

The current state of the challenges for VET in Denmark

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

The current state of the challenges for VET in Denmark

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



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

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

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

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

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

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Introduction: The current challenges for VET in Denmark

In all Nordic Countries the systems of vocational education faces a double challenge. They are required to offer double qualifications, which give access not only to skilled employment, but also to higher education. And ideally, these qualifications should be provided not just as double qualifications, but in an integrated form as hybrid qualifications (Deissinger et.al 2013). This challenge has been handled in quite different ways in the Nordic Countries. In Sweden and Finland it has been a priority to give all young people an opportunity to get access to higher education in an integrated full time school based upper secondary education (Sweden: ‘Gymnasieskola’), while giving little priority to work based learning of vocational skills. Denmark, on the contrary, has maintained a strong division between two tracks of upper secondary education. As a consequence, young people at the age of 16 have to choose between acquiring eligibility for higher education or attaining vocational qualifications in a modernised form of apprenticeship. When students¹ in the Danish VET system obtain a training contract with an employer they normally have easy access to skilled employment. But they don’t get the qualifications required to get access to higher education, even though this has been a policy goal for decades. The Norwegian model represents a compromise with two years of integrated school based education followed by tracking for the last one or two years of upper secondary education.

The Nordic VET systems are facing two additional challenges: social inclusion and esteem. The first of these stems from the political goal of giving all young people some kind of post-compulsory degree to enhance their employability. Hence the challenge for VET is to provide educational opportunities for an increasingly diverse group of young people including weak learners often with a disadvantaged social background. The second challenge is to maintain a high esteem for vocational education among young people and employers – even when a growing share of a youth cohort in most countries are opting for higher education.

The aim of this report is to analyse the way the Danish VET system has been coping with these four challenges in the last decades. First the report describes key features of the institutional architecture of the current Danish VET-system. In the next two sections priority is given to the challenges of offering ‘double qualifications’ that simultaneously give access to skilled employment and higher education. The Danish system of vocational education builds on the apprenticeship model, which is well known to offer a smooth transition to employment due to the significant role of work based training in this model. The report examines how the VET systems connects with the labour market and explores the patterns of transition of the students from VET to the labour market and analyses the mobility and employability of the students.

In the following section the report focusses on the second challenge for vocational education of providing eligibility for studies in higher education. This analysis starts with a view back at the political discussion behind the reform of vocational education in the 1970ies that for the first time put the issue of double qualifications on the agenda. In addition this section will examine

¹ I follow the use of the terms in Danish, so that they are called ‘students’ in the school based basic course and ‘apprentices’ while they are in a training placement in a company.

the success of subsequent reforms of VET in improving the connections between VET and higher education, latest with the reform in 2013.

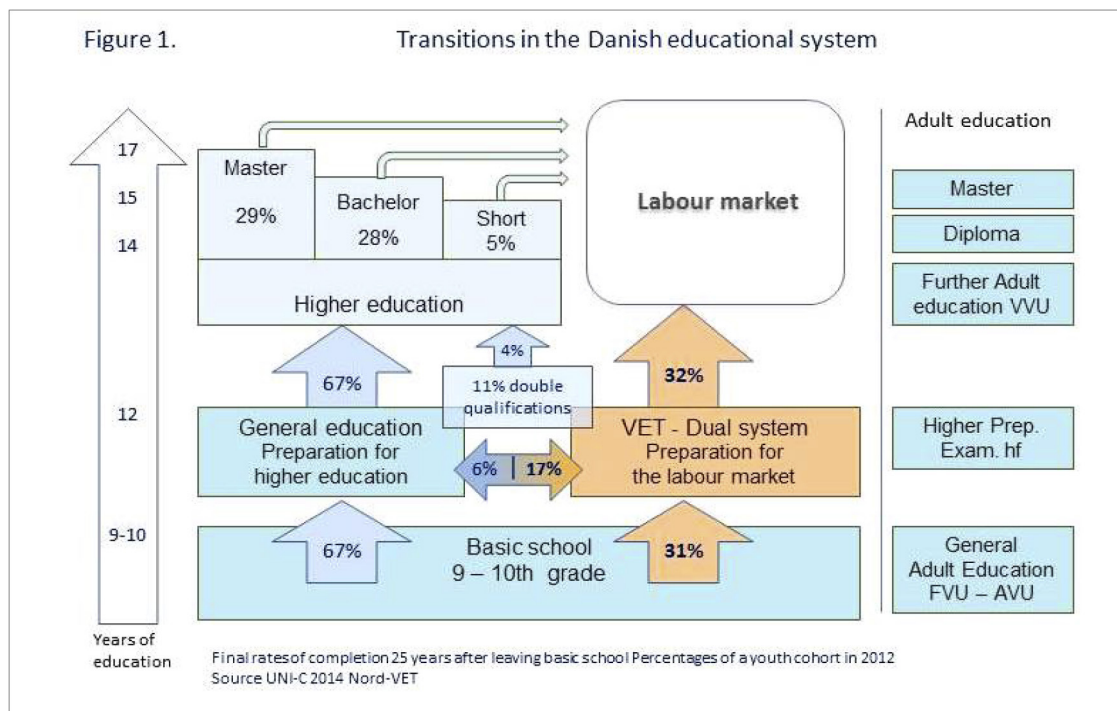
The next challenge to be examined is that of social inclusion. This is mainly a question of raising the retention of students in the vocational programmes, where the drop-out rates have been at a high level for many years. The section describes the patterns of drop-out and completion of the students, and explores how the drop-out problem has been conceived of in the political reforms of VET in the last decades and the measures taken to reduce drop-out. The next section is concerned with the challenge of raising the esteem of vocational education and attracting also ambitious young people to VET. The last section concludes on how the Danish VET system handles the trade-offs and dilemmas for VET regarding the challenges mentioned and questions for comparison with the other Nordic Countries are formulated.

1. The current institutional architecture of VET

In Denmark the Basic School up to grade 9 or 10 is organised as compulsory comprehensive education. The large majority (85%) of all children attend a public school run by the municipalities and the rest attend private schools. While the Basic School has been undivided since 1993 upper secondary education is divided in two tracks. When young people at the age of 16 or 17 complete the Basic School, they have to decide which way to go. All except a few percent continue into post compulsory education at upper secondary level – at grade 10 to 12 called ‘youth education’ in Denmark. The institutional architecture at this level divides students into two tracks: general education and vocational education and training (VET). The aims and purposes of the two tracks are different. Vocational education has the main purpose of qualifying for employment on the skilled labour market, while the main purpose of general education is to prepare for studies at the tertiary level of education. In addition some of the general objectives of the two tracks of education are similar: they should support the student’s personal development and their democratic citizenship and prepare for lifelong learning.

Upper secondary education in Denmark thus does not fit well with the common notion of a Nordic model of education that is characterized as being school based and non-selective and linked to the egalitarian, social-democratic type of universal welfare regime (Blossing & Imsen & Moos 2014; Telhaug et.al.2006; Esping-Andersen 1990). Education at this level is different by being selective, and the division between the two tracks is quite profound and concerns the social recruitment, the learning culture, the legal framework and the form of governance of education. The two types of education also have separate institutions locally: on the one hand the Gymnasiums and on the other hand the vocational schools. The vocational schools are often located separately in Technical, Business & Commercial, and Agricultural and Health Care & Social Work colleges. An exception here is the Vocational Gymnasiums that are located in the legal and administrative framework of the vocational schools and often also physically in this context.

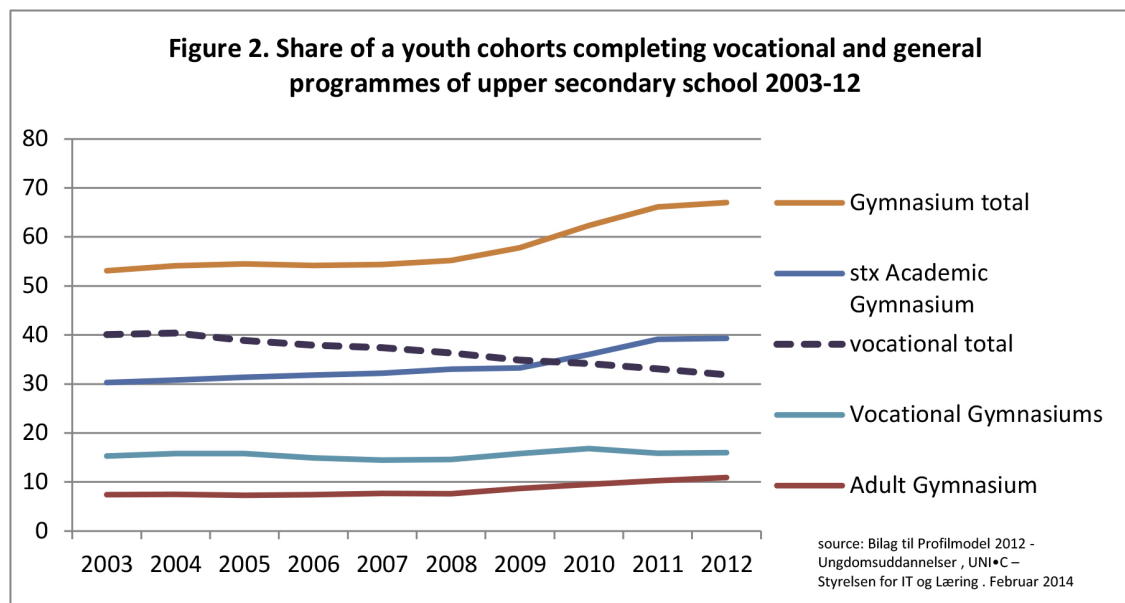
While the Danish educational system generally has been more decentralised than the other Scandinavian countries (Telhaug et.al. 2004), the dual system of vocational education has been more centralised with limited involvement of local or regional authorities (Olofsson & Panican



2008). In comparison with the other Nordic countries Denmark has the most ‘classic’ form of dual system of vocational education that is in many ways similar to the German VET-system. However, in comparison with the German system the Danish VET system is more school based, as the vocational programmes typically start with 6 or 12 months in vocational school before entering a work based training placement. In 2014 the Danish VET system has 12 main entrances and a total of 109 programmes. Though enrolment in vocational education has decreased the last ten years the dual system in Denmark still has a strong position, as almost half of every youth cohort start in a vocational programme, some though after trying out the Gymnasium (see figure 1). Just around one third of an age group completes an apprenticeship in the dual system as the drop-out rate is high, partly due to shortage of training placements. The enrolment in vocational education has been declining over the last decade and the enrolment in the classic Gymnasium has been growing (figure 2). The average age of students in vocational education has been rising (see table 5 and figure 13 in appendix) partly due to the introduction of more programmes aiming at adults and because many students in VET have earlier started at another programme where they have dropped out. Only one third of the students in VET come directly from basic school (Flagstad 2014).

The academic track comprises of four different programmes, the classical gymnasium (*stx*), two vocational programmes (technical, *htx* and business, *hhx*) and the higher preparatory exam (*hf*) that has primarily aimed at adults (‘*Adult Gymnasium*’ in figure 2, next page). The vocational gymnasium (*htx* and *hhx*) have different historical roots, but both were reformed in the 1980es to widen the social recruitment in the gymnasium programmes. Despite their name the vocational gymnasiums are full time school based and do not give access to the skilled labour market. Increasingly students completing the business gymnasium do not go to higher education but enrol in an apprenticeship partly because the competition for training placements is strong.

The vocational gymnasiums have succeeded in recruiting from wider social groups that are



more unfamiliar with academic education. They were given the same status as the classical Gymnasium in a reform in 2005 and thus provide the same access to higher education depending on the subjects and levels chosen by the individual student. The students generally in the vocational Gymnasium have a stronger orientation toward the labour market and the polytechnics and business schools than students in the classical Gymnasium (Andersen 2005).

The vocational track is based on the dual system with roots in the traditional apprenticeship. The basic principles of alternating education, the predominance of work based learning and a corporatist form of governance prevail today. Students normally start in a 6 – 12 months basic course in a vocational school followed by 2 – 3 years of training in a workplace. Alternating with the work based learning they go to vocational school on blocks release, typically 10 weeks every year. The VET-system has problems with low retention rates and falling enrolment in the vocational track in relation to the Gymnasiums, as will be examined later in this report.

Governance of education

The two tracks of youth education have different social and historical roots, and are subjected to different forms of educational governance. The *Gymnasiums* have historically been organised by the state, and some have for a period been owned by the regional authorities. An addition one out of six Gymnasiums is a private institution. By an administrative reform in 2007 the legal status of the state and regional Gymnasiums were transformed into a so called ‘state freehold’ (‘self-ownership’) similar to the legal status of the vocational schools. This means that these educational institutions gained a higher degree of financial and managerial autonomy. But the control by the state is still extensive, as the institutions receive almost all their funding from the state. The Ministry of Education has to approve of all major arrangements regarding mergers or divisions, and the core subjects and curricular requirements of the programmes are laid down by the state.

The regulatory framework of the *vocational programmes* is also laid down by the state. In contrast to the other Nordic countries, Finland, Norway and Sweden, Denmark has two different

sets of legal regulations for general and vocational education respectively. This is primarily due to the pivotal role of the labour market partners in the governance of the VET-system through the occupational self-governance. And in contrast to these neighbouring countries the vocational schools and the Gymnasiums are only weakly linked up with the municipal authorities, though they are obliged to coordinate their provision of programmes to the local requirements.

The pluralist form of governance of vocational education in Denmark combines different regulatory principles, state, market and corporatist regulation. The provision and distribution of training places mainly relies on market regulation in combination with a commitment of companies to contribute to the ‘collective good’ of a well-trained pool of skilled labour for the local labour market (Juul & Jørgensen 2011). In addition the government has used in a variety of financial schemes over the last two decades to support firms who establish additional training placements. The skills requirement of the work based training is stipulated in the training ordinances that are part of the legal framework of VET, but the training is mainly entrusted with the employers under limited external control. The school based part of the programmes is mainly regulated by the state, which funds the vocational schools. This includes a general law of vocational education and laws on examination, quality assurance and transparency (Cort 2010). The current governance of VET is based on principles laid down in a reform of VET in 1991 where the detailed regulation of the vocational schools was replaced by framework regulation. This regulation links funding closely to output of the schools and leaves more room for local management in determining how to reach the performance goals set up by the ministry. The intention is to encourage vocational schools to adapt their education programmes to the requirements of the local labour market. In addition the vocational schools were encouraged to compete in a deregulated market for education. Freedom of choice should be ensured to a greater extent for the ‘users’, mainly the students and employers.

