

National Research Report (NRR)

Norway 2009



CEDEFOP

European Centre
for the Development
of Vocational Training

REFERNET

Authors

Ms Anna Hagen, research coordinator, Fafo Institute for Labour and Social Research

Ms Marianne Dæhlen, researcher, Fafo Institute for Labour and Social Research

This report from Norway is one of a set of European country reports on VET research. Although it has been produced under the guidance of Cedefop, the opinions are those of the contractor only and do not necessarily represent Cedefop's official position.

The preparation of this report has been co financed by the European Community.

Table of contents

Abstract (/Introduction/Executive Summary) Anna Hagen and Marianne Dæhlen	page 4
Theme 1: Benefits of VET Anna Hagen and Marianne Dæhlen	page 6
Theme 2: Effectiveness and quality assurance Anna Hagen and Marianne Dæhlen	page 16
Theme 3: VET and employment-related mobility and migration Anna Hagen and Marianne Dæhlen	page 29
Theme 4: Transition Anna Hagen and Marianne Dæhlen	page 37
Annex: Figure 1	page 47

Abstract

The 2009 National VET Research Report (NRR) from Norway has been written on commission of the Norwegian Directorate for Education and Training by Marianne Dæhlen and Anna Hagen, who are researchers at Fafo, Institute for Labour and Social Research¹. The authors wish to thank members of the Norwegian National ReferNet Consortium as well as commentators at the Norwegian Directorate for Education and Training and Cedefop for valuable input and suggestions to earlier drafts of the report. The responsibility for the final content of the report rests entirely with the authors.

1. Background and purpose

This literature review is part of a series of reports prepared for Cedefop as a source on VET-related research carried out at the national level. The 2009 report provides reviews of two key topics selected by Cedefop (“The benefits of VET” and “VET and employment-related mobility and migration”) and two key topics considered important from a national perspective (“Transitions” and “Effectiveness and quality assurance”). The review of each topic is organised under separate headings.

The purpose of the report is to provide an updated overview of the national literature with relevance to the selected topics. Further definitions and delimitations of the topics are accounted for under the main sections of the report.

2. Selection criteria

The review concentrates on national research carried out from 2005 until 2009, in accordance with the guidelines from Cedefop. The time frame and the four key topics provided the main selection criteria for the review. Availability has served as a third criterion. This means that only journal articles, books and research reports that are searchable and accessible to the public have been included in the review. Some of the studies included are published in English. Unfortunately, however, most of the studies cited are only available in Norwegian.

The procedure for obtaining the relevant literature has included computer search of relevant databases as well as manual search of relevant journals, websites of academic institutions and web-based publication lists of individual researchers. In the initial phase, searches were carried out using BIBSYS, a national literature database for Norwegian research and special libraries.² The first manual searches were guided by the authors’ familiarity with the research field, relevant journals, research institutions and individual researchers. In the final stage of the search process additional publications were selected based on expert advice from research colleagues and commentators on earlier drafts of the report.

¹ Fafo is an independent and multidisciplinary research foundation located in Oslo. For more information, see www.fafo.no.

² www.bibsys.no

3. Initial VET in Norway – a brief contextual introduction

In 1994 a major reform was introduced in the Norwegian education system, providing a statutory right to a minimum of three years of upper secondary education.³ The 19 counties are responsible for the provision of upper secondary education, including VET. Education in public institutions is provided free of charge. About 95 per cent of a cohort enters upper secondary education directly from lower secondary education, making upper secondary education almost universal in Norway. At the upper secondary level, 12 educational programmes are available. Nine of these are VET programmes⁴, leading to a trade or journeyman's certificate. The remaining three are general academic programmes⁵, leading to a general university admissions certificate. Most upper secondary schools offer both general and vocational programmes. Around half the students in upper secondary education initially enter a VET programme.

The readers should be aware that Norway has a slightly different and narrower definition of VET than other countries as VET is usually referred to as the upper secondary education level where the main model is two years of training in upper secondary school and 2 years apprenticeship training in a training enterprise in year 13 and 14. There is no separate system of VET at the tertiary level in Norway, as it is fully integrated in the higher education system. Research on VET in Norway is therefore related to the upper secondary level or integrated as part of the research on higher education level. However there are some very few vocational colleges at the post secondary level.

Norway has a dual system for vocational training, combining school based and work-based education. The standard model for upper secondary VET after the Reform 94 consists of two years of school based education followed by two years of apprenticeship in a company. In Norway this model is often referred to as the 2+2 model.⁶ A few vocational programmes are completely school-based without an apprenticeship period. Apprenticeship training in companies follows a national curriculum. During the apprenticeship period, the apprentice is legally an employee of the company and as such receives wages. The wages are negotiated in collective agreements. In order to take on an apprentice a company must be approved as a training company by the county authorities. Training companies receive a state grant for each apprentice. Trade-specific examination boards appointed at the county level are responsible for the final trade or journeyman's examination. Successful candidates are awarded a trade

³ In Norway there is no provision of certified vocational education and training below the upper secondary level.

⁴ Programme for Building and Construction; Programme for Design, Arts and Crafts; Programme for Electrical Trades; Programme for Health and Social Care; Programme for Media and Communication; Programme for Agriculture, Fishing and Forestry; Programme for Restaurant and Food Processing; Programme for Service and Transport; Programme for Technical and Industrial Production

⁵ Programme for General Studies: Language Studies; Natural Science and Mathematics; Social Sciences and Arts, Crafts and Design; Programme for Music, Dance and Drama and Programme for Sports and Physical Education

⁶ Some trades deviate from the standard model, following alternative models like 3+0 or 1+3 (VET in Europe. Country Report 2009).

certificate (*fagbrev*) for industrial and service trades or a journeyman's certificate (*svennebrev*) for traditional crafts. The counties are the upper secondary school owners and are obliged by law to assist the students in finding apprenticeship places. If an apprenticeship place is not available, students are entitled to a third year of training at school, with practical training in school workshops. Alternative arrangements are available.

The following model shows the Norwegian VET system.

Theme 1: Benefits of VET

1. Introduction

Investments in education may have benefits to the individual, to the company or to the economy at large. The effects may be economic and measurable in terms of labour market attainment and personal income, company productivity and profitability or national competitiveness and economic growth. In addition to the direct economic effects, education may have social benefits that tend to be more difficult to measure. Social benefits of education might include effects on social integration, working conditions, mobility, health, crime and the environment. This review examines research on the benefits of vocational education and training in Norway. The review concentrates on research published during the period from 2005 to 2009. Recently published research on the benefits of vocational education and training is organised under three main headings: 1. Private benefits of VET, 2. Benefits for enterprises or companies, and 3. Benefits for society.

The review will concentrate on initial VET at the level of upper secondary education. As described in the abstract to this report (see section 1.3.), Norway has a well-developed VET system at the upper secondary level. In Norway, as in many other countries, the completion rate in upper secondary education is one issue receiving much political attention. As the Norwegian VET system relies heavily on apprenticeship training, the availability of apprenticeship places is another and related issue. At the same time, there is a concern about the responsiveness of the VET system at the upper secondary level to the needs of the labour market.

2. Private returns of VET

Few Norwegian studies published during the last five years evaluate upper secondary VET in terms of private returns. Although the importance of education for monetary rewards, job security and health status, among other factors, is well known and documented in the literature, most empirical research on education and private returns in Norway has focused on higher educational programmes. To a considerable extent, the empirical research on VET during recent years has centred on completion, drop-out rates and attainment of qualifications among pupils/apprentices in upper secondary education. Much of this research has been carried out at the Norwegian Institute for Studies in Innovation, Research and Education – NIFU STEP (see, e.g., Markussen et al. 2008).

The reform of upper secondary education in 1994 (Reform 94) strengthened the role of apprenticeship training in the education system and the number of apprenticeship places increased. Nonetheless, not all who apply for an apprenticeship are successful (Høst 2008).

In ‘Vocational Education and the Allocation of Apprenticeships: Equal Chances for Applicants Regardless of Immigrant Background?’ (2006), Helland and Støren from NIFU STEP examine how the chances of obtaining an apprenticeship place as part of an upper secondary education vary according to ethnic background. The authors conclude that grades

significantly influence the probability of obtaining an apprenticeship. However, the probability of obtaining an apprenticeship differs more between ethnic groups than differences in grades should imply. The authors argue that non-western immigrants⁷ need to obtain better grades than other students in order to have the same chances of obtaining an apprenticeship place. It seems reasonable to assume that this “mechanism” also takes effect when the apprentices have graduated and apply for employment. Helland and Støren discuss different theoretical explanations for this. One possible explanation might be that employers prefer applicants who are similar to themselves⁸. Differences might also be related to differences in social capital among immigrants and non-immigrants. Non-immigrants have a higher probability of obtaining apprenticeship places through their social networks, even if their grades are poor. To some extent, differences could also be related to differences in human capital that are not measured in the study, such as Norwegian language proficiency and cultural literacy. From this study, it seems reasonable to conclude that private returns of VET depend on the level of qualifications, but also on ethnic background.

Between 2003 and 2007 researchers from the University of Oslo, Oslo University College and the Norwegian University of Science and Technology collaborated on a research project on educational attainment, qualifications and transition to work. As part of the project, sociologist Idunn Brekke undertook her PhD work on inequality in educational attainment. In an article published in 2007, Brekke focuses on the impact of ethnic background on employment and earnings among those with a vocational education (Brekke 2007). The findings shed light on the importance of VET on job security and income.

Brekke examines employment and earnings among people with a vocational education in Norway. The analysis focuses on the impact of ethnic background, differentiating between non-Western immigrants and the majority population.⁹ The results show that VET trained immigrants and native-born children of immigrants experience an earning disadvantage immediately after graduation. Immigrants also have a significantly lower probability of attaining full employment compared with the majority. For instance, the probability of full-time employment two years after graduation for a 21-year-old male trained in health and social care is 0.68 (68%) among non-immigrants. For immigrants and for native-born children of immigrants, this probability is 0.57 (57%) and 0.64 (64%), respectively.¹⁰ Thus, native-born children of immigrants experience only a minor disadvantage compared with the ethnic majority. The findings also show that the probability of full-time employment is higher in electrical trades, building and construction, and engineering and mechanical trades compared with health and social-care services. Graduating in arts, craft and design, and hotel and food processing decreases the probability for full-time employment relative to health and social care. In addition, the results indicate that immigrants are more affected by the local unemployment rate than non-immigrants.

⁷ The distinction between “non-Western” and “Western” immigrants is common in available data and research in Norway. “Western” includes the EEA countries as well as Switzerland, Australia, Canada, New Zealand and the United States.

⁸ This mechanism is sometimes labelled “homo-social reproduction” in the literature.

⁹ Western immigrants are not included as previous research indicates that this group does not differ from the majority in regard to employment or earnings.

¹⁰ These percentages/probabilities are based on estimates for people living in Oslo in a municipality with 3.8% ethnic concentration and 2.6% unemployment.

In summary, the analysis shows that the probability of being employed in a full-time job two years after graduation in a VET programme is lower for immigrants and children of immigrants than for students with a Norwegian background. Furthermore, there are large differences in initial earnings between immigrants and non-immigrants. However, this disadvantage tends to decline with increasing time since graduation. The article also reveals differences in labour market outcomes across different fields of education.

Brekke and Fekjær (2007) examine ethnic differences in drop-out rates and show that the drop-out risk is higher among those of Pakistani, Chilean, Turkish or Iranian origin compared with Norwegians (and Vietnamese). However, information on grades is missing in these analyses, which could probably explain some of the differences.

The importance of the labour market situation and field of education are highlighted in a recent study by Econ Pöyry (2009).¹¹ The report shows that professionals working in small and protected crafts are exposed to competition from the (national) industry, imports and from non-professional workers, making it difficult for a VET professional to obtain relevant work.

Based on the studies referred to above, it seems reasonable to conclude that private returns to VET depend on the labour market situation, field of education and level of qualifications obtained. Results also show differences between immigrants and the Norwegian majority that cannot be explained by differences in school performance. The differences in returns are greater for immigrants than for native-born children of immigrants compared with those with the non-immigrants, indicating that the disadvantages decrease with time of residence in Norway.

3. Benefits for enterprises/companies

A recent OECD policy review of VET concludes that “Norway has a well-developed upper secondary VET system linked to apprenticeship, which enjoys a high degree of confidence among stakeholders” (Kuczera et al. 2008: 5). Strong tripartite co-operation, a relatively inclusive system and low stigma attached to VET tracks in upper secondary education, as well as the high level of trust among stakeholders, are viewed as successful factors in Norway. However, the report also emphasizes the challenges within the Norwegian system. One issue that is raised is the mismatch between the provision of VET and labour market needs. In Norway, the 19 counties are responsible for public upper secondary education. In the provision of VET at the county level, students’ preferences have to be balanced with employers’ willingness to offer apprenticeship places. The OECD policy review concludes that student choice needs to be more closely guided in order to improve the match between VET provision and the needs of the Norwegian labour market. In order to make more qualified choices, students should be informed about the availability of apprenticeship places. In addition, students should receive information about labour market issues such as earnings, employment opportunities, career paths and general working conditions. When few

¹¹ Econ Pöyry is the Nordic branch of the consulting and engineering company Pöyry Plc. It provides research, analysis and advisory services to clients in the public and private sector; see www.econ.no).

apprenticeship places are available in a vocational program, the provision of this program in schools should be reduced accordingly (Kuczera et al. 2008: 6).

