 (0.069)	0.372 (.050)	0.347 (.055)
General upper secondary but no college	0.151 (0.074)	0.184 (.060)	0.268 (.072)

Note: Standard errors are shown in brackets.

Source: IALS database.

Table B.4. Unemployment rate as a percentage of the labour force, by age and level of education

Percentages

	30 years old and less	Over 30 years old
All education levels	2.3%	1.5%
Below upper secondary	3.9%	2.5%
Upper secondary	1.4%	1.3%
Tertiary (1-4 years)	0.6%	0.8%

Source: Statistics Norway, The Norwegian Labour and Welfare Administration.

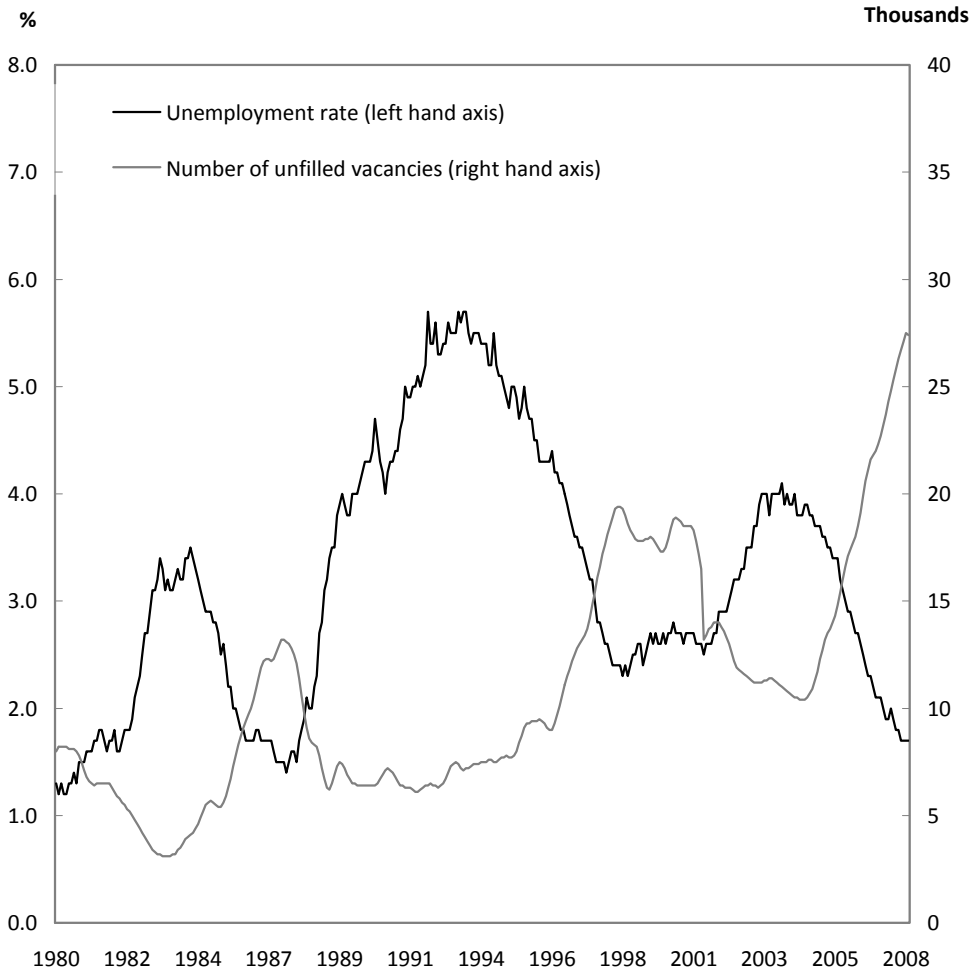
Table B.5. The situation of persons starting upper secondary education in 1999 in autumn 2005, by types of educational achievement

Percentages

	Total	Completed in 2002/03 (general or vocational)	Not completed by 2002/03, stayed in education	Dropout (not in upper secondary education after the first year)
Education or combined education and work	46.6	62.1	19.6	0.2
Employed (only)	40.4	31.8	55.8	59.9
Unemployed	2.8	1.3	5.3	8.7
Labour market measures	0.5	0.2	1.1	1.2
Rehabilitation, disability	2.4	0.5	5.7	6.2
Social security	1.6	0.3	3.4	9.9
Other	5.5	3.5	8.7	12.8
Not in the register	0.2	0.1	0.3	1.2

Source: Norwegian Ministry of Labour.

Figure B.1. Vacancy rates[1] and registered unemployment[2]