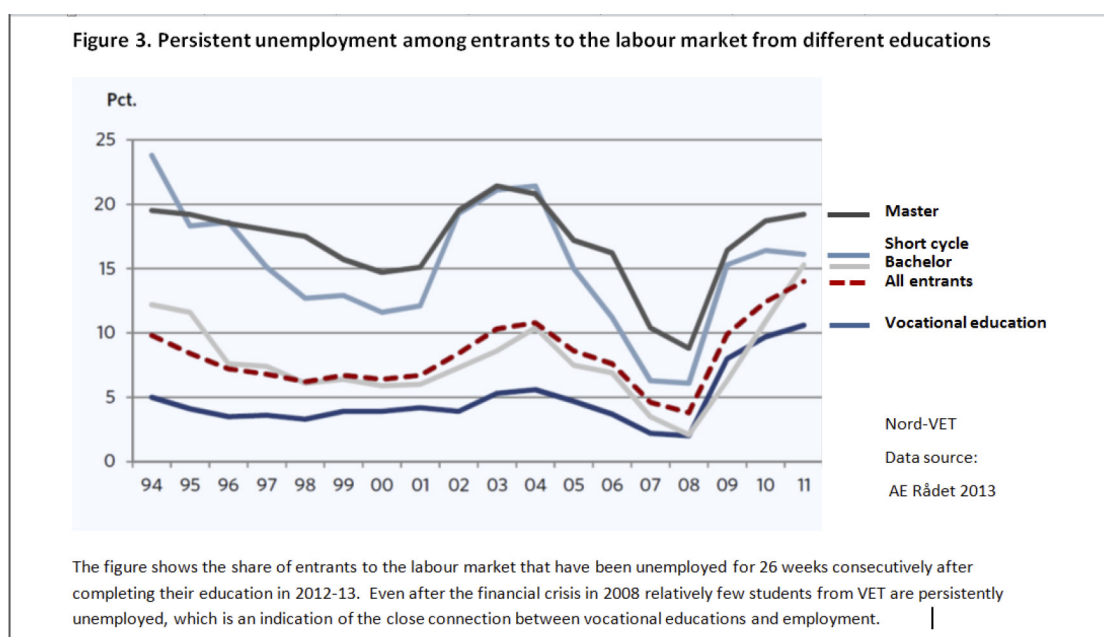
Table 1. Levels of regulation of the dual-corporatist model in Denmark

	State governance	Occupational self-governance	Regulatory instruments
National	Ministry of Education	Council for Initial VET (REU)	Laws, funding, development schemes.
Industry/occupation	Advisors from the Ministry of Education	Trade committees in each industry	Training ordinances, supervision
College	Funding, supervision, instructions.	Local training councils, School boards	Local training plans
Company	Solidaristic funding (AER) by training levy on companies.	Work councils, shop stewards	Local training plans
Apprentice/student	Study grants, guidance	Union branch can assist apprentices	Log-book, ‘Elevplan’

2. Transitions from VET to the labour market

The Danish VET system has a strong involvement of the labour market partners in the governance of VET and assigns work based training a dominant role in the vocational programmes (Juul & Jørgensen 2011). Figure 3 shows that the rate of unemployment for longer periods (26 weeks consecutively) for newly educated students from vocational education is lower than for other types of education (see also table 4 in appendix). There are two main reasons why VET students generally have high employment rates after completing their training. Many students continue as employees in the training company after completion and one third are still employed here one year after completion (DA 2006). On average vocational students gain employment faster than graduates from universities and they have unemployment rates almost equal to people with a higher education examination (Flagstad 2014).

VET systems that, like the Danish system, are based on the apprenticeship model and occupational labour markets are generally noted for bringing low levels of youth unemployment, and this is taken as a good indicator for the ability of this regime to provide a smooth transition to work (Gangl 2001). Three mechanisms can be pointed out to explain this success. One is the gradual *socialisation* to work life that takes place as an integral part of training in the workplace (Heinz 1995; Jørgensen 2013b). The workplace training provides occupational skills that are applicable not just in the in training company but generally on an occupational labour market. Another mechanism behind the smooth transitions is the *transparency* of the system that is linked to the institution of the vocation. The choice of a vocational programme is known by young people to give access to a specific type of occupation that is often recognized as a valuable alternative to higher education. The occupation has the role of a ‘*sign post*’ guiding young people’s transition to the labour market (Heinz 2002). A significant share of the young people, who take up a vocational programme, do this because they are attracted by an occupation, a specific kind of work, more than they are attracted by the education in itself.



Thirdly, the close involvement of the *social partners* in the labour market in the governance of the VET system secures a high degree of legitimacy and recognition of even the school-based parts of these programmes (Streeck 1992). This has resulted in a strong institutional complementarity between vocational education and occupational labour markets (Jørgensen 2012). The trade committees on the national level draw up the curriculum of the vocational programmes that correspond to specific occupations that are standardised on a national level. The regulatory mandate of the committees is quite wide-ranging and is defined in the legal framework for vocational education. It includes the specification of the curriculum of the individual programmes, the continuous upgrading of the qualifications profiles, the approval of training companies and the supervision of the quality of training placements, conflict resolution, etc. This close involvement of the labour market partners in Denmark is a warrant of the relevance of the programmes for the labour market (Clematide & Wittig 2009).

Thus the programmes offer limited opportunities for individual choice and flexibility, but provide certification that is widely recognised in the labour market. The completion of a vocational programme gives access to employment in a skilled occupation and membership of a trade union. In Denmark the occupation is a basic organising principle for the division of labour and it is also basis for the demarcation of trade unions. The Danish trade union movement has a strong tradition of craft unionism with separate organisations for skilled and unskilled workers and a strong protection of skills (Estevez-Abe, Iversen & Soskice, 2001). This contributes to a high employability of apprentices from the dual programmes (Dieckhoff 2008). In addition the standardisation of occupations promotes mobility and flexibility in the occupational labour market. The average job tenure in Denmark is among the lowest in Europe and the job mobility is the highest (EU Commission 2007). Though this model has advantages it has also been under pressure in the last decades.

Self-governance under pressure

The pluralist form of governance involves tensions between the different forms of regulation involved. The neo-liberal inspiration of educational policy meant a shift towards a market based form of governance at the expense of regulation by the state and the social partners. This posed a new challenge to the well-established occupational self-governance of VET and to the core of the VET system based on the principle of occupation (Juil & Jørgensen 2011). The occupational principle means that the profiles of the vocational programmes are based on occupations defined on a national level by the trade committees – one for each occupation or group of occupations. The trade committees are responsible for defining the training ordinances that establish the standardised certification of the occupation. These standardised occupational profiles are decisive for the functioning of the occupational labour markets and for the benefits that companies get from the dual system. One of these benefits is that companies get access to a pool of skilled workers with standardised and certified skills (Deissinger 1998; Marsden 1999). This system would be endangered by a thorough deregulation and decentralisation of the VET system.

The reform in 1991, though, did not significantly affect the key role of the trade committees and the occupational self-governance in VET (Juil & Jørgensen 2011; Cort 2010). The reform

focussed on the principles for funding of the vocational schools by substituting the direct state funding of schools with output based funding based on performance measures set up by the Ministry. On paper the reform delegated regulatory power from the Government and the labour market partners to the vocational schools. The schools were given more opportunities to design the vocational programmes to fit with the requirements on the local labour market. These opportunities have not been utilised by the schools to any significant degree. This is due to the fact that the labour market partners also have a strong position in the running of the vocational schools. In addition locally organised training programmes would not any great value on the labour market, as they are not recognised by labour market partners. As a consequence the decisive role of the trade committees in defining and developing the training ordinances was not changed and the reform did not change the regulatory framework of occupational self-governance.

To explain the survival of the corporatist form of collective skill formation in times of neo-liberal deregulation, we have to look for the benefits that this system provides for the employers. One of these benefits is known under the label of ‘flexicurity’ that offer companies flexibility, a key asset for smaller companies under the conditions of globalisation and unstable markets (Emmenegger 2010). This flexibility derives from the dual system that equips apprentices with a range of firm-specific skills in combination with highly portable occupational skills. In addition the system reduces the transaction costs associated with a high turnover of employees, since firms have low costs for screening and recruitment due to the national certification of the standardised occupational profiles (Marsden 1999). Moreover the benefit for employers of the corporatist institutions is that they promote a high degree of trust that promotes consensus and joint action on other issues like employment, production, technology and social responsibility (Streeck 1992; Dobbins & Busemeyer 2014).

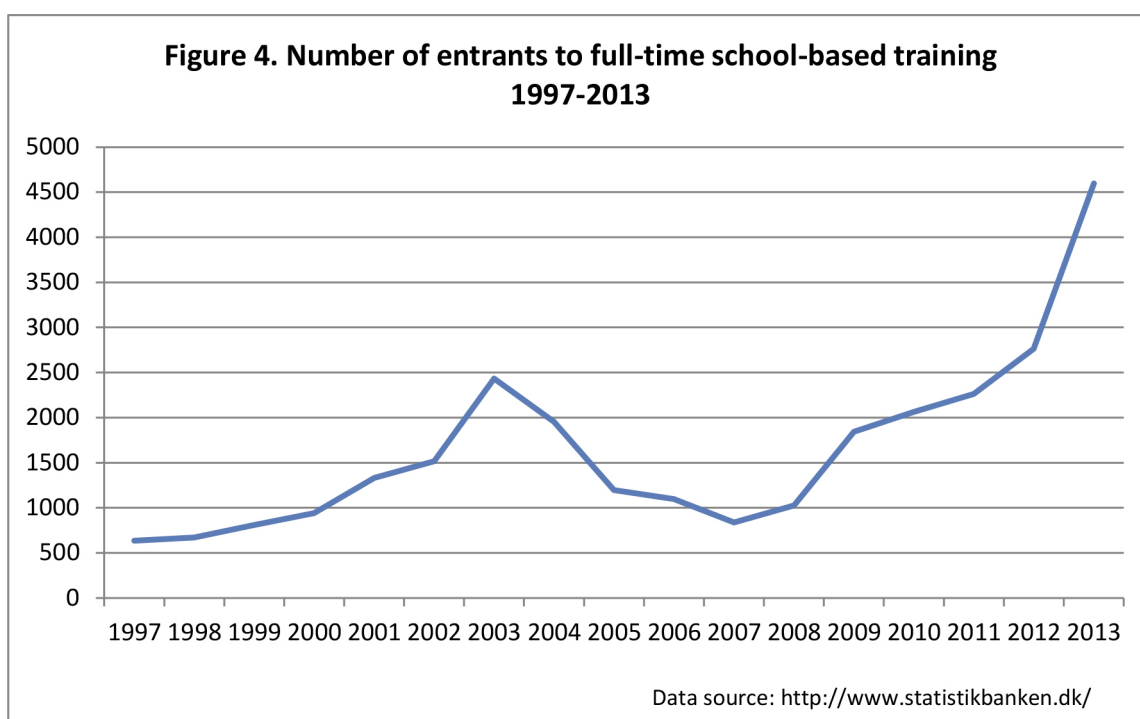
Another explanation for the stability of the occupational self-governance is related to the institutional complementarity between the different parts of the system. As we have argued, the employers’ willingness to provide apprenticeship places depends on their sense of ownership and control of the dual system. The dual system requires strong involvement of the employers, though the specific forms can differ. In Denmark it has been accomplished historically by the participation of the partners on an equal footing in the dual-corporatist institutions (Juul 2009). Furthermore the institutional complementarity also relates to the wider connections between the dual VET system, the prevalence of craft types of production and the strength of the occupational labour markets among other things due to a strong tradition of craft unions in Denmark (Trampusch 2010).

Tensions between VET and the employment system

Even though system of occupational self-governance is generally recognised, critique of the system is regularly raised business federations and political organisations. The system is criticised for lacking flexibility in relation to innovation, for maintaining demarcation lines on the labour market, and for pursuing sectorial interest at the expense of national interest. The Globalisation Council set up by the Government in 2006 questioned the ability of the established trade committees to cover new fields of employment and to adjust to changes in the division of work between different occupations. As a consequence a number of new measures were introduced to secure

that the vocational programmes are in line with the requirements on the labour market. All trade committees must every year to the Ministry submit a development report, where they analyse changes in the skill requirements in the industries covered by the trade committee and consequently consider the need for restructuring of educations, the introduction of new programmes or closing down of existing programmes. In some cases low employment rates prompts the Ministry to demand that the trade committees take measures to improve the employment rates. In addition the Ministry has from 2008 initiated and funded more than external 30 studies to support the renewal of the vocational programmes. In 2004 the Ministry forced the trade committees to establish new shorter vocational programmes aiming at young people unable to complete a four year programme. This initiative though had limited success because the labour market partners did not support it and young people did not enrol in these programmes (Juil & Jørgensen 2011). This can be seen as an indication of the limits of state intervention in VET, if this is not made in cooperation with the labour market organisations.

The most critical tension between the VET system and the employment system is the supply of training placements. The apprenticeship model is based on a double logic of work and education, and this implies strengths as well as weaknesses. It is a major weakness that the supply of training placements in companies depends on the economic conditions in the labour market, while the demand depends on young people's interest in vocational education. The result has been recurrent mismatches between supply and demand for training placements, especially in times of economic recession. This has been an almost permanent problem since the reform in 1976, which allowed young people to take up a basic course in a vocational school before they have obtained a training contract with an employer. Various measures have been taken to overcome this weakness, either by stimulating the supply of training placement or by giving the vocational schools a greater responsibility for the training of apprentices.