An apprenticeship involves a contract between the apprentice and the training company. The firm makes an investment in the training of the apprentice. In order to do this, the company needs to be assured that the apprentice will stay in the company beyond the initial period associated with high training costs and low productivity. The apprentices, for their part, need to know that the apprenticeship period will have positive effects in terms of future job opportunities and earnings (Thelen 2004).

As described earlier, most vocational students in Norway spend two years in school and two years as apprentices. The apprenticeship follows a national curriculum. The wages of the apprentice are negotiated in collective agreements. Traditionally, taking in apprentices has been an important way for firms to recruit skilled labour. However, there is no obligation for training companies to employ the apprentices when their training is completed.

Beyond the immediate recruitment needs, the training of apprentices can also be seen as a way for firms to secure their future needs for skilled labour. In the article 'Apprentices and Young Workers: a Study of the Norwegian Youth Labour Market', Askildsen and Nilsen (2006) find only moderate support for an investment hypothesis.¹² The authors argue that the recruitment of apprentices in Norwegian firms follows the business cycle and is highly market dependent. These results indicate that the hiring of apprentices is mainly explained by the labour market situation.

The fact that the availability of apprenticeship places varies with the business cycle seems to be well documented. Nevertheless, the role of VET and the apprenticeship system also varies between different sectors and between firms within the same sector. How are these variations to be explained? Is VET actually less beneficial to some sectors and companies than to others? Or are the perceived differences mainly due to variations in established traditions and use of skills in different parts of the labour market?

Olsen et al. (2008) describe how the Norwegian VET system traditionally has been divided between a school-based training model and a corporate model with apprenticeships and training co-operatively managed among schools, enterprises and companies. School-based training programmes principally include health and social care studies as well as sales and service trades. Within these sectors there are weak traditions for vocational training and the apprenticeship system. Building and construction as well as electrical trades are sectors with a long tradition for apprenticeship training. The authors argue that established traditions for apprenticeship and vocational training are important in order to explain the existing differences between trades and enterprises concerning the perceived benefits of VET to employers.

¹² Øvind Anti Nilsen and Jan Erik Askildsen are economists. Nilsen is a professor at the Norwegian School of Economics and Business Administration (NHH). Askildsen is research director at The Stein Rokkan Centre for Social Studies, a research enterprise owned by the University of Bergen.

In a survey among Norwegian municipalities, Hagen and Nyen (2006) find that the perceived benefits of VET and hence the motivation to hire apprentices are influenced by a number of factors. Traditions for hiring apprentices, possibilities for recruiting the apprentice after graduation, the number and quality of applicants/potential apprentices and the financing of the apprentices' wages all influence the decision of the firm to take on apprentices. It seems reasonable to assume that the different practices among enterprises within the same sector to some extent reflect different attitudes and personal experience among employers on the positive consequences of participating in VET.

In another study, Nadim and Hagen (2007) investigate the uses of and experiences with the apprenticeship system among Norwegian enterprises organized within the employers' association Spekter.¹³ The findings show that the motives for taking on apprentices are complex and vary among sectors. In the transport and logistics sector, the apprenticeship system is an important way of recruiting new employees. Consequently, apprentices are often offered employment on completion of their apprenticeship period and trade examination. In other sectors, such as culture, information technology and research, the apprenticeship system is less established as a way of recruiting new employees. The most common reason given by employers for not taking on apprentices is that this is not customary within the trade or industry in question. In some cases, the skills and competences developed through the VET system are not considered relevant for the kind of work performed within the sector. In other cases the main reason seems to be a lack of tradition for the development and use of vocational skills. Nadim and Hagen argue that in order to create more apprenticeship places, measures should not only be aimed at employers but also at upper secondary schools. If the skills developed within the two school-based years of a VET programme were considered more relevant to the competence needs of the enterprises, more firms might be motivated to take on apprentices. To some extent, closer co-operation between schools and enterprises at the local level could also strengthen the relation between school based education and labour market needs.

The Knowledge Promotion Reform in primary and secondary education was introduced in 2006 with structural changes in educational programmes, new curricula and an increased focus on basic skills. In upper secondary VET a main objective of the reform was to increase the cooperation between schools and training companies. The "In-Depth Study Project" was introduced in all vocational programmes in order to facilitate this cooperation. An important aim of the project is to provide VET students with more information about different trades to help them make better-informed decisions about their future education and training. The first report from the evaluation of the In-depth study project indicates that employers regard the project as a way of getting in contact with and potential candidates to apprenticeships (Dæhlen et al. 2008). Based on 98 qualitative interviews in five counties, the report examines the role of companies and enterprises in implementing the In-depth study project. The report shows that co-operation between schools and local companies is based on previously established contacts between individual VET teachers in schools (or heads of department) and contact persons within companies. In general, companies with a tradition of involvement in VET have been more involved in developing the In-depth study project in its early implementation phase.

¹³ Most enterprises organized in Spekter are partly or formerly publicly owned.

According to the above-mentioned studies, it seems reasonable to assume that trades with a tradition for VET perceive that the apprenticeship system is more beneficial compared with trades with less of a VET tradition. However, the differences between sectors cannot be attributed only to different traditions. In some sectors, the skills and competences developed through the VET system are perceived to be less relevant to company needs.

4. Benefits for society

To the individual, employment opportunities and earnings increase with educational level, and companies and enterprises benefit from qualified employees. Society as a whole also benefits from investments in the education system. A low unemployment rate and a healthy population lead to a decrease in expenses and an increase in tax payments and other public revenues. In addition, investments in education may be a way to solve the problem of youth unemployment. On the other hand, while in education, people of working age are kept out of the labour force for a shorter or longer period of time, which may cause imbalances between labour supply and demand.

Compared with most other countries, the unemployment rate in Norway is low and labour force participation is relatively high among both men and women. However, as stated in Kuczera et al.(2008), the drop-out rate in vocational training is high compared with other Nordic countries.

In this section, previous research on the impact of VET on society will be reviewed. First, the role of VET as a policy instrument will be examined. Second, research on completion/drop-out rates will be discussed as indicators of the social consequences of VET. Important questions in this literature relate to who completes and who drops out as well as the role of the VET system in counteracting, maintaining or reinforcing a system of social inequality.

In ‘How the Number of Apprenticeships Are Influenced by Policy and Economic Cycles’, Høst et al. (2008) argue that despite various political measures to stabilize access to apprenticeships, the number of available apprenticeships continues to be highly market dependent. The authors find that the correlation between economic cycles and the supply of apprenticeship positions in industrial and craft disciplines is as strong as or even stronger than before these measures were introduced. When unemployment rises, the number of available apprenticeship positions declines, whereas the number of available apprenticeship places increase during periods of decreasing unemployment. Even if the government increases the number of places in schools, any positive effects on the unemployment rate will be brief when more pupils have to compete for the same (or fewer) number of available apprenticeships.

On the other hand, integration of the apprenticeship system with the upper secondary education system in Norway in the reform of 1994 was followed by a marked growth in the number of apprenticeship places. Strong tripartite co-operation as well as public subsidies for enterprises that offer apprenticeship places has contributed to this development (Hagen and Skule 2007). The increase in apprenticeship places has taken place through both geographical expansion and the introduction of the apprenticeship system into new sectors. As Høst et al. (2008) argue, expansion of the apprenticeship system indicates an ability to adapt to new social and economic conditions.

Summing up, research findings on VET as a policy instrument are mixed. While some results indicate that the number of apprenticeship places is highly market dependent, other findings indicate that policy measures have led to an expansion of the apprenticeship system both geographically and thematically into new sectors of the labour market. The Norwegian initial VET system largely depends upon the willingness of companies and enterprises to contribute to the development of vocational skills by offering apprenticeship places. However, these companies and enterprises do not necessarily have the incentives to fulfil wider societal goals such as providing equal access to education or reducing social inequalities.

Social inequalities in participation in the education system and in learning outcomes are found in all countries. As already mentioned, research has shown that the risk for dropping out of vocational tracks is higher for minority groups than for the ethnic majority (Helland and Støren 2006; Brekke and Fekjær 2007). The relatively high drop-out rate among VET students has consequences not only for the individuals, but for society as a whole.

Finally, the challenge of providing society with enough skilled workers in the future is addressed differently in different fields of education/trades. For example, given the ageing population in Norway and huge problems experienced in recruitment into education for auxiliary nurses and care workers, Høst and Michelsen (2004) call attention to the (future) problems in the care provision sector. Høst (2009) criticizes the vocational educational reform of 1994 for enlarging this recruitment problem by giving priority access to adolescents at the expense of adult learners. In other words, an insufficient supply of care providers is considered a disadvantage of the VET system. These arguments point towards a more general problem of a mismatch between demand and supply of skills in the Norwegian VET system.

5. Conclusions and implications for further research

While few studies have focused on the benefits of VET in Norway, some have used VET in assessing the impact of ethnic background on labour market outcomes. Their results show that children of the ethnic majority benefit more from VET than do children of immigrants (Brekke 2007). According to Helland and Støren (2006), immigrant students with non-Western backgrounds achieve lower grades on average than do those from the ethnic majority. However, further analysis of the data indicates differences in the chances of obtaining an apprenticeship between ethnic groups that cannot be attributed to differences in school grades.

Based on previous research, it seems reasonable to conclude that companies and enterprises with only a short history of taking on apprentices experience smaller returns from apprenticeship training than do companies and enterprises with a VET tradition.

Researchers on VET in Norway argue that apprenticeships are highly market dependent and less influenced by government policy on VET (e.g. Høst et al. 2008). However, the expansion of apprenticeships by geography and sector indicates a vital and adaptive VET system. On the other hand, the social and ethnic inequalities in recruitment and completion of VET are a challenge to the Norwegian VET system. In addition, several reports have pointed to the need for a better match between VET supply and labour market needs. The need to balance the different considerations and interests of different stakeholders is inherent in the model.

Summing up, based on the relatively small amount of research on the benefits of VET, a large number of topics seem relevant for future research. The contribution of VET to productivity, income, quality and innovation for enterprises and for society as a whole, and labour market outcomes of VET for the individual both in short- and long-term perspectives are interesting issues for further investigation.

Based on recent Norwegian research, further studies on the impact of policy measures versus economic cycles and the market on apprenticeships would appear to be fruitful. The finding that the number of apprenticeships is highly market dependent (Høst et al. 2008) generates the question of whether companies decrease the available number of apprenticeship contracts in periods of recession, or is this (partly) a result of a declining interest in vocational training among youth? In other words, it would be interesting to examine how both companies and students respond to economic cycles.

Finally, gender-related topics seem to have been largely overlooked in the research on the benefits of VET. Even if, as Esping-Anderson (1990) claims, Norway is a social democratic welfare state exemplified by gender equality and family-friendly policies, the labour market is highly differentiated by gender (Birkelund 1992; Hansen 1995). In general, earnings and other work-related outcomes in occupations where men constitute the majority are higher than in occupations where women constitute the majority. In other words, labour market outcomes vary between occupations that are typically male dominated and occupations that are typically female dominated. This pattern applies to employees with a university degree as well as employees who have completed a vocational educational training programme at the upper secondary level. For instance, car mechanics have higher earnings than do auxiliary nurses, and plumbers have higher earnings than do hairdressers. The review shows that this distinction is not taken into account and should be given closer attention in future research.

6. References

Askildsen, J. E.; Nilsen, Ø. A. (2005): Apprentices and Young Workers: A Study of the Norwegian Youth Labour Market. *Scottish Journal of Political Economy*, Vol. 52, No. 1, pp. 1–17.

Birkelund, G. E. (1992): Stratification and Segregation. *Acta Sociologica*, Vol. 35, pp. 47–62.

Brekke, I. (2007): Ethnic Background and the Transition from Vocational Education to Work: A Multi-Level Analysis of the Differences in Labour Market Outcomes. *Journal of Education and Work*, Vol. 20, No. 3, pp. 229–254.

Brekke, I.; Fekjær, S. (2007): Ethnic Differences in Dropout and Outcomes. An Analysis of Students in Upper Secondary Schools in Norway. In Fekjær, S. (2007). *Nye forskjeller – nye forklaringer? Etniske ulikheter i utdanningsvalg [New Differences – New Explanations? Ethnic Differences in Choice of Education.]* Oslo: University of Oslo, PhD thesis.

Dæhlen, M.; Hagen, A.; Hertzberg, D. (2008): Prosjekt til fordypning – mellom skole og arbeidsliv [In-depth Study Programme – Between School and Working Life.] Oslo: Fafopaper 2008:27.

Econ Pöyry (2009): Små håndverksfag – statusgjennomgang [Small Crafts – Status Report.] Oslo: Econ Pöyry 2009:003.

Esping-Andersen, G. (1990): *The Three Worlds of Welfare Capitalism*. Cambridge: Polity Press.

Hagen, A.; Nyen, T. (2006): Læreplasser i kommunesektoren – omfang og utfordringer [Apprenticeships in the Municipality Sector – Numbers and Challenges.] Oslo: Fafo-report 540.

Hagen, A.; Skule S. (2007) Den norske modellen og utviklingen av kunnskapssamfunnet [The Norwegian model and the development of the knowledge society]. In Dølvik, J.E., Fløtten, T.; Hernes, G.; Hippe, J. (eds.): *Hamskifte. Den norske modellen i endring [Transforming the Norwegian Model.]* Oslo: Gyldendal.

Hansen, M. N. (1995): Kjønnsegregering i det norske arbeidsmarkedet [Sex Segregation in the Norwegian Labour Market]. *Tidsskrift for samfunnsforskning*, 36, pp. 147–177.

