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

The current state of the challenges for VET in Sweden

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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
Content

1. The Swedish VET-system: Toward increased heterogeneity .................................................. 5

2. Recent changes in the institutional architecture of initial VET ........................................... 8
   The school based rationale: Finalizing the university-oriented VET-system .................. 8
   “The market turn”: Decentralization and the emergence of independent schools .......... 10
   “The partnership model”: Innovations in-between school and the world of work ........... 11
   A revival of apprenticeship within the educational system .............................................. 12

3. Current challenges in bridging initial VET to the world of work ...................................... 15
   School-to-work transitions in the university oriented VET-system ............................... 15
   School-to-work transitions in four different vocational tracks .................................... 17
   Male-dominated technical and industrial vocational tracks ......................................... 17
   Female-dominated vocational tracks to the health and care sector ............................. 18
   Initial VET for the service sector ................................................................................. 19
   Hybrid VET-programs oriented to the Media and Culture sectors .............................. 21
   The challenge to involve the labour market partners in initial VET ............................... 22

4. Current challenges in bridging initial VET to higher education ...................................... 24
   Transitions between initial VET and post-secondary education .................................... 24
   Slow transitions to higher education and higher vocational education ....................... 25
   Different vocational tracks affect transition to higher education ............................... 25
   The case of independent vocational schools .................................................................. 25
   Decreased enrollment to HE since 2011 – but increased young applicants .................. 26
   The 2011-reform: The revival of a tracked system ............................................................. 27

5. VET as youth politics for social inclusion: A parallel story ............................................. 29

6. Trade-offs and dilemmas in VET: Final comments ............................................................. 31

Appendix ................................................................................................................................. 34

Literature .................................................................................................................................. 40
List of tables

Table 1. Labour market partners’ involvement in VET ..............................................................22
Table 2. National programs at upper secondary school level since 1991/1992 .........................34
Table 3. National programs at upper secondary school level since 2011 ..............................34
Table 4. Transitions from initial VET to Higher Education 1991-2007: Academic programs
    and Vocational programs (Percentages)................................................................................35
Table 5. Transition rate to Higher Education for upper secondary school graduates within
    the years 1999/00 – 2008/2009: Share by program and three selected vocational fields .....36
Table 6. Share of youth cohort that obtain final grade and eligibility for Higher Education:
    Vocational and Academic programs, 2006-2011 .................................................................38
Table 6a. Distribution of women and men in the vocational programs 2013/2014.......................39
Table 7. Highest level of education among parents of new students in grades 1,
    upper secondary school, 2013. Vocational and higher education preparatory programs.......39

List of figures

Figure 1. Transition from upper secondary education to higher education 2011/2012 ..........27
Figure 2. Transitions from initial VET to working life 2012/2013..........................................35
Figure 3. Beginner students in upper secondary school 2001-2012
    Shares in percentage of students, different types of educational programs.......................37
1. The Swedish VET-system: Toward increased heterogeneity

Characteristically vocational training and education in Sweden are treated as if they are largely of a homogeneous character. In large-scale international comparisons (e.g. Lauglo, 1993; Cedefop, 2013), Sweden provides a perfect illustration of a state-regulated school-based model in which initial vocational training and education are embedded in the comprehensive education system. By the late 1960s, vocational education in school settings had gradually become a dominant path to a vocation in Sweden, pushing workplace learning and apprenticeship aside. By international standards (Nylund, 2012), vocational education in Sweden has been characterized by several distinct features such as: the extensive space accorded to general subjects (Swedish, social studies etc.), the low priority given to the creation of “ready-trained” workers, and the government’s steering role. In addition, the Swedish education model is widely associated with a long tradition of egalitarian policies and integration-philosophy as an organizing principle. In all, a strong emphasis on mainstream schools as the main training area can be seen from these long standing policy priorities.

However, the picture becomes more varied and complex if we take a closer look into different forms of initial-VET that co-exist in Sweden. The perspective on initial VET in Sweden has largely been that VET should provide vocational education and training through a single integrated national education system. Historically, however, Swedish VET-system has changed more than once and the labor market partners’ influence on VET has fluctuated over time. For instance, during and after Second World War (1940 -1955), the main labor market parties (LO and SAF) were actively involved in negotiating a system for qualified workplace training regulated by collective agreements as a complement to initial school-based VET (Olofsson 2005). For a number of reasons, such ambitions have never been materialized in a fully-fledged apprenticeship system as in countries with a ‘dual’ VET-system (e.g. Denmark, Germany).

Yet, school-based VET within upper secondary school is by way the largest VET-form in Sweden. In addition, supportive educational systems of second chances are set up (e.g. VET for adults, Folk High schools) with links to active labour market policy. It also implies that initial VET in the upper secondary schools has a broader aim than merely preparing students for working life immediately after education or preparing them for further studies in higher education. As the goals is expressed in the Education Act:

> The upper secondary school should provide a good foundation for work and further studies and also for personal development and active participation in the life of society. The education should be organized so that it promotes a sense of social community and develops students’ ability to independently and jointly with others acquire, deepen and apply knowledge.¹

Although these different and partly competing goals have been formulated within VET-policy

during the last decades, the priorities given to each of them in relation to each other have varied over time, and may also differ in practice when we consider different forms of VET.

However, some of the increasing heterogeneity of the initial-VET system can be attributed to recent changes in educational policy as well as governmental structures. In the first part of the paper (section 2), the recent development (1991 onwards) of the institutional architecture of initial VET will be described. Since the early 1990-reforms of upper secondary school, the Swedish educational system has become increasingly characterized by extensive marketization, privatization, and decentralization of state governance, becoming a responsibility for the municipalities. These tendencies have to some extent contributed to the loosening up of the school-based model of VET. Moreover, in the field of initial VET, they have opened up for a revival of different kinds of independent vocational schools and also partnership schools. The 2011-reform also contributed to the strengthening of connections between initial VET and working life, and by reintroducing apprenticeship. Taken together, the picture of Swedish VET becomes more differentiated when the emergence of apprenticeship, independent schools and partnership schools is considered. Perhaps most importantly, initial VET is no longer seen as being solely the realm of public upper secondary schools, politicians, administrators and teachers.

Furthermore, different forms of initial VET can be distinguished on the grounds of their different connections to the labor market as well as their historical origins in various vocational sectors and branches. What is generally labeled as school-based vocational programs also involves variations. As will be demonstrated in chapters 3-4 in this report, the interplay between different vocational programs and various labour market sectors differ considerably. These differences are also likely to be consequential for young peoples’ educational and occupational carriers. For example, while some VET-programs have been more profiled towards higher education preparations (e.g. the Art program, the Children and Recreation program), other VET-programs are distinguished by their close connection with apprenticeship systems in the target vocational field (see section 3.2). This is particularly the case in several of the technically oriented VET programs such as energy, electricity and building and construction. In the later cases, already at the upper secondary school level, the responsibility for the education is shared between school and companies within the trade. In the upper secondary construction program, for example (Berglund, 2012), a two-three year period of apprenticeship in the construction industry begins immediately after graduation. The upper secondary education is thus closely integrated with the building trade’s apprenticeship system.

Moreover, different forms of vocational training for young people can be distinguished with regard to its connections to a curriculum-based education system versus competence-based on-the job training in various labour market segments that may or may not result in recognized qualifications. The latter often functions as a complement to upper secondary education: it aims at entry-level skills in a wide array of specialized occupations in the service sector (e.g. bakery, sales), and the handicraft sector (e.g. hairdressing, gold smiths, florists, furniture-design). However, company-based training in these heterogeneous sectors has received much less attention than vocational education for industry sector in Sweden (but see Andersson Gustavsson, 2002).

To take one illustrative example: To become a certified hairdresser, there are three alternative roads for a young person: 1) a completed handicraft program at upper secondary school plus company-based apprenticeship; 2) specialized vocational training for hairdressers at an in-
dependent school plus company-based apprenticeship; 3) apprenticeship (three years) at a company as a “trainee” (mainly competence-based). Although there are many good local examples of well-functioning links between initial VET in schools and such company-based training, there are also inbuilt institutional tensions between curriculum-based VET and company-based training, in particular in the handicraft sector (for an overview see Andersson Gustafsson, 2002). Many handicrafts are deeply rooted in advanced competencies and occupational identities accumulated through work experience over generations. In the gymnasium, these competencies and occupational identities have to a large extent been pushed aside in favor of the school-rationale and general education.

The variety of VET becomes even more obvious when considering that folk high schools too provide vocational education and training. While those schools primarily have been engaged in liberal education, ever since their early days they have also offered training in work related skills (Lundahl & Nilsson, 2007). According to Landström (2004), VET arranged by folk high schools has often been treated as something negligible; however, there are a great variety of VET-courses and a great number of folk high schools that offer such courses. In recent years folk high schools have offered VET courses in the fields of, for instance, culture (music, visual arts, theatre, media), leisure (tourism), and particularly in the health and social care sector. Vocational training at a folk high school can lead to different occupations including journalist, treatment assistant, youth recreation leader, cantor, personal assistant, sign-language interpreter, educator in theatre, dance, health and sports (Landström, 2004). Some courses are at a tertiary level, while others are at the upper secondary level.

The present report is based on a review of previous research and it expands an earlier report2 (Olofsson & Persson Thunqvist, 2014). By highlighting the various forms of initial VET that have been established in Sweden during the last decades (1991 and onwards), the present report will illuminate how different challenges have been tackled in various ways. What are the experiences of different VET-tracks in providing access to higher education as well as work-based learning and skilled employment? In addition, in accounting for these VET-forms, we will point out the possibilities for change within the existing educational model. The ambition is to go beyond a static description of the “theoretically school-based regime” in Sweden and explore the potentials for institutional change.