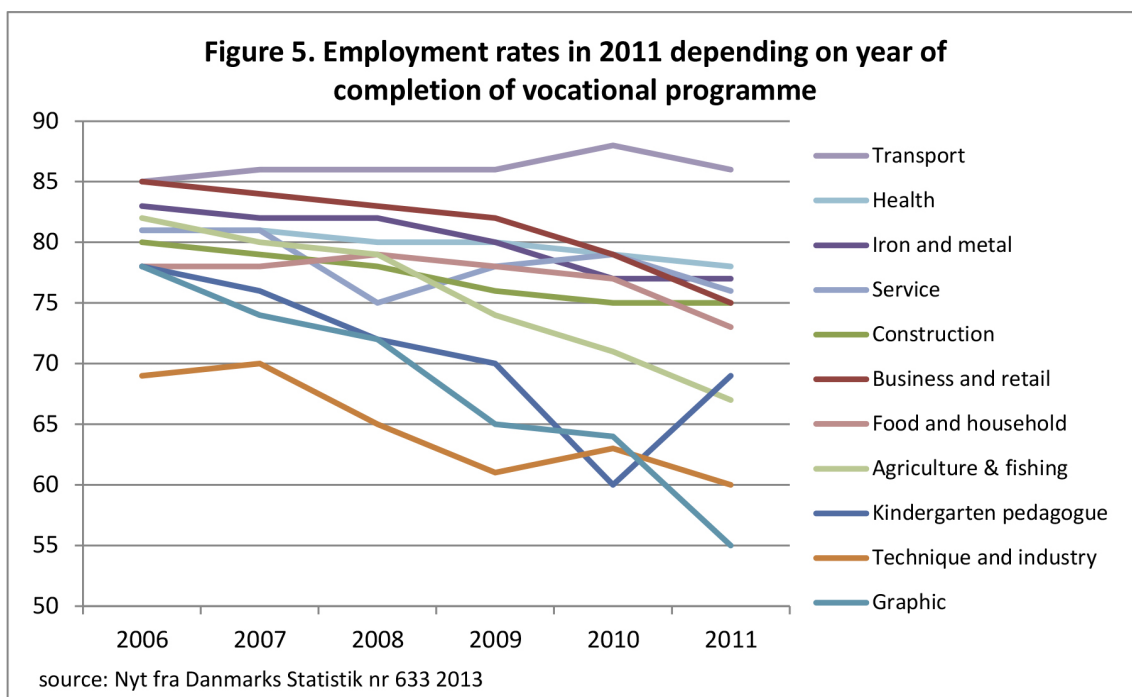
Historically school based training has come to have an increasing role in the vocational programmes. First, from 1956 to introduce day school teaching in all programmes and from 1976 to introduce a one-year school based Basic Course in all programmes. A permanent full-time school-based vocational programme has been proposed several times but has not gained much political support, though forced in the labour movement and the Social Democratic Party has backed the proposal. The argument for this measure is that a school-based system could contribute to increased parity of esteem between academic and vocational educational programmes (Juil & Jørgensen 2011). In 1993 a provisional full-time school-based training programme (in Danish: 'skolepraktik' or 'SKP') was established for students who were unable to obtain a regular training placement. This school-based training was intended as a compensatory measure in times of unemployment and shortage of training placements.

Over the years, the volume of students on the SKP-programme has been adjusted upwards and downwards in accordance with the situation within the training market. Since the financial crisis in 2008 the SKP programme has expanded considerably so that the share of students on this full-time programme amounted to 17% of all VET students. It thus constituted a significant alternative pathway to the work-based programmes and could be seen as a competitor to the dual system. The learning environment of the SKP has many advantages compared to the workplace, like giving more time for reflection and for learning from making mistakes. But in spite of these advantages the full-time school-based programme is not considered as an alternative to a training placement in a company. The SKP programme is held in lower esteem than the dual programmes. Many students chose not to enrol in this programme, even if they cannot get access to an ordinary training placement. And students completing this programme have a lower employment rate than students from the dual programmes.

Following the sharp increase in the shortage of training placement after the financial crisis in 2008, a reform of the SKP was implemented. In 2013 the SKP was changed into a new and permanent institution, the practice centre ('*praktikcentre*'), that offer work based training and take the responsibility for coordinating the students' shorter placements in multiple companies. The position of the fifty Danish training centres in the institutional architecture resembles that of the Norwegian training offices, but they were established at the initiative of the state and under the auspices of the vocational schools – in contrast to the situation on Norway, where the employers took the initiative. It is yet too early to assess the merits of this innovation on the Danish VET system.

Transitions to the labour market

In countries with school based VET systems the transition to the labour market can be very prolonged and difficult process (Gangl 2001; Olofsson & Panican 2008; Ianelli & Raffe 2007). In the next sections the transition to the labour market of VET-students will be explored based on a number of empirical studies that have used a combination of qualitative and quantitative methods (Jørgensen et.al. 2009; Jørgensen & Smistrup 2007; Jørgensen 2013b). Generally they show that the completion of a 3-4 year vocational programme in Denmark and the start of a career as a regular employee is not for the great majority of the students experienced as a major biographical



transition. One reason is that more than half of them continue in regular employment in the firm where they were trained after completion of the programme. Many enter the labour market hardly without noticing, and they are recognized straight away as competent skilled employees on an equal footing by their more experienced colleagues. Many students reported that they found the first period of their training placements in a company more difficult than the transition to regular employment after completion. The transitions from education to the labour market became more difficult in the years after the financial crisis in 2008 due to the high employment rates. Figure 5 shows that the employment rates generally were lower for students completing their education before than after 2008. Newly educated groups of public employees like kindergarten pedagogues found it difficult to get access to the labour market while health workers were much less affected by the crisis.

The training placements and the socialization to work life that is built-into the dual system, equips the students with a broad range of social and specific skills that gives access to a well-defined occupational labour market. Only one out of ten students find it difficult to find a job in the occupation they were trained for, and a similar share were not employed at any time in their occupation six years after completion (Jørgensen et.al. 2009; Jørgensen & Smistrup 2007). In general the students are quite positive about the role of the vocational programme in providing them with adequate skills to perform a wide variety of tasks of the trade, to continue learning the occupation and to feel pride and satisfaction in work. For the technical students the vocational programmes were clearly connected with specific jobs, work identities and access to occupational communities that offer a distinct cultural meaning of work. In the business programmes a third of the apprentices stated that they did not have interest in the vocation before they started the programme. But most of them developed a vocational identity through the training placement in a company. Some of them only formed their specific vocational identity after completing the programme. This is due to the fact that the business programmes are quite broadly defined so that the occupational

specialization often takes place after completion. For example an education in administrative work (clerk) can lead to a later specialization in salary accountancy or Human Resources.

The smooth transition to the labour market *after* completing a VET programme contrasts with the high dropout rates and the difficult transitions *during* the vocational programmes. This is especially the case for the transition from the first year school based course to a training placement in a company and the adaptation to the social environment of the workplace. Around one third of the students drop out during the basic course, often because they are unable to find a training placement. During the work based training placement another 20 % of the students drop out. These figures indicate that students who ‘survive’ and complete are those who have been able to develop personal identities that correspond to the vocational identities offered in the programme and in the training placement. Students who complete a vocational programme are typically well integrated in the labour market and find the shift from being an apprentice to become an ordinary skilled employee easy and rewarding!

Compared to the school based Nordic VET-systems the transition to employment is quite fast and effective in the Danish VET-system. But the transition through the system is difficult (Olofsson & Panican 2008). The institutional architecture of transition systems of different countries locate the risks of not completing at different points in the transition process. In the Danish dual system the greatest risks are located *inside* the programme, in the transition from the school based basic course to the work based main course. This contrasts with the school based systems of Sweden and Finland where the greatest risks are located *after* completion, in the transition to the labour market as pointed to by Gangl (2001).

High mobility across sectors

It is often assumed that general qualifications provide more flexibility than specific qualifications like those acquired in vocational programmes, since these are related to a specific occupation (Hanushek, Woessmann & Zhang, 2011). There is a risk that the qualifications acquired in work based training in the dual system are firm-specific and not portable in the labour market. Consequently, while the training placement is an advantage for the students’ transition to work, it could be a weakness in relation to mobility in the labour market after completion.

Studies of entrants to the labour market from the vocational programmes in Denmark show that they have a high degree of mobility even across industries and sectors. One year after completion a quarter of all students had shifted between two of the nine main sectors of the labour market, and after 6 year this was the case for four in ten students (Jørgensen et.al. 2009). Around half of the cohort studied had shifted their unemployment fund after six years, which indicates a shift of union affiliation and occupation. High mobility could be an indication of precarious forms of employment and insecure life courses shaped by forces beyond the control of the employees (Lehmann 2007). This seems not to be the dominant reason for mobility in Denmark. Quantitative studies (Klindt 2009) show that the majority of the job shifts of the skilled workers was driven by their own agency and interests, for example for seeking more challenges. Surveys indicate that the majority of the former students have advanced into jobs that require skills at a higher level than what the vocational programme qualified for (Jørgensen et.al. 2009; Jørgensen & Smistrup 2007).

One in every seven of the former students has stayed in the training company until six years after graduation. This could be interpreted as sign of being locked in by too specific qualifications with limited value on the labour market. A survey, though, indicate that even those who stay on in the training company change jobs internally often through upward career moves. This group also participate as much in off-the-job training as other groups, which indicate that they generally are not in dead-end positions.

The high rate of mobility across industries doesn't necessarily mean that the former students have left their original occupation, since jobs as for example car mechanics are found in many different industries. But the surveys and interviews indicate that many do shift into new types of work, but often into jobs where they make some use of their vocational qualifications, like analytical skills, social skills and general knowledge of the industry. A significant pattern of mobility is to shift from production related work into service jobs, planning and customer relations, etc. Generally the vocational identities of the former VET students appear as flexible and not tied to a particular type of work, but to be quite dynamic and changeable.

Transition from VET to the labour market can follow a variety of patterns: horizontal transition within or out of the occupation, vertical transition up or downwards, or shifts into further education). The dominant patterns of transition differ substantially between the VET programmes. Some programmes, like car mechanics, recruit students directly from basic school, and they are on average only 22 years when they complete. Few women and many ethnic minority students take up training as a car mechanic. They often do this with clear images of the kind of work and the gendered, occupational culture they enter as also pointed out by Abrahamsson (2007). From the very first day in the vocational school the students become engaged with mechanical activities and there is a close match between vocational practice in school and the occupational work after completion. Other programmes like '*industrial operators*' mainly recruit adults who often have been employed in the training company for many years before they take up an adult apprenticeship. They are on average 39 years of age and typically continue as employees in the training company after completion of the apprenticeship.

The younger apprentices in car mechanics more often switch jobs between different firms, and many shift into other occupations after repairing cars for some years. They seldom take up studies at the tertiary level of education and few of them (4%) acquire qualifications that give access to higher education. In other programmes, like electronics and automation, it is much more common to progress to higher education and a greater share of the students (>20%) has the required entrance qualifications.

Conclusion: access to the labour market and employment

The Danish dual system based on the apprenticeship model is generally quite effective in bringing young people who complete a vocational programme into employment. In addition persons with who have completed a vocational education are highly mobile in the labour market (Nelson 2012). This picture of a smooth transition to work contrasts with international studies that describe school to work transitions as increasingly difficult and risky (Dwyer & Wyn 2001). The smooth transition only applies to students who completed a vocational programme. It doesn't cover the group of the

students who enrolled in a vocational programme, but dropped out before completing. The overall non-completion rate in the Danish VET-system has increased from less than 20 % the late 1990ies to more than 40 % in 2011 (including students who shift into other programmes). These extraordinary high dropout rates give a clear indication that transitions in the Danish VET-system have become more troublesome for young people (Jørgensen 2011, 2013b). In the Danish dual system the greatest risks lie *inside* the programme in connection with getting access to and completing a training placement, whereas the transition afterwards into the labour market is quite smooth.

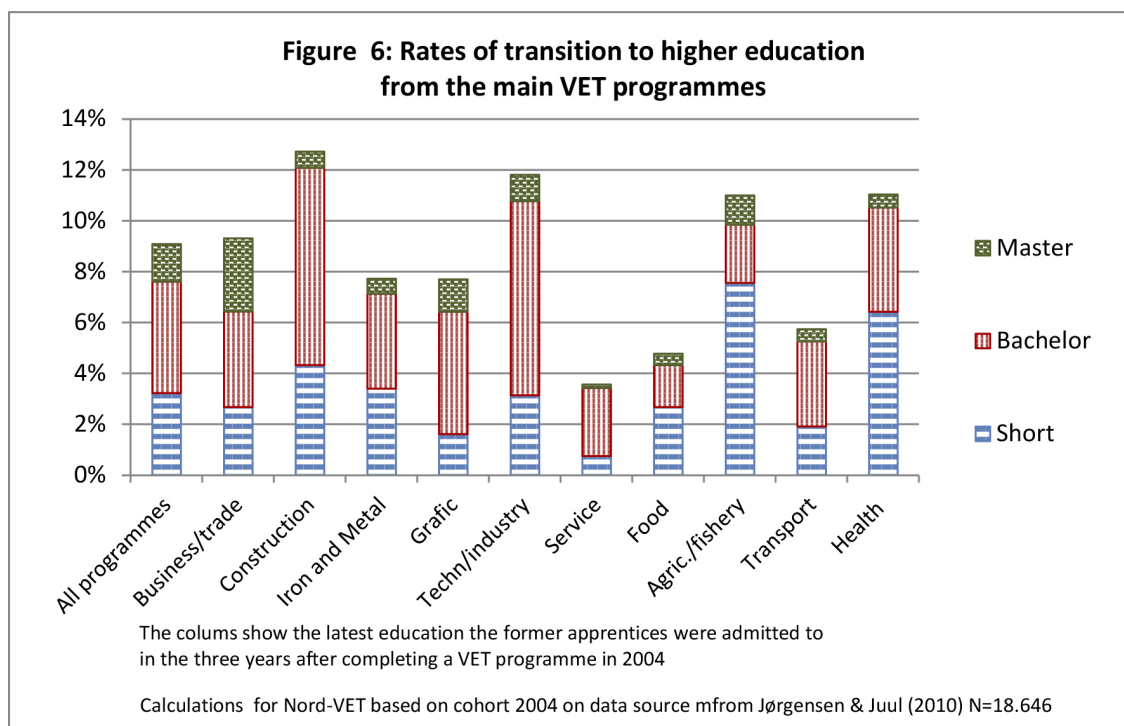
3. Transition from VET to higher education

Today more than 60% of every new generation of young people enrol in higher education in Denmark, which represents more than a doubling since 1980. This ‘academic drift’ constitutes an increasing challenge for VET, as the completion of a programme in the dual system doesn’t give access to higher education, and the system is increasingly seen as a ‘blind alley’. This weakness is closely related to the strengths of the dual system. Students completing a programme in the dual system become well integrated into the labour market, but at the same time they are diverted from higher education. Even though this problem is becoming more acute, the challenge is not new. For more than 40 years it has been a clear political ambition in Denmark to connect vocational education more closely to higher education.

The enrolment in the Gymnasiums in Denmark has multiplied more than five times since the early 1960es. In the middle of the 1970s the number of young people entering the Gymnasium exceeded the number of new apprentices. Since then a growing share of young people have voted with their feet and opted for the Gymnasiums as the favourite choice after completing compulsory school. Participation in higher education had grown concurrently with the growth in students in the Gymnasiums.

As an effect of this development VET is increasingly positioned as a ‘*dead end*’ on the road to higher education, because generally VET students did not acquire entrance qualifications for higher education. Choosing the vocational track after completing compulsory education is more and more seen as cutting yourself off from opportunities later in the life course. This lack of permeability in the educational system runs contrary to the ideas of lifelong education and of equal access to education, since the division between the two tracks of education to a great extent reflects the social background of the students. This has accentuated the challenge for Danish VET of offering *double qualifications* that give access to higher education in addition to the well-established and smooth access to the skilled labour market.