Helland, H.; Støren, L. A. (2006): Vocational Education and the Allocation of Apprenticeships: Equal Chances for Applicants Regardless of Immigrant Background? *European Sociological Review*, Vol. 22, No. 3, pp. 339–351.

Høst, H. (2008): Measures for Quality Improvement in VET. In Høst, H. (ed.): *Continuity and Change in Norwegian Vocational Education and Training (VET)*. Oslo: Norwegian Institute for Studies in Innovation, Research and Education (NIFU STEP).

Høst, H. (2009): Hjelpepleierutdanningen – en suksesshistorie fra 1960-tallet ved veis ende? [Auxiliary Nurse Education – a History of Success from the 1960s at the End of the Road?]. In Christensen, K.; Syltevik, L. J. (eds): *Kvinnerns arbeid [Women's Work.]* Bergen: Unipub.

Høst, H.; Michelsen, S. (2004): Who will Nurse Us in Our Old Age? On the Erosion of Social and Cultural Preconditions for Care Education. In Lindgren, A.; Heikkinen, A. (eds): *Social Competences in Vocational and Continuing Education*. Bern: Peter Lang.

Høst, H.; Gitlesen, J. P.; Michelsen, S. (2008): How the Number of Apprenticeships are Influenced by Policy and Economic Cycles. In Høst, H. (ed.): *Continuity and Change in Norwegian Vocational Education and Training (VET)*. Oslo: Norwegian Institute for Studies in Innovation, Research and Education (NIFU STEP).

Kuczera, M.; Brunello, G.; Field, S.; Hoffman, N. (2008): *Learning for Jobs. OECD Reviews of Vocational Education and Training. NORWAY*. OECD.

Markussen, E; Frøseth, M. W.; Lødding, B.; Sandberg, N. (2008): Completion, Drop-out and Attainment of Qualification in Upper Secondary Vocational Education in Norway. In Høst, H. (ed.) (2008): *Continuity and Change in Norwegian Vocational Education and Training (VET)*. Oslo: Norwegian Institute for Studies in Innovation, Research and Education (NIFU STEP).

Nadim, M.; Hagen, A. (2007): Lærlingeordningen i Spekter [Apprenticeships in Spekter.] Oslo: Fafo-report 2007:35.

Olsen, O. J; Høst, H.; Michelsen, S. (2008): Veier fra yrkesopplæring til arbeidsliv. En studie av det norske overgangsregimets effektivitet [Tracks from Vocational Education to Working Life. A Study on the Efficiency of the Norwegian Transition Regime]. In Olofsson, J.; Panican, A. (eds): Ungdomars väg från skola til arbetsliv. Nordiska erfarenheter [Youths' Transition from School to Work. Nordic Experiences.] Copenhagen: Nordiska ministerrådet.

Thelen, K. (2004) How Institutions Evolve. The Political Economy of Skills in Germany, Britain, the United States and Japan. Cambridge: Cambridge University Press.

Theme 2: Effectiveness and quality assurance

1. Introduction

Any form of quality assurance requires a set of relevant criteria, dimensions, standards and indicators. By definition, the standards are normative rather than descriptive. To assess the quality of an organization, it is necessary to find ways to sample work and to compare samples with selected standards. These general components of evaluation or quality assurance are applicable whether the intent is to evaluate the quality and effectiveness of an individual performer or an organization (Scott 1987: 327). In principle, the same components are applicable when the intention is to discuss the quality and effectiveness of an entire system, for instance a national system for vocational education and training (see the abstract section 1.3. for more information about the system). What complicates the issue is the number of stakeholders involved in vocational education and training, with different views and opinions about the relevant criteria, dimensions and standards to be applied. Some quality indicators are related to inputs, others to outcomes. A third group of indicators are related to different kinds of procedures. Standards and dimensions that might seem relevant in one part of the system could be considered largely irrelevant in other parts. As pointed out by Grubb (2006) an important, but exceedingly difficult question to be answered is: How do different stakeholders and different countries conceive of quality?

Since the reform of upper secondary education in Norway in 1994 (Reform 94), initial vocational education and training at the upper secondary level normally follows the so-called 2 + 2 model. This means that most vocational programmes consist of two years of school-based education followed by two years of apprenticeship in a training company.¹⁴ One of the two years of apprenticeship is considered part of the training and one as productive work for the company. The apprentices are employees of the company and receive a salary that is negotiated through collective bargaining. This salary increases gradually over the course of the apprenticeship period, reflecting the increase in productive work performed by the apprentice (Skule et al. 2002; Kuczera et al. 2008).

The Norwegian VET model can be described as a dual system involving two different learning arenas: the school and the firm or training company. Education and training in the two learning arenas differ with respect to forms of learning, the actors involved and the legal and institutional framework regulating the activities. Apprentices participate in a “community of practice” where the overall goal is related to production and not to education or training (Lave and Wenger 1991). An implication of this is that quality development and quality assurance in training companies must be based on different criteria and standards than school-based education and training. The kind of work apprentices are involved in and the colleagues participating in the work process are two of the factors affecting the quality of the learning process in training companies (Hagen 2005).

¹⁴ Some vocational programmes are completely school-based and do not include an apprenticeship period.

It should be emphasized that quality and effectiveness in VET do not depend only on quality in the two different learning arenas. A major challenge in a dual system combining school-based education with training at work is to provide coherence and connection between the two learning arenas (Hagen 2005). In this respect, efforts must also be made to develop one common, comprehensive and transparent system for quality assurance that is relevant both for schools and for training companies (Norwegian Directorate for Education and Training 2008a).

The next section will summarize findings from recent research in Norway with relevance for quality assurance in the two years of school-based VET. In the following section research focusing on apprentices and training companies will be reviewed. The wider institutional framework of VET is treated in section 4. In the final section, the main findings are summarized and implications for further research are discussed.

2. Quality and effectiveness in schools

The policy issues related to vocational education and training will be different from one country to another, reflecting the different institutional and legal framework of VET as well as different economic and social conditions.

Recruitment of students to vocational programmes

A major concern to some countries is that the vocational training track is mainly a choice for students without other opportunities in the education system. When this is the case, a second-class system might develop as a consequence (Grubb 2006). If vocational training is mainly considered a choice for the less able students, it is evident that this will in turn affect the quality of skills provided within the system. In Norway, about half the students who enter upper secondary education today start in a vocational programme. Applications for different vocational programmes are strongly gendered. Health and social care attract mostly female applicants whereas technological and industrial production, together with building and construction, are programmes dominated by male students (Norwegian Directorate for Education and Training 2008b).

As Høst (2008a) argues, the actual number or proportion of applicants to VET programmes has several weaknesses as quality indicators. The applicants to the three general studies programmes tend to have higher grades from lower secondary school than applicants to the nine vocational programmes (Frøseth et al. 2008)¹⁵. One explanation could be that applicants to vocational programmes have skills, abilities and interests that are not fully captured by

¹⁵ The vocational programmes is Technical and Industrial Production, Electricity and Electronics, Building and Construction, Restaurant and Food Processing, Health and Social Care, Media and Communication, Agriculture, Fishing and Forestry, Service and Transport and Design, Arts and Crafts. See <http://www.udir.no/Tema/In-English/Curriculum-in-English/> for more on curriculum in English.

grades from lower secondary education. A less positive explanation is that many vocational students might have preferred a general studies programme, but end up in vocational programmes either because they are advised to do so or because they do not expect to get accepted into a general programme. It should be noted that many young people who start in VET programmes nevertheless achieve a general certificate of upper secondary education, thereby qualifying for higher education in colleges and universities. In a longitudinal study of students in the southeastern part of Norway, about one in four students who started in a VET programme later changed to a general studies programme (Markussen et al. 2008).

It is well documented that the choice of educational programme in upper secondary education is heavily influenced by the students' social background and gender (see for example Støren et al. 2007). However, student choice is also affected by the information young people receive about labour market prospects. Kuczera et al. (2008) emphasize the need to improve student choices through good career guidance. Such guidance should include updated information about the availability of apprenticeships, employment and career opportunities, earnings and general working conditions.

With the implementation of the Knowledge Promotion Reform, new measures have been introduced to improve student choice. The so-called Elective Programme (*Utdanningsvalg*) was introduced as part of the new curriculum in all lower secondary schools. The intention was to give pupils an opportunity to learn about different education and career options, either by attending classes in upper secondary school or through work placements in local companies.

The implementation of the Elective Programme is currently being evaluated by the research institute NIFU STEP¹⁶. One of the preliminary findings from the evaluation is that given time and resource constraints, lower secondary schools have difficulties establishing closer links with upper secondary schools and local companies and enterprises. However, it is still too early to draw any conclusions about the effects of the Elective Programme on student choice, progression and dropout rates in upper secondary education (Lødding and Borgen 2008).

Teacher training and competence development

Input related quality indicators in schools include teacher training and competence development as well as expenditures per student and student/ teacher ratios (Grubb 2006). In Norway teacher training is a much debated issue. Formal requirements for teachers in all parts of the education system are specified in national legislation. Teachers need formal qualifications in teaching as well as in their subject area. Teachers in vocational programme subjects are usually skilled workers with many years of experience in their trade. In addition, a large number of VET teachers have higher education qualifications (Turmo and Aamodt 2007). In general the formal qualifications of teachers in upper secondary education are quite high. Nevertheless, there is a large demand for competence development for teachers in upper secondary education as well as in other parts of the education system. Technological changes, the introduction of reforms and new assessment practices in schools are some of the factors contributing to this.

¹⁶ Norwegian Institute for Studies in Innovation, Research and Education

“Competence for development” was a national strategy for competence development for teachers, school leaders, trainers and other employees in schools and training companies. The strategy started in 2005 and ended in 2008. The general purpose was to provide teachers and trainers with new competencies to ensure that pupils and apprentices receive education and training adapted to their individual skills, talents and abilities. An important aim was to prepare teachers and trainers for the implementation of the Knowledge Promotion Reform. The strategy provided additional state funding of about 1.4 billion Norwegian kroner (about 160 million euro) for competence development in schools and training companies. Fafo¹⁷ evaluated the strategy throughout the strategy period. The fourth and final report of the evaluation was published in 2009 (Hagen and Nyen 2009).

In upper secondary education, about 18 per cent of the teachers participated in formal further education in 2008. Participation rates for teachers in vocational programmes are similar to those of teachers in general study programmes. By comparison, the general participation rate for all employees in the labour market was about 8 per cent. Teachers also participate more than most other groups in non-formal courses and training (Hagen and Nyen 2009).

The evaluation showed, somewhat surprisingly, that the additional funding in the strategy period did not lead to any major increase in participation rates. There was, however, an increased effect of competence development on teaching practices. This could indicate that the courses and training offered in the strategy period was more relevant and applicable to the actual work practices of teachers than previous courses and training. One main element of the strategy was to channel funds directly to school owners and not to higher education institutions offering courses and further education. The evaluation showed that this measure had positive effects in terms of closer cooperation between school owners and colleges. As a consequence, the courses became more closely related to teachers’ everyday needs. The results from the evaluation also indicate that the strategy led to a more systematic approach to competence development for teachers at the school level (Hagen and Nyen 2009).

The role of academic subjects in vocational education and training

Skill needs is another issue concerning the quality of VET. The important question about the kinds of skills that should be developed in the vocational programmes is also much debated in Norway. One of the strongest criticisms of VET after Reform 94 has been that there is too much emphasis on theory and general competencies in vocational programmes. It has been argued that the 2 + 2 model is too demanding on young people who would prefer to enter more directly into practical work. Mjelde (2006) points out that the tension between vocational education and training and general education is a long lasting and persistent issue that was reinforced by the attempted integration of the two different learning traditions in Reform 94.

From a pedagogical perspective Mjelde (2006) emphasizes the need to develop vocational pedagogy and didactics as a distinct field. Even in schools, an important part of the learning

¹⁷ Fafo is an independent and multidisciplinary research foundation focusing on social welfare and trade policy, labor and living conditions, public health, migration and integration, and transnational security and development issues.

process is practically oriented and takes place in school workshops. In this setting, vocational students learn by participating in activities similar to those of real work situations. Social interaction is an important part of the learning process. Nevertheless, there are important differences between learning in the workshop and learning in an actual workplace. In the school workshop, students can develop their skills and competence without the stress created by time pressures or employer demands for increased productivity.

In 2006, as part of the Knowledge Promotion Reform, the In-depth study project was in all vocational programmes in upper secondary schools. In this project, students are given an opportunity to investigate a chosen vocation or subject in depth at an early stage in their training. The form and content of the in-depth study project and the range of options available for students are determined at the local level. Students may spend time in classrooms, school workshops or workplaces. This local autonomy enables a variety of practices, making it possible to analyse the strengths and weaknesses of different models. In its ongoing evaluation, Fafo has identified four different models for in-depth study projects based on two analytical dimensions. The first dimension is defined by the exposure of students to the demands of employers, customers or clients. The second dimension is defined by the relevance of the tasks performed by students to the actual work performed by skilled workers in the specified trade or occupation. The four models are referred to as (a) classroom projects, (b) quasi firm/school workshop, (c) work experience and (d) learning at work (Dæhlen et al. 2008). Later reports will investigate the effects of the different models on students' learning processes and on the transition from school to work.

