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Abstract/Introduction

PIA CORT & SIMON ROLLS, THE DANISH SCHOOL OF EDUCATION

Knowledge and education are the best defence against youth unemployment. The objective of the Government is to ensure that, by 2015, 95 % of all young people complete at least a youth education programme. Fortunately, most young people manage this on their own, however not all (Opening speech of the Danish Prime Minister Lars Løkke Rasmussen in the Danish Parliament, October 6, 2009).

National policy context

In Denmark, **education and training play a decisive role in the Government's strategy for ensuring economic growth and social cohesion.** In 2006, the Government laid down an ambitious strategy for Denmark in the Global Economy and this strategy forms the basis for the overall education policy until 2012. Within this context, **vocational education and training is perceived as a central means to achieve the double aim of growth and social inclusion:**

- **Initial vocational education and training is seen as crucial in fulfilling the stated objective that 95 percent of a youth cohort should complete a youth education programme by 2015** - an objective which must be viewed in relation to the most recent figures that 81 percent currently receive a youth education. The completion rates are even more striking as a considerable number switch between programmes along the way. Here, the figures for vocationally oriented education and training are particularly concerning with the most recent prognoses for those beginning a programme in 2005 predicting a 51 percent completion rate. More than 33,000 are expected to drop out and, of these, 40 percent will not continue in education during the subsequent ten years (UVM, 2008). These figures help explain the key role afforded IVET in reducing educational drop-out. At the same time, IVET is seen as key to ensuring social inclusion and a flexible and skilled workforce able to adapt to changes within the labour market;
- **Continuing vocational education and training is seen as crucial in providing education and training for all groups in the labour market, with particular emphasis on strengthening the provision for disadvantaged groups, i.e. low-skilled, bilinguals, and marginalised groups,** as, at present, these groups generally have low participation rates in vocational education and training. Continuing vocational education and training is to provide both individuals and enterprises with training opportunities adapted to the needs of the labour market.

As can be seen from the above quotation by the Danish Prime Minister, vocational education and training is also perceived as a central element to combat the rising (youth) unemployment

rate. This is somewhat paradoxical as the Danish dual system is dependent on apprenticeships in business and industry. In times of recession, the number of apprenticeships traditionally goes down and hereby the system cannot absorb all the young people who would like a vocational qualification. Unwillingly, the quotation reveals **the increasing dilemma of vocational education and training: on the one hand appointed panacea to numerous societal problems and on the other hand, it is the part of the education system which is the most dependent on economic development, not to mention increasingly at the bottom rung of the educational hierarchy.**

National Research Priorities

These overall policy objectives are reflected in the Danish research on vocational education and training. Focus is primarily on how to achieve the 95 % policy objective and how the measures implemented since 2000 have contributed to achieving this overall policy objective. Subsequently, there has been a lot of strategic research on retention in vocational education and training and also an increasing focus on the role of transitions in relation to retaining young people in youth education programmes. Another important research area is/has been the benefits of vocational education and training for the individual, the organisation and society as a whole. In this regard, it should be mentioned that a substantial part of continuing vocational education and training is provided through the public adult vocational education and training system. This system is particularly targeted unskilled and low-skilled workers. It is therefore of public interest to measure the benefits of this system.

Retention

The issue of retaining young people in initial vocational education and training has over the past eight years been central to policy makers and to researchers. Since 2000, many policy initiatives have been implemented in order to curb the drop out rate, but only recently has this succeeded. The overall discussion is whether this is due to the economic recession and young people returning to the education system in order to escape increasing youth unemployment, or whether the many policy initiatives are starting to work (these include guidance, mentoring, tracked courses for disadvantaged young people, etc.). Future research will have to determine which factors play the decisive role. However, the research undertaken from 2004 to the present points to many factors in the retention of young people in vocational education and training:

From the perspective of the individual student, **social and ethnic background plays an important role.** The studies by Pedersen suggest that vocational education and training students with an ethnic minority background face a number of problems which can lead to drop-out, such as language and cultural barriers, a lack of support from family, and a feeling of isolation (Pedersen et al., 2006a). The drop-out rate is approx. 60 % among male students with an ethnic minority background. Furthermore students with a low proficiency level, or social or psychological problems have a higher drop-out rate. Another study by Michael Svendsen Pedersen points to the fact that **educational institutions apply a deficiency perspective on students who do not meet the norms, and that this in itself is stigmatising and leads to drop-out** (Pedersen, 2006a). Non-completion of a youth education programme is, in other words, a social problem, and the fact that vocational education and training is singled out as the part of the education system to tackle social problems adds to its problem of self-esteem (see Juul & Koudahl, 2009).

From the perspective of “what works”, research has been undertaken by the Danish Institute of Governmental Research (AKF) and this points to **cooperation between different actors in youth education as a central factor** (Jensen et al., 2009). Successful cooperation has to be based on an agreement in which responsibilities, priorities and the distribution of roles are clearly laid down. Support structures around the individual young person have to be established and especially guidance during transition periods is seen as important.

Transitions

The transition from compulsory schooling to youth education is an important element in the overall retention strategy and it is also a research field which is of increasing interest in the perspective of the 95 % policy objective. Transitions can be perceived as problematic in two respects:

- a) there is a risk of a total exit from education and training;
- b) there is a risk of a transitory shock when moving from one part of the education system to another or into the labour market. If this shock is not dealt with, there is a considerable risk of drop-out.

Danish research on transition patterns from basic schooling to youth education underlines that only a small percentage of a youth cohort continues directly into vocational education and training (Pless and Katznelson, 2007). The study confirms research undertaken in the 1990s which showed that **the educational hierarchy is clear among young people: those with the best grades choose one of the general upper-secondary education programmes** (Andreasen et al., 1997; 1998). The reform of the initial vocational education and training programmes which was implemented in 2001 has not been able to improve the parity of esteem of vocational education and training, rather on the contrary as shown by Koudahl in his study of drop-out in vocational education and training (Koudahl, 2005).

One of the key elements in the critique of the vocational education and training policy is that it is based on a belief in rational planning and economic considerations on the part of the students. Several studies point to the fact that **educational choice is embedded in a multitude of factors**: social and ethnic background, learning abilities, attitudes, values, context, etc. (Jørgensen and Smistrup, 2007; Pless and Katznelson, 2007; Katznelson, 2009). The pressure added on young people through individual educational plans (from 6th grade), increased guidance and continuous monitoring and evaluation (from 1st grade) may prove to be counterproductive as shown by Katznelson in an article from 2009. She points to the fact that young people feel that they have to be result-oriented, clever, have many friends, have the right looks, etc. and hereby the pressure to be a “success” has increased and the margin for “when you fall outside [the norm] and are either too confused, too slow, too stupid, too ugly, or too weak etc. has become narrower” (Katznelson, 2009, p. 44ff).

When it comes to transition from vocational education and training and into the labour market, **research supports the view that a dual system (i.e. a system based on a combination of school-based teaching and apprenticeships) ensures a smooth transition into the labour market**. A study by Jørgensen and Smistrup shows that more than 60 % of vocational education and training students find employment within the enterprise that trained them (Jørgensen and Smistrup, 2007). In other words, it makes good sense to promote work placements and vocational education and training systems based on cooperation with enterprises and not least the social partners.

Benefits

Whereas the research areas of retention and transitions primarily deal with initial vocational education and training and are directly related to the Government objective of a 95 % completion rate, the research on benefits is more diverse dealing with **the economic benefits of the active labour market policy, adult vocational training, and initial vocational education and training for the individual and for society.**

The research indicates that **vocational education and training gives the individual a clear advantage compared to unskilled or low-skilled workers.** Moberg and Stevens (2007) find that a vocational qualification results in **increased job security.** Their results are supported by the study by Jensen et al. (2008) which concludes that vocational education and training provides good opportunities for achieving a relatively high income and increased job security. However, these results have to be contextualised as shown by Dieckhoff in her study of the impact of VET on income and employment rates (Dieckhoff, 2008). Her argument is that the **highly regulated labour market in Denmark (and in Germany) provides skilled workers with an advantage as there is a close link between the vocational education and training systems and established occupations in the labour market.** It is in other words problematic to generalise about the benefits of vocational education and training as it depends on the national context.

In terms of the benefits of active labour market policy, the research results point in different directions. Filges et al. (2005) found no clear evidence of the benefits of training programmes during unemployment. Indeed, Rosholm and Skipper (2009) find that classroom training had a negative impact on employability and unemployment rates, concluding that there are no obvious economic benefits to the individual or society. However, the research was based on short term courses and social and personal benefits were not considered. On the other hand, a study by the Centre for Labour Market Research at Aalborg University (CARMA) indicates that workplace training has a positive impact on employment levels, productivity and economic growth (Sørensen et al., 2007). **In general, there seems to be a need for more rigorous research on the economic AND social benefits of vocational education and training from the perspective of the individual, the enterprise and society as a whole.**

Mobility and migration

In Denmark, research on mobility and migration has been concentrated around **three main themes:**

- 1) the consequences for the Danish labour market of an increased labour mobility in an enlarged EU;
- 2) the issue of social/cultural mobility i.e. integration of immigrants, refugees and their descendants into the Danish society. This research has to be seen within the overall national policy context in which there is a strong focus on how to achieve successful integration. In this regard, vocational education and training is seen as playing an important role as an integration mechanism;
- 3) the issue of mobility among different groups in the population.

The research shows that mobility is a complex issue which can be dealt with from many different perspectives. **The research on geographical mobility within the EU** raises the question of whether it is more important to ensure economic growth or ensure the rights and working conditions of workers in a highly regulated Danish labour market. Creating a European labour market seems to necessitate minimum standards for wages and working conditions in order to avoid social dumping and this does not fit well with the tradition for collective bargaining in the Danish labour market.