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2 This report provided a long-term view on historical and institutional changes in the Swedish model of vocational education and training during the 20th century. This change can be seen as a movement from unregulated apprenticeship to regulated, school-based vocational education in upper secondary schools (see also Olofsson, 2005).
2. Recent changes in the institutional architecture of initial VET

In this section, we will describe school-based VET and the emergence of independent schools, partnership schools and apprenticeship, in relation to recent changes in the institutional framework of initial VET. The foci will mainly be the institutional features such as the interplay between the world of school and the world of work, governmental structures and VET-policy (educational reforms), as well as the underlying principles of the VET-system. To ease the complexity of this task, the disposition will be chronological, from 1991 and onwards.

The school based rationale: Finalizing the university-oriented VET-system

In 1991, the Swedish parliament decided to radically change the upper secondary school including the VET-system. The reform took place gradually and was fully implemented in 1994 (Nilsson, 2009). The central aim of the 1991-reform was to create small numbers of vocational and academic study programs with broad scope that would allow for gradual differentiation and specialization in order to promote flexibility, lifelong learning and access to higher education (Lundahl & Olofsson, 2014). The role of working life orientation and preparation was redefined in the new national curriculum for compulsory school and for upper secondary school and municipal adult education (Olofsson, 2005). More attention was paid to the quality of subject content and academic preparation. The reform comprised the introduction of 17 3-year national educational programs, 14 of which were vocational (Appendix, table 2). The upper secondary vocational education was extended to include a third, mainly theoretical, year, which made the upper secondary vocational program students eligible for higher education too. In this way, the gap between theoretical and vocational study programs was reduced. The VET-programs were typically 85% school-based and contained at least (or sometimes as best) 15 weeks at a workplace outside the school, so-called workplace training (APU, i.e., Arbetsplatsförlagd utbildning).

The increase of the elements of general education in the vocational programs weakened the direct link between vocational education and the labour market. Another challenge that was almost immediately recognized in the university-oriented upper secondary schools was a major problem with student throughput, particular in the vocational programs. According to the latest statistics from the National Agency of Education (2012), 23% of students did not meet the requirements for a final certificate after four years of study; and 36% did not achieve basic eligibility for higher education after four years (The National Agency of Education, 2012, comparative figures; Olofsson & Persson Thunqvist, 2014).

The introduction of the University-oriented upper secondary schools actualizes the question if the early 1990-reforms represent a different route to manage the inbuilt challenges in the field of VET compared to previous ones. Research on Swedish VET-policy (e.g. Olofsson, 2005; Lundahl et al, 2010; Nylund, 2012) reveals both similarities and differences from the reforms since the 1960s. Notably, a particular reform was initiated to handle similar problems and dilemmas addressed in the previous reform cycle: that upper secondary school did not meet the demands for
flexibility and lifelong learning and risked creating dead-locks (Lundahl et al, 2010). The need to reduce class and gender bias was underlined.

Research on the impact on lifelong learning on VET in Sweden illuminates how the vision of lifelong learning became not only an integrated component of initial VET but also a guiding principle for the provision of VET across a full continuum of educational contexts in Sweden (Lindell & Abrahamsson, 2002: 17). Lifelong learning also reflects higher education policies and the government’s objective that 50% of the age cohort participates in higher education (when 25 years of age). In the context of continuing VET, the model of recurrent education was replaced by the broader concept of lifelong learning. Within policy discussions, the concept of lifelong learning was first and foremost motivated as a necessity in the new economy with its high level of job turnovers implicating continuous life-transitions.

In practice, however, the major shift in the educational landscape comprises an expansion of the educational carrier by increasing the time young people spend within different educational institutions, from early childhood to adult-life, before they finally enter working life. The development of a prolonged educational carrier partly runs counter the ideas of recurrent education where learning is distributed over the life span in a continuous alternation of education, work and civic activities (Lindell & Abrahamsson, 2002: 9).

As in previous reforms from the 1960s and onward, economic imperatives were central also in the early 1990-reforms (Lundahl et al, 2010). The need to modernize upper secondary education to be able to meet the requirements of a rapidly changing working life was stressed. In general, the integrated school-based system in Sweden was made possible by the capacity of the state and the social partners to define a consensus in matters of educational policy and to translate it into political practice (Lundahl et al, 2010). In particular, the Swedish Employers’ Confederation (SAF) and the Swedish Confederation of Trade Unions (LO) have played a decisive role in shaping VET-policy. For instance, both organizations actively promoted the early reform of 1991, arguing that modern workers needed more theoretical education but also workplace training. According to Lundahl (1997b), contrary to the common understanding of vocational work as largely practical, leading employer representatives argued that the industries’ competence requirements are multifaceted and in many ways cases they involves sound knowledge of general subjects.

However, in the report examining the need for a reform and in drafted detailed proposals (commissioned by the government commission), it was suggested that the upper secondary school should do more than to meet the demands of the contemporary economy. The importance of providing students with Bildung, defined as a person’s cultivation and empowerment to live and develop freely, was emphasized (SOU, 1992: 84, p. 57). The overall ambition to narrow the gap between vocational and general education, offering a broad education and Bildung to every student, could be interpreted as a continuation with the general integration philosophy since the 1960s. However, the 1991 reform was more anchored in liberal values and visions of an individualized school with diversified philosophy rather than philosophy of uniformity (see also Olofsson & Persson Thunqvist, 2014). For example, providing the individual student more freedom of choice was emphasized more strongly than during the previous rounds of reforms.
“The market turn”: Decentralization and the emergence of independent schools

As mentioned above, in parallel with the 1991 reform of upper secondary school, the Swedish educational system was subject to governance reforms intended to decentralize the responsibility of upper secondary education to the municipalities and promote management by objectives and results and choice (Lundahl & Olofsson, 2014). Municipalities were given increased autonomy, new roles as self-governing units and a considerable freedom to act. Moreover, the educational development when upper secondary schools compete for students has created an educational mix that partly results from the students’ choices and preferences in a system of free-school choice. The challenge that emerged is to match students’ preferences and the needs of the labour market. Several observers have recognized a mismatch between the mix of different specialized vocational programs and the needs of the labour market (for an overview see Nordström Skans, 2012). A related challenge is to find ways of dimensioning the vocational programs to combine students’ interest and labour demands. Programs with a strong appeal to students’ interests, such as the former media programme, tended to be over-dimensioned in comparison to the needs of the labour market. This is one of the reasons of the termination of the Media programme in the latest educational reform 2011 (see section 3.2). In addition, some observers (e.g. LO, 2006) claim that many of the vocational programs are under-dimensional.

The hegemony of the municipalities in the educational market has been challenged by an additional educational reform. In the 1992, the private school reform brought about greater possibilities to establish private schools that did not fall under the municipal authority. It is the National Agency for Education that decides whether a private (or “independent”, official term) upper secondary school qualifies for state financing or not. Initially, this resulted above all in the establishment of so called industry schools where big enterprises started schools in close connection to their production sites. Examples are Volvo, ABB, SAAB-Scania, and Perstorp where these programs soon became popular (Lundahl, 1997b; Nilsson, 2008). Private upper secondary schools in general became more popular after 2000 and in 2008 about 19% of upper secondary school students in vocational programs attended private schools. During school year 2012/13, 25% of upper secondary school students attended independent schools (The National Agency of Education, 2011).

Taken together, these educational reforms point to several, partly contradictory consequences relevant to the initial VET. On the one hand, the increasing diversity in the initial VET-system promotes flexibility (e.g. students could choose and sandwich between a large number of VET-courses). The degree of specialization of different vocational programs and opportunities for facilitating workplace learning as well as higher education preparations vary across municipalities and independent schools. Such opportunities are highly dependent on the links they have established with private and public organisations, the local business community, and universities. On the other hand, in the absence of regulatory frameworks and structures for cooperation between schools, the labour market and the university sector (se sections 3–4), receivers (e.g. companies, universities and other organizations) of students from this diversified upper secondary school system can find it difficult to access the students’ actual competences and capabilities. Indeed, this fragmented educational system can be difficult to overview for students, parents, teachers,
and carrier counsellors as well (e.g. Lundahl & Olofsson, 2014). Hence, since the 1990s, the de-centralized school-system has experienced certain difficulties and challenges, partly because the educational market tended to focus more on what schools can supply, rather than what the labour market as well as universities demand (Lindell & Abrahamsson, 2002).

“The partnership model”: Innovations in-between school and the world of work

Although the aforementioned reforms largely have been driven by decisions made by the government and other state bodies, there is also an opposite tendency where working life representatives have involved in the field of initial VET. In this section, we will describe how the initial VET is understood when the opportunities for vocational learning that have been created outside the gymnasium are taken into account. The development of Technical Colleges (Teknikcollege) and Healthcare Colleges (Vård- och omsorgscollege) is a case in point where working life representatives have initiated far-reaching cooperation with each other and with schools. Importantly, the partnership model points to a rather different view on VET compared with a market-rationale that submits VET to the short-term requirements of the individual business or student. Rather, education and training are viewed in terms of partnership implicating a broader network thinking that involves workplaces, educational institutions, individuals and a variety of private enterprises and community organisations.