One issue that has been much discussed is the teaching of English as a foreign language. In this subject, the vocational students follow the same curriculum and take the same final examination as students in general study programmes. Steffensen and Ziade (2009) compared learning outcomes measured by grades in English for students in VET and general study programmes. The results showed that the average grade level for students in general study programmes was significantly higher, even when comparing students with the same social background. An important part of the explanation is that the two groups have different English language skills when entering upper secondary school. However, differences between the two groups remain even after controlling for grades from lower secondary school. These results indicate that teachers and teaching practices in upper secondary school contribute to differences in learning outcomes among students in vocational and general programmes (Steffensen and Ziade 2009).

Qualification attainment, progression and dropout

Several studies on qualification attainment, progression and dropout rates have been published during in Norway in recent years. Most of these are based on individual level data. Some findings from these studies are quite consistent. It is known that there is a strong relationship between grade levels from lower secondary school and learning outcomes in upper secondary education and training (Byrhagen et al. 2006, Markussen et al. 2008). Based on these findings, it has been concluded that many pupils enter upper secondary education without the knowledge and skills required to obtain a trade certificate or diploma (*The Education Mirror* 2007). Nevertheless, it is still a reasonable assumption that competent teachers and high quality education and training could make a difference.

Grøgaard, Helland and Lauglo (2008) analysed differences in learning outcomes between schools using administrative register data. The results showed that learning outcomes were affected by students' grade point average from lower secondary school. In addition, learning outcomes were affected by gender and family background. The results from this study did not reveal any consistent pattern showing the ways in which school characteristics influenced learning outcomes for students in vocational programmes. One possible interpretation would be that learning outcomes are determined by factors that cannot be influenced by the schools. However, as noted by the authors, it is likely that the results would have been different if other school level indicators had been available and included in the analysis.

3. Quality in apprenticeship training

With the introduction of Reform 94, all 16–19 year olds in Norway were granted a statutory right to at least three years of upper secondary education. To achieve this goal, a key feature of the reform was to make the apprenticeship system an integrated part of upper secondary education. As part of the education system, the apprenticeship system is now regulated by the same legislative framework as general education (Norwegian Directorate for Education and Training 2008a).

Apprenticeship places – supply and demand

From the outset, one of the greatest challenges of Reform 94 was to obtain sufficient numbers of apprenticeship places. Public financial support for training companies was increased and trainers were offered competence development.¹⁸ Local training agencies (*opplæringskontor*) were considered strategically important to identify new training companies, coordinate the interests of training companies and to provide training and administrative support to their members (Hagen and Skule 2007, Høst et al. 2008).¹⁹

While there is a lack of apprenticeship places in some sectors, other sectors have problems finding apprentices to fill available positions. Hagen and Nyen (2006) studied the apprenticeship system in the municipal sector, focusing on two trades: childcare and youth work (*barne- og ungdomsarbeiderfaget*) and health care work (*helsearbeiderfaget*). In health care work, the main challenge was not to find apprenticeship places, but to recruit young people to fill them. It seems reasonable to relate the interest in and status of different vocational programmes to job prospects and general working conditions in the relevant occupations (Hagen and Nyen 2006). Kuczera et al. (2008) point out that difficulties in finding apprentices may occur either because students do not have sufficient information or because they find the work or workplace unattractive. In the first case, improved career

¹⁸ The grant is currently around EUR 12 000 for each apprentice, corresponding to the average cost of a student spending one year in school-based VET (Kuczera et al. 2008).

¹⁹ Training offices are owned by companies. A training office may sign the apprenticeship contract on behalf of a training company. The training office is then accountable for the quality of the training.

guidance would seem to be a relevant measure. In the second case, the solution lies in the labour market rather than in the VET system as such.

The mismatch between the supply of and demand for apprenticeships raises the issue of how a better balance could be achieved. Hagen and Nyen (2006) found that the responsiveness to labour market needs in the structuring of VET varied across different counties. These findings were later confirmed by another study undertaken by Econ (2007)²⁰.

The qualifications of the trainers

The structuring of VET and the balance between student choices and labour market needs is one major debate concerning the quality of VET. Another important issue concerns the competence of VET trainers. There are currently no formal qualification requirements for trainers in training companies. County administrations offer general courses for trainers, but these courses are not mandatory (Kuczera et al. 2008).

Hagen et al. (2004) conducted a survey of competence development for 100 trainers in training companies. The survey showed that more than half (56 per cent) had participated in courses or seminars aimed at VET trainers during the last year. Only 3 per cent had participated in formal further education. Around one in five trainers received in-house training. Other important providers of training were industry and trade organizations as well as training offices. In addition to this introductory courses are offered by the county administration. On average, trainers spent 22 hours during the year on different forms of non-formal training. A large majority of the trainers (81 per cent) experienced time pressures at work as a hindrance to doing a good job as a trainer. By comparison, only 32 per cent reported that they experienced lack of competence as a hindrance to doing a good job.

In 2009, another survey of competence development among 252 trainers in training companies found a small but not statistically significant increase in participation rates compared with the 2004 survey (Hagen and Nyen 2009). About one in three trainers participated in training that was offered jointly for trainers and teachers, indicating that this could be an important meeting place for VET personnel in schools and workplaces.

How should quality in apprenticeship training be measured?

After the evaluation of Reform 94, a few studies have tried to analyse the quality of apprenticeship training. County administrations are responsible for monitoring the quality of training. Based on qualitative interviews in six (out of 19) counties, Hagen (2005) concluded that quality assurance is based on structural and process indicators such as the competence of trainers, their participation in competence development and whether companies have established systems for quality assessment. Quality assurance at the county administration level seems to be based on routines without being firmly based in knowledge about the relationship between these structural and process indicators and learning outcomes.

²⁰ Econ Pöyry is the Nordic branch of an international consulting firm providing research, analysis and advisory services.

As part of an evaluation of the national system for quality assessment, Deichman-Sørensen (2007) carried out a survey of trainers and supervisors in 100 training companies. The aim of the study was to investigate how companies followed up on their responsibility for quality assurance. Deichman-Sørensen (2007) argues that training companies seem to be in a transition zone between peer-based training and assessment and more recent forms of documentation-based assessment. However, the traditional master-apprentice model continues to be the dominant approach. According to Deichman-Sørensen (2007), this model also seems to be the approach that is most highly rated by companies. Eight out of ten trainers consider good relations between apprentices and experienced trainers and colleagues to be very important for apprentices' learning processes. Most companies do not appear to be concerned generally with systems and procedures for systematic planning and evaluation of apprentice training. However, the survey also reveals a strong desire within companies to develop and upgrade quality procedures at the company, industry and sector level.

The breach of an apprenticeship contract is a clear indication of failure in the training of apprentices. A systematic follow-up of factors leading to breaches of contract could be an important approach in research and also in company-based evaluation. Deichman-Sørensen (2007) found that half the companies in her survey had experienced such breaches of contract. However, only one of these companies had followed up the process leading to the breach of contract.

Like Deichman-Sørensen, Havn et al. (2009) finds that the training offices play an important role in competence development for trainers and in quality assurance of apprentice training. As pointed out by Kuczera et al. (2008), training offices are owned by the training companies. Therefore, quality assessment performed by training offices cannot be considered an independent evaluation. According to Havn et al. (2009), training offices themselves have called for a more defined role in relation to VET in general and the implementation of the Knowledge Promotion Reform in particular.

Monitoring the learning process

While tests and grades are commonly used indicators of students' learning in schools, there is less agreement about how to monitor the learning process for apprentices. Traditionally, the final craft or journeyman examination has been a key element in quality assurance. Over the course of apprenticeship training, companies are supposed to maintain a system that shows how training is planned, organized and assessed to monitor the learning process. Dialogues between the apprentice and the trainer are considered an important part of this process.

During the period 2000–2003, education authorities carried out a project with the aim of trialling alternative forms of evaluation and documentation in VET. The overall goal was to improve the quality of training and reduce the use of resources in the final craft or journeyman examinations. An evaluation of the project concluded that in-process (formative) assessments provide a broader picture of apprentices' competence than craft or journeyman examinations (Havn and Buland 2003). Furthermore, it was believed that in-process evaluations contributed more focus and structure to the learning process. Different methods of in-process evaluation have since been developed, and are now being used in most counties. In general, in-process evaluations are viewed as important aids in the learning process. At the same time, there is strong interest among trainers in retaining the traditional final

examination. In other words, there is an interest in in-process assessment as a supplement, not a substitute, for the traditional examination (Deichman-Sørensen 2007).

Matching skills to labour market needs

Another important quality dimension in VET is the match between skills developed within the system and competence demands of the labour market. In recent years, a few researchers have investigated output from VET in terms of labour market opportunities. Grøgaard (2006) studied the transition from school to work for the first cohort that completed upper secondary education after the implementation of Reform 94. Among those with trade certificates in industries and crafts, there was a high rate of employment in relevant full-time work six years after graduation. Those who completed their VET training in health and social services were mainly offered part-time jobs, especially in the municipal sector, indicating weaker labour market integration for graduates of this vocational programme.

Based on survey data, Hagen et al. (2008) studied the transition from school to work for people who obtained a trade or journeyman certificate in 2002. A general conclusion was that there seems to be a high demand for skills and competencies developed through vocational education and training in the Norwegian labour market. A large majority was employed six years after graduation and most skilled workers were in jobs relevant to their training. However, this study also reveals differences in recruitment patterns, skill development and use among different vocational programmes. These findings reflect that the status of VET and the apprenticeship system varies considerably across different parts of the Norwegian labour market.

4. Institutional framework

So far, the review has concentrated on quality issues related to school-based education or in the apprenticeship period in training companies. In addition, issues regarding the quality of VET could be viewed from a more general systems perspective, focusing on the institutional framework for co-operation between different stakeholders. As Grubb (2006) points out, quality assurance mechanisms can only be expected to be effective when there is some consistency and agreement between different stakeholders about conceptions of quality in VET.

Kuczera et al. (2008) conclude that there is currently a strong tripartite co-operation at national, county and sectoral levels in Norway, characterized by a high level of trust among stakeholders. At the same time, Kuczera et al. (2008) recommend that VET provision at the county level should be better linked to the availability of apprenticeship places. So far, priority has often been given to students' choices. Kuczera et al. (2008) argue that more emphasis should be placed on outcome indicators such as the number of students who obtain apprenticeships and the labour market performance of VET graduates.

A new distribution of responsibility for quality assurance in VET has recently been established at the regional level. Previously, County Vocational Training Boards were responsible for the formal approval of training companies, the supervision of quality assurance in training companies and the appointment of examination boards. In the new

model, established under the Education Act from 2008, the main task for County Vocational Training Boards is to advise on quality issues in VET.

Deichman-Sørensen (2007) argues that a more strategic role for County Vocational Training Boards in relation to quality development and assessment needs to be developed over time. In her study, she finds different approaches to quality at the county level. Two main patterns are identified: one is a narrow model, characterized by guidance and control, and the other is a broad approach, characterized by networks of cooperation and a high degree of trust among stakeholders.

Over the last two decades the role of the social partners (the trade unions and the employers or their representative organizations) has changed from a relatively autonomous position towards an advisory role in the governance of the apprenticeship system in Norway. Several researchers argue that, as a consequence, there has been more emphasis on educational and societal values and less on labour market needs (Høst 2008b; Olsen 2008). According to Deichman-Sørensen (2009), the Norwegian VET system is currently standing at the crossroads. Further development of the system depends on whether stakeholders will make use of the tools and frameworks available. The national VET system of the future will need to find a space and a direction between national history and traditions on one side and transnational harmonization efforts on the other.

5. Conclusions and implications for further research

This review has shown that a number of studies during recent years have been based on individual level data. Much of this research has focused on the relationship between social background and school performance in upper secondary education. It seems evident that more research is needed on the quality and effectiveness of different teaching methods and educational practices as such. For instance, the study by Steffensen and Ziade (2009) indicates that teaching practices in upper secondary schools contribute to differences in learning outcomes among students in vocational and academic programmes. To increase our understanding of these factors, there is a need for further systematic studies of differences in teacher competence and teaching methods, and their effects on learning outcomes. The strengths and limitations of school workshop learning is another issue that deserve closer investigation. In addition, more knowledge is needed about how vocational education can be developed in order to meet present and future needs for vocational competence in the labour market.

To increase our understanding of the relationships between teacher competence, teaching methods and learning outcomes, more research is needed using school level data that allows for systematic analysis of different teaching practices and work methods. One approach is to study schools with low drop-out rates over time and compare these with schools with average or high drop-out rates for similar study programmes. This would enable identification of factors contributing to differences in learning outcomes.

Apart from several evaluation studies, little research has focused on quality dimensions within training companies. Accordingly, our current knowledge of the factors contributing to good learning conditions for apprentices is limited.

The need to analyse the quality of VET from a labour market perspective should be emphasized. A stated political goal in Norway is that as many people as possible complete an upper secondary education. The increasing number of people who drop out of school has received much public attention and it is a well-known fact that the drop-out rate is higher in VET programmes than in academic programmes. From this perspective, it is not surprising that the quality of VET is often measured in terms of progression and completion rates. However, the aim of VET is not only to get young people through upper secondary education but to provide them with skills and competencies that are valued in the labour market and in society in a short and in a long term. To evaluate the quality of VET from this perspective, it is necessary to study labour market performance, career patterns and mobility of VET students. Ideally, studies should include employer surveys and longitudinal data to enable a long-term perspective to the analysis.