The research on integration of immigrants, refugees and their descendants into the Danish society points to the problem of cultural and social barriers for mobility. In the case of young people with an ethnic minority background, the education system tends to reproduce inequality as it is based on social and cultural codes which make it more difficult for people with a non-Western European background to complete an education programme. The policy initiatives on integration are criticised by Pedersen et al. (2006a) for focusing too much on deficiencies instead of resources and hereby the policies tend to aggravate exclusion mechanisms.

Finally, **research shows that mobility is higher among highly educated young people than other groups in society** pointing towards mobility barriers such as family, financial obligations and level of education.

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Theme 1: Benefits of VET

SIMON ROLLS & PIA CORT, THE DANISH SCHOOL OF EDUCATION

In this review, we examine recent research considering the benefits of VET for individuals, enterprises or society as a whole. This review demonstrates a clear dominance of studies evaluating the economic returns from VET in its various forms, alongside the related topic of employment rates. This dominance reflects political priorities regarding the role played by VET in ensuring national growth and global competitiveness. Other, broader approaches are found to be underrepresented. As the government seeks to achieve its objective of increasing participation in both IVET and CVET, it is suggested that considering other potential benefits will provide a better understanding of the complex factors which can attract individuals to VET.

National research questions and issues

In Denmark, as in many other countries, education has been prioritised at the policy level as a **key to ensuring continuing national economic growth and global competitiveness**. A well-functioning vocational education and training sector and comprehensive lifelong learning initiatives are regarded by policymakers as vital components in this regard. With large investments in education and training, there is a need to document that the desired effects are gained in terms of national prosperity. As such, it is of little surprise to find a relatively large body of research has been funded considering the benefits of VET primarily in terms of the **economic returns** for society, for enterprises, and for the individual. A closely linked and often overlapping subject for investigation concerns the effects of labour market training for the unemployed on employment rates and economic returns.

There are, however, a number of different ways of approaching the topic “benefits of vocational education and training”. Broadly speaking, the research can be divided into three categories:

1. Studies offering an analysis of **the economic outcomes of VET for society in terms of productivity, employment rates etc.;**
2. Studies considering **the benefits of VET participation for the individual in terms of economic returns, employment levels etc.;**
3. Studies of **the benefits of VET for the individual in terms of career development, increased well-being.**

In addition, of course, there will be studies which are difficult to place within any of these three categories or which combine two or more perspectives.

As already stated, the political focus on sustained growth means that much recent Danish research can be placed within the first of these categories. Nevertheless, in the following

review, we will include key national research representing each perspective on the topic of VET benefits.

In order to ensure a degree of focus within the review, we have chosen to omit a number of potentially relevant fields of research considered as overlapping other topics. These include the benefits of VET specifically for particular demographic groups such as ethnic minorities; the specific benefits of particular forms of VET; and the individual's learning processes and competence development as a result of VET.

Key research findings

The economic outcomes of VET: training for the unemployed

In a working paper for *The Danish National Institute of Social Research*, Filges et al. consider **the benefits of active labour market policy (ALMP) programmes from a national economy perspective** (Filges et al., 2005). Such active programmes can consist of education and training programmes aimed at improving the skills of the unemployed or employment programmes aimed at preventing skill erosion during periods of unemployment and have increasingly become a requirement for individuals to receive publicly-funded unemployment benefit in Denmark, as well as in many other countries. Despite their popularity among policymakers, the authors state that **there is little evidence of clear benefits** from the additional costs, whether at the individual or the macro level, referencing a number of earlier studies. This leads them to two possible conclusions: either politics are irrational, or the benefits have not been apparent due to the approaches employed in these studies (simply put, they were not looking in the right places). The study finds that there *are* clear benefits to an active labour market policy, as long as it is targeted at particular groups, such as the long-term unemployed, and combined with passive unemployment benefit programmes (i.e. the provision of unemployment benefit without requirements for participation in various courses and training programmes). However, **these benefits are in terms of a reduction in social inequality**, and are therefore dependent on high levels of equality being considered a political objective (and thereby a benefit) within a particular country. The authors feel that **these results can help explain considerable variations in national spending on active labour market policy programmes as dependent on the extent to which the country in question prioritises social and economic equality**. If this hypothesis holds true, Denmark and its Scandinavian neighbours, with their traditions for social egalitarianism and progressive taxation systems, would be expected to spend highly on ALMP programmes. It could also be tested by considering whether these funding levels have changed parallel to recent Danish policy developments and changes to the tax system in the direction of a greater degree of economic inequality.

In another report dealing with the outcomes of an active labour market policy, Martin Rasmussen investigates the 'Social welfare effects of educational labour market programmes' (Rasmussen, 2005). More precisely, he analyses the optimal level of benefit rate for participation in ALMP education programmes, as opposed to the rate of passive public income support in order to maximise productivity levels. Rasmussen concludes that this is dependent on the level of interest and the population of potential participants. As such, a high level of benefit for active participation in job training programmes can be beneficial in terms

of stimulating labour supply and increasing productivity among previously unemployed and under-qualified individuals. However, a high level of benefit can also be counterproductive if it attracts individuals already possessing sufficient skills and competencies to satisfy a labour market demand, thereby depriving the labour market of qualified manpower. Rasmussen's conclusions would seem to support the findings of Filges et al. that **an active labour market policy is beneficial as long as it is targeted at particular groups and combined with a reasonable level of passive unemployment benefit.**

A third study suggests that labour market training for the unemployed may, surprisingly, have an adverse effect for the individual in terms of finding work (Rosholm and Skipper, 2009). The authors conducted a social experiment where unemployed applicants to classroom training programmes in Denmark were randomly placed within treatment (offered classroom training) and control (not offered training) groups. Interpreting their results within an economic model, they find that **classroom training impacts negatively upon employability and significantly increases unemployment rates, at least in the period immediately following training participation.** This in itself is not entirely surprising, and can perhaps be due to what the authors refer to as a 'locking-in effect', i.e. less intensive job searching among trainees during the period of training, as well as greater selectiveness and higher wage demands subsequently. However, the results also provide **no evidence that training participants go on to earn higher wages** when they find employment. This leads the authors to preliminarily conclude that **there are no obvious benefits to the individual or to society,** with the caveat that the training undertaken by participants in the study was of a very short duration (two weeks on average), and that longer courses may well result in a more obvious wage differential.

Once again, **a straightforward economic returns perspective on ALMP provides little evidence of benefits, but there are other possible benefits** not considered in this study. It is possible, for example, that individuals experienced non-economic benefits, such as increased job satisfaction or a sense of personal development. Even within an economic perspective, there are possible benefits such a study is unable to measure. Better trained employees may result in an increase in efficiency which, in the long term, can outweigh the increased costs to society of training provision and a longer period of unemployment.

The economic outcomes of VET: CVET

Indeed, there would seem to be some **evidence of a positive impact on overall employment levels, productivity and national economic growth within the area of enterprise-based continuing vocational education and training.** As part of a large cross-national European research project on CVET, two Danish researchers from the *Centre for Labour Market Research (CARMA)* at Aalborg University alongside colleagues from the *National Institute of Technical and Vocational Education* in Prague investigate the relationships between training incidence within enterprises and a number of macroeconomic indicators (Sørensen et al., 2007). Their findings indicate a **positive relationship at the national level between employment growth and CVET.** At the same time, the survey suggests that employees in countries with a high incidence of CVET are less likely to remain in the same job. Regarding productivity levels, **a clear correlation is found between countries with high productivity levels and high levels of CVET.** However, a correspondingly high level of labour costs was also found in such countries. As such, the results suggest that CVET can increase productivity in terms of hours worked, but not necessarily in terms of costs. Such a balance sheet would also require the factoring in of the cost of provision, including the resulting loss of man hours.

Another positive correlation is identified in terms of the relation between CVET levels and GDP levels and growth rates. However, as the authors themselves note, in each of these cases, the existence of a positive correlation should not be regarded as a suggestion of cause and effect as there are likely to be many other influential factors involved.

Benefits to the individual: economy and employment

The results of a study covering the broad adult education and further training sector reveal a number of interesting differences in the outcomes of different forms of education and training for the individual participant (Clausen et al., 2006). The authors investigate the effects of participation via statistics for subsequent employment levels and earnings, as well as future educational activities. Adult education and training is divided into three types: general education, vocational training and further education. Whilst all three types are found to result in increased levels of participation in future educational activities, this is particularly the case with general and further education. **Participation in vocational training courses, meanwhile, has a positive influence on subsequent employment levels, but zero impact on hourly wages.** The exact opposite is shown to be the case for further education, with participation in general education courses resulting in a fall in both individual employment and income levels. In addition to the statistical analysis, the study also surveys participants regarding their perceptions of benefits. The majority state that they have acquired good professional qualifications and gained skills and knowledge which they can make use of in their work. As such, **adult education and further training are shown to have benefits for participants' subsequent professional lives**, with notable differences in the nature of these benefits depending on the type of course, and these effects are reflected in individual perceptions. However, as the authors take care to underline, the study only considers the question of educational benefits on an individual level. As such, it is unable to take into account any additional benefits (or negative implications) for the enterprise or society as a whole.