Technology-college is developed and run by the Industry council in Sweden, a partnership between leaders from the industry sector employer- and employee-organizations. According to the first paragraph in the statutes of the National Association Technology College, the term Technology-college refers to “competence centres offering youths and adults industry-relevant educations at all levels”. At a regional level, municipalities, educational institutions and companies cooperate to enhance the attractiveness and quality of technically-oriented courses for industry needs. Regional companies play a key role when designing courses and programs. The overall aim is that future workers will have the skills needed in a global market. Taking the role of an intermediary organisation promoting cross-sectorial cooperation (Tillmar, 2012), technology-college is similar to the American concept community-college (cf. Hallqvist, 2005). The National Association secures a certain character of the regional by using a system for certification. Thus, at a national level the organization certify regions and local providers of VET. Today there are about 150 certified colleges in Sweden (Teknikcollege, 2014). The following ten criteria must be fulfilled by the organization to become certified as a technology college:

- A regional perspective, including cooperation between municipalities, industrial companies and providers of education
- A developed infrastructure, including well established paths for the transition between school and workplace
- A distinct profile,
- Cooperation with working life
- Quality control
- Creative and stimulating learning milieus
• High quality equipment and machines.
• Intact work days.
• Team work and cooperation between disciplines.
• Learning through work

A few years later this college-concept was followed by one located in the care sector, labelled Health and Care-college (HC-college). In its statutes, HC-college is defined as “a non-profit organization with the aim to promote regional and local initiatives securing the supply of personnel and competence in the health and care sector” (Vård- och omsorgscollege, 2014). Members of the organization are the Swedish Association of Local Authorities and Regions (SKL), The Association of Private Care Providers, Pacta, Svenska Kommunalarbetareförbundet and Arbetsgivarförbundet KFO. The arrangement is rather similar to technical college in that the national association certifies local health and care colleges. Today there are 18 regional and 70 local VO-colleges.

A revival of apprenticeship within the educational system

Workplace learning and apprenticeship have been given an upgraded priority in recent educational reforms. The attention given to the high numbers of youth unemployment, the generally weak connections between upper secondary school and work life, and high levels of drop outs from school, has resulted in renewed reform efforts concerning upper secondary school. In 2011, the Swedish government has responded to the challenges outlined above with a series of new reforms. These reforms have been collectively referred to as the GY11 reform. Two of the main goals of the 2011-reform were to increase the students’ employability and to allow stakeholders to exert more influence on the education system.

Since autumn 2011, the earlier system of vocational education (i.e. integrated upper secondary school) has been replaced with a modified system with three broad orientations: (a) general education, mainly for those intending to pursue higher education; (b) school-based vocational programs; (c) workplace-based apprenticeship. All programs lead to a diploma. The new upper secondary school comprises 18 national programs, 12 of which are vocational (Appendix, table 3). The most significant change concerns the contents of vocational training. The reformed system aims to ensure that VET students acquire more specific vocational knowledge and skills. Vocational program students have the option to choose an apprenticeship track. Since 1970s onwards, there have been a number of small-scale experiments with apprenticeship (Olofsson, 2014), and in 2008, a pilot upper secondary apprenticeship project was introduced (SOU, 2010). At present, from 2011, apprenticeship is a regular feature of vocational training. Workplace-based Learning (“Arbetsplatsbaserat Lärande, APL”) should be included in all vocational programs for a minimum period of 15 weeks. On the other hand, a student attending an upper secondary apprenticeship education has to carry out more than half of this as workplace-based learning. According to the National Agency of Education (2011), APL means that students carry out parts of their education in one or more workplaces outside the school.

Besides these changes initiated by the government, the trade unions and employer organizations have developed arrangements that encourage a particular kind of apprenticeship-employ-
ment. IF Metall and Teknikföretagen signed in 2010 an agreement regarding a form of employment called “job-introduction” (yrkesintroduktion). This makes possible for people between 15 and 24 with no professional experience for a particular job, to learn a job with support from a tutor while working and receiving a salary. By encouraging industrial companies to offer special introductory employment to young people, the overall purpose was to promote a change of generations in the industry. According to this agreement, the employee gets wages equal to at least 75 percent salary in employer collective agreements, depending on how much of the working time is tutorial or training. At least 15 percent of the time must consist of training or supervision. The period of employment is limited to 12 months, with possibility of extension for up to 12 months.

This agreement was followed by similar agreements between other trade unions and employer organizations and from 2014 there is also a public funding for this kind of employment in the form of a wage subsidy and a supervisor support (Förordning 2013:1157 om stöd för yrkesintroduktionsanställningar). The employer who hires will thus receive a financial support, however, the point of departure must be a central collective agreement regarding the particular employment “job introduction”. They vary for different branches.

Notably, from an analytical perspective, the central goals for apprenticeship can be associated with particular research perspectives on workplace learning. The policy-text regarding the new apprenticeship program in the gymnasium, is quite in tone with the theoretical concept of “situated learning” developed by Lave and Wenger (1991) and Wenger (1998). The purpose of students spending half of their study time at different workplace settings concerns not only the possibilities for the students to apply theoretical knowledge under real work-related circumstances. One central goal is that “students should become a part of the vocational culture and community at a workplace and developing a vocational identity” (Skolverket, 2011, 3). The intention is that the students will be socialized in the profession in ways that are difficult to achieve in school-based vocational training only. This approach on apprenticeship aligns well with Lave and Wenger’s perspective on how relations of legitimate peripheral relations and community of practice underpin learning and identity formation (Lave & Wenger, 1991).

At the same time, a critical question for such workplace learning is also how supportive institutional framework will work in order to promote expansive forms of learning rather than restrictive ones (Fuller & Unwin, 2009). As in the case of school-based vocational training (e.g. Persson-Thunqvist & Axelsson, 2012), tensions and contradictions between the school-based rationale and the rationale of the workplace settings are likely to occur also in the new apprenticeship programs. Similar as school-based vocational training, APL is curriculum-based. Special appointed vocational teachers (Lagström, 2012) are given an important role to mediate between the school and the labour market, and to promote social inclusive goals.

Moreover, the government policy documents also put rather high demands on the curriculum of work-based learning within the initial VET. Although the aim of training is to impart familiarity with an occupation or vocational area, training according to the policy documents has to be more general than in-service training (SOU, 2010). Also, the students have to integrate informal and formal learning when learning from work, to enhance their analytical abilities, learn to apply a holistic approach towards their future profession, learn how to take responsibility for their work and learn to co-operate with other people in team-work. However, there is a gap between the in-
dented curriculum and the actual curriculum. A recent evaluation of the new apprenticeship track (Skolinspektionen, 2013) reveals a numbers of shortcomings with respect to the implementation of the intended curriculum. The report concludes that schools seldom work systematically to improve the quality of workplace learning (ibid, p. 8). In order to achieve the multifaceted demands on workplace learning, one major issue also concerns the development of institutional frameworks for cooperation between schools and the labour market partners (including the unions). We will get back to this issue soon (section 3.3.).
3. Current challenges in bridging initial VET to the world of work

The current capacity of the Swedish initial VET-system in promoting the journey for young people from school to working life and employment can be described and analyzed both in terms of homogeneity and heterogeneity. One the one hand, looking at the overall integrated school-based VET-system in Sweden during the time span from 1990 and onwards, the generally weak connections between the world of school and the world of work stand out as a major challenge.

One the other hand, the picture becomes more differentiated and nuanced when we compare different subsystems within the initial VET in Sweden. This is, of course, partly a matter of the analytical level in question. In comparative research, it is helpful to use ideal types in order to discover path-dependencies. Research on the university-oriented VET-system in Sweden has been rather extensive since the 1991-reform. Based on this research, the next section will illuminate how school-to-work transitions in many ways follow a path-dependency in relation to school-based VET. Presently, the recently emerged partnership-schools and new apprenticeship tracks are not included in national statistics as separate categories.

In addition, however, we will also point at important differences between the four largest vocational tracks within initial VET which are commonly downplayed in statistical analysis on aggregated level. The interplay between initial VET and the labor market might differ in various labor market sectors. These differences have potential consequences for vocational students’ educational and vocational carriers.

School-to-work transitions in the university oriented VET-system

Until the 1990s, unemployment rates among young people in Sweden were comparatively low. Longitudinal research on school-to-work transitions before the 1991-reforms reveals that such transitions were rather smooth even for the majority of young people without upper secondary school education. Young people that had considerable difficulties in compulsory school entered the regular labor market no later than age 20 (Murray, 1997). The societal context for these findings is the long economic boom of the 1980s.

During the last decades, however, school-to-work transitions in Sweden to a large extent resemble international trends observed in many other western countries (Lundahl & Olofsson, 2014). The expansion of education, the increase of segmentation in many labor market regimes as well as high youth unemployment generally prolong the young people’s journey to permanent positions in working life and decrease social mobility. The average age of establishment in the labor market increased from 21 years in the early 1990s to 28 years in 2006. In a European perspective, youth employment is high in Sweden, and Sweden has one of the EU’s highest percentages of young people (aged 15-24 years) in temporary employment: in 2011, it was 60 % while the EU average was just over 40 % (European Commission, 2012). As a consequence, working life in Sweden as in many other Western countries does not function well for young people without upper secondary education or for the low-skilled in general. The vast majority (over 98 %) of Swedish compulsory school completers directly continue their education at the upper-secondary
school level. The proportion of Swedish students who complete their upper secondary education (before the age of 25 years) is slightly below 75%. This number is similar to the graduation rates in countries such as Norway, Denmark, USA and Canada (Lundahl & Olofsson, 2014: 3).

In a Nordic context, school-to-work transitions are dependent on different VET-regimes in the Nordic countries. These countries have developed similar universalistic welfare systems and well-regulated labor market, but they also have different VET regimes (e.g. Helms Jørgensen, 2004; 2014). The upper secondary education system in Sweden introduced in the 1990s was substantially different from other Nordic countries. This is still true today. Drawing on the previous analysis of the school-based VET system (section 2), we identified at least five inbuilt institutional features that more or less differentiate school-to-work transitions in Sweden from other Nordic countries, in particular Denmark and Norway. These features are: 1) in Sweden, apprenticeship has had a minor position in the school-based VET-system compared to the dual system where the apprenticeship tracks are closely linked to the labour market (Denmark) or where they constitute an integrated part of upper secondary education (Norway); 2) the labor market partners has had a quite different role (see further section 3.3 below); 3) vocational education comprises a few broad vocational fields/programs rather than many specialized tracks as in Denmark; 4) In Sweden, differentiation between academic and vocational tracks is relatively low (whereas Denmark, for instance, has a dual system); 5) decentralization has been mostly profound in the Swedish educational system compared to other Nordic countries.