The role of social partners in the Norwegian VET system is another topic that deserves closer attention. As Høst (2008b) argues, the review reveals a need to increase our understanding of how this role has changed and how the VET system has been affected in terms of governance and co-operation. A related issue concerns the status of VET both as a part of the education system and in the labour market, and how this status is affected by different institutional frameworks. From this perspective, there is a need for historical and comparative research projects beyond the limited perspective of reform evaluations.

6. References

Byrhagen, K., N., Falch, T., Strøm, B. (2006): Frafall i videregående opplæring: Betydningen av grunnskolekarakterer, studieretninger og fylke. Trondheim: Senter for økonomisk forskning. SØF-rapport nr. 08/06. [Drop-out in upper secondary education: The importance of lower secondary grades, educational programmes and municipality. Trondheim: Centre for Economic Research at NTNU, Report 08.]

Deichman-Sørensen, T. (2007): Mot en ny infrastruktur for læring og kontroll. Kvalitetsvurdering i fag- og yrkesopplæringen. Rapport fra evaluering av Nasjonalt kvalitetsvurderingssystem i grunnopplæringen. [Towards a new infrastructure in learning and control. Report from the evaluation of a national system of quality evaluation in the basic training.] Oslo: AFI-rapport 3/2007.

Deichman-Sørensen, T. (2009): Hvor går norsk fag- og yrkesopplæring? Om modernisering, organisering og styring av fag- og yrkesopplæringen i Norge. [The direction of Norwegian vocational education and training.] Høgskolen i Akershus. Småskriftserien 3/2009.

Dæhlen, M., Hagen, A., Hertzberg, D. (2008): Prosjekt til fordypning – mellom skole og arbeidsliv. Delrapport 1. Evalueringen av Kunnskapsløftet. [In-depth Study Program – Between School and Working Life. Interim report 1. Evaluation of the Knowledge Promotion Reform.] Oslo: Fafo-notat 2008:27.

Econ (2007): Dimensjonering av fagopplæringen. [Dimensioning of vocational training]. Oslo: Econ Rapport 2007-044.

Frøseth, M.W., Hovdhaugen, E., Høst, H., Vibe, N. (2008): Tilbudsstruktur og gjennomføring i videregående opplæring. Delrapport I. Evaluering av Kunnskapsløftet. [The structure of available choices within education programmes and completion in Upper Secondary school. First interim report. Evaluation of Knowledge Promotion Reform.] Oslo: NIFU STEP Rapport 40.

Grubb, W.N. (2006): Vocational Education and Training: Issues for a Thematic Review. OECD

Grøgaard, J. (2006): Det første Reform 94-kulletts overgang til arbeid etter videregående. Et arbeidsnotat. [The transition for the first Reform 94 age cohort to working life after upper secondary school.] Oslo: NIFU STEP. Arbeidsnotat 19/2006.

Grøgaard, J., Helland, H., Lauglo, J. (2008): Elevenes læringsutbytte: Hvor stor betydning har skolen? [The learning outcome of the pupils: The schools effect.] Oslo: NIFU STEP rapport 45/2008.

Hagen, A. (2005): Kvalitet i fag- og yrkesopplæringen – kartlegging av kunnskapsstatus. [Quality in vocational education and training – a survey of knowledge.] Oslo: Fafo, report 2005:31.

Hagen, A., Nyen, T. (2006): Læreplasser i kommunesektoren – omfang og utfordringer. [Apprenticeships in the municipality sector.] Oslo: Fafo rapport 540.

Hagen, A., Nyen, T. (2009): Kompetanse – for hvem? Sluttrapport fra evalueringen av ”Kompetanse for utvikling. Strategi for kompetanseutvikling i grunnopplæringen 2005-2008”. [Competence - for who? Final report from the evaluation of the strategy “Competence for development”. A strategy for competence-building in the basic training.] Oslo: Fafo rapport 2009:21.

Hagen, A., Nyen, T., Folkenborg, K. (2004): Etter- og videreutdanning i grunnopplæringen. [Continuing education and training in (the) basic training.] Oslo: Fafo.

Hagen, A., Nadim, M., Nyen, T. (2008): Bruk av fagkompetanse i arbeidslivet. [Using technical expertise in working life.] Oslo: Fafo-rapport 2008:29.

Hagen, A., Skule, S. (2007): Den norske modellen og utviklingen av kunnskapssamfunnet. [The Norwegian model and the development of the knowledge society.] I Dølvik, J.E., Fløtten, T., Hernes, G. Hippe, J.M. (eds.) Hamskifte. Den norske modellen i endring. Oslo: Gyldendal.

Havn, V., Buland, T. (2003): Underveis? Sluttrapport fra evalueringen av prosjektet ”Alternative vurderings- og prøveformer i fagopplæringen”. [On the way? Final report from the evaluation of the project “Alternative forms of evaluations and tests in vocational training.] Trondheim: SINTEF Teknologiledelse IFIM.

Havn, V., Teige, B.K., Buland, T., Tønseth, C., Finbak, L., Lian, R. and Lysø, I.H. (2009): Kunnskapsløftet på reise I: Første delrapport for prosjektet Kunnskapsløftet – et løft også for fag- og yrkesopplæringen? [Knowledge Promotion Reform on the road 1: First interim report on the project Knowledge Promotion Reform – also a rise in competence of vocational education and training.] Trondheim: SINTEF A8578.

Høst, H. (2008a): The status of vocational education. In Høst, H, (ed): Continuity and Change in Norwegian Vocational Education and Training (VET). Oslo: Norwegian Institute for Studies in Innovation, Research and Education (NIFU STEP)

Høst, H. (2008b): Governance and cooperation. In Høst, H, (ed): Continuity and Change in Norwegian Vocational Education and Training (VET). Oslo: Norwegian Institute for Studies in Innovation, Research and Education (NIFU STEP)

Høst, H., Gitlesen, J.P., Michelsen, S. (2008): How the number of apprenticeships are influenced by policy and economic cycles. In Høst, H, (ed): Continuity and Change in Norwegian Vocational Education and Training (VET). Oslo: Norwegian Institute for Studies in Innovation, Research and Education (NIFU STEP)

Kuczera, M, Brunello, G., Field, S. And Hoffman, N. (2008): Learning for jobs. OECD Reviews of Vocational Education and Training. Norway.

Lave, J., Wenger, E. (1991): Situated learning. Legitimate peripheral participation. Cambridge: Cambridge University Press.

Lødding, B. and Borgen, J.S. (2008): Karriereveiledning i overgangen mellom ungdomsskole og videregående opplæring. Delrapport I. Evaluering av Kunnskapsløftet. [Career guidance in the transition between lower secondary school and upper secondary school. First interim report on the evaluation of Knowledge promotion Reform.] Oslo: NIFU STEP Rapport 41/2008.

Markussen, E; Frøseth, M. W.; Lødding, B.; Sandberg, N. (2008): Completion, drop-out and attainment of qualification in upper secondary vocational education in Norway. In Høst, H, (ed) (2008): Continuity and Change in Norwegian Vocational Education and Training (VET). Oslo: Norwegian Institute for Studies in Innovation, Research and Education (NIFU STEP).

Mjelde, L. (2006): The magical properties of workshop learning. Bern: Peter Lang.

Norwegian Directorate for Education and Training (2007): The Education Mirror 2006. Analysis of primary and lower secondary school and upper secondary education in Norway. Oslo: Norwegian Directorate for Education and Training.

Norwegian Directorate for Education and Training (2008a): National ReferNet report on progress in the policy priority areas for Vocational Education and Training (Norway).

Norwegian Directorate for Education and Training (2008b): The Education Mirror 2007. Analysis of primary and lower secondary school and upper secondary education in Norway. Oslo: Norwegian Directorate for Education and Training.

Olsen, O.J. (2008): Institusjonelle endringsprosesser i norsk fag- og yrkesutdanning. Fornyelse eller gradvis omdannelse? [Institutional changing processes in the Norwegian vocational education.] Bergen: Rokkansenteret. Notat 5 – 2008.

Scott, R.W. (1987): Organizations: rational, natural and open systems. 2nd ed. New Jersey: Prentice-Hall.

Skule, S., Stuart, M., Nyen, T. (2002): International briefing 12: Training and development in Norway. International Journal of Training and Development 6:4, pp. 263-276.

Steffensen, K., Ziade, S.E. (2009): Skoleresultater 2008. En kartlegging av karakterer fra grunnskoler og videregående skoler i Norge. [Schoolresults 2008. A survey of marks from lower and upper secondary schools in Norway.]Oslo – Kongsvinger: Statistics Norway.

Støren, L.A., Helland, H., Grøgaard, J.B. (2007): Og hvem stod igjen...? Sluttrapport fra prosjektet Gjennomstrømming i videregående opplæring blant elever som startet i videregående opplæring i årene 1999-2001. [And who was left behind ...? Final report from the project "Throughput of pupils in upper secondary school among pupils that started at upper secondary school in the years 1999 – 2001.] Oslo: NIFU STEP Rapport 14.

Turmo, A., Aamodt, P.O. (2007): Pedagogisk og faglig kompetanse blant lærere i videregående skole. [Pedagogical competence and technical expertise among the teachers in upper secondary school.]]NIFU STEP rapport 29/2007.

Theme 3: VET and employment-related mobility and migration

1. Introduction

This review will focus on employment-related mobility and migration. The emphasis will be on immigration. There are several reasons for this. During the last decade, the numbers of immigrants and Norwegian-born to immigrant parents nearly doubled. In 2007, net migration to Norway was 40 000, being the highest net migration ever. Almost half the immigrants came to work²¹. In an international perspective the unemployment rate in Norway is low, currently at 3.2 per cent. As a consequence, employment related emigration as well as employment-related geographical mobility within Norway is limited.

Current key research issues in Norway related to Vocational Education and Training (VET) and employment-related mobility and migration can be divided into two general categories. First, there is research on educational and labour market participation among refugees and immigrants who have been granted residency in Norway on humanitarian grounds and descendants of these immigrants. Second, there is research on the increased mobility of labour after the EU enlargement in 2004. In this paper, VET-related research on these two topics is reviewed.

Since 2004, a number of research projects focusing on the enlargement of the EU/EEA area has been conducted at Fafo²². Research on educational and labour market participation among immigrants and descendants of immigrants is also carried out at other research institutes and universities, such as the Institute for Social Research (ISF), Statistics Norway, the University of Oslo and NIFU STEP (Norwegian Institute for Studies in Innovation, Research and Education).

Norway has been home to diverse ethnic groups for a long time, with the first immigrants coming from neighbouring countries and Western Europe. From 1960 until the introduction of an “immigration stop” in 1975, Norway accepted a number of immigrants from so-called non-western countries, mainly men looking for work. After 1975, immigrants from these countries (mainly in Africa and Asia) have usually been granted residence for family reunification or on political or humanitarian grounds (Bø 1987). Today, most of the work permits are held by migrants from EEA countries. After the EU enlargement in 2004, Norway

²¹ Source: Statistics Norway.

²² Fafo is an independent and multidisciplinary research foundation focusing on social welfare and trade policy, labor and living conditions, public health, migration and integration, and transnational security and development issues.

experienced increased migration from the EU-8²³, particularly from Poland. At present, immigrants from Poland and Pakistan constitute the largest and second largest immigrant groups in Norway, respectively²⁴.

The review is organized into sections that first present reasons or motives for employment-related mobility, followed by a review of research on the consequences of this mobility. The final section describes and discusses VET-related research on non-western immigrants and their descendants.

2. Motives for VET and employment-related mobility and migration

In recent decades, employment-related migration has expanded both in volume and in complexity. More people move across borders to find work. Even if people move to and from more countries and continents than before, the main migration patterns are from east to west and from south to north (Aure 2008).

The EU enlargements in 2004 and in 2007 have had an important impact on the Norwegian labour market. From May 2004 to November 2006, 110,000 work permits were granted in Norway. This is about twice the number granted in the other Nordic countries combined (Dølvik et al. 2006). A large number of work migrants originate from Poland, and many of these work in building and construction. About 70 per cent of the Polish workers in building and construction are VET-trained (Friberg and Tyldum 2007a). In other words, most of the labour immigration to Norway is VET-related.

A few studies have examined the motives for travelling to Norway. Friberg and Tyldum (2007b) find in their study of Polish workers in Norway that the key motive for labour migrants to travel abroad is the prospect of higher. In addition to a higher wage level in Norway than in Poland, the unemployment rate is still high in Poland (Napierala and Trevana 2007). Dølvik and Eldring (2008) argue that, because the wage levels in all Nordic countries are far higher than in the countries of origin, the Nordic countries are attractive destinations in terms of wage conditions:

Even though the wage levels in the sending countries have increased rapidly in recent years, the nominal wage differences are still significant, and many years, or even decades are likely to pass before the forces that drive this type of economically motivated migration will recede in importance. This applies to unskilled and low-skilled labour in particular, for which wage growth in the sending countries is slower and the wage levels in the Nordic countries especially favourable. In this perspective, there are many indications that labour mobility from the new member states will

²³ EU-8: Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Slovenia and Hungary.

²⁴ Including descendants from immigrants—see http://www.ssb.no/english/subjects/00/00/10/innvandring_en/.

continue—although on a smaller scale—even in the face of considerable scarcity of labour in the sending countries. Accordingly, there is little reason to assume that the westward flows suddenly will turn or cease. (Dølvik and Eldring 2008: 85).

Nevertheless, even if the wage levels are higher in the Nordic countries than in Poland and the Baltic states, more people have migrated to Norway than, for example, to Sweden and Finland. Consequently, factors other than wages have probably contributed to the relatively high level of migration to Norway. Dølvik and Friberg (2008) argue that demand for labour is higher in Norway and Denmark than in the other Nordic countries. They also emphasize that the networks of immigrants from Poland and the Baltic states are more developed in Norway. Finally, Norway (and Denmark) “... maintain transitional arrangements aiming to ensure tariff wages to labour immigrants” (Dølvik and Eldring 2008: 94), which, together with other social benefits, result in Norway being a financially attractive destination for labour migrants (Dølvik and Friberg 2008).

These studies reveal some trends in the motives for labour-related migration and mobility. However, the statistical data on labour migration have been highly aggregated and contain mainly gross figures on nationality, duration and region. There is a need to gather more specific, comparable statistics on flows of migration, qualifications of migrants and employment in different industries and occupations. Furthermore, after the repeal of transitional arrangements and working regulations, there is an increased need for statistics and data regarding the developments of wage, employment and working conditions for labour migrants (Dølvik and Eldring 2005).

In summary, the vast majority of the immigrants who arrived in Norway after the EU enlargement work in building and construction, and a large number are VET-educated. The relatively high wage level in Norway in this sector is important, but is not the only reason for migrating to Norway. Tariff wages for labour immigrants, the possibility of claiming social benefits as well as established networks and contacts with other immigrants from Poland and Baltic states are other factors attracting labour migrants from these countries to Norway.

3. Consequences of VET and employment-related mobility and migration

In addition to the consequences for the migrants, employment-related migration has important consequences for the labour markets in the recipient countries. Dølvik and Eldring (2008) argue that increasing labour mobility from Poland and the Baltic states has contributed to higher economic growth and slower increases in prices, costs and interest rates in Norway and other Nordic countries in parts of the labour market that would otherwise have suffered from scarcity of labour. Although Dølvik and Eldring address employment-related mobility and migration in general, the arguments are highly applicable to VET-related mobility as well.

The negative aspects of increased labour mobility should also be taken into account. The number of low-wage jobs has increased, especially in construction and domestic services, leading to the development of new lines of division in parts of the labour market (Dølvik and Eldring 2008). Norway and the other Nordic countries have experienced increasing low-wage

competition and circumvention of rules and collective agreements on factors such as taxes, wage levels and working conditions. Dølvik and Eldring (2005) conclude that the overall economic effects of increased supply of labour and services have probably been positive. However, certain areas and sectors with high demand for labour experience negative pressures on national norms and standards regarding wages and working conditions.

A few studies have focused on the consequences of employment-related mobility and migration for the immigrants. In general, people from the new member states move to Norway with plans to stay for a limited time period. However, Dølvik and Eldring (2008) find that a growing number of labour migrants have moved to the Nordic countries permanently. In a study of Polish immigrants in Oslo, as many as 40 per cent of the respondents report that their spouses, currently living in Poland, intend to move to Norway (Friberg and Tyldum, 2007b). This study also indicates problems for Polish migrants in Oslo. For instance, the survey reveals that the skills and qualifications of many Polish immigrants are not recognized in Norway. It is not uncommon for skilled migrant workers to be paid as unskilled workers.

The question of wage dumping and mechanisms to prevent this phenomenon has been investigated in a recently published article by Alsos and Eldring (2008). Based on the experience of extension of collective agreements in Norway, the article concludes that such mechanisms may be effective in protecting foreign workers from wage dumping.

In an article on the development of the building and construction sector in Poland after the EU enlargement, Eldring (2007) directs attention to the apparent contradiction that hundreds of thousands of Poles work abroad at the same time as this sector experiences a period of growth and an increased demand for skilled labour in Poland. Because of labour migration, the Polish construction sector has experienced a serious skill shortage along with declining interest in vocational education among young people in Poland.

Social dumping and violations of national legislation and collective agreements are some unfavourable consequences of VET-related labour migration. Research also addresses the negative consequences in terms of skill shortages in the migrants' home countries. On the positive side, recent research emphasizes the positive economic outcome of increased labour mobility in terms of higher economic growth and slower increases in prices, costs and interest rates.

4. Non-western immigrants, their descendants and VET

In this section, research related to non-western immigrants²⁵ and their descendants' participation in VET programs in Norway is reviewed. In addition to the current interest in this topic in studies of VET, summarizing this research is relevant for shedding light on issues concerning immigrants' mobility in the Norwegian educational system, the labour market and society as a whole.

²⁵ Prior to 2008, Statistics Norway distinguished between "non-Western" and "Western" immigrants. This distinction is still common in available data and research. "Western" includes the EEA countries plus Switzerland, as well as Australia, Canada, New Zealand and the United States.

In 2005–2006, Statistics Norway conducted a survey of living conditions among immigrants in Norway. The purpose of this survey was to gather new and better data on a group not sufficiently covered by ordinary surveys of living conditions in Norway (Østby 2009). The results show that 43 per cent of the immigrants have completed upper secondary education, while 28 per cent have completed higher education (Henriksen 2009). For the Norwegian population in general the corresponding numbers were 43 and 25 per cent, respectively.²⁶ Hence, the education level of immigrants is as high as or even higher than that of the population in general. However, immigrants to Norway are a very diverse group. Immigrants from Iran, Chile and Iraq have high mean levels of education, while those from Somalia, Turkey and Vietnam have low mean levels. Among immigrants in general, the mean level of education is higher for men than for women. However, gender differences also vary according to country of origin (Henriksen 2009).

A lower rate of employment among immigrants than among the overall population reflects the fact that many immigrants face difficulties entering the labour market. In 2006, the rate of employment for the entire population was 75 per cent, compared with 57 per cent among immigrants. Immigrants also had a relatively high degree of temporary employment. Furthermore, data show that immigrants experience poorer opportunities to apply their skills and knowledge in their jobs. The percentage who report very good opportunities to use their skills and knowledge is around 10 percentage points lower for immigrants than for the population in general (Mathisen 2009).

About 90 per cent of all 16–18 year olds in Norway attend upper secondary education. For 16–18 year old immigrants, the attendance rate in 2007 was only 68 per cent. For Norwegian-born children with immigrant parents, the attendance rate was 89 per cent. Furthermore, while the general attendance rate has been stable since 2000, there has been a steady increase in the attendance rate for 16–18 year old immigrants and for Norwegian-born people with immigrant parents. The percentage that drops out of secondary education is also much lower among those born in Norway with immigrant parents than among foreign-born immigrants (Daugstad 2009). An important question raised in this report from Statistics Norway is whether Norwegians born to immigrant parents are beginning to follow a pattern similar to that of the Norwegian population in general.

While participation rates in upper secondary education are almost equal, recent research shows that ethnic background has an impact on progression in education, attainment of qualifications and transition from school to work. Helland and Støren (2006) find that children with an ethnic minority background experience more difficulty in obtaining apprenticeships than the ethnic majority. Brekke and Fekjær (2007) find that ethnic minorities have a higher probability of dropping out of school, but the variation between different ethnic groups is greater in academic tracks than in vocational tracks. Brekke (2007) finds that children of ethnic Norwegians with a vocational education have significantly higher earnings in their first job after graduation than children of immigrants with the same educational background.

Schøne (2006) uses survey and register data in his analysis of the returns on education among non-western immigrants. He finds that the returns to education for immigrants with education

²⁶ <http://www.ssb.no/utniv/tab-2009-08-25-01.html>.

from their country of birth, in particular when this is a non-western country, is considerably lower than for native persons. Based on this, foreign education seems to have a much lower value in the Norwegian labour market than education from Norway. Part of the explanation is that non-western immigrants with education from their country of origin are more likely than natives to have jobs where their level of education exceeds the required qualifications. In other words, immigrants are overqualified for their jobs more often than natives.

Bratsberg, Raaum and Røed (2006) studied labour market participation among people who immigrated to Norway in the 1970s. They found that labour market participation rates of immigrants exceeded those of natives of similar age and educational attainment during the first years following arrival in Norway. However, after about 10 years there was a sharp and steady decline in the participation rate among the immigrants. The authors argue that part of the explanation lies in the disincentives to work in the Norwegian social security system. However, the article also shows that immigrants are more sensitive than natives to labour market conditions, suggesting that immigrants play a buffering role as reserve labour, being included during economic upturns and excluded during downturns. The findings of the study are valid for both high- and low-skilled immigrants, and it is reasonable to assume that these findings are valid also for immigrants with VET backgrounds.

5. Conclusions and implications for further research

Few studies in Norway have examined employment-related mobility and migration in relation to VET. However, after the EU enlargement in 2004 a large proportion of the labour migrants to Norway have vocational training from their home countries. From research on the motives for and consequences of this migration, it seems reasonable to conclude that this job-related migration has had a positive economic impact for the immigrants as well as for Norwegian society in terms of increased income and productivity. On the other hand, labour migration has led to a growing number of low-wage jobs and contributed to the establishment of new lines of division in the Norwegian labour market. For some of the origin countries, like Poland, increased emigration has led to shortages in the supply of skills and labour.

In the future, there seems to be a need for better and more comparable data and statistics on the flows of migration and labour, with more information on migrants' educational background, level of skills and qualifications. As called for by Dølvik and Eldring (2005), it is also important to collect new data concerning the development of wages, employment and working conditions of labour migrants. For instance, what happens to the labour migrants—do they stay in Norway or will they return to their country of origin? How will the wage levels be affected and how easy will it be to get a job in Norway in the future for different groups of skilled workers?

Questions concerning the effects of the EU enlargement process are also interesting in relation to VET and employment-related mobility and migration. In addition, the financial crisis that “hit” a wide range of countries and economies in 2008 adds additional urgency to these questions. Will the outflow of labour and competence from, for example, Poland continue, will it slow down, or even reverse? If the migrants stay, will they still be able to find work or will they be dependent on social welfare benefits? To what extent will different stakeholders, such as trade unions, employer associations, skilled workers and immigrants,

contribute to the maintenance of arrangements concerning tariff wages and other collective agreements?

Differences between immigrants and ethnic Norwegians in the education system and in the labour market are well documented. However, the immigrant population is a very heterogenic group. Educational attainment and labour market integration are also affected by factors such as duration of residence in Norway, country of origin and reason for immigration. While there are large differences in educational attainment between immigrants and the ethnic majority, the differences between Norwegian-born people with immigrant parents and other Norwegians are much smaller. An important question is whether the differences in educational attainment and labour market integration are decreasing over time. To answer this question it would be necessary to have data on educational attainment and career mobility for different ethnic groups over a longer time period.

6. References

Alsos, K. and Eldring, L. (2008): Labour mobility and wage dumping: The case of Norway. *European Journal of Industrial Relations* Vol. 14, No. 5, pp 441–459.

Aure, M. (2008): Arbeidsmigrasjon fra Teriberka til Båtsfjord 1999–2002 [Labour-related migration from Teriberka to Båtsfjord 1999–2002]. PhD thesis. Tromsø: University of Tromsø.

Bratsberg, B., O. Raaum and K. Røed (2006): The rise and fall of immigration employment: A lifecycle study of labour migrants to Norway. Oslo: The Ragnar Frisch Centre for Economic Research.

Brekke, I. (2007): Ethnic background and the transition from vocational education to work: a multi-level analysis of the differences in labour market outcomes. *Journal of Education and Work*, Vol. 20, No. 3, pp. 229–254.

Brekke, I; Fekjær, S. (2007): Ethnic differences in dropout and outcomes. An analysis of students in upper secondary schools in Norway. In Fekjær, S. (2007). *Nye forskjeller—nye forklaringer? Etniske ulikheter i utdanningsvalg* [New differences—New explanations? Ethnic differences in choice of education]. Oslo: University of Oslo, PhD thesis.

Bø, B. P. (1987): *Innvandring eller utestengning?* [Migration or exclusion.] Oslo: TANO A.S.

Daugstad, G. (ed.) (2009): *Immigration and immigrants 2008*. Oslo-Kongsvinger. Statistics Norway.

Dølvik, J.E. and Eldring, L. (2005): *Arbeids- og tjenestemobilitet etter EU-utvidelsen. Nordiske forskjeller og fellestrekk. Sluttrapport for en arbeidsgruppe under Nordisk Ministerråd*. [Mobility of labour and services after the EU enlargement. Nordic differences and commonalities]. Copenhagen: TemaNord 2005:566.

Dølvik, Jon Erik and Line Eldring (2006), *The Nordic labour market two years after the EU enlargement. Mobility, effects and challenges*. Copenhagen: TemaNord 2006:557.

Dølvik, Jon Erik and Line Eldring (2008): Mobility of labour from new EU states to the Nordic Region—Development trends and consequences. København: Nordisk Ministerråd.

Dølvik, Jon Erik and Jon Horgen Friberg (2008), Den nye arbeidsinnvandringen. Drivkrefter, utviklingstrekk og arbeidslivspolitiske konsekvenser. [The new labour immigration: Driving forces, trends and implications for the labour market regimes. Background paper for the IMER-Programme – Research in the Field of Migration and Immigration.] Oslo: The Research Council of Norway].

Dølvik, Jon Erik, Line Eldring, Jon Horgen Friberg, Torunn Kvinge, Sigmund Aslesen og Anne Mette Ødegård (2006), Grenseløst arbeidsliv? Endringer i norske bedrifters arbeidskraftsstrategier etter EU-utvidelsen. [Labour market without limits? Changes in skills strategies] Fafo-report 548.