A number of Danish studies consider the employment prospects for individuals who have completed a VET programme. The results in general suggest a significant improvement in employment levels when compared with unskilled workers. Møberg and Stevens, for example, follow a particular branch in a particular locality over a longer period concluding that **both IVET and CVET result in increased job security when compared with colleagues without formal vocational training**, although the benefits decrease when unemployment levels increase (Møberg and Stevens, 2007). In their annual surveys of employment frequency among those who have completed a VET programme, the collective employers' fund AER have likewise found employment levels in general to be high with the results of the two most recent surveys, of those graduating in 2006 and 2007 respectively, continuing the trend throughout the period since 2003 when the first survey was conducted of increasing employment levels. Of course, these results stem from a period of economic prosperity and it will be interesting to monitor the figures over the next few years. Whilst **the employment levels are generally found to be high, there are notable demographic differences**, with a higher employment frequency among men and those over 39 years of age. Ethnicity, however, proves to be the most significant factor, with employment rates among those with a non-Danish background considerably lower than for Danes (AER, 2009).

Another report considering the individual benefits of VET was commissioned by the Danish confederation of trade unions, LO, with the aim of demonstrating that VET can provide attractive career opportunities, and thereby attempting to compete with the more prestigious

higher education sector in appealing to able students (Jensen et al., 2008). The necessity of tackling the dwindling status of VET is clear from Juul and Koudahl's historical analysis of the changing roles of vocational training (Juul and Koudahl, 2009). Whilst VET was once considered a valid alternative to the *gymnasium*¹, **VET colleges have increasingly lost out when it comes to attracting the most academically able students**. Indeed, while approximately one third of those achieving the highest grades in 1968 chose to continue within VET, today this is only true of one in fifty².

The study by Jensen et al. involved 30 000 people who completed a vocational training programme in 1990. On the basis of available national statistical data, the authors were able to discover where they now worked, what positions they held and what they earned, as well as monitoring participation in further education and training. They find that there are considerable variations with the 25% of highest earners receiving an average income more than 60% above the average income for all 1990 VET graduates. Of these high earners, a clerical background was the most common, with disproportionately high number in management positions or self-employed. Likewise, 45% had completed some form of higher education compared to 30% of the overall study population. While these figures are largely unsurprising, a noteworthy result is that **students' social background, measured by parental income levels, does not seem to play a role in determining future earnings or employment rates**. However, as the authors note, there is considerable evidence that social background plays a considerable role in young people's educational choices. As such, one might argue that an inverse correlation between parental income and annual earnings should be expected as stronger students from affluent families are far less likely to enter VET than those from working-class families. All in all, the report concludes that **VET provides good opportunities for achieving a relatively high income and a good position within the labour market**, as well as pursuing further education and training, thereby enabling individuals to achieve their career ambitions with a VET background. The report does not, however, directly compare the returns of VET participants with those of individuals with other educational backgrounds, making it difficult to draw conclusions on the relative benefits of VET.

In a comparative study of skills and occupational attainment, Martina Dieckhoff from the Danish National Centre for Social Research investigates **the impact of VET on labour market outcomes in Germany, Denmark and the UK** (Dieckhoff, 2008). Here, she employs the European Community Household Panel (EHCP) to examine how employees with vocational training fare in terms of income and employment rates within low-skilled and professional jobs when compared to employees with higher levels of general education and the untrained. The author operates with **the hypothesis that marked national differences in the organisation and institutional set-up of the VET sector are likely to result in significant differences in VET returns**. As such, in Denmark and Germany, the extensive and highly standardised dual VET systems mean that workers with a vocational background are expected to be better placed than those with an upper-secondary general education or only a lower-secondary education. Meanwhile, the weak tradition for institutionalised VET in the UK is predicted to result in the same advantages not existing. Analysing the available data confirms this hypothesis with the **VET systems in Denmark and Germany displaying high levels of efficacy in terms of promoting good employment prospects, with clear returns**

¹ Upper secondary education equivalent to sixth form college in the UK.

² See Pless and Katznelson, 2007 for further details.

in terms of labour market attainment. In the UK, the benefits of VET in terms of income and career opportunities are far less apparent.

Other benefits to the individual

All of the research outlined above considers the benefits (or otherwise) of various forms of VET in terms of largely economic factors such as income levels and employment rates. Whilst such approaches dominate the literature, there exist a small number of studies which tackle the issue of the benefits of VET from other perspectives. One such study analyses **the effect of participation in government training for the unemployed on what the author terms ‘subjective well-being’** (Andersen, 2008). On the basis of existing research and theory regarding unemployment, training and well-being, Andersen constructs two hypotheses: **that participants in government training will have higher subjective well-being than the unemployed; and that there is a long-term positive impact on subjective well-being which will decrease over time.** Although the author is Danish, the study considers longitudinal data from the UK in testing these hypotheses. Her analysis confirms both hypotheses and Andersen concludes that **the benefits of labour market training thereby go beyond skill-acquisition with a positive impact on individuals’ subjective well-being.**

In another study, learning processes among students at Danish schools of production are in focus through interviews conducted with a large sample of students (Kirkegaard and Nielsen, 2008). Many of the students have experienced a series of failures during their time within general education, e.g. conflicts with teachers and/or victims of bullying. These same students tell that they seldom have the same problems during their time at a school of production. Many also state a preference for the more practical teaching forms commonly employed. As such, **production schools have a clear benefit in their ability to accommodate a group of young people who otherwise may well have withdrawn entirely from the educational sector.** The majority express that they felt that they had benefitted considerably from their time at a school of production – **not just by acquiring new skills or knowledge, but in terms of personal and social development.** The authors suggest that other educational institutions have much to learn from the schools of production’s success in accommodating a group of students otherwise marginalised within education. This is not least true of VET where the school-based element of the dual training system has become increasingly academic, thereby excluding students who have struggled in school.

Workplace learning is the topic of a comparative study commissioned by the Nordic Council of Ministers (Pedersen and Ellström, 2007). On the basis of six cases conducted in Denmark, Sweden, Norway and Finland, the report draws a number of conclusions regarding best practice and effective strategies for workplace learning. Here, a wide array of **key factors are identified in ensuring the potential of the workplace as a learning arena is realised** in order to reap the many benefits in terms of competence development and lifelong learning for the individual’s life, the enterprise, society as a whole and within a global perspective. These conclusions lead the authors to present a number of **research-based recommendations for developing the field of workplace learning** predominantly via improvements to the co-operation between enterprises and adult education institutions.

Finally, an analysis of the career paths followed by those with a technical VET background results in a number of conclusions regarding benefits and disadvantages (Jørgensen et al., 2009). **As well as offering a smooth transition from education to employment and a high degree of mobility between industries and sectors, a technical VET background is found**

to offer good opportunities of attaining a leadership position. The majority also feel that they were given **plenty of chances to participate in further education and training.** However, very few gain access to higher education programmes and **as many as one in five consider their VET training a dead end.** Nevertheless, five years after graduation, the vast majority feel they have benefitted from their training, although it is worth noting that the enterprise-based elements of the programme are valued much more highly than the school-based elements. The students also felt that the two parts of the Danish dual training system³ were often disjointed, requesting greater cohesiveness and co-operation. Similarly, they stated that they sometimes had difficulties in aligning what they were taught in the more practical subjects with the generally decontextualised theoretical teaching in the general subjects⁴.

Conclusions and implications for future research

The Danish research on the benefits of VET clearly reflects a political focus on economic factors. As such, there have been a number of studies conducted during the last five years considering issues such as employment rates and income levels among VET graduates. The lifelong learning paradigm has likewise resulted in research attention to further education opportunities and participation rates.

This research has largely provided **evidence of clear benefits to both the individual and society as the result of VET participation.** However, these benefits vary with, for example, those with clerical training most likely to achieve career advancement and a high salary, and employment rates considerably lower among VET graduates with a non-Danish ethnic background. More research is required to explain such differences and, for example, compare in greater detail the returns within different areas of VET in an international perspective. It would likewise be instructive to consider differences in outcomes in relation to different educational approaches and ways of organising VET programmes.

While the focus on economic factors has resulted in a wealth of research within this field, it has also meant that **other perspectives on the potential benefits of VET have been neglected.** An issue such as social equality which for many years has occupied educational researchers is largely ignored. When equality is considered, it is largely reduced to a question purely of economic differences. The current economic crisis and recession has so far done little to stem the interest in documenting the economic benefits of VET; however, one may hope it will also lead to an increased interest in research considering other benefits of VET. As policymakers look to fulfil their goals of 95 % of a youth cohort completing a youth education by 2015 and of a flexible workforce able to adapt to labour market demands through lifelong learning, a more complex understanding of what is gained by the individual, the enterprise and society is required, going beyond a narrow focus on economic returns. Individuals rarely make educational choices solely on the basis of rational analysis of a balance sheet and research should reflect this.

³ Based on alternating periods of school-based teaching and apprenticeships.

⁴ For an exploration of the relationship between theory and practice within VET teaching, see Aarkrog, 2007a and 2007b.

Alongside the dominant economic discourse on education, one finds a more 'spiritual' discourse, where education is regarded as playing a key role in a lifelong self-actualisation project. Whilst isolated studies considering the impact of VET on the individual's well-being do exist, this is an area which can be expected to grow.

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Theme 2: VET and employment-related mobility and migration

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In this review, we examine recent research on VET and employment-related mobility and migration. The research is found to deal with a number of related topics such as the integration of ethnic minorities in the labour market and education system, the effects of increasing employment-related immigration from the new EU member states, and the mobility of the Danish population between regions in conjunction with employment or education. A number of potentially fruitful areas for future research are also presented.

National research questions and issues

In Denmark, much of the research on the topics of VET and employment-related mobility and migration has been centred on the integration of immigrants, refugees and their descendants. This focus corresponds with a **strong national political focus on immigration issues**, in particular since 2001 when the current liberal-conservative government coalition first came to power with the backing of the nationalist Danish People's Party. Many of these studies have focussed on **benchmarking the performance of different municipalities against each other**.