Comparative statistics (for overviews see e.g. Bäckman et al, 2011; Lindahl, 2011) recurrently reveal that dual vocational education with extensive apprenticeship make the school to work transition smoother. Transition seems to work best in Denmark, followed by Norway, Finland and finally Sweden. Apparently this follows the extent of the apprenticeship component in the vocational education in the respective country. But it is important to note that the apprenticeship system in Denmark is supported by specific institutional arrangement in the labour market (e.g. active involvement by employers and by trade unions). As described above, Sweden undertook a major reform of upper-secondary education in 2011 with the aim of strengthening the vocational content and reintroducing apprenticeships. However, since a vocational training system is not easy to establish, it will take several years before the long-term effects of the reform are visible in the labor market.

In contrast to the dual system, the university-oriented VET-system is associated with few educational dead-ends and good opportunities for further education beyond the secondary level. In addition, there is a large system of adult education that gives second chances for education for early school-leavers. A trade-off is that those who did not intend to continue with higher education lost their possibility of following a less-scientific, vocation-oriented education (Hall, 2013). Moreover, it is quite evident that boundaries between different social groups in the academic and vocational tracks have not disappeared as a result of previous reforms. The family’s educational and socioeconomic background continues to play a decisive role for young people in their educational choice. Approximately 25 per cent of a cohort do not finish their upper secondary education. This also affects youth unemployment rates. In international comparative research, however, Swedish drop-out rates as well as youth unemployment are often
In research perspective, while studies on school failure, drop-outs or the effects of incomplete upper secondary school comprise a well-plough furrow in Sweden (for overviews see e.g. SOU, 2010; Hall, 2013), Swedish research on the role of upper secondary VET in skills provision in different vocational areas as well as in supporting young people to establish themselves and to combat social inequality seems to be rather scarce. Next, we will turn to a comparison of how school-work transitions work in different fields of initial VET.

School-to-work transitions in four different vocational tracks

Based on national register-studies and case-studies, the following section reveals different transition patterns and challenges related to the four largest vocational areas in Swedish initial VET: 1) technological and industrial fields; 2) health and social care; 3) service and business; 4) media and culture. By doing so, specific institutional features in the interplay between initial VET and working life are accounted for. They are constitutive of some of the various premises affecting young people’s vocational carriers. Transitions to higher education in these four tracks are described in section 4.

Male-dominated technical and industrial vocational tracks

A rather robust and partly gender-dependent transition pattern during the last two decades is that vocational students in male-dominated technical and industrial programs generally have the fastest access to the labour market. Students in vocational tracks, such as energy, electrical engineering, vehicle- and transport, building and construction establish themselves more quickly in permanent positions than do students in the female-dominated programs. For instance in 2012, approximately 75% of students who have finished their energy-program education were established in working life three years later; 88% including those with temporary employment (Statistics Sweden, 2012).

Wages are also generally higher in male-dominated technical and industrial branches compared to female-dominated branches such as health and care and social service. At present, for instance, in average, after a successful completion of a vocational program oriented to electrical engineering or construction work, a male electrician, a construction worker or a carpenter are likely to have an approximately similar income as a female nurse or a female teacher with higher education (Statistics Sweden, 2014a).

In addition to gender-dimension, other historical and organizational features differentiate these educational programs from others. Many of these programs are designed for well-defined occupations and with established certification systems tend to promote smoother transitions between the gymnasium and the labour market. The certification systems and qualification profiles also support mobility and access to skilled jobs in different companies within these occupationally segmented

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overstated. This is due to various Sweden-specific factors and statistical issues. One peculiarity is that it is not possible to enroll in upper secondary school after the age of 20 in Sweden. A large part of those who drop out take up their education again in e.g. adult education or Folk high schools.
labour markets (Statistics Sweden, 2014b). Building and Construction, as well as electrical engineering are characterized by a long standing close co-operation with their respective occupational trade and by apprenticeships (aiming at entry-level skills) regulated by collective agreements. In addition, in the electricity trade, a complete upper secondary school education with a passing grade in all core subjects is required as the basis for continued apprenticeship employment.

Research (case-studies) on the technically oriented VET programs (e.g. Härdig, 1995; Berglund, 2009) illuminates particular challenges for these vocational tracks. Vocational training and apprenticeship in the Building and Construction seem to have been more influenced over time by labour market sectorial conditions than the historical development of upper secondary school. Mismatch between school-based vocational education and the apprenticeship-system might preserve skills and conditions which already exist in working life (Berglund, 2009). For instance, apprenticeship-system is marked by a culture of masculinity (Paechter, 2003) that creates difficulties for these few females who do choose this track (Berglund, 2009). Close-up studies of company-based training (Härdig, 1995) reveal tensions between the school curriculum and the logic of production: economic factors (e.g. high production tempo) are often more decisive than training needs. “Old timers” might use trainees as cheap labor. However, some occupations and forms of on-the job training seem to be associated with higher status and more complex and demanding tasks among students (e.g. carpenters).

Female-dominated vocational tracks to the health and care sector

Health and social care sectors constitute the largest vocational fields for female vocational students in initial VET. Men here are in minority. It is the Health and Social Care-program that comprises the formal qualification for an employment in certain vocations within the health and care-sector (including medical care, psychiatry, care of the elderly and people with functional impairments). Register-based studies of this vocational track covering transition patterns 2000-2008 (Ahlund & Johansson, 2011) reveal that both the horizontal and vertical mobility are rather high in a long time-perspective. A majority of females (80%; but only 56% of the men) that completed their vocational education in the health sector in 2000 were established in the targeting field by 2008. A rather large number of female population had complemented their VET-program with an exam from higher education (42 per cent) and many were employed as nurses. Compared to the technically-oriented programs, the speed of transition from school to established positions in the labour market is slower. According to Swedish statistics 2012, 39% of females and 49% of men were established in the labour market three years after graduation from this vocational track; 27% of the females and 22% of the men had a temporary position in working life.

Changes in school-to-work transitions since early 1990 onwards have to be contextualized both with respect to the 1991-upper secondary school-reform as well as the particular development trends within these labour market sectors. A major challenge for the female-dominated branches during the last decades is a mismatch between, one the one hand, declining numbers of vocational students, and, on the other hand, a demographic development with more elderly people and a high middle age among the employed, especially in the elderly care sector (Statistics Sweden, 2008; 2011a).
Before the 1991 reform of upper secondary school, vocational education geared toward the health and care sector (the care program) had high esteem and large numbers of applicants with high degrees from primary school. The attractiveness of the care program could partly be attributed to the fact that the students could be credited with the first year of nurse education at the university level. This possibility disappeared after the 1991-reform. At the same time, the care program became more academically oriented. The applicants in the new system tended to be more school-tired and had lower grades from compulsory school (Socialstyrelsen, 2006: 10). In addition, economic crisis has affected employment structures and working conditions badly (Socialstyrelsen, 2006) and contributed to the decline of the status of the Health and Care-program.

Moreover, the role of the university-oriented Health and Social Care program has been contested among different actors within the health and care sectors (Ahlund & Johansson, 2011: 5-11). These different positions are materialized in two partly competing recruitment traditions and strategies of employees (Qvarsell, 1991). One tradition with long historical roots in the local practice of care work is to learn on the job, in daily interaction with the care users, and to make use of the personal experience, i.e. to take care of children and old people, and to carry out a whole range of mundane activities such as cleaning. Neither of these social, personal and practical skills demand academically oriented vocational education. From this perspective, students from the school-based vocational programs are regarded as formally over-qualified, but not necessarily competent, for the actual jobs. The other tradition and strategy, emerging from the central, state-bureaucratic system, is to use a formal education system to gear persons into education for care work. The main argument for formal education is that modern care work needs to be anchored in a solid theoretical ground (e.g. in medicine and pedagogy) and a widely recognized national qualification framework that also support the professional legitimacy of the vocations. Nevertheless, in practice, formal qualification requirement often runs counter to the competence-based requirements at the local level. In consequence, there are many alternative routes to these vocations for young people beyond vocational education for care-work at secondary school-level. In fact, there is a considerable variation in the educational background among young people working in these sectors.

Initial VET for the service sector

The most common first job for young people is in the service-sector, particularly within trade, followed by the hotel and restaurant sector (Statistics Sweden, 2014). Transitions to working life from the three VET-programs, i.e. Business and Administration, Hotel and Restaurant and Handicraft (i.e. certain customer-oriented handicrafts) that are directed to the service sectors are rather high. According to Swedish statistics 2012 (Appendix, figure 2), approximately 73-80 % of the vocational students in these three programs had a job three years after graduation from upper secondary school.

Importantly, however, these transitions are fraught with a high degree of insecure temporary employments; approximately 32-36 % among the vocational students in these vocational tracks had a weak position three years after upper secondary school (Statistics Sweden, 2012). In the particular case of certain customer-oriented handicrafts it usually takes several years of compa-
ny-based training before vocational students are able to conduct an exam for a certificate and a permanent position. In general, however, the slow transitions to established positions can be explained by weak formal frameworks for cooperation between schools and the service sector, as well as strong polarization and segmentation in the service sector (e.g. Urban, 2013). While high status jobs associated with high quality-service production (e.g. ICT, business and finance) require higher education at bachelor level, young people’s first jobs after secondary school tend to be low skilled jobs in restaurants, hotels and trade. Such work settings are characterized by insecure employment conditions.