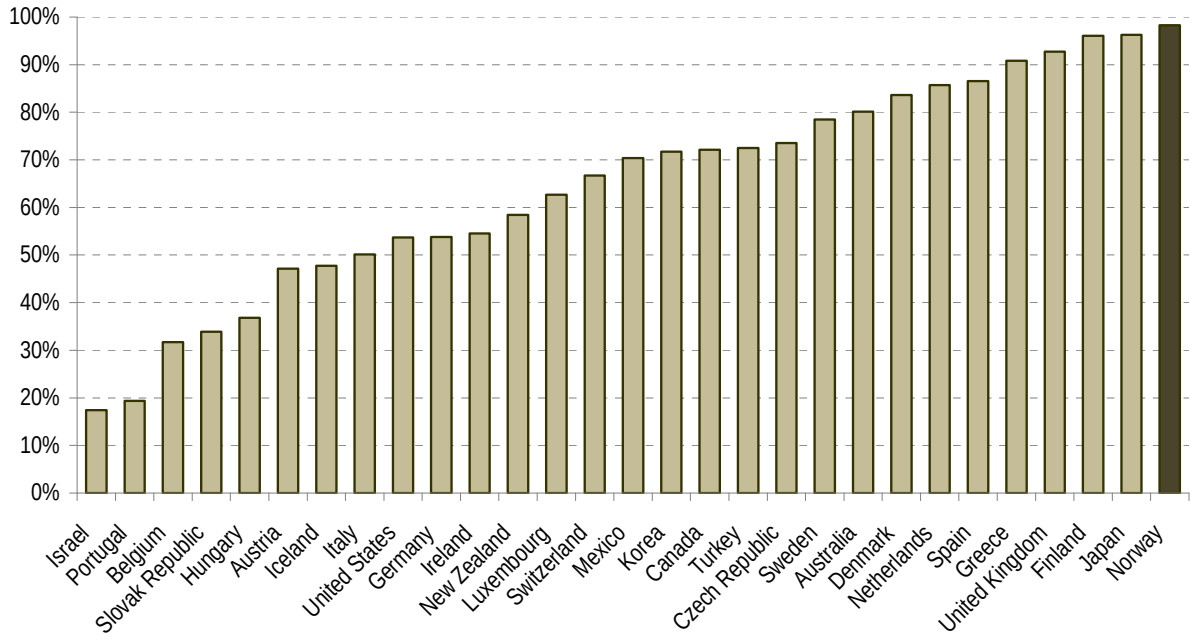


1. Trend-adjusted.

2. Seasonally adjusted.

Source: Norwegian Labour and Welfare Administration (NAV); OECD (2008b), *2008 Economic Review – Norway*, OECD, Paris.

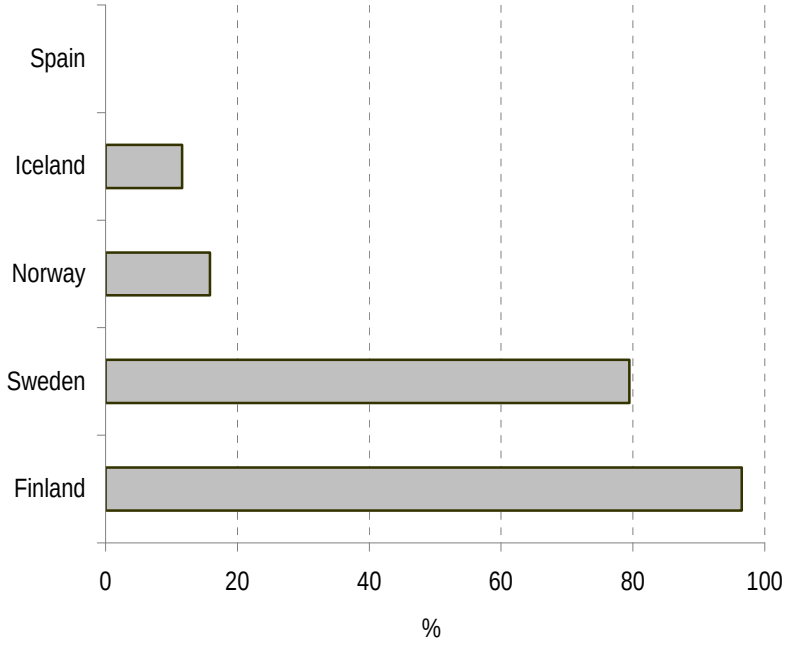
Figure B.2. Percentage of students in schools whose principal reported that career and guidance were formally scheduled into students' time at school



Source: OECD PISA 2006 database.

Figure B.3. Career guidance provided to 15-year-olds in the last year of comprehensive lower secondary school (ISCED 2) (2006)

Percentage of students in schools whose principal reported more than half of students from the school receive some training in local businesses as part of school activities during school year



Source: OECD PISA 2006 database.

Learning for Jobs

OECD Reviews of Vocational Education and Training

NORWAY

For OECD member countries, high-level workplace skills are considered a key means of supporting economic growth. Systems of vocational education and training (VET) are now under intensive scrutiny to determine if they can deliver the skills required.

Learning for Jobs is an OECD study of vocational education and training designed to help countries make their VET systems more responsive to labour market needs. It will expand the evidence base, identify a set of policy options and develop tools to appraise VET policy initiatives.

The Norwegian VET system has many strengths including strong and trustful co-operation between employers, unions and VET authorities and high-status VET tracks in upper secondary education. Many employers are keen to attract apprentices and there is a high level of adult literacy. But there are significant challenges, including an ageing workforce of school-based trainers, weak quality assurance mechanisms, high levels of dropout and concerns that the priority accorded to student choice may make the system unresponsive to labour market needs. Among the review's recommendations:

- Improve the quality of apprenticeship through training for workplace supervisors and a standardised national assessment of apprentices' practical skills.
- Provide effective guidance to students entering upper secondary VET education to help them choose their programme.
- Reduce the size of VET programmes that do not lead to apprenticeships.
- Tackle dropout by providing stronger intervention in early childhood and school systems.
- Improve VET data and analysis.

OECD is conducting country VET policy reviews in Australia, Austria, Belgium (Flanders), the Czech Republic, Germany, Hungary, Ireland, Korea, Mexico, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom (England and Wales), and the United States (South Carolina and Texas). The initial report of *Learning for Jobs* will be available on the OECD website in 2009. The final report on the study's findings will be published in 2010.

Background information and documents are available at ***www.oecd.org/edu/learningforjobs***.