In recent years there has been much national focus on increasing completion rates within upper secondary education (the 95 % completion objective). Here, young people from ethnic minorities have been singled out as requiring special initiatives due to the extremely high proportion that drop out of the educational system without any form of professional qualification. VET is seen as a key to achieving the national goals regarding completion rates and **there is therefore a growing body of research identifying best practice in the integration of ethnic minorities within VET**.

Another mobility and migration related issue concerns **labour immigration from other EU countries, particularly the new member states**. This research has largely been conducted within a Nordic regime reflecting the similarities in the organisation and characteristics of the labour markets in these countries. In each case, the trade unions are traditionally strong and standards of living quite high. There are relatively high levels of minimum wage and considerable legislation to protect workers' rights. Employment within many sectors is covered by the results of collective bargaining between the social partners. As such, an influx of labour from other EU member states traditionally offering workers lower wages and less protection of their rights can be seen as a threat to the Danish system by bypassing and undercutting collective agreements. Research seeks to monitor the extent of such problems.

Finally, one finds research concerning the **mobility of Danes in conjunction with employment or education**. Although Denmark is a small country in terms of both area and population, there are considerable regional differences in terms of employment and education levels. With higher education institutions largely concentrated in a few regions, there is a growing tendency that young people remain in the country's larger towns and cities with considerable differences in regional unemployment rates and a rapidly aging and dwindling population in some of the more remote areas. Policymakers are therefore interested in ways of encouraging people to move to areas where relevant employment is available. Much of the research within this area therefore seeks to identify certain characteristics shared by those who are most mobile.

Other related issues, such as social mobility, are considered as beyond the scope of the topic and are therefore not included in this review.

Key research findings

Labour immigration from new member states

There exists a considerable body of research regarding employment-related mobility and migration conducted as part of the work of the Nordic Council of Ministers and involving researchers from each of the Nordic countries. Particular attention has been paid to the impact of EU enlargement on the labour market in the various Nordic countries with two large studies led by Jon Erik Dølvik and Line Eldring (Dølvik and Eldring, 2006; 2008). In the first of these studies, the state of affairs is surveyed two years after the 2004 EU expansion. Here, it is found that the **increased immigration from the new member states has contributed to increases in production and employment levels, and generally benefits economic growth**. The service industry in particular has experienced an explosion in labour mobility. **Much of the influx of labour has also been within industries requiring little or no formal skills qualifications**. The authors conclude that this can likely be attributed to the relatively flat wage structure found in the Nordic countries. As such, unskilled and low-skilled work offers a clearer economic advantage than skilled labour in comparison with other countries (both countries of origin and other possible destination countries within the EU) with a more stratified wage structure. Among the more negative effects in evidence are wage dumping and a deterioration of working conditions in certain sectors such as construction. A side-effect would seem to be a growing market for illegal employment of immigrants. Nevertheless, **the consequences of increased labour mobility are overall considered positive during this period, helping to support and enhance the then booming economies in the Nordic countries**.

Two years on, labour mobility from the new member states had continued to increase, in particular labour from Poland and the Baltic countries. Once again, the authors conclude that the influx of labour has contributed to higher economic growth and slower levels of inflation, costs and interest rates than would otherwise have been possible during a period characterised by economic boom and labour scarcity, with a number of significant bottlenecks. Likewise, the negative trends observed in 2006 are still all too evident. In particular, **the possibility of circumventing labour market regulations and wage structures through service mobility and the posting of workers has created problems in certain sectors with the**

establishment of a clear two-tier system in some cases. **The Nordic countries have adopted different strategies** in their attempts to tackle these problems with Finland and Iceland (and to a large extent Norway) employing a policy aimed at generalising collective wage agreements with strict control enforced by authorities. **Denmark and Sweden, meanwhile, continue to rely upon the trade unions to ensure that collective agreements are extended to foreign enterprises and workers applying pressure via instruments such as picketing.** Labour mobility can also have negative implications for the home countries. Poland and the Baltic countries have all experienced a brain and skills drain with the emigration of young well-educated and highly skilled workers constituting a considerable barrier to lasting growth with a labour deficit and a strong risk of spiralling wage inflation. With the economic downturn and recession, it will be interesting to trace the impact of rising unemployment throughout the EU upon labour mobility from the new member states and the consequences in both home and host countries.

Integration of immigrants within the labour market

Another report stemming from the Nordic partnership deals with the integration of immigrants within the labour market in Denmark, Sweden and Norway (Djuve and Kavli, 2007). The background for this study is the common characteristics for the three countries of **a highly regulated labour market, a flat wage structure and significantly higher unemployment levels among non-Western immigrants.** The authors seek to **map similarities and differences in how the challenges of immigration have been tackled in the three countries and the experiences that can be gauged from various initiatives.** In all three countries, the responsibility for implementing and coordinating a national introductory programme for immigrants, including various forms of adult education and job training is placed with local authorities. There is, however, a world of difference regarding the rights and duties of immigrants, with Denmark and Sweden at opposite ends of the scale and Norway somewhere between, but with more in common with Denmark. **In Denmark, active participation in the intensive introductory programmes introduced in each of the countries is obligatory, with economic and legal sanctions applied to those who fail to participate, or do not participate to a satisfactory degree.** Another clear difference is found in housing policy with Denmark and Norway allocating refugees housing in a particular municipality without them having any say in the matter, while refugees in Sweden can decide themselves where they want to settle. Regarding the success of labour market initiatives aimed at improving employment rates among immigrants, wage subsidies, especially within the private sector, emerge from the available assessments as the most effective instrument⁵.

A number of systematic assessments of Danish municipal efforts to integrate refugees and immigrants within the labour market or the regular education system can be found in a series of analyses benchmarking the results in different municipalities (among the more recent examples are: Husted and Heinesen, 2009; Husted et al., 2009; Andersen and Heinesen, 2008, Gørtz et al., 2006). **These analyses demonstrate considerable variations in the average amount of time required for immigrants and refugees to find work and/or become self-sufficient under the jurisdiction of different local authorities.** Whilst the exact composition of the specific group of immigrants and refugees might be expected to skew the results, this factor, along with local labour market conditions, is taken into consideration in developing indicators for the benchmarking. This has led to studies considering the cause of

⁵ See for example Clausen et al. (2006).

these variations. Hansen et al. conclude that there are a number of characteristics which affect the success of integration efforts (Hansen et al., 2006). Firstly, it is important for the local authority to have a **clearly expressed and prioritised set of objectives** for their introductory programme; secondly, this programme should be **founded on a labour market perspective**; and thirdly, **social workers and job consultants must work side by side to integrate individuals within the local labour market**.

Reducing VET drop-out rates among ethnic minorities

Frimodt and Larsen have studied **the role of VET in the integration of refugees and immigrants within a European perspective** (Frimodt and Larsen, 2009). With the Lisbon Strategy stressing the importance of a well-educated population in achieving the goal of establishing the EU as the most competitive and dynamic knowledge-based economy in the global market by 2010, there has been an increasing focus on ensuring that as many young people as possible complete an education. In Denmark this has resulted in the repeated reiteration of the 95 % completion objective by the government and to particular attention being paid to marginalised groups and how to improve participation and retention rates among them. One such group consists of immigrants and refugees and their descendants, with education regarded as the key to an improved societal integration. In Denmark, a report has shown that **VET drop-out rates among ethnic minorities are approximately 60% - twice as high as the rate for Danish nationals** (The Ministry of Refugee, Immigration and Integration Affairs, 2005). These figures are also substantially higher than found in a number of other countries such as Germany, Canada and the Netherlands. On this background, Frimodt and Larsen seek to **identify good European practice** which can then inspire improvements to Danish efforts. On the basis of an extensive review of research and explorative dialogue with key experts, four overriding themes are identified to be used in structuring data and the subsequent analysis:

- (a) learning environments and models;*
- (b) induction and monitoring;*
- (c) practice-based teaching and networks;*
- (d) teacher training and mentoring.*

Frimodt and Larsen are able to identify a number of common barriers to motivation and commitment among ethnic minorities in the countries studied. As Denmark faces many of the same challenges, it is also possible to learn from examples of good practice. This leads them to identify the following initiatives as potentially **key to improving retention rates within VET among ethnic minorities**:

- (a) a holistic approach to learning promotes integration;
- (b) focus on language barriers in relation to work placements;
- (c) produce standardised teaching materials in different languages;
- (d) mentoring in immigrant families as a retention tool;
- (e) use mosques in the marketing of the value and need for education;
- (f) exploit enterprises' corporate social responsibility programmes;

- (g) summer schools and extended opening hours for institutions has both possibilities and pitfalls;
- (h) increase reporting and monitoring of truancy so as to nip it in the bud;
- (i) broad networks containing different stakeholders enables individualised action plans;
- (j) intercultural approaches should be integrated within teacher training and ensure the necessary competences;
- (k) training requirements for leaders of vocational colleges;
- (l) increased use of mentoring across the entire education system.

Frimodt and Larsen here suggest possible principles for future initiatives in Denmark, and it remains to be seen to what extent policymakers integrate them. Meanwhile, another report **assesses existing Danish initiatives regarding the integration of refugees and immigrants within IVET and CVET** on the basis of a series of interviews with participants (Pedersen et al., 2006). These initiatives have been developed as part of the Ministry of Education's programme *Initiatives focussing particularly on the integration of refugees and immigrants and others within IVET and CVET* and, in line with overall education policy priorities, are particularly focused on a reduction of drop-out rates. One of the problems identified is a **tendency to regard ethnic minorities in terms of what they lack**. While these approaches generally have the best intentions, aiming to help students catch up by 'filling the gaps', they have a tendency to **ignore the students' learning resources**. In addition, 'lacking' approaches risk branding students as problematic or somehow 'wrong' and thereby contributing to marginalisation. This is borne out by the interviews with VET students belonging to ethnic minorities. As such, it can be beneficial to consider ways of adapting the learning environment so that students can better employ the resources they possess and it becomes possible to take advantage of **diversity as a source of learning**. The report provides examples of a number of successful learning strategies with a 'resource' approach. Pedersen categorises the various initiatives under five headings: individualisation and flexibility, practice-based learning, a combination of theory and practice, Danish as a second language, and teacher development. He then systematically evaluates the success of the various initiatives.

Geographical mobility

In a report on young people's progress through the education system, **the significance of geography and social background for education patterns** in a particular region of Denmark are considered (Jensen and Husted, 2008). To conduct the investigation, the region was divided into three different types of municipality:

- (a) those centred around one single urban area;
- (b) those housing or in close proximity to a university;
- (c) and those where the first two criteria do not apply.

The national statistical database Statistics Denmark was used to survey educational patterns with the results corrected for family background. The results show that **young people living close to a university are more likely to begin a course of upper secondary education as**

well as long-term higher education. On the other hand, this group is also **more likely to drop out of VET courses** and VET is generally more popular among the group of students living in municipality type (c). With regards to geographical mobility, it comes as little surprise that young people are far more likely to move to a different municipality in conjunction with starting a course of higher education if they do not live near a university than if they do (nine out of ten contra three out of ten). However, they are also more likely to move when beginning a medium term (i.e. non-university) course of higher education⁶. They are also more likely to enter VET after completing a general upper secondary education. As such, the overall results show that **young people growing up in an area with limited educational facilities are likely to adopt one of two strategies: to fully exploit the opportunities available locally; or to migrate to a municipality offering a wider range of educational possibilities.**

Of course, mobility and migration also involves Danes heading out into the world for educational or employment reasons. A report from Cirius looks at **Danish VET students who choose to undertake part of their traineeship at a workplace outside Denmark** (Warring and Pedersen, 2006). A questionnaire was distributed to students who spent at least three months in a work placement abroad during the period 2003-2005. A total of 109 students responded, and these results are combined with detailed interviews conducted with 16 students and 12 employees from the VET programmes with the responsibility for student education and training. The results show **widespread student satisfaction with their work placements although the linguistic and personal benefits are generally considered to exceed the profession-related benefits.** This is partly because the **concrete professional knowledge can be difficult to translate directly to a Danish context.** However, this does offer a rewarding opportunity to reflect upon national differences between Danish and foreign enterprises. That student benefits are primarily not in terms of directly applicable professional competences matches the expectations of those responsible for student training within the host Danish enterprises. They believe what the student gains in terms of personal growth will benefit the enterprise and outweigh any losses in terms of professional knowledge. The study underlines the importance of ensuring coherence in the programme, such that the full learning potential of the student's experiences of different workplaces and different learning environments is taken advantage of.

When it comes to geographical mobility among adults living in Denmark, research suggests that **few are willing to move for employment reasons.** An anthology compiled for the Danish National Centre for Social Research compiles the results of a number of studies considering **the relationship between housing, mobility and marginalisation within the labour market** (Bjørn, 2004). Statistics show that the geographical mobility, as measured in terms of the number of individuals moving from one county to another⁷, is low for both those in work and for the unemployed. The figures are approximately 3% for the former and 4% for the latter. Of course, the reasons will not always be employment related – in some cases, for instance, crossing the county border may not involve moving over a large distance, and the availability of cheaper housing or better educational facilities for children can also be factors. One notable result is that the **unemployed are statistically more likely to move to counties**

⁶ Non-university or medium-cycle education in Denmark primarily consists of the so-called professional bachelor programmes (*Professionsbachelor*) based at university colleges within fields such as teaching, nursing, engineering, public administration, journalism and finance.

⁷ The Danish counties have since been abolished and replaced by fewer and larger 'Regions' as part of the major municipal reform of 2007.

with low unemployment levels than is the case for the population as a whole. Nevertheless, this is not sufficient to offset the unequal regional distribution of employment levels. Figures show that such **regional differences have remained more or less constant for a number of years through periods of either high or low national unemployment.**

Mobility is shown to be highest among young, well-educated people. This group is less likely to have established roots and may well have already relocated once in conjunction with their education. Young people are also less likely to own property, so this result aligns well with another, namely that unemployed people living in rented accommodation display greater willingness to relocate than property owners. Meanwhile, property owners are on average unemployed for shorter periods than those who rent. Both results can be explained by the economic factors: property owners generally have more financial obligations than leaseholders and are also ineligible for housing benefit, meaning they have a greater financial impetus to quickly find work; at the same time, there are usually greater costs involved in moving house for property owners, thereby reducing the incentives to relocate.

Another study considers many of the same themes regarding geographical mobility and why people move (Deding and Filges, 2004). In this case, the study surveys only individuals in work between the ages 20-59 and relocations between municipalities. The authors find that, whilst moving involves a new job for either the respondent or a partner in 68% of cases, **job situation is only cited as the primary motive for relocating in approximately 20% of cases. Family reasons such as better schools for children, meeting a new partner etc. are cited by roughly half those who move.** Overall, the results of this study are largely in harmony with the conclusions presented by Bjørn, although Deding and Filges find that, despite the low levels of geographical mobility, many express a willingness to relocate in order to get a better job. This leads them to conclude that **the lack of actual mobility can be attributed to a general satisfaction with local job opportunities and that people would be willing to relocate if the situation demanded it.** Bjørn, meanwhile, is more sceptical about the likelihood of such a theoretical mobility to be transformed into genuine mobility, noting the constancy in relative regional employment levels regardless of the national economic situation.

Conclusions and implications for future research

The Danish research on VET and employment-related mobility and migration considers a range of issues. The political background for much of this research consists of a **strong national focus on issues of immigration and integration** and on the **potentially negative effects of a lack of geographical mobility on growth.** Comparative Nordic studies have considered **the impact of increased labour immigration from the new EU member states** from a variety of perspectives. The growing influx of primarily low-skilled and unskilled labour poses a number of challenges to labour market policy, a number of which, such as the undermining in certain industries of workers' rights and wage structures, have yet to be fully addressed. As such, there will continue to be a need for research monitoring and assessing developments and new initiatives within this area. There is also a need for research considering the effects within the workplace and broader social effects of labour immigration. Research considering the labour market effects in both Denmark and the workers' homeland would also be a fruitful area for future research, for example following migrant workers upon their return to their home country.

Another frequent topic for research concerns integration of refugees and immigrants within the labour market. A comparative Nordic study demonstrates that **Denmark has undergone a major shift from a rights-based to a duty-based discourse and policy regarding integration**. The studies within this field have generally sought to either measure the success of various municipal initiatives or to identify examples of best practice which may be adopted elsewhere. Further work is required in analysing and synthesising the results of these studies and the large number of recommendations and conclusions they present.

Finally, one finds research considering regional mobility. The results of this research indicate that **Danes seldom relocate to another part of the country for purely employment-related reasons**. Those who do are, as might be expected, generally young, well-educated, and with few ties to the area in the form of partners, children, property etc. Generally relocation is found to be primarily motivated by other factors than employment and, while many express a willingness to move for employment reasons, there is disagreement as to whether or not these statements should be taken at face value, as there is some evidence in the form of a relatively static distribution of unemployment to suggest otherwise. In the future, there will be a need for further research able to demonstrate what can be done at a policy level to encourage people to move in order to avoid potential bottlenecks and regional brain drain as certain parts of the country, such as smaller island communities, are already experiencing a rapidly ageing population.

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Theme 3: Retention

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In this review, we examine recent research on retention. Retention and drop-out rates within VET are the subject of considerable political interest in Denmark with official government policy operating with the objective that 95 % of a youth cohort should complete some form of upper-secondary education by 2015, and this is reflected in the amount of research. This research includes studies of best practice at the institutional level, investigations of drop-out among specific groups such as ethnic minorities, and explorations of particular problems, such as the shortage of training placements within enterprises. As such, the issue of retention and drop-out is shown to be extremely complex with a vast array of factors identified as influential.

National research questions and issues

With the Danish government's stated ambition that **in 2015, 95 % of a youth cohort should complete some form of upper-secondary education**⁸ and current figures that are significantly lower, it comes as little surprise that retention and drop-out rates have become the subject of increasing scrutiny among policymakers. More than 95 % currently enrol in a youth education, so there is a solid basis for fulfilling the government objective; the problem would seem to be not so much recruitment, but that far too few complete the programmes they enrol in. **Drop-out rates within VET are particularly high** and, in an attempt to find ways of combating this problem, there exists an ever-growing body of research. The figures are even more alarming among ethnic minorities making this a particular focal point for both policy initiatives and research.

Much of the research **assesses the situation within a particular area of VET or evaluates the success (or lack thereof) of various policies, development projects and localised initiatives**. Others seek to **identify possible causes**, such as a lack of suitable training placements or the increasing academic demands made of VET students. In this review, we primarily concentrate on research belonging to the latter category as the findings within the former category are often strongly tied to a particular localised context and address very specific issues⁹, making it difficult to draw conclusions of relevance within a broader context.

⁸Most recently reiterated in the governmental 'Agreement on the Implementation of the Globalisation Pool' (Aftale om udmøntning af globaliseringspuljen, November 2006) and at the centre of national education policy as one of the Ministry of Education's transversal themes. See for example: <http://www.eng.uvm.dk/Uddannelse/Themes/Lifelong%20Learning/Goals%20for%20a%20worldclass.aspx>

⁹ For example Mariagerfjord Kommune (2005) and Daugaard & Secher (2006). For an extensive database of local Danish development projects, see http://fou.emu.dk/offentlig_eud.do

Key research findings

Reasons for student drop-out

A common theme in many of the studies of retention within VET is that many students drop out because they **struggle with the more academic aspects**. This is for example one of the conclusions of Lene Larsen's survey of the causes of drop-out among social and health care worker students as presented in three reports (Larsen, 2004; 2005; 2006). The former students cite the amount of theory as a primary reason for leaving the study. Another oft-cited reason is difficulty reconciling their studies with their private commitments resulting with high non-attendance levels.