A related challenge is a mismatch between the vocational students’ formal qualifications and their actual jobs. A national survey study (Statistics Sweden, 2012b) revealed that approximately 40 per cent of the vocational students that completed upper secondary school 2008/2009 had a job in a different area than their vocational program was geared toward. About two of ten participants in the survey regarded that primary school would have been enough preparation in order to carry out their present job.

This above tendency is particularly characteristic to the service sector. Vocational students from Business and Administration have to compete for jobs in the trade sector with students from many other vocational programs as well as from higher education preparatory programs. However, formal qualifications from this program could potentially be beneficial for the students who aim to make a carrier in the trade sector. In the long run, they could advance to more established and demanding positions and jobs (e.g. as team leaders in stores or running own business). Case studies of workplace-training at stores and shops in the Business program highlight a selection-process where employers often select the most ambitious apprentices for further employment (Arnell Gustafsson, 2002). Research on the carrier prospects for young people in the service sector (for an overview see Urban, 2013) generally shows that work experience in low-skilled, temporary jobs does not tend to provide upward mobility. Instead, they may signal lack of qualification and skills. Hence, for those without formal qualifications, jobs on the periphery therefore risk becoming dead-end jobs with low wages, few career prospects, and unemployment.

Finally, carrier prospects seem to vary between young people with different educational and social background. As for the large restaurant and hotel-sector, a longitudinal case study (Urban, 2013) reveals that this sector constitutes an important stepping stone into other parts of the labour market for young people. The study covers the time span 2003-2008 and individuals aged 18-26 years who worked in the restaurant sector in 2003 (43.339 individuals in total). Moreover, the study shows that young people with Swedish born parents generally proceed to other sectors of employment while individuals with immigrant background to a larger extent remain in the sector. This is partly explained by the fact that immigrants tend to live in metropolitan regions where the restaurant sector is larger than in smaller cities and that they have parents as well as a wider infor-

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4 In fact, in 2012, transitions to the service sector were paramount in the following vocational programs: Food (34 % females/24 % men), Media (31 % females/19% men), and Art (26% females/19 % men), and Industry (19 % females, but only 3 % men), respective in the following higher educational programs: Natural Science (24 % females/19 % men), Social Science (31 % female/22 % men), Technology (31 % females/ 14 % men).
mal contact net of other immigrants that are employed in the sector. In addition, ethnic minorities are over-represented among the unemployed.

Hybrid VET-programs oriented to the Media and Culture sectors

When accounting for school-to-work transitions since the 1991-reform, it should be noted that several of the large vocational programs have had a stronger orientation to higher education preparation (in particular Child and Recreation, Media and Art). In contrast to the three vocational tracks described above, these programs have had considerably lower transition rates from school to work (Skolverket, 1998; Statistics Sweden, 2012). However, transition rates to higher education are among the highest over time compared to the other vocational programs (Appendix, table 4) and paramount in independent vocational schools in larger cities. Given that the media and culture sectors are highly competitive as well as marked by high unemployment, higher education is generally a necessity in order to get an attractive job such as a journalist, a film-director or an art designer (see e.g. Employment Agency Media and Culture, 2012).

The hybrid Media program illustrates in a quite incisive manner the political vision of the 1991-educational reform to promote new mixed programs with two overlapping cultures; the vocational and the academic. Media vocational training has attracted many young people since early 1990-ies. In fact, the enrollment to the programs has been higher during the last decades both among young females and young men than many of the more established vocational programs (Skolverket, 1998; Statistics Sweden, 2012). The Media program was profiled by rather specialized and hands-on vocational courses (e.g. TV-production, film-production, radio-production, photography, web design). While school-based vocational training has been the most common, many schools also organized work-based projects (e.g. students broadcasted radio programs at local radio stations) in close cooperation with local media branches and with strong links to continue their vocational education at Folk High Schools (Persson Thunqvist & Axelsson, 2013). These vocational courses were combined with general education in media and digital technology which were supposed to be in tone with the increasing requirements of communicative and symbolic-analytical skills required by the “information-society”. However, as vocational education and training were embedded in hybrid educational programs with an overall academic culture, the qualification frameworks and characteristics of the programs became somewhat ambiguous (Persson Thunqvist & Axelsson, 2012).

The Media program and The Art program were abolished during the 2011’s reform. This was partly motivated by a weak connection between the vocational programs and the labour market. The Art program was replaced with a higher education program for humanistic studies. The media vocational courses were integrated in three different higher education preparatory programs: Technology, the (new) Art program and Social science. One intention behind the reform was to strengthen the cooperation between upper secondary school and different institutes of higher education that reflects the entire higher education sector’s fields of knowledge (SOU, 2008: 27). In the new system, the media vocational courses have become more theoretical and less oriented to specialized media vocations. An alternative scenario could be that the new higher preparatory programs also develop cooperation with the adult education system (e.g. Folk High Schools) with
well-established VET-education for vocations in these sectors which also comprise alternative
routes to a carrier in many media-vocations (e.g. journalists). However, this remains an open
question for the future.

The challenge to involve the labour market partners in initial VET

The 2011-reform was meant to increase the influence of trade and industry on the upper second-
ary vocational programs. Establishment of the university-oriented secondary schools in the 1990s
(see section 2 above) weakened the direct link between initial VET and the labour market. Based
on international comparisons (OECD, 2008; Cedefop, 2013), the weakened connections between
the world of work and the world of school and school-based VET is significant in comparison to
other Nordic countries. The influence of the social partners is stronger in Denmark and in Norway.
Denmark also differs from Sweden in terms of industrial relations (for a comparison see Due and
Madsen, 2001). In Denmark, that is characterized by a large amount of workplace-based learning
at firms and close involvement of the labor market partners, the motivation and initiatives to renew
VET are often generated directly by the firms (due to changing needs and demands), or by trade
unions who are aware of the problems experienced by apprentices on the labour market (Juul &
Jørgensen, 2011; Cedefop, 2013). The content of the vocational programs and the qualification
profile for each occupation is defined by the trade committee on the national level. Their regulatory
mandate is defined in the legal framework for vocational education. In Norway and Finland, the
labour market partners have a decisive say in some areas of VET. As briefly demonstrated in Table
1, in Sweden, the social partners have mainly an advisory role on both central and local level.

Table 1. Labour market partners’ involvement in VET

<table>
<thead>
<tr>
<th></th>
<th>Curricula</th>
<th>Practical training content</th>
<th>Duration of practical training</th>
<th>Acquired Competencies</th>
<th>Delivered Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>A</td>
<td>D</td>
<td>A</td>
<td>D</td>
</tr>
<tr>
<td>Danmark</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Finland</td>
<td>X</td>
<td>X</td>
<td>0</td>
<td>X</td>
<td>0</td>
</tr>
<tr>
<td>Norway*</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sweden</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Note: D – decision-making; A – advisory role. X = involvement; 0 = non-involvement.

*In Norway, the apprenticeship model for IVET consists of two years at school and two years as apprentice in a com-
pany. Table 1 refers to apprenticeship component of the program. Source: the table is based on data in OECD

As indicated, Sweden differs from many other national VET-systems in that there is very little
formal frameworks for co-operation between VET providers and the labour market partners. This
The current state of the challenges for VET in Sweden

also implies that there are no national standing arrangements for consultation with labour market partners on emerging policy initiatives, such as, for instance, the development of an apprenticeship system (Cedefop, 2013). To put it somewhat incisively, employers tend to see themselves as outsiders served by the education sector, not as partners and stakeholders who shape VET (OECD, 1998: 19).

However, the upper secondary school reform from 2011 has improved opportunities for the labour market partners to exert influence via the local and national councils. In general, there is an increasingly strong feeling that representatives of working life should be able to influence vocational training to a greater extent (Olofsson, 2014). There are several reasons for this.

First, stronger co-operation is a necessary support for the last reform of VET for the development of an apprenticeship system. Since the reform, schools are obliged to set up local program councils for each vocational program. Councils are to include representatives of businesses and trade-union organizations. At the national level, vocational councils have to be organized via the National Agency of Education. The goal is that representatives of trade and industry gain increased influence over the programs via the national councils.

A second related reason for a stronger co-operation, supported by international experiences, is the fact that qualifications delivered by the VET-system are more valued by employers if they have been engaged and consulted during the definitions of standards and qualifications (e.g. Ryan, 2000). This may also contribute to ensure the system’s legitimacy among the social partners, students and their parents. In Sweden, local program councils are supposed to bring together labour market partners and schools for the joint development of initial VET. Given the undefined role of these local program councils, the challenge for the future is to establish a participatory framework in which the labor market partners will be active enough in updating workplace training and qualification standards (Olofsson & Panican, 2012).

At present, however, the government still possesses a strong school-rationale in the field of initial VET. The Ministry of Education and other state bodies as the National Agency for Education and the Schools Inspectorate (Skolinspektionen) maintain a decisive role in defining how labour market signals are reflected in vocational programs in upper secondary school. Responsibility for the quality control of all vocational programs including apprenticeship schemes has been allocated to the School Inspectorate, which has been commissioned to inspect workplace learning (The National Board of Education, 2013).

However, it is also possible to point at some opposite trends of employers’ engagement in initial VET from a bottom-up perspective. Encouraged by the government, several employers are actively seeking opportunities to co-operate with upper secondary schools. This includes the Teknikcollege (see section 2.3 above), which started as a bottom-up initiative launched by an industry sector suffering from a skills shortage. In this initiative, large or medium sized companies in the region influence and contribute to education content and may share costs. The social partners are also involved in steering groups responsible for the quality of VET (among other things).
4. Current challenges in bridging initial VET to higher education

The heterogeneous nature of initial VET in Sweden is also reflected in transition patterns to higher education from the VET-programs. There is a significant variation between different vocational programs targeting different vocational fields. However, before a detailed description of these variations, we will comment upon some of the more general trends.