Similar to the situation in Sweden in the early 1970ies a strategy emerged for the unification of all upper secondary education programmes in Denmark as described in the first Danish country report from this project (Bøndergaard 2014). As this strategy did not succeed in Denmark, the aim for policy-makers has been to build bridges between general and vocational education – and from vocational to higher education. But the actual development shows that these political intentions have not been successful. In the last two decades fewer young people progress to the tertiary level of education after completing a vocational programme (Frederiksen et.al. 2012).



And fewer young people achieve double qualifications that combine vocational qualifications and entrance qualifications for the tertiary level education. This contradiction between persistent political pressure to increase permeability and the actual widening of the gap between VET and higher education is somewhat of a paradox. In this section I will examine the background and the political responses to the challenge of double qualifications in VET in Denmark.

Early steps to offer double qualifications in VET

To understand why the call for double qualifications has emerged in Denmark since the 1960ies, we have to take the changing social and political context into consideration. During the 1950es and well into the 1960es the number of apprentices rose steadily, partly as a response to the growing demand from the large cohorts entering the labour market. The rapid growth of industrial production led to favourable conditions for entrants to the labour market that experienced a shortage of skilled labour. But this changed from the middle of the 1960es. Enrolment in VET declined and in only ten years from 1965 to 1975 the number of young people entering apprenticeship was halved (Albæk 2004) and the dropout rate rose to 25 % of those who started an apprenticeship (Betænkning 612 1971, p. 59). At the same time the number of students entering the academic track increased strongly. In the late 1960es the emerging demand for double access was not only propelled by the shift in young people's choice of educational pathway. It was also driven by the crisis for the post-war political settlement that was marked by erosion of traditional authorities, student revolts and strike waves and a general left wing turn (Andersen 1997). This was expressed by increasing social demands for social equality and a widening access to all levels of education – and a growing criticism of apprenticeship (Christensen 1978). Apprenticeship was criticised for offering too little qualified training and too much exploitation of the cheap labour

of the apprentices under paternalist conditions. The apprentices started to organise independently and demonstrated in opposition to the union leadership in 1966 for the abolishment of apprenticeship. This happened some years before the student movement in the universities (Nielsen 2001). The sharp drop in the number of applicants for apprenticeship and the rise in dropout rates from apprenticeship in connection with the political protests required a political response. This initiated the first response to the double challenge by proposing a strategy for a unification of vocational and general education. This happened in connection with the reform in 1972-6 that introduced the new Initial Vocational Education, EFG (Christensen 1982). The two tracks in upper secondary education were in the first proposal to be integrated and in a later and modified proposal to be 'coordinated' and connected closer to each other. A key argument for this reform was to reduce the 'class division' in the upper secondary educations, similar to what had happened in primary school. The reform proposal should make it easier to switch between the tracks and to continue from an upper secondary vocational education to the tertiary level of education.

One of the main objectives of the reform proposals for the VET system in this period was to reduce social inequality in the participation in higher education (Juul 2006). The aims of a detracking of upper secondary education ran parallel to the abolishment of tracking in lower secondary education. In 1969 the Parliament decided to prolong compulsory education from 7 years to 9 years and to introduce the undivided basic general education for all (Wiborg 2004). While a comprehensive lower secondary education was implemented with wide political support, this was not the case for the proposals for detracking of upper secondary education. The vision of a unified upper secondary school met strong opposition from the Right wing in Parliament and from the influential labour market organisations (Christensen 1978).

The reform plans in Denmark had parallels to the education policy reforms in Norway and Sweden, both of which established integrated upper secondary educations in the 1970es (Wiborg 2004). In Sweden all students would in principle achieve entrance qualifications for higher education through the upper secondary education, although this has proven difficult to realize (Lundahl et.al 2010). In Norway, a framework law was adopted in 1974 for upper secondary education, and later the reform in 94 established the so-called 2+2 model, so that students usually study together for the first two years of secondary education, before they choose either a vocational or academic programme for the last one or two years .

But as described earlier the situation was different in Denmark, where the political climate had shifted dramatically when the reform was discussed. The election in 1973 reduced the votes for the Socialdemocratic Party with over one third to reach the lowest level in more than fifty years. The political shift buried the plans for a radical restructuring to establish a unified upper secondary school. The "red wave" of labour unrest and socialist policies that started in the late 1960es was replaced by a "blue wave" of anti-state tax-revolt and neo-liberal policies (Mjösset 1987). As a result of the shift in political climate the reform of the VET system in 1976 was much less radical than the Socialdemocratic proposal and the reform in Sweden. Instead a new programme, Initial Vocational Education, ('*erhvervsfaglig grunduddannelse, EFG*'), was introduced parallel to the traditional apprenticeship. All EFG-programmes started with a broad, one-year basic course with 40% general subjects, which were also intended to make it easier to switch to an upper secondary education and continue to tertiary level education (Christensen 1978).

When the apprenticeships and EFG-programmes were combined by the reform in 1991, the preceding Government White Paper found that: “Generally, the real opportunities for higher education immediately after completing basic vocational education and training are rather limited.” (Betænkning 1112/1 1987, p.16). The proportion of young people who, after a vocational education, continued to higher education (predominantly short-cycle higher education programmes) was about 5-7% in most disciplines (Table 3.9.). Among the reasons identified were: “Too many of the current basic vocational educations have no counterpart among the higher technical education programmes because, among other things, they are too narrow”. (ibid. p. 92). There was also considerable political interest, therefore, in improving the opportunities for access to higher education through the reform in 1991.

The challenge posed by the increased competition from the general track of upper secondary education put pressure on policymakers to increase the permeability from VET to higher education in order to keep up enrolment in VET. The Ministry stated the intentions with the reform of VET in 1991 in this way: “The educations are organised so that they clearly appear as the main road to important short and medium length higher education programmes... The road from initial vocational education to higher technical and engineering programmes will become simple and attractive.” (Undervisningsministeriet 1989:3).

The subsequent reforms in 1991 and 2000 maintained vocational education as a track separate from the Gymnasium with a particular form of governance, a distinct school culture and recruiting base and special requirements for teacher qualifications. The division was sustained so that one track in the upper secondary educations has a clear focus on the labour market, while the other track is focused on higher education. As a result of this political struggle the challenge of gaining access to higher education after completing a vocational education is greater in Denmark than in the other Nordic countries. After the defeat of the unification strategy the political aim in the following decades has been to *build bridges* (Lasonen & Young 1998) from vocational education and training to the programmes of higher education. The vocational gymnasiums were meant to be one of these bridges.

The success of the vocational gymnasiums

The two programmes (business: *hhx* and technical: *htx*) of the vocational Gymnasium have different historical roots. The Business Gymnasium was started almost a hundred years back, while the Technical Gymnasium was introduced in 1982 as a two year continuing education on the top of a one year vocational basic course that was common for all vocational students in the EFG-system. The dual system (EFG) and the vocational gymnasiums thus had a common entrance year. It was possible in the 1980es for students to start on a vocational programme (the EFG basic course) and then decide after six months whether they would choose the upper secondary route via the technical gymnasium (*htx*), or whether they would continue with the main vocational course in an apprenticeship. The intention was that there would be more bridges established across the tracks and with fewer dead-ends.

Later on the vocational Gymnasiums have cut the close links to the VET-system and moved closer to the classic Gymnasium. With the reform in 1995 the vocational Gymnasiums were

turned into three year programmes that were given the same status as the classical Gymnasium, *stx*, and therefore can provide general access to higher education. Compared to the *stx* the teaching is more related to occupational practices with subjects like for example business economics, marketing, international economics and business law in *hhx*. Part of the teaching in the Technical Gymnasium takes place in workshops and laboratories. Over time the vocational gymnasiums have become more separated from the dual system of VET and, particularly with the 2005 reform, have achieved equal standing with the classical academic Gymnasium.

The political intention with the vocational gymnasiums was to broaden recruitment to higher education by offering a vocational-type education that would provide entrance qualifications for higher education. In addition the intention was to make the vocational schools retain some of the academically strong young people who were otherwise applying to the classic gymnasium. The vocational gymnasiums have succeeded in recruiting from wider social groups that are more unfamiliar with academic education. The students generally have a stronger orientation toward the labour market and the polytechnics and business schools than students in the classical Gymnasium (Andersen 2005).

The vocational Gymnasiums have become a remarkable success as they since the 1980es as they have expanded to recruit more than 15% of a youth group today. But their role in meeting the demand for double qualifications is more doubtful. First of the vocational gymnasiums are full time school based and include very little work based learning. They do not give certified qualifications for the skilled labour market, but are mainly preparing for studies in higher education. Actually it has become usual for students from the business programme of vocational gymnasium to continue in an apprenticeship. In some of the VET business programmes (Finance and Insurance) completing the vocational gymnasium, *hhx*, has become a requirement for getting access to a training placement.

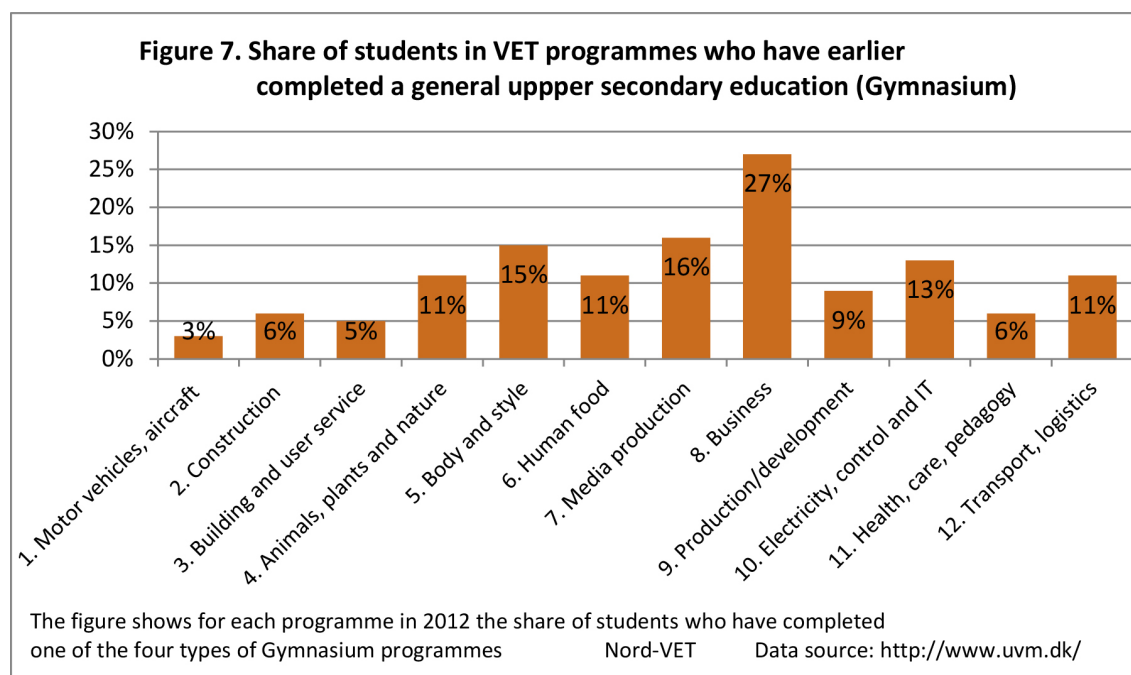
The effect of the introduction of the vocational gymnasiums was in some respect the opposite of the political intentions behind these new programmes (Sørensen 1987). The programmes did succeed in attracting more youth from non-academic families to the gymnasium, and thus provided this group with a new pathway to higher education. But at the same time they directed the most academically oriented students away from the ordinary VET programmes into the vocational gymnasiums. They did not contribute to raise the number of VET students who progress to the tertiary level of education, but have more likely reduced it. Another strategy to build bridges from VET to higher education has been to offer double qualifications as part of the ordinary vocational programmes.

Offering double qualifications in VET

In the nineteenth century the polytechnic programmes of higher education had direct access for applicants from the dual system of VET. Initially the bachelor programme of engineering was placed under the auspices of the technical schools and was an extension of a vocational education in the technical field. But increasingly direct enrolment became more difficult for students from a VET programme due to the growing requirements for theoretical knowledge in the post-war period (Betænkning 238, 1959). The admission requirements were increased in 1965 so that

applicants had to pass a lower secondary school leaving examination and a special entrance examination. In addition a one-year workshop course plus a one-year internship was introduced as an alternative to an apprenticeship as a new access route. This heralded a shift in the recruitment routes to the short-cycle (sub-bachelor) higher education programmes [Now called *Vocational Academies*]. As increasing numbers of young people complete general upper secondary education, these students now represent the largest share of the participants on the short-cycle higher education programmes, which have traditionally been the main destination for students from the dual system of VET.

In connection with the review of the technician and engineering education programmes in the mid-1980s, the Committee noted in their report: “The fact that so few young people progress from a vocational education is in itself both explainable and understandable”. The explanation given was that the vocational educations “are geared towards application-oriented skills and a (practical) specialization in these, and only to a lesser extent towards further (theory-oriented) education”. (Betænkning 1074, 1986, p.62). The report found that although the intention with EFG was that it should also prepare students to continue to higher education, it did not achieve that goal to a satisfactory degree. It was also pointed out that the technical programmes in higher education were relatively unknown and invisible, and that there are economic barriers that prevent skilled workers from taking up further education (the difference between the wages for skilled labour and the student grant). The report formed the basis for a revision in 1987 of the law governing Higher Technical Educations, which was intended to establish a bridge from VET to the technical programmes at the tertiary level. The report also recommended that better opportunities to achieve entrance qualifications for higher education in the vocational programmes should be created, and that the students should be encouraged to use them. This was a message to the subsequent reform of the VET system.



Measures to increase permeability to higher education

In connection with the reform of the business programmes of VET in 1995, it was pointed out that the range of opportunities for progression to higher education was limited for young people from the dual system of VET. In the preceding White Paper it was noted that it was increasingly common for an upper secondary school leaving examination to be required to access higher education. As a consequence measures were needed to ensure that the business education programmes did not come to be seen as a *'dead end'* (Betænkning 1283 1994, p.18). Improved opportunities should be established for additional courses in order to obtain entrance qualifications for higher education. It was also pointed out, however, that more than one third of students who start a business vocational education programme in 1992 came from an upper secondary school background. A later study showed that this was the case for just over a quarter of the students in 2004, which is significantly more than for the technical vocational educations, with the exception of the graphics programmes (Juil & Jørgensen 2010). In the business field, therefore, many students already had entrance qualifications for higher education and subsequently continued on a short-cycle higher education. However, the possibility of gaining direct access to the Bachelor-programmes in the business school with a business vocational education was abolished in 1995 and replaced by a requirement for a general upper secondary school examination.

The reform of VET in 2000 major put emphasis on a more flexible and individualised organizing the vocational programmes. This included providing better opportunities to continue in higher education. Presenting the law, the Minister of Education explained the objective: *"... the more academically strong students will have the opportunity to supplement their education with courses that improve their entrance qualifications for higher education. There will also be greater coherence between the vocational educations and the Vocational Gymnasium, with an opportunity for students to acquire double qualifications, i.e. both vocational qualifications and entrance qualifications for higher education."* (Vestager 1998)

The intentions of Reform 2000 to increase the opportunities for students in VET to progress to higher education was made possible by offering the choice of additional general subjects in the VET programmes. A framework was established to enable "entrance qualifications accumulation" as an offer to the more ambitious students. Now, more than ten years after the reform we can conclude that very few students have used this opportunity to acquire additional general qualifications. In part this is because these qualifications are not offered as part of an integrated curriculum, but as individual subjects being taught separate from the vocational teaching (Jørgensen 2013). As a consequence, students who want to combine the two types of qualifications, do this by way of taking a double education, first one and then the other. A relatively stable share of around 10% of the 16-19 year olds do combine their studies in different ways and end up with double qualifications.

The main destination in higher education for students from the dual system is the short-cycle programmes at sub-Bachelor level. Today they are most often located in the new Vocational Academies (*'Erhvervsakademier'*), which were established as separate institutions a result of a reform in 2007. Earlier these short-cycle programmes were either offered by the vocational schools or by the schools of engineering. The reform in 2007 intended to strengthen the intermediary level of education and thus to provide better opportunities for skilled workers to proceed to the lowest

level of higher education. The reform has been a success measured in the enrolment of students, which has almost doubled in the period from 2007 to 2013 (Rambøll 2013). The number of students coming from the VET-system has also increased, but still the figures are low. Only 13% of the students in the Vocational Academies come from the dual system and this share has not increased in the period 2009-2012. As a contrast the share of student coming from the vocational Gymnasiums is the double of the students from the dual system. This confirms the general conclusion that the reforms to promote permeability between upper secondary vocational education and higher education have not been successful. Table 2 on the next page shows how the rate of progression from VET to higher education has developed from 1991. In all the traditional occupations in manufacture and the crafts the progression rate has declined.

It can be concluded that all of the major reforms of vocational education from the early 1970ies have included a declared political interest in building bridges from vocational education to higher education, and to encourage more young people to use them. However, these intentions have not been achieved. The possibility to obtain entrance qualifications to the tertiary level of education in connection with a vocational education has formally existed for two decades, but is only rarely used (Deissingner et al. 2013).

Official statistics show that the proportion of students with double qualifications (both a vocational education and entrance qualifications for higher education) has been declining over the past 20 years, from the peak of 14% in 1995 to 9% in 2010 (See figure 8)(Uni-C 2011). The same applies when we look at developments in short-cycle programmes of higher education. The proportion of students with a vocational education background enrolled in the bachelor of engineering programme fell from around 30% in 1980 to just 7% in 2004 (MTV 2005). Similarly, the proportion of students with a higher vocational education at the Technical University of Denmark decreased (A4 2009). On the other hand, the proportion of students with a background in the vocational gymnasium on these technical education programmes has increased. This indicates that young people planning to take a higher education (including short-cycle higher education programmes) have increasingly chosen the vocational gymnasiums rather than training a vocational education in the dual system.

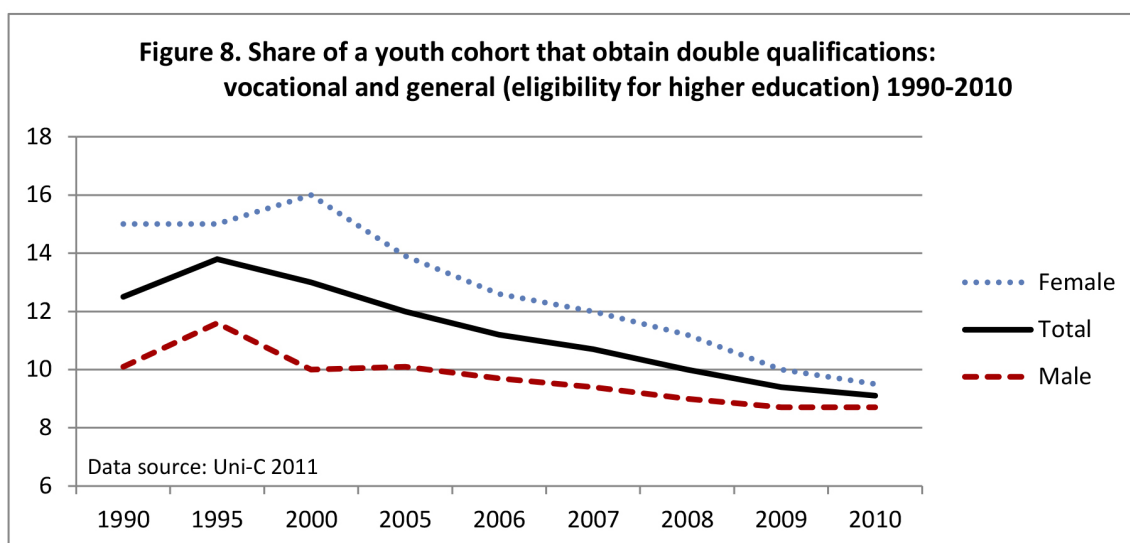


Table 2. Rates of transition to higher education five years after completion of vocational upper secondary education for four cohorts 1991-2006 – in percent %

Pedagogy, Kindergarten	-	-	12,6	3,2
Business, retail	4,5	8,5	11	10,7
Construction	9	7,1	4,8	3
Manufacturing Metal	6,3	4,5	3,4	1,9
Grafical	2,9	4,6	2,4	3,3
Technique and Industry	12,3	7,5	4,9	4,7
Service	2,7	3,7	2,7	2
Food & Beverages	4,5	3	2,6	2
Transportation	7,1	3,8	2,2	4,8
Health	2,6	2,7	3	3,8
Total transition rates	7,7	7,9	7,7	6,4
Total number of students	2918	3259	3053	2104

Source: Frederiksen, et al. 2012

Second chances to progress from VET to higher education

Generally students (apprentices) in Danish vocational education do not achieve entrance qualifications for higher education, but eligibility for higher education can be obtained later through adult education. Since the 1960s, there has been a major expansion of the opportunities for adults to access continuing and further education and training. The Higher Preparatory Examination (hf), which started in 1966, has been an opportunity for skilled workers who wanted to take further education, and it is often referred to as the offer of a '*second chance*' for those who took an early vocational career choice and later wanted to continue studying. This is due to the way the higher preparatory examination is organized, where it is possible to take single courses as evening classes in an education environment with other adults. But studies have shown that the higher preparatory examination has had limited success as a bridge from vocational education to a higher education. Only 5% of the students on higher preparatory examination courses have a vocational education background (Klewe 2007). This can be explained by the history and role of the higher preparatory examination in the education system.

The higher preparatory examination was established in order to achieve a broader recruitment to the new welfare professions (teachers, pedagogues, nurses, etc.) when the entry requirements for these educations were raised to the level of the upper secondary school leaving examination. The higher preparatory examination (hf) courses have earlier been dominated by women and increasingly they are dominated by young people who have dropped out of upper secondary school. It has therefore been difficult for the learning environment at the higher preparatory examination courses to attract the typical male, skilled workers who wished to pursue higher education. In fact, there are a higher proportion of students who use the higher preparatory examination as a route to a vocational education. About one in five students on the higher preparatory examination courses subsequently complete a vocational education, usually in the field of commerce or health and social care (Klewe 2007).

Taking double upper secondary education may be motivated by a wish to gain access to higher education after completing a VET programme by taking for example higher preparatory examination courses. This can be a good opportunity to change direction, but double-education can also be problematic. It usually involves longer periods spent in education in relation to achieving double-qualifications in an integrated education, such as the new *eux* programme from 2011. It may also involve the repetition of the same curriculum. It is also problematic if repeated education is a result of increased competition in the apprenticeship market, since young people with dual educations displace young people who take the ordinary route through the education system.

Finally, it involves additional costs for the state due to the extra time spent in the education system and the delayed arrival on the labour market. A commission on the structure of the public sector (Strukturkommissionen 2004), for example, pointed out that double-education and switching between educations reduce the workforce by 40,000 people each year. One third of all students from the vocational Gymnasiums continue into a programme in the Dual System of VET (DEA 2013). This is a sign of ‘educational inflation’ with increasingly higher requirements for the level of education, which is more a result of the increasing size of the educated workforce rather than an increase in the level of education required to perform the work.

To conclude: VET and the challenge of double access

The connection between the dual system of VET and the tertiary level of education is weak in Denmark, while the connection to the labour market is very strong. The completion of a vocational programme in the Dual System gives smooth access to skilled employment, but at the same time VET appears as a dead end concerning to access to higher education. This is a major challenge for the future of the Danish VET-system. Over four decades it has been the intention of policymakers to improve the permeability from initial vocational education to higher education. But the measures taken to achieve this have not been successful, and the share of students from the Dual System progressing to higher education has decreased for the last two decades (Frederiksen et.al. 2012). The question is why we see this discrepancy between political intentions and the actual development. Several reasons for this can be identified.

First, the tracking of upper secondary education and the structure of the educational pathways diverts young people who complete a vocational education, from progressing to higher education. This is in accordance with the ‘*diversion effect*’ of a separate vocational track found in other research on young people’s transition pathways (Aynsley & Crossouard 2010; Iannelli & Raffe 2007; Jæger & Holm 2013). Students in the dual system of VET do not acquire qualifications for entrance into higher education. On the contrary during the programme they become well-integrated into the labour market. When they complete, they start receiving high introduction wages and generally have high employment rates. This is among other things due to the fact that around half of the students from the dual system continue as employed in the company where they were trained. Their transition to the labour market has been achieved successfully, when they complete VET. Typically they will be members of the skilled workers union and have a strong occupational identity. If they want to progress to higher education, they have to break off from this trajectory and re-enter the educational system.

Secondly, the background and the academic qualifications of the students in the vocational educations have made the students less likely to progress to higher education. As the enrolment in the Gymnasiums has grown, the enrolment in vocational education has decreased slowly. The activation policies have made an increasing number of young people start in a vocational programme with little motivation for education. The social and cultural background of the great majority of the vocational students makes it unlikely for them to opt for an academic education. In their family and social environment, higher education is unknown territory and investment in higher education has an uncertain outcome (Jørgensen 2013).

A third reason relates to the life course of vocational students. When vocational students complete their education and enter the skilled labour market, they have earnings close to the earnings of the experienced workers. Apprentices double their income, when they change status from being an apprentice to become an ordinary employed craftsman. This happens typically in the period of life when they establish family, get children, and buy their own home and car. They become tied up financially in a way that makes it difficult to take two or three years out for studying. Normally they will have to start by acquiring higher education entrance qualifications (six months to two years) and afterwards take up at least two years study at the tertiary level. Their earnings after completing a higher education will not always be significantly higher, than what they earned as skilled workers (DØR 2001 tabel II.21). Often a skilled male worker living with a female nurse or a social worker will earn more than she does – even though she has a degree at the bachelor level and his is at the upper secondary level. Graduates at bachelor level will more often be employed in the predominantly female public sector, where wages are lower, whereas males completing VET will often be employed in the private sector with higher average earnings (Dalskov 2006).

In addition the distinct learning cultures of the two tracks and the dualist conception of qualifications common among apprentices and skilled workers constitute cultural barriers to a progression to higher education. From 2011 a new combined programme, *eux*, offers hybrid qualifications and the enrolment in the programme has been quite promising. But as the historical analysis here has documented, there are considerable challenges to be handled before the VET-system becomes a natural pathway to higher education in Denmark.

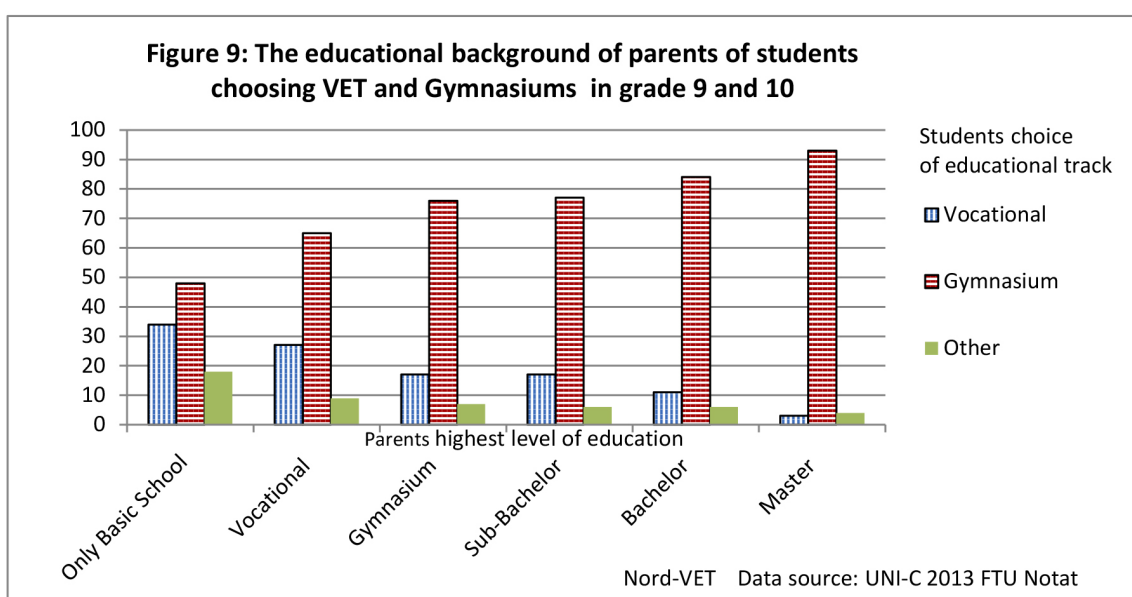
4. The esteem and position of VET

The total enrolment in the VET-system has been quite stable in the last decade, but the enrolment of young people coming directly from basic school is falling and this can be seen as an indication of the falling esteem of VET. This is confirmed by studies that show that the VET programmes and especially the male-dominated technical programmes are considered by young people as the lowest rung of the status hierarchy of upper secondary programmes (Andersen 2005). Another indication of the low esteem can be read from the grade point averages in the final exams in basic school of the students who take up a VET programme. Grade point averages for students opting for VET are 4.4 while they are 7.1 for students going to the Gymnasiums. Grade point averages to a high degree mirror the social background of the students and thus give a clear indication of the inequalities in the recruitment to the two tracks of upper secondary education.

It is well documented in international research that early tracking tends to increase social inequalities in education, especially regarding recruitment to higher education (Gamoran 2010; Hanushek & Wößmann 2006). There are major differences between the educational background of parents of students in the Gymnasiums and parents of students in the vocational schools. Figure 9 shows the differences in educational background of parents of students choosing the two tracks of upper secondary education in grade 9 and 10 in basic school. The figure clearly shows that the higher the level of education of the parents the more frequently the children chose the Gymnasium and not vocational education (UNI-C 2013).

The share of students in the vocational schools that have parents who haven't completed any post compulsory education is two times the share of similar students in the Gymnasiums. Compared to vocational schools, there are four times as many students in the Gymnasiums with parents who have higher education qualifications (Jensen & Larsen 2011; Jæger & Holm 2013). In addition students who start a VET course have far lower chance of enrolment in higher education than students in upper secondary schools, and this indicates that the social inequality in education is sustained by the tracking of the upper secondary level of education (Van de Werfhorst & Mijs 2010). The uneven recruitment to the two tracks means that students in VET have fewer educational resources than students in the Gymnasium. This social selection is one of the main causes of the high dropout rate in VET compared to the Gymnasiums, since it is well documented that a low socio-economic position of parents is a significant risk factor for dropout (Munk 2013; Jensen & Larsen 2011). The early tracking of Danish upper secondary education reinforces social selection with regard to participation in higher education (Shavit & Müller 2000). Social selection occurs not only during the transition from the compulsory basic school to the two tracks of upper secondary education. The growing dropout rate in VET programmes indicates that increasingly social selection happens *within* the VET programmes in the processes that result in a division between students who complete their course and students who drop out.

Three decades ago the most decisive social selection took place after the completion of the basic school at grade 9, when more than a quarter of a youth group went directly unto the la-



bour market (Ørum 1981). Over the years an increasing number of students are continuing in post-compulsory education: today 96% of all young people start an education programme at upper secondary level. However, at the same time, less than half of all young people who start on a vocational programme in Denmark actually complete this programme. Dropout rates have been rising since the mid-1990s (Jørgensen 2011). Very few young people enter the labour market directly after the compulsory level and it has become the norm among young people from all social strata to continue in upper secondary education. Nonetheless, the proportion of students who do not complete an education programme has remained overall unchanged from 1995 to 2009 despite many political initiatives to reduce the so-called NEET-group. More young people now embark on a post compulsory education, yet a greater number drop out.

This indicates that a bigger part of the social selection has moved inside the VET programmes and that the selection takes place in the division between students who complete the programme and those who drop out. In the light of this development, it is important to examine the processes that result in students dropping out of vocational education despite the official goals and the extensive efforts of the government and vocational schools to ensure that everyone completes an educational programme at upper secondary level. One major reason for non-completion is the almost permanent shortage of training placements. Young people have free access to most of the basic courses of VET (6-24 month), but in 2013 one third of the students had difficulties continuing on the main course (typically 3 years) because they could not find a training placement.

Despite these serious weaknesses, the Danish two-track system does have certain positive qualities with respect to integration of youth from disadvantaged families into the labour market (Holm, et al. 2013; Gangl 2001). The separate system of work based training programmes in the dual system of VET offers young people who are less academically minded an attractive route to employment. The dual system in Denmark on the one hand diverts young people from higher education but at the same time works as a safety net for students who are less academic.

Gender inequality in VET

The gender distribution is very uneven among the individual programmes, so that for example in the social and healthcare programmes women make up for 93% of the students, whilst in traditionally male sectors, such as car mechanic and transport and logistic, they constitute only 4%. Ethnic minorities are well represented in the VET programmes, but they are strongly overrepresented in the full time school based program, because they have difficulties getting access to a training placement. This is to some extent due to discrimination, and to some extent due to the weaker social network of ethnic minorities. A considerable share of training placements is distributed through informal social networks. Especially boys from ethnic minorities have much higher dropout rates than ethnic Danish boys and are over-represented in the group of young people who do not complete any post-compulsory education (Kolodziejczyk & Hummelgaard 2012).

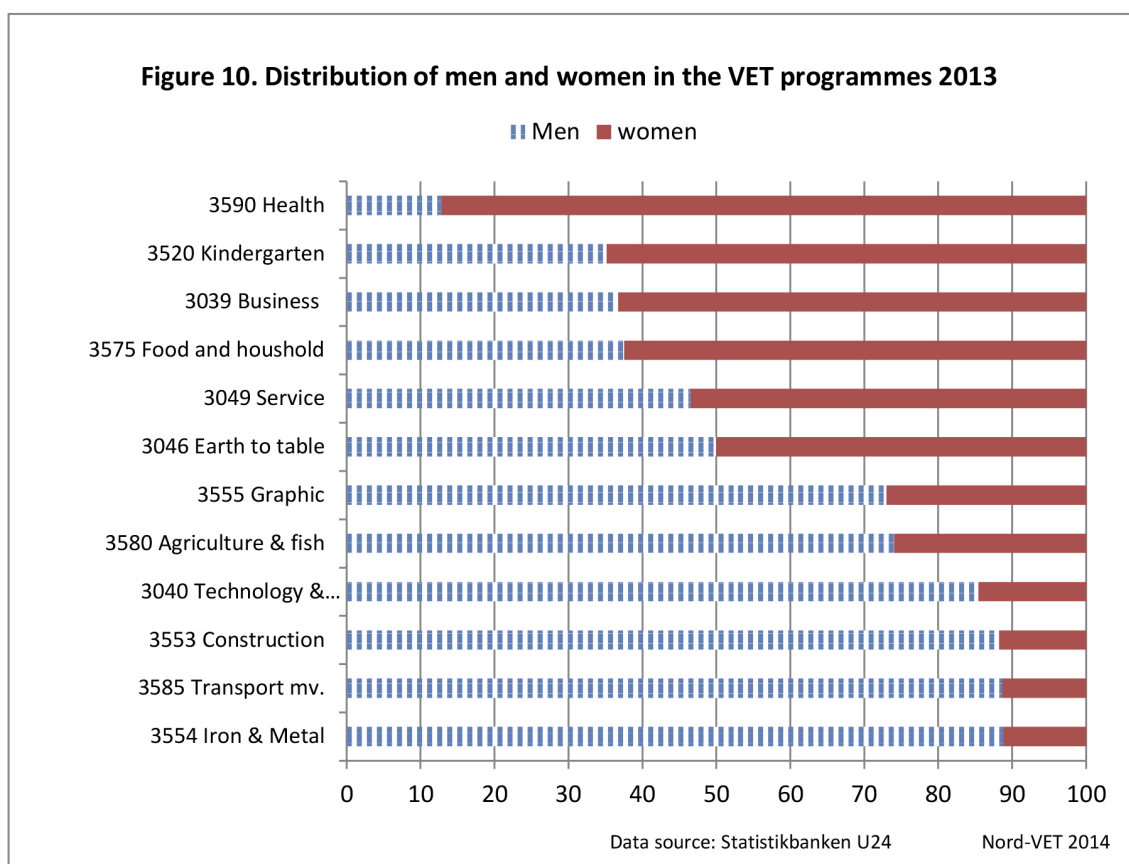
Similar to the other Nordic countries Denmark has a long political tradition of pursuing equal access to education, regardless of gender and social background (Antikainen 2006). It is thus a paradox that the Nordic societies are strongly gender-segregated, despite the highly profiled policies of gender equality. Inequality is not strong in the vertical dimension, but women and men are

educated and employed in different jobs and sectors (horizontally), with a strong segregation into male and female professions (Bloksgaard 2011; Jarman, Blackburn and Racko 2012).

The Danish VET-system is highly gendered, as half of all the 109 programmes are dominated by either men or women (more than 90% of the students are one sex). This segregation is partly a result of the large welfare state that employs around one third of the workforce, mainly women. More than three quarters of the employees in the municipalities and regions in Denmark are women. This segregation means that the transformation to a service and knowledge society has a different impact on men and women. Men more often enrol in VET programmes for the traditional industries and crafts, which are shrinking due to the financial crisis and the outsourcing and automation of manufacturing jobs. Women are more likely to study in programmes aiming at work within the public sector, which was less severely impacted by the financial crisis.

Concurrently, the unemployment rate of men in 2008 exceeded that of women, and men have come to be in majority in the group of young people who never complete any post-compulsory education. The majority of this group of young people are drop-outs from vocational schools (Jensen & Larsen 2011). These figures seem to support the new political discourse claiming that we have a ‘boy problem’ in education – and that VET is contributing to this. But this is not the whole story (Jørgensen 2015).

The drop-out rate from VET of boys is at the same level as the drop-out rates of girls (Larsen and Jensen 2010; Henningsen 2007; Humlum & Jensen 2010). The dominant pattern is that social background is the main risk factor for dropping out of VET, and that minorities – gender, ethnic or



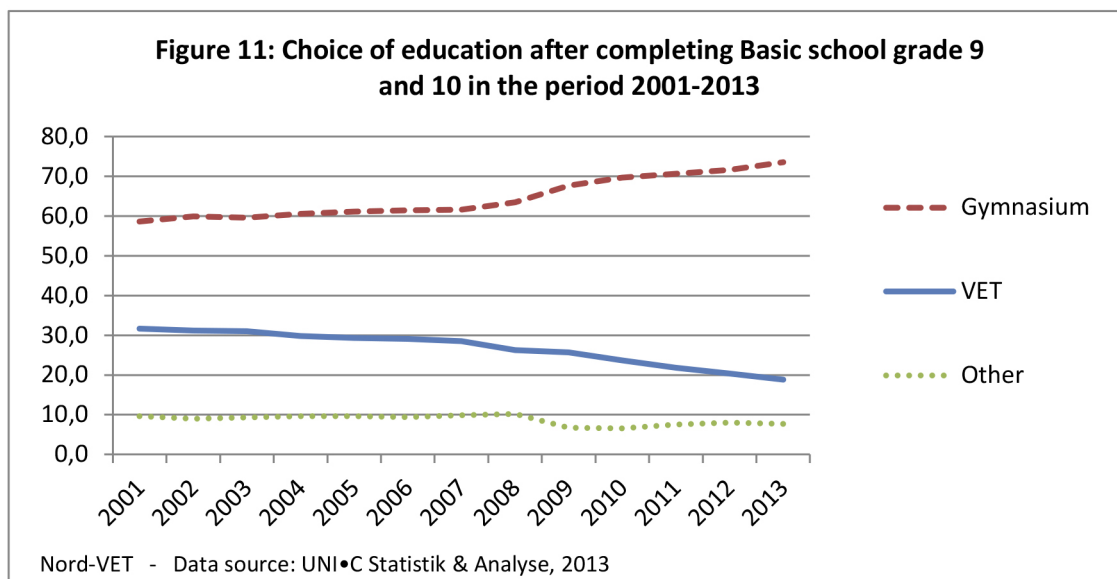
other – have higher drop-out rates than majorities in education. This does not support the idea of a general ‘boy problem’. The lower unemployment of women only lasted a short period, because cuts in the public sector since 2008 have made it very difficult for newly graduated nurses, teachers and social workers, mainly women, to get access to the labour market. As a result unemployment rates for men and women have been equal since 2011 (Danmarks Statistik 2013), and future job growth is expected to take place mainly in the private sector benefitting men more than women.

5. Social inclusion and retention in VET

Historically the dual system of VET in Denmark has accomplished an important task of social integration of young people from a disadvantaged social background. This task has during the last two decades become a more prominent obligation for VET. By the end of the 1980s policymakers were increasingly alarmed by drop-out of students from the VET system and the exclusion of young people due to the shrinking youth labour market. One response to this alarm was the introduction of the active labour market policy from 1993 onwards (Jørgensen & Schulze 2011). Gradually the period of eligibility for social security has been shortened, and the demand on unemployed youth to be in education or training has been tightened. As a consequence, significant shares of the students who enter the basic courses in the vocational schools do this because they have few other choices (Jørgensen 2011). Some of the students have little commitment to education and have low grade averages from basic school. This is one of the reasons why the rate of dropout in vocational education has grown since the middle of the 1990s and why the rate of progression to higher education has decreased.

Activation policies have succeeded in making almost all young people enrol in a post compulsory program. This means that the basic course in VET accepts a significant group of academically weak students. When they after 6 – 24 months have completed the basic course many of the students have difficulties to obtain a training contract with a company, as this requires a high level of skills and social networks. Until the mid-1990s high unemployment rates in combination with the large youth cohorts resulted in what was later described as the ‘*lost youth generations*’ (Jørgensen 2011). As the high unemployment has blocked young people’s direct transition to the labour market after compulsory schooling they are required to enter the vocational full time school-based basic course. But the basic courses have become a dead end for many students that were unable to get access to a training placement and complete the education. As a result drop-out rates from VET has increased. The traditional apprenticeship programme could not absorb all those who were seeking an apprenticeship contract.

At the same time policy makers require of the vocational schools that they offer entrance qualifications for higher education to the students and open pathways to the tertiary level of education. But this requirement conflicts with the prerequisites and interests of the large majority of the students, who are aiming for a skilled position in the labour market. The simultaneous demand for eligibility for higher education and for social inclusion tends to widen the gap between education policy rhetoric and the reality which teachers and students experience on the ground (Jørgensen 2011).



Since the early 1980s, the number of young people who complete a higher education has doubled in Denmark, and this looks set to continue. The government has in 2013 increased the target for the proportion of young people who should complete an educational programme at the tertiary level from 50% to 60%. But the massive expansion of higher education over the last 30 years has *gone around* the VET-system, instead of going *through* it. Vocational educations increasingly appear to be a side-track in relation to the main tracks in the education system: primary school – gymnasium – higher education. As the proportion of young people with a higher education increases, a higher education is increasingly perceived as the main route to the attractive jobs with status and development prospects. This is one of the reasons for the decline over the last decade in the proportion of young people pursuing a vocational education and the continued increase in the proportion of young people who opt for the Gymnasiums (Uni-C 2011). At the political level this is considered a serious problem as the forecasts for the labour market predict a significant shortage of skilled labour. In addition it is considered a problem that one in seven of the young people who complete general upper secondary education (Gymnasium) do not progress in the education system and often have a weak position in the labour market.

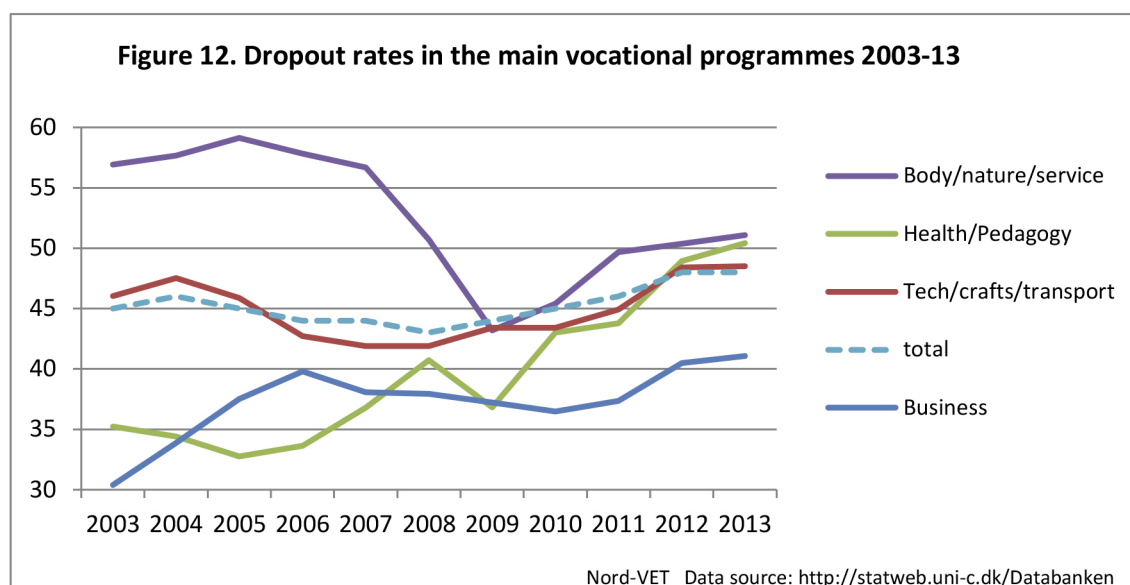
Dropout in VET

For the last fifteen years the drop-out rates in vocational education has stayed on a very high level in Denmark. Only half of the students, who took up a vocational programme on upper secondary level in 2008, actually completed this programme. The lowest retention rates are found in the initial school based basic course (½ - 2 years) that precedes the three year work based main course in a work based training placement. Some of the students, who drop out, shift into another education programme. Around one half of the students who had dropped out of vocational education before 2007 had taken up or completed another educational programme in 2011. And more than 60% were registered as in employment (some in part time employment while studying) (Kraka 2013).

In Denmark, like in other European countries, the low completion rate has raised consider-

able concern on the political level (Jørgensen 2011; Lamb & Markussen 2011). Three reasons are given for considering the high dropout rates a serious problem for policymakers. Firstly, due to the globalisation process many low skilled job are outsourced to low wage countries and fewer employment opportunities will be open for low skilled people. Secondly, labour market forecast point to a severe deficit of skilled workers in the coming years. And thirdly, education is considered to be decisive for social integration and prevention of social problems. People who drop out and never complete any post compulsory education have a significantly higher risk of unemployment, a low income and a higher frequency of health problems (Andersen 2005; Jensen & Jensen 2005). Though these increased risks are not solely a result of dropout, it is documented that dropout adds to other factors that increases the risk of marginalisation on the labour market and a lower quality of life (Lamb & Markussen 2011).

For this reason the government has set a target for getting 95% of a youth group to complete a post-compulsory programme in 2015. Continuing high dropout rates will make it very hard to reach this target and the government has launched a series of measures to increase retention. This includes the obligation for all vocational schools to make plans for retention and to supervise the students more closely. The strong political interest in reducing the dropout rate in VET programmes has primarily focussed on the students who drop out in order to find out what characterises this group. This effort has helped the schools to interpret indications of a student who is not faring well and to take measures to increase the support for a student to complete his or her course. However, it also means that dropping out is explained by the students' deficits and problems: their lacking discipline and skills or their family problems. As a result, the effort to reduce the dropout rate is focused on compensatory measures to support the "weak", "vulnerable" "at-risk" students. As a consequence the dropout problem is becoming individualised and attributed to the students, who are to be helped through special measures (Jørgensen & Nielsen 2014). This is evident in VET schools, where a wide range of measures have been implemented to support this group of students: mentors, coaches, advisers, counsellors and social pedagogical measures. However this can divert the attention from other areas that contribute to the dropout problem:



teaching styles, class sizes, teachers' competence, education policy, shortage of placements – or the social deprivation and disadvantages that are documented to increase the risk of drop out.

A shift from placing the dropout problem with the individual students to placing it with the educational system is particularly relevant in the case of the vocational programmes. Their structure has certain inherent characteristics which increase the risk of students dropping out. The first of such characteristics is that VET in Denmark is based on training in companies, and the availability of placements greatly depends on the state of the economy. The shortage of training places has been one of the main reasons for students' dropout since 1972, when students were allowed to start a vocational course without having secured a training contract with a company in advance (Sørensen et al. 1993).

The students' insecurity concerning their access to a training placement can also reduce their engagement in the course and make them discontinue their programme. This kind of dropout is in the most cases not in itself problematic, since many of students switch to another basic course, in some instances after they have spent some time in the labour market. Almost every fourth student who starts basic course has previously attended another course and this has helped some of them to become more determined on their choice of program. But others drop out several times, and analysis of register data has shown that shifts by themselves do increase the risk of never completing any post-16 programme (Jensen & Larsen 2010).

Another inherent risk lies in the dual-system structure of VET programs. In addition to the transition from lower secondary school to vocational school, the dual system involves yet another transition from the school-based basic course to the work-based main course of training in a company. While students in the Gymnasiums normally stay with the same class and in the learning environment for three years, VET students change their social environment after 6 – 24 months. These transitions mean risky shifts in status involving a change in social environment and a heightened dropout risk (Heinz 2001).

In the 1990s the 'increasing individualisation' of youth was seen as the major reason for the growing drop out problem of vocational schools. The diagnosis was that the standardised courses and fixed pathways of the dual system did not match the growing diversity and individualisation among the students. This thesis of individualisation of youth formed background to a radical institutional individualisation.

The reform in year 2000 entailed the introduction of the so-called 'personal education plan' that gives a broader scope of opportunities for choice of subjects and flexible organisation of content and duration of the school based basic course. At the same time it became possible in many vocational schools to start at any time during the year. Earlier the schools only started new classes once or twice a year, and thus dropouts had to wait and maybe become disengaged. According to the Ministry the intention of the reform was *"that the increased opportunities for adjusting the programmes to the individual requirements of the students will make the vocational programmes more attractive and reduce dropout"* (Undervisningsministeriet 1989). In cooperation with the school each individual student must draw up a personal education plan that tailors the programme to their interests and requirements. Instead of directing students with learning disabilities to special programmes they should be offered relevant tailor-made courses inside the main programme. This was introduced in connection with a shift in the pedagogical thinking in the direction of a

more student-centred form of teaching. The students were expected to take a greater responsibility for their own learning processes and their personal education plan. Policy though was not consistent or uniform in this area. As described above, the active labour market policy increasingly made it an obligation for all young people to be in education, training or employment. But since access to employment and training placements has become restricted, taking up a basic course in vocational school was the only option left for some young people.

In the years following the reform in 2000 the intentions of increasing retention was not fulfilled and the dropout rate continued to increase. One reason for this was that the flexible and individualised courses weakened the social relations of the classes and raised the requirements on the individual student to hold on to his or her education plan. The strong and committed students could benefit from the flexible structure, but students who were less engaged or unclear about their interests got less support from a stable peer group and a fixed course plan (Koudahl 2005; Jørgensen 2011).

The institutional individualisation of the VET reform in 2000 did not succeed in increasing retention in vocational education (see figure 12), though it probably did meet the interests of the most committed students of having more individual choice. But the individualisation of the pathways increased the risk of dropping out for the most vulnerable students who needed more scaffolding and structured pathways (Koudahl 2005). A lesson to be learned from this reform is that policy interventions can have multiple, unintended consequences (Jørgensen 2011). National policies are often based on simple assumptions concerning the problems to be addressed and favour simple and standardised solutions based on ‘best practice’ and evidence. The statistical category ‘dropout’ covers a wide range of different phenomena, and thus policy measures have no uniform effect on dropout. Introducing more flexible and individualised courses did increase retention for some students, but at the same time increased dropout for others depending on background of students and the way the reform was implemented in the vocational schools. As dropout have multiple and complex causes, policies based on simplistic policy assumptions run a high risk of failing due to unintended consequences (Hodkinson & Bloomer 2001). As a consequence it would be more useful to conceive of the dropout problem as involving various dilemmas that must be coped with according to contextual conditions and opportunities.

6. Trade-offs and dilemmas in VET

This last section will sum up on how the Danish VET system handles the trade-offs and dilemmas for VET that have been analysed in this report. The first challenge is to provide double qualifications, which means direct access to skilled employment and to higher education at the same time.

Simultaneous access to employment and to higher education

The analysis of the challenge of providing *double qualifications* in the Danish VET system has shown that the strength of the dual system of VET also is a weakness (Jørgensen 2013). The dual system has performed well in providing high rates of employment and a direct and immediate ac-

cess to skilled employment after the completion of a vocational programme. The vocational students become well integrated into the labour market during their work based training placement of typically three year duration. Many groups of skilled workers have life earnings at the same level as Bachelor graduates (nurses, basic school teachers) from institutions of higher education. In addition skilled workers have very good opportunities for work based careers supported by a comprehensive system of further training. In the dual system they do not obtain qualifications to access higher education. But oftentimes a work based career has more advantages for a skilled worker than a career based on higher education. The position of the skilled workers on the labour market gives them few incentives to re-enter the educational system and start a programme of higher education.

In sum, the dual system supports the transition of the students to the labour market, but at the same time diverts them from progression to the tertiary level (Shavit & Muller 2000). The Danish VET is quite successful at providing employment but has failed to deliver on the second point, access to higher education. Despite persistent political reforms with the intention of improving the permeability from VET to higher education the rate of progression from VET to higher education is low and has been decreasing. In Denmark the *unification* strategy for upper secondary education has failed to gain support from the main stakeholders in the dual system. Instead a strategy for *enhancement* of vocational education has been pursued, to use the terms proposed by Lasonen & Young (1998). The enhancement strategy means policies for improving VET as a separate track and emphasizing the distinctive qualities of vocational education. As a result of this strategy some of the programmes in the Danish VET-system (e.g. *data-technician*) are of 5 years duration and placed at level 5 of the NQF which is the same as some of the short cycle tertiary programmes of higher education in the vocational academies.

The smooth transition to work from the VET Danish system contrasts with international studies that describe school to work transitions as increasingly difficult and risky (Dwyer & Wyn 2001). It is important to emphasise that the smooth transition only concerns students who have completed a vocational programme. It doesn't cover the large group of young people who enrol in a vocational programme, but drop out before completing. The high dropout rates in the basic course of VET shows that transitions inside the Danish VET-system have become more difficult especially the transition from the school based course to a training placement (Jørgensen, 2011, 2013).

The structuring and timing of the risks in the transition process in a dual system is thus very different to those of school based systems like those in Sweden and Finland. Here the greatest risks lie *after* completion of a vocational education in connection with the transition into the labour market. The Danish case confirms the advantages of dual systems (modern apprenticeships) in supporting the transition into the labour market, but also reveals the unresolved problem connected with early tracking and work based learning: the weak connections from VET to higher education.

The continued tracking and the organisation of VET as a separate track is related to the early institutionalisation of a corporatist form of governance of VET, which gives the labour market partners an extensive control over vocational education (Juil & Jørgensen 2011). The evolution of this 'dual-corporatist model' (Greinert 1999) has contributed to sustain the craft type of unions

that have engaged in the upgrading of occupational skills and improvement of the opportunities for further education courses and training of their members. Due to the craft and occupational basis of these organizations they have taken little interests in providing access to higher education for the apprentices, as this could make them leave the craft unions. Similarly the Federation of Employers have opposed reforms to integrate the two tracks, as they have feared that this would reduce the dominance of vocational skills in the programmes and thus the employability of the skilled workers. In this arrangement an occupational concept of qualifications has been dominant and has prevented the introduction of hybrid qualifications that could give access to higher education. The corporatist form of governance has conferred the labour market partners a power of veto over major changes of VET and they used this to prevent reforms in the direction of unification of the two tracks of education.

An exception to this pattern was the introduction of the two programmes of the Vocational Gymnasiums that are aiming at the vocational programmes at the tertiary level. The Vocational Gymnasiums are placed in the institutional context of the vocational schools in order to raise their esteem by attracting more ambitious students. The Vocational Gymnasiums have succeeded in recruiting from wider social groups that are unfamiliar with academic education and have a stronger orientation toward the labour market and the polytechnics and business schools than students in the classical Gymnasium (Andersen 2005). But the Vocational Gymnasiums do not offer the certified qualifications that give access to the skilled labour market. One third of the students from the vocational Gymnasiums do achieve double qualifications, but not in the gymnasium (DEA 2013). They continue in a VET programme after completing the gymnasium similar to the patterns seen in Germany (Pilz 2009). The direct pathway from the dual system to the polytechnics and business schools has to some degree been replaced by the pathway through the vocational Gymnasium. Increasingly young people who aim at the lower levels of tertiary education pass through the vocational Gymnasium rather than through the dual system.

In 2010 a new programme was introduced in the vocational schools, the '*eux programme*', which offers hybrid qualifications that offer 'double access'. The two types of qualifications are transmitted in an integrated form in a single programme of around four year's duration. A developmental programme from 2005-11 showed that in order to succeed the programme had to cope with some serious challenges related to the deep institutional separation of the two types of qualifications in the Danish educational system. This will be dealt with in a coming report in 2015 on innovations in the Danish VET system (www.Nord-VET.dk).

Social inclusion and high esteem at the same time

The second challenge for VET is to be inclusive for weak learners and at the same time to maintain a high esteem and be attractive for high performing students and for employers, who will provide training placements. In the last decade the enrolment of young people in the VET programmes has been decreasing and the share of weak learners in VET has increased. At the same time the dropout rates have grown, so that almost half of the students either leave the education system or shift into another programme. One of the reasons for this development is that vocational education increasing appears as a 'blind alley' in relation to higher education. As a consequence

almost all student who have the opportunity to enrol in a gymnasium, do this, especially youth from well-educated families. Compared to the vocational schools, there are four times as many students in the Gymnasiums with parents who have graduated from higher education. Today two thirds of all young people go to the Gymnasiums after completing compulsory school. Of those who enrol in a gymnasium one out of five breaks off and shift to a vocational education. And one third of the students who complete a programme in a vocational gymnasium later start in a vocational education. This means that in total almost half of a youth cohort starts a vocational education, even though only one third complete a vocational programme due to the high dropout rates.

Since 1993 the government has set a target for getting 95% of a youth group to complete a post-compulsory programme. To support this goal an active labour market policy has been implemented and this has made almost all young people take up some kind of post-compulsory education. As a result more young people are coerced or directly forced to enrol typically in a vocational programme even though they are not motivated or have not decided about their choice of education. The vocational schools are encouraged to socialise and retain a large group of students with few educational resources, and this tends to reduce the quality of the learning environment of the schools.

There seems to be some self-reinforcing social dynamics behind this evolution. Inequalities in the social recruitment to VET result in a high share of academically weak learners in VET and a high share of students burdened by social and psychological problems (economic, housing, family, diagnoses, etc.). This situation adds on to the low esteem of vocational education and increases the social bias in the recruitment to VET. Increasingly employers in training companies complain over low qualifications of applicants for apprenticeships and this is seen as one of the reasons for the shortage of training placements. This was one of the reasons for a reform on early 2014 that introduced general admission requirements in all VET programmes based on students' grade point average from basic school.

Even though the esteem of vocational education is falling, a significant share of students vocational educations have chosen a programme deliberately because they find it attractive (Koudahl 2004). The students emphasise the meaningfulness of the practical tasks, the relevance of the teaching, the positive attitude of the teachers and the learning environment. Many students emphasise how the teachers can laugh and joke, which they find is different from the teachers in primary school. The physically active process of learning and the varied tasks are highlighted by many students, and the practical activities in the workshops are perceived as exciting and interesting. The practical skills are often contrasted with "theory", which has no clear relevance for the solution of the vocational assignments (Jørgensen 2015).

So, for many of the students, vocational education provides an alternative opportunity for education, for some after they have experienced failure at compulsory school – and possibly also at a Gymnasium. By some students vocational education is seen as kind of a counter-culture to the academic culture in the general programmes preparing for higher education. It is not a counter-culture that is in opposition to education as such, as described in studies of anti-school cultures and resistance to schooling (Willis 1977, Whelen 2011). It is an opposition *within* the framework of the education system. This culture emphasises the usefulness of vocational learning in contrast to the learning of abstract school-knowledge. The strong tracking in Danish upper secondary edu-

cation (in vocational and general tracks) differs from the other Nordic countries, which have more comprehensive programmes that do not offer clear alternatives to the non-academically oriented adolescents. As a consequence, the Danish dual system of VET has the role of a safety net for young people who do not thrive in a traditional form of school education.

The majority of students in the VET programmes are men and the gender segregation is quite strong in the VET-system. This is a result of the early tracking and the early choice of a specific occupation in the Danish system and a reflection of the gendered divisions in the labour market. In addition men have come to be in majority in the group of young people who never complete any post-compulsory education. But at the same time men who complete a vocational programme are often better off in the labour market than women who complete a Bachelor programme in terms of income and career prospects.

To conclude, the Danish VET system increasingly suffers from decreasing esteem and enrolment. Most of the programmes are quite inclusive as a result of government policies to raise participation in post-compulsory education. The inclusion of many weak learners in the vocational schools has contributed to the negative image of these schools and to discourage the ambitious students from taking up a VET programme.

Appendix

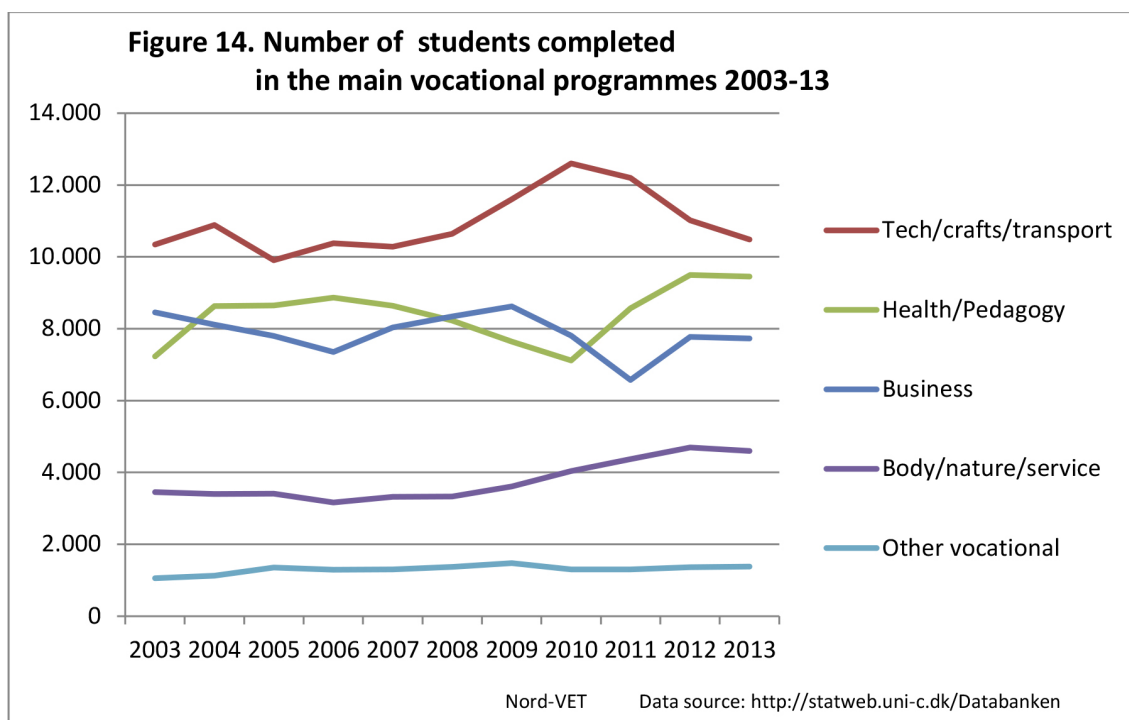
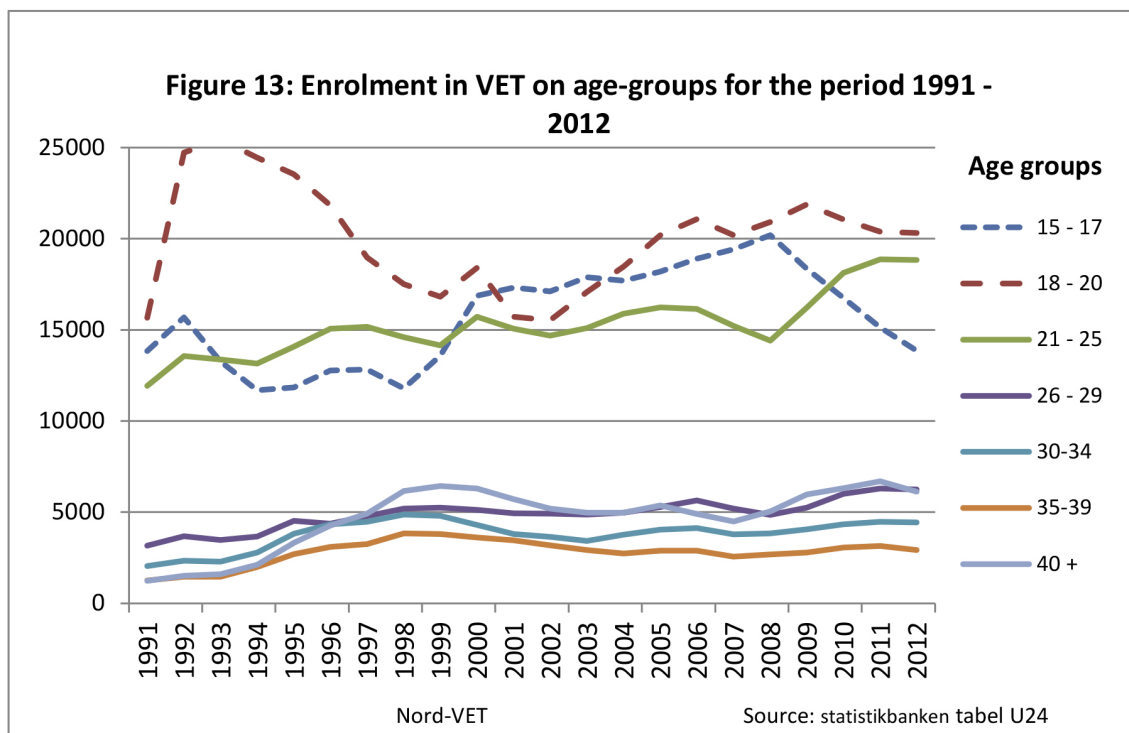


Table 3 Overview of structure of vocational education in Denmark 2014

Basic courses Entrances	Number of programmes in entrance
1. Motor vehicle, aircraft and other transportation	8 programmes
2. Construction	15 programmes
3. Building and user service	3 programmes
4. Animals, plants and nature	9 programmes
5. Body and style	3 programmes
6. Human food	10 programmes
7. Media production	7 programmes
8. Business	7 programmes
9. Production and development	31 programmes
10. Electricity, management and IT	7 programmes
11. Health, care and pedagogy	4 programmes
12. Transport and logistics	7 programmes

Source: Danish Ministry of Education. www.uvm.dk

Table 4, Unemployment rates among entrants to the labour market from different educations

	2007	2011	Change 2007-11
VET programmes			
Pedagogy	9,8	32,3	22,5
Graphic	14,0	27,0	13,0
Technic industry	8,5	18,1	9,6
Business	2,6	12,8	10,2
Health	2,0	11,9	9,9
Iron/Metal	1,9	8,9	7,0
Food	1,4	8,8	7,4
Service	2,8	8,0	5,2
Construction	0,6	7,5	6,9
Agriculture/fishery	1,3	6,8	5,5
All VET programs	2,2	10,6	8,4
Short cycle higher education	6,3	16,1	9,8
Bachelor	3,5	15,3	11,8
Master	10,4	19,2	8,8

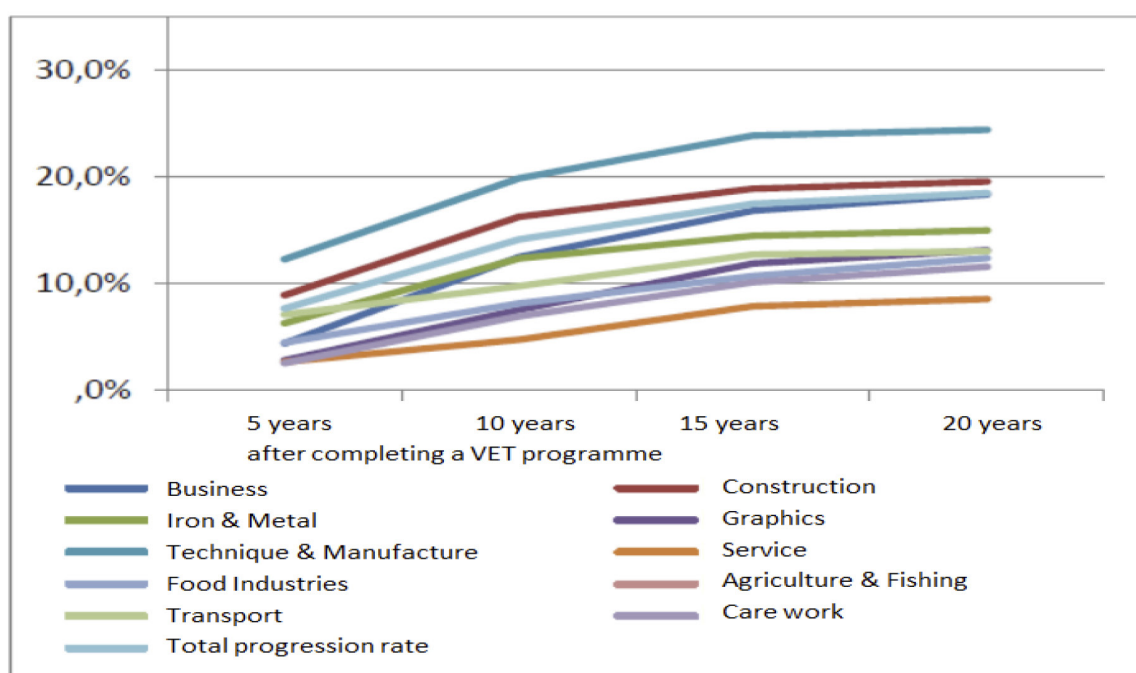
Data source: AE Rådet 2013

Table 5. Average age of students completing a vocational programme 2003-13

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Basic course	21,8	21,7	21,8	21,9	21,9	21,8	21,6	22	22,3	22,8	23,4
Business	25,4	25,3	25,4	25,1	25,2	25,3	25,6	25,9	25,8	25,7	25,6
Motor vehicles, aircraft	22,8	22,5	22,4	22,7	22,7	22,8	22,7	23	22,8	22,6	22,6
Construction	24,9	24,5	24,4	24,5	24,6	25,1	25,4	24,9	24,3	23,8	24,5
Media production	27,2	26,9	27	26,9	26,5	25,8	26,2	25,4	25,3	25,7	25,7
Production/development	27,7	27,3	27,2	26,9	27,2	27,8	28,1	28,2	27,7	28,4	29,3
Electricity, control, IT	24,8	24,5	24,4	24,7	24,4	24,4	25	25,8	25,9	25,4	25,4
Transport, logistics	31,1	32,4	31,8	32,1	32,5	33,8	34	36,5	37,7	38,2	39
Health, care, pedagogy	34,7	33,1	33,3	33,1	32,5	31,7	31,3	33,6	33,7	33,3	32,3
Building/user service	42	42,5	44,4	42,8	43,3	42,2	42,3	41,9	42,1	42,7	42,6
Animals, plants, nature	25,5	26	26,2	25,9	26	25,9	25,7	24,3	24	24,7	24,1
Body and style	23,9	24,1	24	24,2	24,1	23,9	24	24	23,8	23,5	23,4
Human food	26,1	26	25,6	25,3	25,3	25,4	25,3	24,9	25	25,2	25,3
Other Vocational	24,5	23,9	24,8	25,4	25,7	26	26,9	28	27	26,8	26,4
Total	27,9	27,6	28	27,8	27,5	27,4	27,4	27,9	28,2	28,5	28,4

Data source: <http://statweb.uni-c.dk/Databanken/>

Figure 15. Transition rates from vocational education to higher education in Denmark



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