However, in Pless and Katznelson's study of young people's paths through the education system, they found that, among students who drop out or consider dropping out during the first year of IVET, 39 % cite either poor teaching or boring lessons and 22 % that they struggled with the academic requirements, while 11 % name bullying as the primary cause (Pless and Katznelson, 2007). As such, **the primary causes of drop-out within IVET would seem to be grounded in a poor study environment**. The figures can be compared with students in general upper-secondary education where almost half state that they struggle to keep up or couldn't cope with the workload with poor teaching a considerably less common reason (See figure 1).

Figure 1: Reasons cited for considering dropping out of a youth education

	IVET (%)	General upper-secondary (%)
Friends dropped out	0	0
Difficult to make friends	0	7
Too much homework	0	14
Too boring	11	16
Bullying	11	0
Difficult to keep up	22	34
Poor teaching	28	11
Other	28	18

Also notable from the above table is that bullying does not feature as a reason for considering dropping out among students within general upper-secondary education, but is cited as the primary reason by more than one in ten VET students. This would seem to suggest that there is **a genuine problem with bullying within VET**. Indeed, bullying is also cited as a cause of student drop-out in a study of drop-out and school environment within VET and social- and healthcare worker training (DCUM, 2006a; 2006b). The analysis finds that students' opinion of their learning environment has an impact on drop-out rates. **Both the social environment and the physical/aesthetical environment are shown to be significant in determining student retention**. Students with a good relationship to teachers and classmates are far less

likely to drop out, while bullying is a factor within social and health care worker training in particular. Key areas for VET colleges to address in their efforts to reduce drop-out include teachers' pedagogical and professional ability, a sense of security in the classroom, initiatives to prevent and combat bullying and ways of dealing with the difference in age between students. This last point is based on figures showing that **drop-out rates among students over 35 are approximately three times as high as for 15-19-year-olds**. The report does not investigate the reasons for the higher drop-out rates among mature students. It is therefore difficult to conclude whether the students have difficulty fitting in with their younger classmates, struggle after so many years away from the classroom, or are forced out by economic and family commitments. The fact that two thirds of those who drop-out over 35 do so either to transfer to another educational programme or to take full-time employment may suggest the latter.

Drop-out among ethnic minorities

In an extensive study of students belonging to ethnic minorities within VET, Michael Svendsen Pedersen and colleagues identify a number of **common causes of student drop-out among students from ethnic minorities** before presenting a number of focus **areas which can help improve retention levels** (Pedersen, 2006a; 2006b; Pedersen et al. 2006a; Pedersen et al. 2006b). Among minority students, the following causes of drop-out are highlighted:

- (a) students feel isolated;
- (b) they have little contact with Danish students;
- (c) they struggle to decrypt the expectations when completing assignments;
- (d) they lack linguistic competences;
- (e) they are met by discrimination at their training placement;
- (f) they lack support from their families.

To reduce drop-out rates, it is therefore necessary to develop initiatives within a number of areas:

- (a) VET organisation;
- (b) pedagogical planning;
- (c) student guidance;
- (d) social environment;
- (e) conditions within the training enterprise;
- (f) contact with the student's family.

Examples of such initiatives are provided based on experiences at a number of vocational colleges with courses designed specifically to accommodate minority students.

When considering minority students, the approach taken often focuses upon what these students lack with initiatives seeking to plug the gaps and compensate for their shortcomings compared to Danish students. A similar approach is taken to students with a practical

orientation when compared to their more academically-minded contemporaries. Pedersen underlines that this is understandable considering that the role of VET programmes is to ensure that students can fulfil certain requirements in the form of an examination which functions as an admission requirement to be considered qualified to enter a trade. These requirements are generally determined on the basis of a perceived ‘normal’ student. As such, **students whose abilities and backgrounds deviate significantly from this ‘normal student’ are marginalised from the off and more likely to struggle in meeting the stipulated requirements** with their failure to do so giving the impression that they are somehow ‘lacking’. However, if one instead approaches these students from a ‘resource’ perspective, it is possible to create learning environments which can provide all students with the opportunity to learn in accordance with their personal abilities and resources. **Students faced with a learning environment irreconcilable with their abilities and resources are likely to experience education as a series of failures and are therefore likely to drop out**, not only of the particular education programme, but of the entire education system. It is therefore important for VET to have a broad and inclusive framework able to accommodate and support the learning processes of a wide range of different students with a broad array of differing abilities, backgrounds, expectations and resources.

How to increase retention

In another study, Jensen et al. identify **examples of successful practices at reducing drop-out rates** (Jensen et al., 2009). They identify the characteristics of colleges with low drop-out rates, including the ways in which they support vulnerable students and their cooperation with youth counselling centres and local authorities. The approach adopted by youth counselling centres to young people with special needs is likewise considered alongside the role played by local authorities in relation to marginalised groups. They find that **a multi-dimensional approach is necessary with initiatives situated within an agreed framework of overall priorities, roles and responsibilities**. Here, a close cooperation between vocational colleges and other relevant parties is key, including the local community, youth counselling centres, local government services, other educational institutions and local enterprises. The following characteristics are identified among ‘good’ colleges:

- (a) the use of introduction days and assessments of prior learning in determining training placements;
- (b) close contact with youth counselling centres during the transition from basic schooling to VET;
- (c) efforts to develop foundation courses in accordance with student abilities;
- (d) close cooperation with production schools;
- (e) the integration of teaching within the general subjects and workshop training with a focus on learning by doing;
- (f) a multi-dimensional approach to student retention;
- (g) using mentors on a day-to-day basis;
- (h) ensuring good student-teacher relations;
- (i) the promotion of inclusion;

- (j) stable classes;
- (k) have formulated a clear strategy to reduce drop-out which all relevant employees are familiar with;
- (l) have defined clear roles and responsibilities for reducing drop-out rates;
- (m) involve local authorities in supporting vulnerable students;
- (n) awareness of why students drop out and where they go afterwards, including swift follow-up procedures;
- (o) employ and frequently assess their retention strategy.

Peter Koudahl considers the causes and explanations for drop-out within VET, making a series of recommendations (Koudahl, 2005). He finds that, despite considerable efforts to the contrary, **VET drop-out rates in Denmark have more than doubled** during the preceding ten years. In the report, he considers initiatives to reduce drop-out during the period 2001-2005. 2001 is chosen as the cut-off point as the comprehensive Reform 2000 became effective as of January 1st 2001. The increased modularisation of VET programmes and the introduction of individual education plans for each student introduced in this reform¹⁰ have proved to be effective in retaining some groups of students while making others even more vulnerable to drop-out. Koudahl therefore concludes that, in some cases, an individual education plan should entail the student being offered a 'traditional' form of teaching with the same classmates and the same teachers providing stability and fulfilling a need for a social support network.

Poor retention rates within Danish VET are often attributed to students' problems in finding a training placement within an enterprise. In a broad empirical study encompassing students from eight different main VET programmes, it is found that **students who find a training placement immediately upon completion of the basic programme are least likely to later switch to another programme or to drop out of VET entirely** (Shapiro et al., 2006). In addition, students who switch programmes once are more likely to switch again or drop out. **Student guidance is highlighted as vital** in providing students with a realistic idea of their resources and their opportunities for further education. The most vulnerable students in terms of retention are shown to be those with little contact with the college or career guidance centres, as well as frequently lacking family support.

A comparative perspective

As part of a broader study of school-to-work transitions in the Nordic countries, Christian Helms Jørgensen considers **drop-out within Danish VET in a comparative perspective** and considers many of the issues dealt with in the studies presented here (Jørgensen, 2008). **The proportion of young people who complete an upper-secondary education in Denmark is lower than in the other Nordic countries.** While more than 96 % begin an upper-secondary education programme, a substantial number never finish. A closer look at the figures reveals a considerable difference in retention rates between general upper-secondary education programmes and VET. While completion rates for the former range from 81 % to 78 %, dependent on the specific course, for VET, this figure is as low as 51 %, with 70 %

¹⁰ For further details on this reform, please see Nielsen (1999).

completing the foundational course of up to a year's duration and 80 % of those completing the main programme, primarily in the form of a training placement. While the majority of those who drop out of VET switch to another upper-secondary programme, either immediately or at a later date, 12 % of a cohort drops out of a VET programme without going on to complete another upper-secondary programme. As such, **VET drop-outs represent the largest share of the residual group without qualifications giving access to either a vocation or higher education.**

Jørgensen stresses that retention problems have plagued VET for a long time and have been the reason for several comprehensive reforms¹¹. Again, **a lack of suitable training placements within enterprises is given as one of the reasons for the high drop-out rates.** The supply of training placements is largely unregulated and dependent on the enterprises within a field. As students are generally required to have found a placement before gaining access to the main programme, many students drop out, following the foundational course, when they are either unable to find a placement or to find a placement at an enterprise compatible with their goals. Since 1993, however, students have been able to enter a number of the main programmes without a placement within an enterprise, instead receiving their practical training at the college. This has gone some way to reducing the problem of placement shortages; however **there remains a considerable degree of mismatch between supply and demand with a shortage in some fields and a surplus in others.**

Despite poor retention within VET frequently being attributed to a lack of training placements, Jørgensen finds **a significant rise in VET drop-out since 2003 parallel with a steep increase in the number of available placements.** There are two possible explanations: firstly, extremely low levels of unemployment during this period have increased the opportunities for young people to find work without qualifications; and secondly, the major VET reform in 2000 has entailed an increase in the individual's responsibility for his or her own learning processes which has led to an increasing marginalisation of students ill-equipped to cope with these challenges. Such students need the support of a strong social environment. Meanwhile, the reform, and the resultant **modularisation of VET, has meant that the students no longer have the stability of a stable class during the college-based periods of their training.** These students already spend a considerable amount of their training within a workplace environment where they may well be the only trainee or indeed the only young person at the enterprise. As such, the **students are increasingly left to fend for themselves with little or no support network.**

Social heritage is shown to be a central factor in relation to educational attainment levels. 25-year-olds where neither parent has an education beyond the compulsory schooling level are shown to be six times more likely themselves to be within the residual group than their contemporaries where at least one parent has completed a course of higher education. Amongst males, the difference is even greater. Achievement levels within lower-secondary education are likewise shown to be a good indicator of drop-out levels within upper-secondary education, with those receiving the lowest grades far more likely to drop out.