Transitions between initial VET and post-secondary education

As described earlier (see section 2) Swedish policy has paid considerable attention to the transition between initial VET and different levels of education. Access to higher education from the VET-system was improved by the early 1990-ies upper secondary school reforms. At present, all forms of initial VET, including the apprenticeship track, are three year in duration and formally qualify for higher education (with some exceptions following from the latest 2011-reform, see below).

Drawing on a small body of research that has focused on the effects of the 1991 reform in terms of transition from vocational programs to higher education (Ekström, 2003; Hall, 2009), the consequences of this policy do not appear straightforwardly positive or negative. In her dissertation, Ekström (2003) demonstrated that prolonging vocational education at upper secondary school with a third year in a pilot scheme (which preceded the launching of the 1991-reform) significantly increased the probability for vocational students to begin university studies. The results are comparable with previous research on the Swedish comprehensive school reform in the 1940s. Meghier and Palme (2005) demonstrated that this reform improved access to higher education by increasing compulsory schooling to nine years, and by abolishing the division of students into academic and non-academic schools after sixth grade. However, the effects of de-tracking of the school system may differ for students of different ages. Contrary to the earlier findings, Halls (2009) statistical analysis of the pilot scheme that preceded the 1991-reform gave no indications that the extra year of schooling increased transition to university studies. However, there were some indications that the extra year of education may have led to increased earnings in the long run.

Besides research on earlier reforms and the pilot-scheme, research on the development in initial VET in recent years is scarce. Register-based studies of cohorts from 1991 until today show that the number of students continuing to higher education has constantly increased since the 1990s (Statistics Sweden 2013; 2014). Among vocational students, 6-7 out of 10 (67 per cent in 2010) finished their upper secondary education and were qualified for higher education (Statistics Sweden, 2013).

In addition, the number of students enrolled in higher vocational education has recently increased (from 38 000 in 2008 to 44 300 in 2011). The greatest increase in student numbers was by 2 200 in the field of Technology and Manufacturing, followed by 1 800 in Economics, Administration and Sales. These two fields of study have remained the largest by the number of students since 2008. Vocational education on post-secondary level could potentially give the students fast-
er access to specialized occupations in the core-segments in the service sector compared to Business and Administration program in the gymnasium (see section 3 above).

Slow transitions to higher education and higher vocational education

The transitions from upper secondary school to higher education and other form of post-secondary vocational education are generally frequent, but slow: In 2010, between 45-50 per cent of an age cohort began some form of higher education before the age of 25. Less than half as many began higher education immediately or within one year after graduation (Statistics Sweden, 2013). Only 2.7 per cent of students entering upper secondary school 2006/07 had started higher vocational education within two years after finishing upper secondary school. This can be related to the fact that the average age of entrant HVE student is high: in 2011 it was 29 years. The average age for female students was 30.4 years and 27.4 years for male students. These entrant students may have achieved full upper secondary education through an equivalent, older upper secondary education and/or supplemented it with continuing education in adult education at upper secondary level, work-integrated learning programs, and/or grades through an independent adult education college. Analysis of the students’ enrolling in HVE, background, reveals the complex transition patterns between VET-programs within upper secondary school and work and the continuation of education in a long term perspective.

Different vocational tracks affect transition to higher education

Again, there is a vast variation between different vocational tracks concerning enrolment to higher education. Register based studies of cohorts from 1999/2000 till 2012/2013 (Statistics Sweden, 2014a) show that transition to higher education (within three years after graduation from upper secondary school) has remained relatively high in several of the female-dominated programs, especially within programs that are oriented toward broad vocational fields, such as Art and Media (between 30-40 %) as well as programs oriented to the health and care sector (e.g. Health and Care and Child Care and Recreation, approximately 25-35 %). However, given that the Child Care program and the Art program have been organized as higher education preparatory programs to a larger extent than the other vocational programs, the transition rates are lower than expected. In contrast, the transition to higher education is particular low (3-7 %) in the male-dominated programs that are designed for fairly specific professions (e.g. construction work, electricians, vehicle engineering).

The case of independent vocational schools

The register-based studies also include vocational education at independent schools by way of comparison (statistics Sweden, 2014). The transition to higher education is relatively high in independent schools oriented to technically and/or industrial vocational fields such as electricity (23% 2011/2012), industrial technology (27% 2011/2012) as well as the service sector (e.g. Business
The current state of the challenges for VET in Sweden

and Administration, 30% 2008/2009; 13% 2011/2012). As these differences are not explained in the statistical reports, we can only speculate about them. Selection might play a role. During the recent years we have seen the creation of several joint industry/upper secondary schools as well as independent business schools. Some of these schools are expected to attract more and “better” students to fill vacant positions within industry as well as in the service/trade sector (e.g. Berner, 2010). Hence, the high esteem of these schools might also cash out in higher level of enrollment in higher education. In addition, transition from upper secondary school to higher education is paramount in larger Swedish cities and significantly lower in smaller cities and rural areas (Statistics Sweden, 2013). Attractive independent schools are more common in larger cities and their surrounding suburbs. Another explanation concerning independent vocational schools oriented to service and trade is that the gender division is relative low compared to the male-dominated programs. In contrast to many other vocational programs, there is only a small, insignificant, difference between women and men in terms of their transition rates to higher education.

Decreased enrollment to HE since 2011 – but increased young applicants

At present, political measures have been taken by the government to limit the expansion of higher education. During the last three years (2011-2014), Higher Education Authority (Universitetskanslerämbetet, 2014) has reported the largest decline (13 %) of new students in higher education recorded during the last 20 years. However, the amount of young applicants has increased significantly. According to a recent national sample survey (Statistics Sweden, 2014), six out of ten upper secondary students graduating in the 2013/2014 plan to start university studies within the following three years. Of those who study in a higher education preparatory program, 85 percent females and 77 percent men have plans to study further. Of those who attend vocational programs, 38 percent females and 14 percent men plan to study further within three years. Among students who plan to study at university level, the most popular programs among women both in higher education preparatory programs and vocational programs are social science and economics. Men prefer technology and natural science, but economics is also popular. To study health care or to study to become a teacher is more popular among vocational students than it is among the students enrolled in a higher education preparatory program. The popularity of the teacher program at tertiary level might also imply that many vocational students are open to a change in their educational and vocational carriers in the future. The most common reasons why students do not want to continue their studies are: school tiredness or their preference for work. For almost one in five of those enrolled in a vocational program, one reason that they do not plan to study further is that they are not qualified to enter higher education studies.
The current state of the challenges for VET in Sweden

The 2011-reform: The revival of a tracked system

At the core of the 2011-reform is a clearer distinction between the upper secondary programs that more specifically focus on: 1) preparing students for particular vocations, 2) preparing students for academic education (Lundahl et al, 2010). One implication is that vocational training no longer automatically leads to basic eligibility for higher education (but see below). This division between the vocational programs and higher education preparatory programs is by far the most controversial and contested aspect of the reform. The criticism has been articulated from different viewpoints and positions in the Swedish educational debate.

In their parliamentary motions, the three opposition parties (Social Democrats, Left party, Green party) emphasized that dead-locks will increase and the differences related to class, gender and ethnicity exacerbate because young people will have to make carrier decisions at a very early state of their educational and vocational trajectory (for an analysis of these parliamentary
The GY-2011 has also been a subject for critical social sciences following a similar tradition of argumentation. For example, Nylund (2011) argues in his dissertation that many central priorities in the 1991 reform, such as Bildung, critical thinking, equality, have been largely overlooked in the policy texts underlying GY11.

Another strand of criticism has focused on the implications for the status of VET in society (e.g. OECD, 2008; Cedefop, 2013). The main argument is that selection criteria may distort the choice between VET and academic tracks by stigmatizing VET. Selection would send a clear signal to employers, teachers, students and parents that vocational upper secondary qualifications are for the less able. Recently, in fact, in Sweden, the number and proportion of student applying to vocational education programs have decreased considerably. The proportion of students in vocational programs of the total number of upper secondary school students has dropped to approximately 30 per cent.

In addition, some of the criticism has been based on the perspectives of the employers. For example, an OECD report (2008), including interviews with Swedish employers, demonstrated that many employers did not wish to see general academic requirements reduced. They perceived that intellectual demands are increasing in most professions and trades and that strong critical thinking, Math, Swedish and English skills are essential in working life.

Taken together, there is a risk of precipitating a vicious circle, with teachers, students, parents and employers all reinforcing a negative view on VET. However, from autumn 2013, it is possible to acquire basic eligibility for higher education within the framework of all upper secondary vocational programs without having to choose an extended curriculum. Hence, it is too early to say what effect this will have in practice and in the long run.
5. VET as youth politics for social inclusion: A parallel story

The focus on the report is on initial VET on secondary level, not on labour market politics as a measure for guarding the journey for young people from school to work. However, in the final section we will briefly account for certain supportive systems of vocational education and training for young people that have been established outside the gymnasium during the last decades. Similar to the other Nordic countries, Sweden is characterized by a system of active market politics (for a comparison of labour market politics in the Nordic countries see Olofsson and Wadensjö, 2007). Such policies are very much in effect also for youth. However, while labour market politics in Sweden generally have been associated with strong and centralized state-governance, a highly decentralized system of local labour market policies for young unemployed people was established during the 1990s.