Eldring, L. (2007): Uviklingen i polsk byggenæring etter EU-utvidelsen. Søkelys på arbeidslivet. [The development in the Polish buildingsector after the extension of the EU.] 2, pp. 133–147.

Friberg, J. H. and Tyldum, G. (2007a): Demografi og tilknytning til arbeidsmarkedet i Norge. In Friberg, J. H. and Tyldum, G. (eds.): Polonia i Oslo. En studie av arbeids- og levevilkår blant polakker i hovedstadsområdet. [Demography and attachment to the labour market in Norway.] Oslo: Fafo.

Friberg, J. H. and Tyldum, G. (2007b): Livet i Norge. In Friberg, J. H. and Tyldum, G. (eds.): Polonia i Oslo. En studie av arbeids- og levevilkår blant polakker i hovedstadsområdet. [A study of the working conditions and living conditions among the Polish workers in Oslo.] Oslo: Fafo.

Helland, H. and Støren, L. A. (2004): Videregående opplæring - progresjon, gjennomføring og tilgang til læreplasser. Forskjeller etter studieretning, fylke og kjønn og mellom elever med minoritets- og majoritetsbakgrunn. [Upper secondary education and training – Progression, accomplishment and access to apprenticeships.] Oslo: NIFU STEP Skriftserie.

Helland, H.; Støren, L. A. (2006): Vocational education and the allocation of apprenticeships: Equal chances for applicants regardless of immigrant background? In European Sociological Review, Vol. 22, No. 3, pp. 339–351.

Henriksen, K (2009): Education. In Blom, S. and Henriksen, K. (eds): Living Conditions Among Immigrants in Norway 2005/2006. Oslo-Kongsvinger: Statistics Norway

Mathisen, B. (2009): Work. In Blom, S. And Henriksen, K. (eds.): Living conditions among immigrants in Norway 2005/2006. Oslo-Kongsvinger: Statistics Norway

Napierala, J. and Trevana, P. (2007): Motiver for å reise ut. In Friberg, J. H. and Tyldum, G. (eds.): Polonia i Oslo. En studie av arbeids- og levevilkår blant polakker i hovedstadsområdet. [A study of the working conditions and living conditions among the Polish workers in Oslo.] Oslo: Fafo.

Schøne, P. (2006): Returns on pre-immigration education for non-western immigrants: Why so low? Oslo: Institute for Social Research.

Østby, L. (2009): Survey of living conditions among immigrants—how and why. In Blom, S. and Henriksen, K. (eds): Living conditions among immigrants in Norway 2005/2006. Oslo-Kongsvinger: Statistisk Sentralbyrå.

Theme 4: Transition

1. Introduction

Avoiding dropout and disruption of education, and ensuring smooth transitions between different phases of education and from education to working life is important in many respects. It is important for pupils/students, educational institutions, employers and society in a broader sense.

All young people who have completed lower secondary school in Norway have a statutory right to three years of upper secondary education (see figure 1. in the annex and the abstract section 1.3. for more information about the system). More than 90 per cent of the cohort proceeds directly from lower to upper secondary education. With an attendance rate at this level, upper secondary education in practice has become almost compulsory. In 2007 around 97 per cent of all 16–18 year olds pursued an upper secondary education, either as students or as apprentices. Students can choose from twelve available programmes in upper secondary education. Three are general academic programmes and nine are vocational. In 2007 approximately half of the students (52 per cent) who began upper secondary education chose a vocational programme (The Norwegian Directorate for Education and Training 2008).

The 19 counties in Norway are responsible for upper secondary education. The counties are also legally obliged to follow up young people between the ages of 16 and 21 who neither attend a course of education nor find employment (The Norwegian Ministry of Education and Research 2007).

The standard model of vocational education and training (VET) at the upper secondary level is two years in school followed by two years of apprenticeship in a company. This model was introduced with the reform of upper secondary education in 1994 and is often referred to as the 2+2 model. Students who are not offered an apprenticeship after two years of vocational education in school are entitled to a third year of practical training in school. Another option available for students in vocational programmes is to transfer to a programme in general studies after the two first years. Approximately one in three students in vocational programmes follows this path, which gives access to tertiary education (Kuczera et al. 2008).

A completed upper secondary education is increasingly becoming a prerequisite to succeed in further education and in the labour market. In Norway, as in all OECD countries, people who have not completed upper secondary education are less likely to be employed and earn less than those with better educational attainment (Raaum et al. 2005, Kuczera et al. 2008). It is also well documented that persons who have not completed upper secondary education are less likely to participate in further education and training (Dæhlen and Nyen 2009). Dropout from upper secondary education is therefore considered a major challenge in the Norwegian education system, and this issue has been addressed in a number of studies in Norway during recent years.

First, research on the transition from lower secondary school to VET is reviewed. Second, research findings on completion, dropout and attainment of qualifications in VET are

presented and summarized. Then, research is presented on the transition from school to work. Finally, implications for future research needs are discussed.

2. Transition from lower secondary school to VET

As mentioned above, the vast majority of graduates from lower secondary school continue directly to upper secondary school. This proportion has been stable since 2000. In the same time period, there has been a steady increase in the proportion of 16–18 year olds with immigrant backgrounds who attend upper secondary education. For 16–18-year-old immigrants the proportion has increased from 64 per cent in 2000 to 68 per cent in 2007. For Norwegian-born people with immigrant parents there has been an increase in the attendance rate from 82 per cent in 2000 to 89 per cent in 2007 (Daugstad 2009).

Like few other decisions in life, educational choices are vital and important for our future. Interests, skills, upbringing and opportunities are important factors that influence our choice of education. Diego Gambetta's (1987) expressive book title *Were they pushed or did they jump?* sums up the two opposing explanations that are generally applied in the sociology of education. Several studies have shown that the choices people make depend on various factors such as social background (Boudon 1974), gender (Padavic and Reskin 2002), preferences for work (Rosenberg 1957) and/or immigrant background (Heath and Brinbaum 2007). Our choice of education is consequently a result of several influences and/or differences in possibilities. Variety in upbringing, influences and opportunities is also reflected in people's reasons for choosing a specific education.

Students' motivation for education is complex and so are the reasons for choosing one of the total nine vocational tracks in upper secondary education in Norway. Based on interviews with 55 VET students, Dæhlen et al. (2008) describe the students' motivation as a combination of interests, availability of courses in the neighbourhood, grades and advice from people such as relatives or teachers. Still, the high drop-out rate from vocational studies indicates that many students are dissatisfied with their choices and/or do not have the qualifications that are needed to complete the course.

One of the recommendations of the recent OECD policy study of VET in Norway is to improve career guidance in lower and upper secondary school to improve the match between VET provision and labour market needs (Kuczera et al. 2008). It is argued that because of a compressed wage structure in Norway, wages are given less weight when young people make their career decisions. As a consequence, education and career guidance should include information on the characteristics of different jobs as well as information about wage prospects and employment opportunities.

The comprehensive Knowledge Promotion Reform was implemented in primary and secondary education in Norway from 2006. With the reform, new measures have been adopted aimed at strengthening pupils' basis for making an appropriate choice of educational programme in upper secondary education. In lower secondary education, the so-called Elective Programme (Utdanningsvalg) has been introduced as a new subject for levels 8–10. The intention is to improve progression in and prevent dropping out from upper secondary education. The Elective Programme is being evaluated as part of the ongoing reform evaluation. The first report on this part of the evaluation was published in 2008, based on qualitative data. The introduction of the Elective Programme presupposes good collaboration between lower and upper secondary schools and between schools and local employers. One of

the preliminary findings from the evaluation is that lower secondary schools find that establishing closer links to upper secondary schools and to local companies and enterprises is difficult due to time and resource constraints. However, it is far too early to draw any conclusions about the effect of this measure on progression and dropout rates in upper secondary education (Lødding and Borgen 2008).

3. Completion, drop-out and attainment of qualifications in VET

According to data from Statistics Norway, less than 60 per cent of the students in upper secondary education complete their education within the regular time frame.²⁷ After five years, around 70 per cent have completed, while almost 20 per cent have dropped out of education or training (The Norwegian Directorate for Education and Training 2008). As noted by Kuczera et al. (2008) the dropout rate in upper secondary education in Norway is higher than in the other Nordic countries.

The dropout rate is significantly higher for pupils in vocational programmes than for those in general studies programmes. Whereas the dropout rate in programmes for general studies lies between 12 and 15 per cent, it is almost 40 per cent in vocational programmes, although there are large variations among different vocational programmes. Immigrants have a higher dropout rate than Norwegian pupils. However, Norwegian-born pupils with immigrant parents have approximately the same dropout rate as pupils with Norwegian parents.

A number of research projects have been conducted in Norway during recent years focusing on completion, dropout and attainment of qualifications in upper secondary education. Based on an analysis of national register data, Byrhagen et al. (2006) find a strong relation between pupils' grades from lower secondary school and the probability of dropout from upper secondary education. According to this study, lower progression among non-Western immigrants is to a large extent explained by lower grades in lower secondary education and parents with lower education levels. The analysis also shows that differences in dropout rates among different educational programmes are partly explained by differences in family background and knowledge and skills from lower secondary education (measured by grades). However, even when comparing pupils with the same skill levels and family background and adjusting for county effects, Byrhagen et al. (2006) find that the dropout rates remain higher in some vocational programmes than in others.²⁸

High dropout rates within these programmes could be caused by a range of different factors such as a shortage of apprenticeship places, good labour market opportunities for unskilled or semiskilled workers, quality of education or the pupils' motivation for education.

²⁷ Data for pupils starting upper secondary education over a five-year period, starting 1998.

²⁸ These are woodworking trades, hotel and food-processing trades, electrical trades, engineering and mechanical trades, sales and service.

Støren et al. (2007) is the final report from a study of progression and qualification attainment for pupils who began upper secondary education in 1999, 2000 and 2001. One of the findings is that there has been an increase in the transition from vocational training programmes in the first and second years of upper secondary education to general supplementary courses provided as a third school year. In other words, there has been an increasing tendency for pupils to switch from vocational programmes to academic programmes in upper secondary education.

The study also documents lower completion rates in VET in the three northernmost counties of Norway compared with the national average. Like Byrhagen et al. (2006), Støren et al. (2007) finds that completion rates vary considerably between different vocational education programmes. The differences between counties and study programmes are considerable, even when controlling for other variables.

A vital transition for VET students is from school-based to on-the-job training and then to apprenticeships. Støren et al. (2007) show that about 80 per cent of applicants for apprenticeships from the classes of 1999 and 2000 were offered places (in 2001 and 2002). Good grades and little absence from school increase the chances of obtaining an apprenticeship. The findings in Støren et al. (2007) also show that boys are more likely to obtain apprenticeships than girls (controlled for subject and grades) and that applicants from a non-Western background experience more problems obtaining apprenticeships than other pupils.

On the basis of their findings, Støren et al. (2007) argue in favour of measures aimed at reducing structural barriers. Such measures might include improved access to apprenticeship places, developing options for people who fail to obtain apprenticeships and adapting the requirements and teaching of academic subjects within vocational education programmes.

In another project, researchers from NIFU STEP studied completion, drop-out and attainment of qualifications in upper secondary education among almost 10,000 pupils in the south-eastern part of Norway over a five-year period from 2002 to 2007. The project followed young people after their last year in lower secondary education and through upper secondary education (Markussen et al. 2008a). The findings show that two out of three (65.8%) who finished lower secondary school in 2002 had attained formal qualifications from upper secondary education five years later. Around 15 per cent had dropped out of secondary education without obtaining formal qualifications. Almost 20 per cent did not drop out, but either failed in one or more subjects or did not complete all subjects required to obtain a certificate of upper secondary education, a trade certificate or a journeyman's certificate.

Markussen et al. (2008a) show that the majority of students that successfully complete a vocational or academic track within five years had no breaks or changes between programmes. The majority of the dropouts left either during the first year of upper secondary school or between the second and third years.

Sixteen per cent of the cohort followed in NIFU STEP's "Drop-out and qualification study" applied for an apprenticeship, and two out of three of these students were granted the apprenticeship for which they applied. The probability of obtaining an apprenticeship, according to this study, increases with good grades and little absence from school. Based on these findings it is argued that an increase in the number of apprenticeships would not necessarily help the least qualified applicants (Markussen et al. 2008a, 2008b).

Those who do become apprentices are a selected group with better grades and less absence from upper secondary education. Even within this group grades from lower secondary school have a positive effect on the likelihood of completing upper secondary education, either with a vocational qualification or with a certificate for university admission (Markussen et al. 2008b).

Researchers from Nordland Research Institute used a combination of quantitative and qualitative data in their study of drop-outs from upper secondary education in Troms, one of the three counties in northern Norway (Karlsen et al. 2005). They found that most pupils drop out during the first year in upper secondary school and that dropping out is more common among boys than among girls. In addition to factors that can be related to individual pupils, the report discusses the effect of school factors, local labour market opportunities and attitudes towards education in the local environment. Furthermore, it is argued that cultural factors should be included in analyses of drop-out. One such factor is that for most young people in Norway today, the consequences of non-participation in school or in the labour market are perceived as relatively minor, at least in the short run.

In 2003, an action plan against drop-out in upper secondary schools was initiated as part of the government's Poverty Action Plan. Different research teams have evaluated the project. Researchers from the Norwegian Institute for Urban and Regional Research found in their evaluation that everything that helps prevent inappropriate choices and improves school life for students in the drop-out risk zone prevents dropping out (Baklien et al. 2004). Another evaluation by SINTEF concludes that making the transitions between levels easier, especially for pupils belonging to the high-risk groups, is a critical measure to prevent dropout. The report also emphasizes the need to develop closer co-operation between upper secondary schools and their local communities as well as between upper and lower secondary schools (Buland et al. 2007).

To summarize, there is a considerable literature on progression and dropout in upper secondary education. It is well documented that the dropout rate is higher in vocational programmes than in academic programmes. Several studies referred to in this section show that progression and qualification attainment in upper secondary education is strongly related to school achievement in lower secondary education. The dropout rates are higher in some vocational programmes than in others and higher in some counties than in others. Most studies of dropout are based on individual level data. It is reasonable to assume that differences in dropout rates between different counties and study programmes are partly related to labour market conditions. So far, however, these differences remain largely unexplained by the data.

4. Transition from VET to work

This section reviews recent research on whether participation in VET provides a successful progression route into working life or higher education.

Grøgaard (2006) studied the transition from school to work for the first cohort who completed upper secondary education after the implementation of the upper secondary education reform in the 1990s. He followed 2800 pupils who entered upper secondary education in the autumn of 1994 until September 2000. The study confirms that the probability of labour market integration is considerably lower for those who do not complete upper secondary education. Grøgaard argues that the winners in the youth labour market at the end of the 1990s were

those who had completed a vocational programme with apprenticeship training as part of their education. Those with a trade certificate in industry and crafts in particular had a high rate of employment in relevant full-time work six years after graduation. However, those with vocational training in health and social services experienced more difficulties in the labour market, mainly because of the established occupational structure in these sectors. People with vocational training in health and social services, as well as unskilled workers, were mainly offered part-time jobs, especially in the municipal sector.

Frøseth (2008) followed the cohort who graduated from upper secondary education in the county of Østfold in 2003. Again, the data confirm that those who dropped out of school experienced the greatest difficulties in the labour market. A majority of those who completed their training with a trade certificate in the spring of 2003 were in full-time employment in the autumn. Those who completed a school-based vocational programme (mainly within health and social care) were more often in part-time employment or had moved on to higher education. The group in full-time employment consisted mainly of men; the part-time workers were mainly women.

Brekke (2007) finds that non-Western immigrants have a significantly lower probability of full employment than native-born pupils.²⁹ She also finds differences among different trades. Full employment is more common for those with training in building and construction, electrical trades, engineering and mechanical trades compared with those in health and social care.

A recent report on labour market integration of immigrants in Norway (OECD 2009) concludes that the opportunities for assessment and recognition of vocational skills from abroad currently are limited. The report furthermore points to a particular need for “bridging” offers for persons with an educational background that is not considered fully equivalent to training from Norway. Based on this, the report recommends an improvement and expansion of measures aimed at the certification and further development of skills with a special focus on immigrants. It is emphasized that these measures need to be implemented in co-operation with the social partners to be accepted into the labour market.

Based on survey data, Hagen et al. (2008) studied the transition from school to work for people who obtained a trade or journeyman’s certificate in 2002. A general conclusion from the survey is that there is a high demand for skills and competencies from vocational education and training in the Norwegian labour market. The data show that a large majority were employed six years after graduation. Furthermore, most skilled workers were in jobs relevant to their training. However, this study also reveals differences in recruitment patterns, skill development and use among different vocational programmes. While a large majority of the apprentices were offered regular employment by the apprenticeship company at the end of training, only a minority of the apprentices within health and social services experienced the same opportunity. Furthermore, a majority of the skilled workers in electricity and electronics or in design, arts and crafts say that they could not have done their job without their vocational training background. For those with a trade certificate in one of the service trades this is rarely the case. These findings reflect that the status of VET and the apprenticeship system still varies considerably among the different parts of the Norwegian labour market. As

²⁹ These findings are also discussed in the paper “Benefits of VET”.

noted by Høst et al. (2008), the vision of the 1994 reform was that all sectors of the labour market could, at least in principle, base their recruitment practices on young people with vocational certification. In some areas, this has been a success. In other areas, the apprenticeship system plays a less significant role as an entrance route compared with other educational traditions.

To summarize, even if relatively few studies have examined the VET students' transition from school, some results appear to be strong and consistent. It is well documented that the majority of those who complete their initial vocational education and training have good chances of obtaining relevant work. However, the review has shown that labour market integration varies among different trades. These variations are highly gender related, as there are large and persistent differences between the education choices of girls and boys in upper secondary education. There is a clear female majority in the education programmes of arts, crafts and design and health and social care. Building and construction, electricity and electronics as well as technical and industrial production, on the other hand, are dominated by male pupils. Finally, the differences in labour market integration according to ethnic background are well documented. These differences can only to some extent be explained by differences in education levels.

5. Conclusions and implications for further research

A substantial part of recent research on VET has been on transition. These studies are mainly concerned with transition from lower secondary school to VET, completion of and dropping out from vocational studies and finally, transition from VET.

About half of the youth cohorts start on a vocational track. We know that choice of education differs between girls and boys and that motivation for starting a programme is multifaceted. However, less is known about the importance of environmental factors, gender and interests on choice of vocational track when controlling for the influence of grades. In future studies, it would be interesting to look more closely into the effects of grades, interests, gender and environmental factors on choice of vocational education.

In section 3, major findings from a longitudinal study of pupils in upper secondary education in the south-eastern part of Norway were summarized (Markussen et al. 2008a, 2008b). In addition to providing in-depth information about dropout rates, the authors of these studies make a point about *how* or *why* students quit vocational studies. They argue that pupils who quit school often make an intentional choice. Still, the results show that the probability of quitting school is explained by innate (e.g. gender) or social characteristics. In future research, it would be interesting to examine further the extent of intentional versus unintentional choices among dropouts. To do this, there is a need for more qualitative research.

A number of studies have shown that the transition from VET to work has been successful for a majority of those who complete their training with formal qualifications at the upper secondary level. However, most of these studies were conducted in the years prior to the financial crisis. More research is needed to investigate how the transition to work is affected by the new economic downturn. In addition, research is needed to reveal how the labour

market opportunities for skilled workers trained in Norway will be affected by increased labour migration from Eastern European countries.

The dropout problem in upper secondary education is considered a major challenge to the education system in Norway. A number of different measures are currently being discussed. Some of these measures imply a lowering of the competence requirements for pupils in vocational programmes. However, as pointed out by Kuczera et al. (2008) another major challenge is to ensure that the quality and content of VET matches present and future labour market needs. Better statistics and longitudinal data on the labour market integration and mobility of VET candidates are necessary to study the match between VET and labour market needs more closely over time. Research on the transition from VET to work would provide important feedback to national and regional education authorities. In addition, such data would be useful as a basis for improved career counselling and better informed educational choices. This, in turn, would also be important in preventing dropout from vocational education and training.

6. References

Baklien, B., Bratt, C., Gotaas, N. (2004): Satsing mot frafall i videregående opplæring. En evaluering [Anti-drop-out programme for upper secondary education. An evaluation.] Oslo: NIBR Report 2004:19.

Boudon, R. (1974): Education, Opportunity, and Social Inequality. New York: Wiley.

Brekke, I. (2007): Ethnic background and the transition from vocational education to work: a multi-level analysis of the differences in labour market outcomes. In *Journal of Education and Work*, Vol. 20, No. 3, pp. 229–254.

Buland, T., Havn, V., Finbak, L., Dahl, T. (2007): Intet menneske er en øy. Rapport fra evalueringen av tiltak i satsningen mot frafall. [No person is an island. Report from the evaluation of the initiatives to prevent drop-out.] Trondheim: SINTEF Report.

Byrhagen, K. N., Fach, T., Strøm, B. (2006): Frafall i videregående opplæring: Betydningen av grunnskolekarakterer, studieretninger og fylke [Drop-out in upper secondary education: The importance of lower secondary grades, educational programmes and municipality.] Trondheim: Centre for Economic Research at NTNU, Report 08.

Daugstad, G. (ed.) (2009): Immigration and immigrants 2008. Oslo-Kongsvinger. Statistics Norway.

Dæhlen, M., Hagen, A., Hertzberg, D. (2008): Prosjekt til fordypning—mellom skole og arbeidsliv [In-depth study program—between school and working life.] Oslo: Fafo Report 27.

Dæhlen, M. and Nyen, T. (2009): Lifelong learning in Norwegian working life. Results from The Learning Conditions Monitor 2003–2008. Oslo: Fafo Report 2009:02.

Frøseth, M. W. (2008): Tre år etter videregående opplæring. Kartlegging av overgangen til videre utdanning og arbeidsliv blant personer som avsluttet videregående opplæring i Østfold våren 2003. [Three years after upper secondary education. A survey of the transition from

further education and working life among persons that finished upper secondary teaching in Østfold county during the spring of 2003.] Oslo: NIFU STEP Report 46.

Gambetta, D. (1987): *Were They Pushed or Did They Jump? Individual Decision Mechanisms in Education*. Cambridge: Cambridge University Press.

Grøgaard, J. (2006): *Det første Reform 94-kulletts overgang til arbeid etter videregående. Et dokumentasjonsnotat. Arbeidsnotat 19.* [The transition from Upper Secondary Education to working life for the first age cohort from R94.] Oslo: NIFU STEP.

Hagen, A., Nadim, M., Nyen, T. (2008): *Bruk av fagkompetanse i arbeidslivet.* [Using specialised competence in working life.] Oslo: Fafo Report 29.

Heath, A. and Brinbaum, Y. (2007): *Explaining ethnic inequalities in educational attainment.* In *Ethnicities*, Vol. 3, No. 3, pp. 291–305.

Høst, H., Gitlesen, J. P., Michelsen, S. (2008): *How the number of apprenticeships are influenced by policy and economic cycles.* In Høst, H. (ed.) *Continuity and Change in Norwegian Vocational Education and Training (VET)*. Oslo: NIFU STEP Report 29/2008.

Karlsen, E., Rønning, W., Wiborg, A. (2005): *Frafall i videregående skole og hevinger av lærekontrakter i fagopplæringen i Troms* [Drop-out in upper secondary school and revocation of an apprenticeship contract in Troms]. Bodø: Nordland Research Institute Working Paper 1016.

Kuczera, M., Brunello, G., Field, S., Hoffman, N. (2008): *Learning for Jobs. OECD Reviews of Vocational Education and Training. NORWAY.* OECD.

Lødding, B. and Borgen, J. S. (2008) *Karriereveiledning i overgangen mellom ungdomsskole og videregående opplæring. Delrapport I. Evaluering av Kunnskapsløftet.* [Career guidance in the transition between lower secondary school and upper secondary school. First interim report on the evaluation of Knowledge promotion Reform.] Oslo: NIFU STEP Report 41.

Markussen, E., Frøseth, M. W., Lødding, B., Sandberg, N. (2008a): *Bortvalg og kompetanse. Gjennomføring, bortvalg og kompetanseoppnåelse i videregående opplæring blant 9749 ungdommer som gikk ut av grunnskolen på Østlandet våren 2002. Hovedfunn, konklusjoner og implikasjoner fem år etter.* [Changing choices of education and competence. Research among 9,749 youths finishing Lower Secondary Education in the spring of 2002. Major findings, conclusions and implications five years after.] Oslo: NIFU STEP Report 13.

Markussen, E., Frøseth, M. W., Lødding, B., Sandberg, N. (2008b): *Completion, drop-out and attainment of qualification in upper secondary vocational education in Norway.* In Høst, H. (ed.) (2008): *Continuity and Change in Norwegian Vocational Education and Training (VET)*. Oslo: Norwegian Institute for Studies in Innovation, Research and Education (NIFU STEP).

Norwegian Directorate for Education and Training (2008): *The Education Mirror. Analysis of Primary and Lower Secondary School and Upper Secondary Education in Norway.* Oslo: Norwegian Directorate for Education and Training.

Norwegian Ministry of Education and Research (2007): *Education—from Kindergarten to Adult Education.* Oslo: Norwegian Ministry of Education and Research.

OECD (2009): Jobs for Immigrants. Labour Market Integration in Norway. Paris: OECD.

Padavic, I. and Reskin, B. F. (2002): Women and Men at Work. Thousand Oaks, CA: Pine Forge Press.

Raaum, O., Rogstad, J., Røed, K., Westlie, L. (2005): Young and Out: An Application of a Prospects-Based Concept of Social Exclusion. Memorandum No 17/2005. Oslo: Department of Economics, University of Oslo.

Rosenberg, M. (1957): Occupations and Values. Glencoe, IL: The Free Press.

Støren, L. A., Helland, H., Grøgaard, J. (2007): Og hvem sto igjen...? Sluttrapport for prosjektet Gjennomstrømning i videregående opplæring blant elever som startet i videregående opplæring i årene 1999–2001. [And who was left behind...? Throughput of students in Upper Secondary Education for classes embarking upon upper secondary education in 1999, 2000 and 2001.] Oslo: NIFU STEP Report 14.

Figure 1. The Norwegian system for Education and Training and Diagram of the Education and Training System



Source: Norwegian Directorate For Education and Training. VET in Europe. Country report 2009 Norway.

The figure shows that the Norwegian public mainstream education and training has several levels: primary (*Barneskole*), lower secondary (*Ungdomsskole*), upper secondary (*Videregående skole*), and post-secondary and tertiary (*Fagskole* and *Høgre utdanning*).

Compulsory education lasts for 10 years (7 years at primary from the age of 6, and 3 years in lower secondary). Primary, lower and upper secondary general education and VET collectively form basic education (*Grunnopplæring*).