Jørgensen's study again confirms the significance of ethnicity or cultural background in relation to VET retention. **While the educational participation rate among ethnic minorities has risen considerably to a level similar to that of ethnic Danes, drop-out**

¹¹ For a comprehensive review of Danish VET reforms, see Cort (2008).

rates are significantly higher, particularly among males from ethnic minorities. Here, as few as 30 % of those beginning VET complete the course.

Conclusions and implications for future research

In the preceding review of Danish research into retention and drop-out within VET, a series of factors have been identified as significant in influencing retention levels. **Despite a concentrated political focus on reducing drop-out within VET, little progress has been made towards achieving the government's goal that by 2015, 95 % of all young people complete a programme of upper-secondary education.**

It is, as yet, too early to assess **the impact of the latest set of reforms**, and, over the next few years, there will be a need for studies considering the ability of these policy initiatives, such as the newly introduced 'new apprenticeship' model of VET, to address the problems of drop-out. Here, it is important that the studies do not only consider statistical data, but also take into account which types of students select this route. Despite political intentions for new apprenticeship to serve as an option primarily for practically-oriented students who may otherwise have struggled with the foundation course, some early indications suggest it has mainly attracted the 'strongest' students.

It will likewise be **important to trace the effects of the global financial crisis on retention rates**. As rising drop-out rates during the first half of this decade have sometimes been attributed to the extremely low levels of youth employment, it will be interesting to see if rising unemployment has the opposite effect. Of course, another consequence of the recession is likely to be a fall in the number of available training placements within enterprises which could potentially counteract these effects.

However, most importantly **there is a need for research that considers retention and drop-out within a wider context and in relation to a number of other factors, such as transition, rather than focusing on an instrumental problem-solving approach.**

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Theme 4: Transitions

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In this review, we examine recent research on transitions, with particular focus on transitions from general schooling to VET and from VET to the workplace. There is found to be little Danish research within this field with the focus primarily on unsuccessful transitions in the form of drop-out. Nevertheless, we present the results of a study considering the transition from lower-secondary to upper-secondary education and a study considering the transition from IVET to the labour market. In addition there are a small number of studies dealing with issues related to a school-to-work transition which lies at the very heart of the Danish dual VET system – namely the transition between periods of school-based training and periods of workplace apprenticeship. Finally, a number of potentially fruitful areas for future research are identified.

National research questions and issues

In Denmark, the transition from compulsory schooling to labour market runs via VET for more than one in three young people and VET is increasingly regarded by policymakers as a central component in the development of the Danish knowledge society. Furthermore, international comparisons have shown that **VET in Denmark contributes to an extremely effective transition with high employment rates among young people**¹². As such, it would seem the Danish system is doing something right. However, the high drop-out rates within VET give a clear indication that there are also problems.

As is the case in many countries, the route from compulsory schooling to the labour market has become **less linear and straightforward, increasingly characterised by interruptions and changes of direction**. The educational opportunities are more flexible than previously, with **modularisation, stepped education, and recognition of prior learning** just some of the initiatives enabling young people to piece together their own personal education and training programmes. While there are more opportunities, this also means a **greater responsibility is placed on the individual**, and it is perhaps not surprising that we have seen significant increases in the length of the period between completing compulsory schooling and graduation within all areas of the educational sector. In fact, **the time taken to complete an education has increased by 42 % between 1980 and 2005** (Reusch et al., 2007). Naturally, this also results in an increase in the average age of students with **an average age for students entering VET in Denmark of 21 and the average age upon completion 28** (Danish Ministry of Education, 2008).

Perhaps there are lessons to be learnt from studying those who successfully complete a VET programme and make the transition to the labour market. Nevertheless, there is little Danish

¹² E.g. Dieckhoff, 2008; Wolbers, 2007.

research within the field of transitions between VET and work. The transition from compulsory schooling to VET is likewise largely ignored by research.

As suggested, the apparent lack of interest in this area is likely ascribable to the Danish success in international comparisons. With research funding increasingly dependent on political priorities, research is largely centred on areas perceived to be problematic in a quest for solutions to concrete problems and aggregating evidence so as to establish best practice. The focus is therefore disproportionately upon those who fail to successfully complete the transition to the labour market via upper-secondary education: hence the rapidly expanding body of research into student drop-out within VET. In this perspective, **student drop-out can be considered an unsuccessful school-to-work transition**. However, as retention constitutes a separate topic in this review of Danish VET research, these studies will not be considered here.

In the following **we consider the small body of research considering the transitions from compulsory schooling to VET and from VET to work**. In addition, we include examples of research considering **the transition between classroom and workplace within VET programmes central to the Danish dual system model**.

Key research findings

Transitions from lower-secondary education to IVET

The transition from lower-secondary to upper-secondary education is at the centre of a study conducted between 2004-2006 by Mette Pless and Noemi Katznelson (Pless and Katznelson, 2007). The study involved a questionnaire survey completed by 1158 pupils representing 60 schools throughout Denmark along with a large number of more in-depth interviews and followed the students over the course of two years as they completed compulsory schooling and began a programme of upper-secondary education or, in some cases, left the education system and entered the labour market. As such, **the study does not only consider young people who enter VET, but illustrates patterns in the paths followed by a cohort**.

The results show that **only a small number of students (8%) choose to continue directly within VET**: a result which is in keeping with the trend towards an increasing average age among VET participants. The study also **indicates a clear hierarchy among the different forms of upper-secondary education** with the majority choosing one of the general upper-secondary education programmes, especially those with the highest grades. **VET would seem to be an option primarily selected by those who are tired of school**, with many of this group expressing an expectation that they are now finished with classroom learning and **looking forward to the opportunity to participate in more practical learning forms**. This can be considered problematic in light of the increasing demands to VET students' more academic abilities. Moreover, it can perhaps help explain the high drop-out rates within VET as students are disappointed to discover that the VET programmes still involve the teaching and learning forms they are familiar with from compulsory schooling.

In another article stemming from the same project, **young peoples' expectations and ideas regarding their future working lives and the role these expectations play in educational**

choices are considered (Katznelson and Pless, 2006). Young people are found to have **high expectations**; work should be exciting, challenging, and contribute to personal development, as well as offering a good salary. At the same time, however, these expectations are generally **tempered by a healthy dose of realism**. When it comes to concrete jobs, there are **distinct gender patterns**. While the three most common choices amongst female students (doctor, lawyer and designer) all require a programme of long-cycle higher education, for male students, the three most popular choices (mechanic, chef and carpenter) are all forms of skilled labour. While the picture becomes more blurred further down the list, in total there are **approximately twice as many male students as female students who express preference for a job requiring vocational education and training**. While female students would therefore seem more likely to enter higher education, a belief that education is a key factor in determining their future working lives is universal. None of the students surveyed state a wish to undertake non-skilled labour and all expect to complete some form of upper-secondary education.

The authors **divide the young people into three groups in terms of their journeys through the educational system: package tourists, backpackers, and vagabonds**. The *package tourist* already has a clear plan, including destination and travel itinerary. Education is a means of achieving the goal of a specific line of work, not a goal in itself, and should therefore be as uncomplicated and unobtrusive as possible. *Backpackers*, on the other hand, are far more focused on the journey itself. For this group, education is a key element in a process of self-realisation and personal development. As such, they do not generally have a firm idea of a destination when setting out on their journey, and it is important for them to keep as many options open as possible allowing detours along the way, or even a complete change of direction. The last group, the *vagabonds*, consists of young people who have typically experienced school as a series of defeats. Lacking self confidence, they struggle to find out where they want to go or how they should get there. Unlike the backpackers, however, the lack of a clear sense of direction does not take the form of an exciting journey into a world of unknown possibilities which gradually reveal themselves, but rather a series of dead-ends and disappointments. While the package tourists satisfy political demands that young people take a quick and efficient route through the education system, the backpackers are in alignment with the growing tendency to regard education as a lifelong, ongoing process and the demand for employees with transferable skills who are willing and able to adapt. The vagabonds, meanwhile, risk remaining marginalised throughout their working lives and, if they continue to fail in their attempts to beat a path through the education system, to become part of a group which we are repeatedly reminded is becoming increasingly superfluous within the (post-) modern labour market.

Transitions from IVET to work

Christian Helms Jørgensen and Morten Smistrup have investigated the role played by VET in young peoples' transition from education to work (Jørgensen and Smistrup, 2007). Here, they first **analyse the term 'vocational subject' in a theoretical perspective** including a review of how the field is approached within international research. They then describe the results of an empirical study involving questionnaire surveys and interviews conducted among students from the mercantile and commercial VET programmes. This study shows that, **in Denmark, students' transitions from education to work are generally smooth resulting in a very low level of youth unemployment**. One of the reasons for this relatively smooth transition can be found in **the Danish dual training system's combination of practical training within the workplace and classroom teaching in both general and vocationally-specific**

subjects. As such, **VET programmes can be considered as constituting a bridge between school and workplace**, combining elements of both. The high employment rates are also unsurprising when bearing in mind that Jørgensen and Smistrup's empirical study showed that more than 60 % of students found employment within the enterprise that trained them.

In categorising the Danish transition regime as a vocational regime, the authors attribute much of the Danish success to the **strong institutional framework** compared with what they term market-governed and state-governed transition regimes found elsewhere. In these regimes, young people typically spend a longer period finding employment and often find jobs for which they are overqualified and do not make full use of their competences. In Denmark, however, **the involvement of the social partners in the development and regulation of both VET and labour market goes some way to ensuring that VET programmes provide students with the necessary skills and competences before starting their first job and that enterprises are well aware of the skills and competences of new employees**, thereby enabling them to make full use of them. Additionally, this involvement can imbue enterprises with a sense of responsibility for young people's training and subsequent working lives.

This **comparison of different transition regimes** focuses attention on a key quality criterion for assessing the success of school-to-work transitions. While youth employment rates and the time taken between graduation and finding employment can certainly tell us something, they do not indicate the type of work and the degree to which it is related to the individual's qualifications. As stated above, in state- or market-governed transition regimes, there is often a mismatch between skill sets and job functions, which can be considered as constituting labour market inefficiency. **A successful school-to-work transition should not only involve finding employment, but finding employment which corresponds to the skills and competences acquired during VET.** The empirical study conducted by Jørgensen and Smistrup shows that **less than 10 % have not worked within their chosen vocational field six years after graduation.** In addition, their jobs often provide the opportunity to further develop their skill set with **the vast majority participating in further and continuing education courses and as many as 40 % in some form of higher education.** As such, six years after graduation, more than half the respondents state that they frequently perform tasks which require skills and/or competences exceeding those they gained from their education and training. The Danish VET school-to work transition can therefore also be considered successful in terms of the outlined quality criterion.

Another finding is that **students frequently express that they learnt little from the classroom teaching they received at vocational college, citing a gulf between classroom activities and the tasks they meet in the 'real world' of the workplace.** As many as 47 % of former IVET students state that they have had very little use for what they learnt in the classroom in the course of the first six years of their working lives. Many go so far as to say that **they do not consider college-based VET necessary to do their job.** The authors note that this may be a result of much of what they have learnt becoming invisible as it is considered common knowledge within a work place where every one has completed a similar VET programme. However, even if one accepts that vocational college is superfluous in terms of learning, it still plays a vital role in the school-to-work transition by providing a midpoint between the adolescent space of school and the adult space of the workplace.

Nevertheless, there are also problems; Jørgensen and Smistrup's review of international research reveals a tendency that **the transition to the labour market is generally taking longer and becoming more complex**, as is evident from the study's finding that **over 60 % of those entering an VET programme within the mercantile and commercial sector have**

already completed a general upper-secondary qualification. In a positive light, this shows that, despite Katznelson and Pless' findings regarding a hierarchy of prestige within upper-secondary education among lower-secondary students, **a number of those who at first reject a VET path later change their minds;** however it also represents a **considerable wastage from an economic perspective.** Moreover, it reflects the increasing demands made of students within VET, something which results in a large group of young people continuing to be marginalised within the educational system – a marginalisation which is likely to accompany them onto the labour market due to the increasing scarcity of unskilled jobs. The Danish education system does little to tackle social inequality, largely reproducing existing patterns and imbalances.

In a separate article, Jørgensen suggests that **a key problem with government education policy is that it is based upon an assumption that young people make decisions and plan a route through the education system on a purely rational basis, weighing up the investments and outcomes involved in a specific course of action** (Jørgensen, 2009). Not only is it assumed that they will select the most efficient route to achieving the goal of a particular job, but also that they will take into account the available data regarding employment and salary levels within different professions and sectors in determining this goal. **An economic-rational approach to school-to-work transitions is problematic as it ignores the multitude of factors that affect young people's actual paths through education, as well as reducing all decisions to a purely economic objective.** As Katznelson and Pless' study showed, for a significant group of young people, the journey itself is considered more important than the destination. Another problem is the political focus on isolated issues and solving perceived problems as revealed in various international benchmarkings and surveys of best practice, because the considerable differences in institutional frameworks in different countries are largely ignored. These differences often render imported tools and models ineffectual.

Jørgensen proposes **a multi-dimensional understanding of transition.** The school-to-work transition often involves more than one *diachronic* transition, in a simple example involving first a transition from compulsory schooling to VET and subsequently a second transition to workplace. In reality, the process is often far more complex: students can enter the labour market following compulsory schooling, return to complete a general upper-secondary programme before deciding upon a VET course and, following a period working within their chosen field, may later choose to enter some form of higher education. In addition, one finds a *synchronic* dimension involving a number of different transitions which have traditionally taken place simultaneously, but which research indicates are becoming increasingly independent of one another. The school-to-work transition involves a change in socio-economic status from student to employee, but this shift was previously often also accompanied by a change in familial status involving moving away from one's childhood home, possibly to move in with a partner and begin to establish a family of one's own. The combination of such changes often led to a shift in identity, a sense of becoming an adult. The ties between such changes are no longer as firmly established necessitating greater attention to the ways in which the different transitions intertwine in new ways and how these changes can conflict with the institutional framework

As part of a report on experiences with school-to-work transitions in the Nordic countries, the situations in Denmark, Iceland, Finland, Norway, and Sweden are presented in turn by researchers from each country (Olofsson and Panican, 2008). In the chapter on Denmark, Jørgensen considers **whether there exists a specifically Danish regime for school-to-work transitions** (Jørgensen, 2008). He begins by considering **the similarities and differences**

between the situation in Denmark and, in particular, the other Nordic countries. While Denmark is also displaying clear signs of the broader international tendency towards longer, more complex, individualised and non-standard transitions, there are certain aspects of the structure of the Danish educational sector and its interaction with the labour market which differentiate Denmark from the other Nordic countries. **The author highlights Denmark's two-string upper-secondary education, divided into general upper-secondary and vocational upper-secondary education, as an important difference,** before outlining the specific Danish transition regime as detailed in the above presentation of Jørgensen and Smistrup's study.

Transitions within a dual training system

While the above research deals with transitions between different parts of the educational sector or between education and work, Lene Tanggaard has conducted research into **the school-to-work transition which lies at the very centre of the Danish VET dual system itself, namely that between the classroom-based learning within vocational colleges and the practical training which occurs within an enterprise** (Tanggaard, 2007; 2008). Here, she argues in favour of a *situated approach to learning* and develops the concept of *boundary crossing* as a tool to help understand how students learn across the two different contexts of vocational college and workplace. To do so, she draws on examples from a field study involving interviews and observations conducted with ten male electro-mechanical apprentices. While studies have shown that students are generally satisfied with the dual structure of the Danish VET system¹³, they also experience **a lack of cohesion** between the two components, meeting **two very dissimilar contexts with different norms and different guidelines for action**. These differences pose a challenge to students in the form of their ability to switch between different forms of participation, subjectivity and identity. As such, Tanggaard finds that apprentices' everyday navigation between learning contexts should be conceptualised in terms of crossing boundaries between different practices rather than coping with abstract gaps between theory and practice. She compares her approach to a cognitive-functionalistic model and a reflective practitioner model of transition, arguing that a boundary crossing approach allows a view of **learning as an integrated aspect of social practice and rejecting a hierarchy of theoretical contra practical knowledge**.

A different approach to the transition between classroom and workplace within a dual VET system can be found in Vibe Aarkrog's study of a project regarding **practice related teaching in the general subjects within VET** (Aarkrog, 2008). The project's main finding was that, **although proximity to practice would seem to motivate students' in the general subjects, practice related teaching does not necessarily result in improved learning outcomes**. The author discusses this result by introducing two pairs of concepts: *specific and general transfer*, differentiating between the transfer of trade-specific knowledge and of general knowledge; and *near and remote transfer*, differentiating according to the similarity between the context of learning and the context of application. The article concludes with the hypothesis that **the learning and application of specific knowledge is facilitated by near transfer, while remote transfer helps foster the learning and application of general knowledge**.

¹³ See for example Wilbrandt, 2002; Nielsen, 2005.

Conclusions and implications for future research

There is a lack of Danish research considering school-to-work transitions. In particular, there is **a need for more Danish research systematically considering the transition from school to work while incorporating aspects of other research areas such as young people's lifestyles, (sub-) cultures, biographies and life histories**. In this way, it would be possible to establish a cohesive, multidisciplinary and multi-dimensional body of knowledge regarding this pivotal point, able to provide a more detailed picture of the decisions and dilemmas, problems and possibilities facing young people on their journey towards the labour market than that provided by the current focus on drop-out, employment rates and educational outcomes.

The little research that does exist suggests that **the situation is not as unproblematic as youth employment figures and Denmark's ranking in various international comparisons might suggest**. That is not to say that the dual system organised around a close cooperation between vocational college and workplace and with the involvement of the social partners cannot serve as an instructive example to other countries as there are a number of clear benefits in terms of smoothing the path from school to work; however, the increasing length of transition and extremely high drop-out rates within VET in particular are evidence of what, at least in socio-economic terms, can be considered less successful transitions. **Further research into young people's often complex journeys through the education system and labour market are a necessary element in any attempt to further improve the institutional frameworks for such transitions**. There is likewise **a need for studies considering transitions within a lifelong learning perspective** thereby reflecting the growing expectancy that **school-to-work transitions are not a one-off occurrence as part of the process of entering the adult world, but rather are an intrinsic and continuing element of (post-) modern working life**.

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