From 1990s and onward, a certain field of vocational education and training for young unemployed people has been created outside the upper secondary school system (Salonen & Johansson 1999). Unemployed workers aged below 20, mainly those who have not completed upper secondary school, are with a few exceptions not allowed to participate in the ordinary labor market programs. Instead, they are referred to programs administrated by the municipalities. These programs for young unemployed people have been periodically revised during the last decade. In 2007, a new so called ‘job guarantee’ scheme for young people was introduced in Sweden.

During the 1990s almost every municipality in Sweden organized municipal youth projects for young unemployed people 16-19 years old (SFS 1997: 1268) and (young adults) aged 20-24 years olds (SFS 1997: 2178). Thus, the municipal youth projects played an important role for many unemployed young people in their transition from school to labour market as well as to adult education (Statskontoret, 1999). What earlier was labeled as issues relevant to the labour market and the educational sector have now increasingly became a political field – youth politics – on its own, with its own experts, politicians and administrators (Salonen & Hansson, 1999; Ungdomsstyrelsen, 1999a). Evaluations (Statskontoret, 1999; Ungdomsstyrelsen, 1999b), based on youth projects established during the first part of the 1990s, reveal that the youth projects particular have been successful in motivating young people to return to the educational sector in order to complete their studies on secondary level through the “second-chance system” (i.e. adult education, such as folk high schools). These results contributed to the (social democratic ruled) government’s very positive view on the potentials of the projects in the late 1990s.

However, what do we know about the specific nature of the vocational education in these projects? Available surveys (for an overview see Nordström Skans, 2007) suggest that they usually involve combinations of work practice, job search assistance, social guidance and computer training. Qualitative research has been very rare in this field. What we do learn from existing qualitative research is that even if different projects display similar aims and seemingly target the same groups of young people, the actual functions and activities differ substantially between different projects (Persson Thunqvist, 2003; Hansson & Lundahl, 2004). For example, while some of the documented market-oriented projects prioritized job search activities combined with work
training, other projects have in practice been more oriented to social educational goals such as fostering citizenship and/or creating a meaningful leisure while waiting for a job chance. But why and how could the local conditions affect the documented local projects so differently? A general answer is decentralization. Even if the goals for labour market politics for young unemployed people are set by the government at the central level the outcomes of national policy are increasingly determined by local institutions, power structures and conditions (Hansson & Lundahl, 2004). In addition, a common feature for the documented local projects was that they actively promoted liberal values of self-governance and individualization, putting the main responsibility on the young people to become more “employable” with the help from specially appointed project leaders and social guidance and coaching (Persson Thunqvist, 2003). Moreover, youth projects commonly have ambitious aims embracing a wide spectrum of young people’s supposed needs. But in reality, project activities are generally sparsely funded (Hansson & Lundahl, 2004). It is therefore important to consider the relatively low resource allocation to the projects. Similar features apply for labour market policies for young people in Sweden in general (Olofsson & Wadensjö, 2007: 44).

At present, high youth unemployment continues to be a central concern within labour market policy and educational policy as well. Youth unemployment is largely driven by a large number of short unemployment spells that start directly after finishing upper secondary education (Lindahl, 2011). As we have seen, with the latest Swedish reform (2011) of upper secondary school, several changes have been directed to vocational education, bringing the question of youth unemployment and the transition from school to work to the political agenda.
6. Trade-offs and dilemmas in VET: Final comments

Finally, we will sum up the challenges and pitfalls for Swedish initial VET that has been illuminated in this report. With respect to the teenagers enrolled in vocational streams in the gymnasium, the major challenges could perhaps be summarized as not too unreasonable: Getting a job that match time invested in education, becoming established in society as citizens and keeping doors open to further education. After all, these are the sorts of goals that initial VET in the gymnasium is supposed to help vocational students to achieve. Some of the difficulties discussed above can be connected with international trends putting initial VET in most industrial countries under pressure. Since 1990, it is striking that many different VET-systems have changed in a similar fashion to respond to the shift toward a knowledge society (e.g. Nilsson, 2010). In general, as not only the theoretical component of vocational education has increased but also societal status associated with academic oriented education, many IVET-systems struggle with similar challenges: decreasing esteem, declining participation rates and high drop-out rates. However, as demonstrated in the review of previous research, the institutional design of initial VET also contributes to more or less successful ways of providing access to higher education, work-based learning and skilled employment. This is perhaps most apparent in comparative studies on different IVET-systems in the Nordic countries (e.g. in terms of school-to-work transitions). In addition, the ways in which the interplay between different vocational streams within initial VET and different labour market segments function also seems to play a role. Hence, one point of interest for further research is to compare different vocational forms and fields in a Nordic perspective, for example technically- and industrial oriented sectors, health- and care and the service sector.

In this report, we have also highlighted a particular problem in the Swedish context of initial VET, namely, a tendency to view ‘manual’ work and vocational training as being largely homogeneous in character. Clearly, one historical aspect has to do with status. To put it somewhat incisively: The content of different vocational streams in upper secondary school is not only determined by the specific nature of the target occupations but rather the social position vocational students are expected to adopt in the social hierarchy of society. Being a dentist or a surgeon is seen as requiring greater skills, and accordingly as yielding higher status than the work involved in building bridges, houses, atomic plants or taking care of children and elderly people. Although this crude, one-dimensional view on the recognition of status (for a critical review, see e.g. Billett, 2014) is not manifest in VET-policy, sociologically it has been materialized in the latent functions of the upper secondary school system as a two-tracked system in reality. It is well documented that young people with a working-class background are over-represented in vocational tracks, while the middle-class children are in majority in the academic side of the gymnasium (for an overview see e.g. Högberg, 2009). The types of vocations that are conventionally considered when referring to vocational training in the gymnasium tend to be the ones involving subordination in relation to academic oriented programs (e.g. Härdig, 1995). As a consequence, teenagers and their parents are likely to recognize vocational programs as belonging to the lower end of the status hierarchy in schools. Until recently, research on initial VET in Sweden has been very limited compared to research on the academic side of the upper secondary school. This lack of comprehensive (qualitative) knowledge about the particular character of the vocational side of the
gymnasium has also contributed to the survival of the dualism between manual versus intellectual work. However, case studies of different vocational tracks that have been referred to in this report contribute to a more multifaceted picture of the varied nature of different work conditions and types of tasks vocational students have to engage with in different vocational streams.

At the same time, the notion that vocational training should be treated as largely homogeneous can also be related to institutional changes in the development of VET-policy and governance the last decades. In a long-term view Sweden stands out as a case that has pioneered the development of school-based vocational training as a part of comprehensive secondary schooling. This development could be seen as congruent with the underlying principles of the universalistic welfare state. Since 1950s, the establishment of the Swedish “IVET-model” has been promoted with strong political support and willingness to make resources available in a highly industrialized society (Olofsson & Persson Thunqvist, 2014). One of the strengths of school-based training is that socialization to work could be carried out in structured way by integrating theoretical education with practical skills as well as promoting social inclusion (e.g. teachers can develop inclusive working methods to handle students with poor grades). Another merit of school-based vocational training is that the student’s development is of primary interest rather than being secondary to more company-specific interests. However, the school-based character of the Swedish initial VET is not only a result of the long record of Social Democratic political domination and equalizing goals. Both among employers and trade unions, craft identification is relatively weak in Sweden, partly reflecting the nature of Swedish industrial structure. From a labour market perspective, during a long period, industry-based training, especially in the large firms, has existed in parallel. Apprenticeship has existed all along in certain trades (Lauglo, 1993). However, large export-industry sector has shown little interest in investments in the apprenticeship mode at initial-VET.

Although the universalistic welfare model still is intact in Sweden, the report has illuminated how the upper secondary school system in particular has been responsive to changes in the international economy and to more liberal and market-oriented values. The reforms of the early 1990s could perhaps be seen as a kind of a turning point in the modern history of initial VET. The tradition of centralized state-regulations of VET was transformed by the decentralization of governance to the municipalities. In addition, privatization means that the upper secondary school became influenced by market forces. As described in the first section of the report, these reforms have contributed to increased local autonomy, diversity and flexibility. At the same time, they also have (to some extent), weakened the unifying principles, for example, equality and standardization, on which the previous school-based system was built (Lundahl & Olofsson, 2014). Moreover, unintended consequences of the establishment of the university-oriented VET-system (by the 1991-reform) was a stronger separation between the world of school and the world of work. A more general orientation of the gymnasium, in combination with limited amount of work-based-learning and low involvement of the labour market partners, can be seen to contribute to unemployment among young people and increasing segmentation in the labour market. In particular, the latter is the case in the large service-sector where well-educated young people have to accept low paid jobs that require less formal skills.

The increasing heterogeneity of the initial VET-system has also been be related to a renewed labour market partner’s interest for participating in the development of initial VET. The emer-
gence of partnership schools, as we have seen, also points to future issues of how initial-school-based VET could be complemented with final, qualified workplace learning. In general, since the 2011-reform of upper secondary school, there has been a clear political orientation to develop workplace learning and apprenticeship within initial-VET. For instance, in autumn 2013, Budget bill highlighted that Sweden should learn more from the continental countries with apprenticeship system (Germany, Austria and Switzerland). They are characterized by lower youth employment and shorter routes from school to working life. One of the implications of the proposals (if implemented) is that more of the vocational training in initial VET will be located in workplaces (Olofsson, 2014). However, issues on how productive integration of formal education and work-oriented learning is to be accomplished also require a development of the collaboration between the world of school and the world of work in practice.
Appendix

Table 2. National programs at upper secondary school level since 1991/1992

<table>
<thead>
<tr>
<th>Vocational programs</th>
<th>Academic programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Recreation</td>
<td>Natural Science</td>
</tr>
<tr>
<td>Building and Construction</td>
<td>Social Science</td>
</tr>
<tr>
<td>Electricity Engineering</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td></td>
</tr>
<tr>
<td>Vehicle Engineering</td>
<td></td>
</tr>
<tr>
<td>Business and Administration</td>
<td></td>
</tr>
<tr>
<td>Handicraft</td>
<td></td>
</tr>
<tr>
<td>Hotel and Restaurant</td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td></td>
</tr>
<tr>
<td>Natural Resource</td>
<td></td>
</tr>
<tr>
<td>Food</td>
<td></td>
</tr>
<tr>
<td>Media</td>
<td></td>
</tr>
<tr>
<td>Special programs and Individual programs</td>
<td></td>
</tr>
</tbody>
</table>

Source: National Agency of Education 2011

Table 3. National programs at upper secondary school level since 2011

<table>
<thead>
<tr>
<th>Vocational programs</th>
<th>Academic programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child and Recreation Programme (BF)</td>
<td>Business Management and Economics Programme (EK)</td>
</tr>
<tr>
<td>Building and Construction Programme (BA)</td>
<td>Arts Programme (ES)</td>
</tr>
<tr>
<td>Electricity and Energy Programme (EE)</td>
<td>Humanities Programme (HU)</td>
</tr>
<tr>
<td>Vehicle and Transport Programme (FT)</td>
<td>Natural Science Programme (NA)</td>
</tr>
<tr>
<td>Business and Administration Programme (HA)</td>
<td>Social Science Programme (SA)</td>
</tr>
<tr>
<td>Handicraft Programme (HV)</td>
<td>Technology Programme (TE)</td>
</tr>
<tr>
<td>Hotel and Tourism Programme (HT)</td>
<td></td>
</tr>
<tr>
<td>Industrial Technology Programme (IN)</td>
<td></td>
</tr>
<tr>
<td>Natural Resource Use Programme (NB)</td>
<td></td>
</tr>
<tr>
<td>Restaurant Management and Food Programme (RL)</td>
<td></td>
</tr>
<tr>
<td>HVAC and Property Maintenance Programme (VF)</td>
<td></td>
</tr>
<tr>
<td>Health and Social Care Programme (VO)</td>
<td></td>
</tr>
</tbody>
</table>

Source: National Agency of Education 2011
The current state of the challenges for VET in Sweden

Table 4. Transitions from initial VET to Higher Education 1991-2007: Academic programs and Vocational programs (Percentages)

<table>
<thead>
<tr>
<th>Programs (3 year)</th>
<th>91/92</th>
<th>93/94</th>
<th>96/97</th>
<th>98/99</th>
<th>00/01</th>
<th>02/03</th>
<th>04/05</th>
<th>06/07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>56,3</td>
<td>63,0</td>
<td>61,6</td>
<td>64,0</td>
<td>65,0</td>
<td>63,9</td>
<td>61,1</td>
<td>63,8</td>
</tr>
<tr>
<td>Vocational Programs</td>
<td>10,6</td>
<td>12,0</td>
<td>10,8</td>
<td>12,2</td>
<td>13,6</td>
<td>20,1</td>
<td>19,4</td>
<td>20,7</td>
</tr>
</tbody>
</table>

Source: Statistics Sweden, 2011

Figure 2. Transitions from initial VET to working life 2012/2013

Source: Statistics Sweden, 2013
Table 5. Transition rate to Higher Education for upper secondary school graduates within the years 1999/00 – 2008/2009: Share by program and three selected vocational fields

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Art and Media:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art</td>
<td>34</td>
<td>39</td>
<td>42</td>
<td>46</td>
<td>49</td>
</tr>
<tr>
<td>Media</td>
<td>24</td>
<td>32</td>
<td>31</td>
<td>36</td>
<td>37</td>
</tr>
<tr>
<td><strong>Service:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business and Administration</td>
<td>11</td>
<td>14</td>
<td>14</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>Hotel and Restaurant</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td><strong>Care:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child and Recreation</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Health Care</td>
<td>18</td>
<td>21</td>
<td>25</td>
<td>29</td>
<td>31</td>
</tr>
<tr>
<td><strong>Technology/industry:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial Technology</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Building and Construction</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Electricity</td>
<td>10</td>
<td>11</td>
<td>9</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Vehicle</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Vocational education at independent schools

with connection to Art and Media:
Art: - 38 37 36 42
- 33 42 45 48

with connection to Service:
Business and Administration:
Hotel and Restaurant: - 42 22 31 30
- 2 17 19 13

with connection to Care:
Child and Recreation:
Health Care: - - 21 34 37
- 35 34 31 36

with connection to Technology/Industry:
Industrial Technology: - 15 10 14 20
Building and Construction: - - 4 2 4
Electricity: - - 4 2 4
Vehicle: - 56 48 42 50
- 3 3 4 2

Source: Data analysis based Statistic Sweden (2014a)
Figure 3. Beginner students in upper secondary school 2001-2012
Shares in percentage of students, different types of educational programs

### Table 6. Share of youth cohort that obtain final grade and eligibility for Higher Education: Vocational and Academic programs, 2006-2011

<table>
<thead>
<tr>
<th></th>
<th>2006/07</th>
<th>2008/09</th>
<th>2010/11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numbers</strong></td>
<td>114 600</td>
<td>123 869</td>
<td>122 194</td>
</tr>
<tr>
<td><strong>Share (%)</strong></td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Vocational programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final grade</td>
<td>48 543</td>
<td>54 554</td>
<td>55 255</td>
</tr>
<tr>
<td><strong>Share (%)</strong></td>
<td>42,4</td>
<td>44,0</td>
<td>45,2</td>
</tr>
<tr>
<td>Final grade without basic admission</td>
<td>5005</td>
<td>5491</td>
<td>8383</td>
</tr>
<tr>
<td><strong>Share (%)</strong></td>
<td>51,8</td>
<td>59,1</td>
<td>66,0</td>
</tr>
<tr>
<td>Year 3 without basic admission</td>
<td>8218</td>
<td>7987</td>
<td>8088</td>
</tr>
<tr>
<td><strong>Share (%)</strong></td>
<td>50,8</td>
<td>48,8</td>
<td>50,4</td>
</tr>
<tr>
<td><strong>Academic programs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final grade</td>
<td>56 338</td>
<td>58428</td>
<td>58 411</td>
</tr>
<tr>
<td><strong>Share (%)</strong></td>
<td>49,2</td>
<td>47,2</td>
<td>47,8</td>
</tr>
<tr>
<td>Final grade without basic admission</td>
<td>44 864</td>
<td>47 632</td>
<td>48 277</td>
</tr>
<tr>
<td><strong>Share (%)</strong></td>
<td>57,4</td>
<td>54,8</td>
<td>56,2</td>
</tr>
<tr>
<td>Year 3 without basic admission</td>
<td>3 932</td>
<td>3 505</td>
<td>3 573</td>
</tr>
<tr>
<td><strong>Share (%)</strong></td>
<td>40,7</td>
<td>37,7</td>
<td>28,1</td>
</tr>
<tr>
<td>Academic programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Share (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final grade without basic admission</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Share (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 3 without basic admission</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Share (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6a. Distribution of women and men in the vocational programs 2013/2014

<table>
<thead>
<tr>
<th>Programs (Gymnasium)</th>
<th>Numbers</th>
<th>Share %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>Vocational programs</td>
<td>37 640</td>
<td>52 770</td>
</tr>
<tr>
<td>Academic programs</td>
<td>80 080</td>
<td>69 640</td>
</tr>
<tr>
<td>Total:</td>
<td>124 070</td>
<td>131 830</td>
</tr>
<tr>
<td>Vocational programs:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child and Recreation</td>
<td>5 110</td>
<td>2 760</td>
</tr>
<tr>
<td>Construction</td>
<td>1180</td>
<td>12 020</td>
</tr>
<tr>
<td>Electricity</td>
<td>520</td>
<td>11 940</td>
</tr>
<tr>
<td>Vehicle</td>
<td>1 500</td>
<td>8 080</td>
</tr>
<tr>
<td>Buisness and adm.</td>
<td>4 200</td>
<td>2 310</td>
</tr>
<tr>
<td>Handicraft</td>
<td>6 920</td>
<td>500</td>
</tr>
<tr>
<td>Hotel and Tourism</td>
<td>2 590</td>
<td>610</td>
</tr>
<tr>
<td>Industrial Technology</td>
<td>540</td>
<td>4 280</td>
</tr>
<tr>
<td>Natural Resource</td>
<td>5 510</td>
<td>2 630</td>
</tr>
<tr>
<td>Restaurant, Food</td>
<td>3750</td>
<td>2 700</td>
</tr>
<tr>
<td>Energy</td>
<td>90</td>
<td>3 240</td>
</tr>
<tr>
<td>Health and Social Care</td>
<td>5630</td>
<td>1 040</td>
</tr>
</tbody>
</table>


Table 7. Highest level of education among parents of new students in grades 1, upper secondary school, 2013. Vocational and higher education preparatory programs

<table>
<thead>
<tr>
<th>Programs (Gymnasium)</th>
<th>Vocational programs</th>
<th>Academic programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary education</td>
<td>5 %</td>
<td>3 %</td>
</tr>
<tr>
<td>Secondary education</td>
<td>60 %</td>
<td>33 %</td>
</tr>
<tr>
<td>Shorter post-secondary education (less than 3 year)</td>
<td>17 %</td>
<td>22 %</td>
</tr>
<tr>
<td>Longer post-secondary education (3 year or longer)</td>
<td>17 %</td>
<td>43 %</td>
</tr>
<tr>
<td>Total</td>
<td>100 %</td>
<td>100 %</td>
</tr>
</tbody>
</table>

The current state of the challenges for VET in Sweden

Literature


The current state of the challenges for VET in Sweden


SCB, Statistics Sweden:


