

**This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.**

**Author(s):** Stenström, Marja-Leena; Virolainen, Maarit

**Title:** The modern evolution of vocational education and training in Finland (1945–2015)

**Year:** 2018

**Version:** Accepted version (Final draft)

**Copyright:** © Routledge, 2018

**Rights:** In Copyright

**Rights url:** <http://rightsstatements.org/page/InC/1.0/?language=en>

**Please cite the original version:**

Stenström, M.-L., & Virolainen, M. (2018). The modern evolution of vocational education and training in Finland (1945–2015). In S. Michelsen, & M.-L. Stenström (Eds.), *Vocational Education in the Nordic Countries : The Historical Evolution* (pp. 102-123). Routledge. Routledge Research in International and Comparative Education.

# **The Modern Evolution of Vocational Education and Training in Finland (1945–2015)**

**Marja-Leena Stenström & Maarit Virolainen**

## **Introduction**

In Finland, 1945–2015 was the period during which the welfare state has become the main player in organising vocational education and training (VET). Accordingly, educational institutions have expanded to respond to challenges arising from the emergence of the welfare state, especially the social division of labour and the development of production technologies (see e.g. Henriksson et al., 2006). Finland was mostly an agrarian society and structured by small local communities during the beginning of the period 1945–2015. Before the World War II the need for establishing traditions for vocationally oriented education was limited because most citizens learned their occupations in the context of everyday routines at work and in daily life (Antikainen, 1993, p. 103). Finland started to catch up with other Nordic countries and modernised as industrialisation started to become effective. Industrial culture created new kinds of occupational needs; craftsman-like skills lost the central value that they had possessed in the agrarian society, where many goods for households had been produced by families themselves or bought from local craftsmen. The VET system constructed after World War II played an important role in modernising the Finnish nation state. The VET model linked school-based with work-based learning and connected education with the labour market in a specific, Finnish way (see, e.g., Dobbins and Busemeyer, 2014).

The aim of this chapter is to elaborate the historical evolution of the Finnish vocational education and training (VET) system as it unfolded from 1945 to 2015. The focus of our research was on the development of VET as an institutionalised education at the upper secondary level (initial vocational education and training). To begin with, we made an analysis of its development in relation to that of the Finnish state because the state has been a central player in redefining and reorganising VET in Finland. Our findings show how the organising of Finnish upper secondary VET is linked to the construction of Finland as a welfare state, and we present what kinds of gradual, neo-liberal deregulations have influenced the VET development since the 1990s. The emphasis of our analyses was on the recognition of major turning points, in part since there has been only scarce historical research on the role of the different players as co-determinants of Finnish VET, also taking into account the policies of the different employer and employee organisations and individual policymakers with respect to VET.

The historical turning points described in this chapter are divided into three periods: 1) the emergence of VET and the welfare state from 1940 to 1960; 2) the time of rapid growth and consolidation of the welfare state in the 1970s and 1980s; and 3) the time of the challenges of Europeanisation and globalisation since the 1990s. The analyses presented in this chapter are partly based on previous VET research, statistics and policy papers.

## **Emergence of VET and the welfare state from 1940 to 1960**

### *Post-war development of Finnish VET*

In Finland, school-based vocational education and training emerged on a large scale only during the societal reconstruction after the Second World War, when Finnish educational policy was intertwined with the project of the welfare state (Stenström and Virolainen, 2014a). Finland shifted from a socially supported small-scale farming society to a welfare state of social security and paid work (Kettunen, 2001, 2013; Laukia, 2013b, p. 172).

After the Second World War, the economic structure started to diversify and became less dominated by agriculture. The industry, trade and public services were strengthened and there were demands for rural life to be modernised (Laukia, 2013a, 2013b, p. 172). The task of the Finnish industry was to produce the goods necessary to pay for the substantial war reparations demanded from Finland (Kivinen and Peltomäki, 1999). Heavy industry dominated, and new methods of mass production in the textile, clothing, leather, shoe and food industries emerged. At the same time, small-scale farming decreased dramatically.

The change in the dominant forms of production was more rapid in Finland than in the other Nordic and European countries (Haapala, 2006). However, it took until the 1960s for the share of the Finnish working population involved in agriculture to decrease to the level (36%) already seen in other Nordic countries by 1930 (Christiansen et al., 2006). The settlement of the population evacuated from the Karelian part of Finland during World War II and the number of returning war veterans increased the number of the agricultural population as they maintained an agrarian culture after the Second World War. Furthermore, agricultural production was slow to modernise as crofters did not consider the new technology to be cost-effective (Itälä, 2000). When the amount of industry, trade and public services increased, urbanisation started as people moved from the countryside to the cities. Urbanisation was also late in transforming Finnish society compared to its transformation of other Nordic countries (Christiansen et al., 2006, p. 356). Industrialisation, the expansion of the economy and new ways of living created new occupations for which vocational education and training was needed. In addition, after the Second World War there was a great demand for skilled workers in the labour market since only 5% of industrial workers had gained training for their job before entering to the labour market (Tuomisto, 1986).

The demand for organising VET for the young did not arise from the economic development only. Policymakers were also concerned about youths' development, use of time and societal inclusion during a time of societal change toward industrialisation and increasing migration. VET was expected to protect youth from poverty and marginalisation. Vocational school was perceived as workers' school. There were few vocational school students from farming families in the VET schools as these schools were located in towns and other population centres (Laukia, 2013b, p. 142).

The new law (Finland. Laki ammattioppilaitoksista 184/1958) concerning vocational education meant that all municipalities consisting of more than 20,000 inhabitants had to have a vocational school and smaller municipalities had to reserve study places for their youngsters at these schools (Laukia, 2013a). The law initiated Finnish VET's expansion and further differentiation in the 1960s and 1970s (Klemelä, 1999). It established school-based VET as the dominant model of VET in Finland, although Sunday schools can be seen as the first actual vocational schools and predecessors of the later expansion of vocational school-based education (Klemelä, 1999, p. 34; Tuomisto, 1986, p. 71). The vocational schools operated under the Ministry of Trade and Industry; more specifically, in the fields of industry, construction, handicraft, home economics, and traffic (Laukia, 2013b, p.228). This field-specific division of Finnish VET established itself long-term, yet separate gender-specific vocational schools were to change into vocational schools for both girls and boys (Laukia, 2013b, p. 229).

During the period from the 1950s to the 1960s, new types of education and training institutions for industry, technology and business were constructed in particular (Klemelä, 1999). In parallel, agricultural institutions suffered from a lack of students and increasing financial difficulties, but their maintenance was defended with the intention to prevent young people from moving away from rural areas. VET was also set a regional task: it was committed to getting young people to stay in their place of residence in order to slow down the concentration of people in towns (Laukia, 2013b, p. 231). The expansion of VET at the time was not only an outcome of established new vocational institutions; the number of students increased due to the baby boom that followed the Second World War and resulted in larger age cohorts among the young. This meant that the increase of the number of VET students was particularly strong during the period of 1950–1960 (Klemelä, 1999). In 1950, less than 30,000 persons studied at vocational institutions, whereas by 1960 their number had almost doubled (see Table 7.1). In parallel, the number of youths who completed the matriculation examination of the general secondary schools also increased; more specifically, from less than 5,000 annual graduates to over 20,000 (Kaarninen, 2011).

*Table 7.1. Vocational Secondary Education and Secondary School Entrants from 1940 to 1970 (Laukia, 2013b, p. 328, p. 334; Kaarninen, 2011, p. 409)*

Year	VET students <sup>1</sup>	Secondary school entrants <sup>3</sup>	Share of secondary school entrants among 11-year-olds <sup>4</sup>	Live births related to cohorts of secondary school entrants (birth year) <sup>5</sup>
1945	20,380 <sup>2</sup>	15,580	25%	67,713 (1934)
1950	29,098	18,956	27%	78,164 (1939)
1960	56,733	37,089	38%	103,515 (1949)

<sup>1</sup> The number of VET students adopted from Laukia, 2013b, p. 328. The figure refers to students of all grades (1–3, depending on the field) in VET schools and is thus not comparable with the number of secondary school entrants.

<sup>2</sup> The number of VET students in the year 1940, whereas the numbers in the other columns relate to year 1945.

<sup>3,4</sup> Numbers adopted from Kaarninen, 2011, p.409.

<sup>5</sup> Data on live births adopted from Statistics Finland population figures.

The expansion of VET was coordinated by the state administration, which was centralised in the 1960s. Until the 1960s, the administration of vocational education and training was shared by several ministries and central administrative boards. In 1966, the Finnish National Board of Vocational Education was established as part of the Ministry of Trade and Industry, and in 1968 the Board was transferred to the Ministry of Education. Finally, in 1991, the general (Finnish National Board of General Education) and vocational (Vocational Board of Education) boards were merged to form the current Finnish National Board of Education (FNBE) (Cedefop ReferNet Finland, 2011, p. 30). Since then, the cooperation between vocational and general upper secondary education institutions has increased; for example, the Youth Education Pilot Project started in 1992.

### *Employer and employee organisations' emerging interest in participating in defining VET*

Following the Second World War, apprenticeship training continued to hold a central status as a form of initial vocational education and training (VET) in many countries (e.g., in Germany, Austria, Denmark). In Finland, on the contrary, apprenticeship training was reformed into a minor route (Olofsson and Wadensjö, 2006). In Finland, at their outset, the export industries had no connections to former guilds and their craft traditions (Sakslind, 1998). Some factory owners who were oriented toward mass production (e.g., steel and paper mills) had established vocational schools of their own to train a specialised, skilled workforce. The number of these industries' vocational schools increased between the 1960s and 1980s (Tuomisto, 1986, p. 306; Laukia, 2013a). Industries who had no particular interest in taking on the responsibility for youth training by developing apprenticeships left this task up to the state and municipalities. The new Apprenticeship Act of 1968 did not change the situation because both employers and employee organisations saw apprenticeships as complementary to school-based forms of vocational education. Apprenticeship played only a marginal role in certain specialised fields of industry (Kivinen and Peltomäki, 1999).

After the Second World War, VET increasingly became a topic of both industrial policy and education policy discussions. The political parties highlighted different aspects of VET. The labour movement emphasised the role of general subject matter in VET. The non-Socialist political parties and employers stressed direct task training at workshops. The Agrarian League advocated the expansion of the vocational and secondary school networks in rural areas (Itälä, 2000).

In Finland, the class compromise between capitalists and labourers was built through agreements between the government, the Finnish Employers' Confederation (STK) and the Central Organisation of Finnish Trade Unions (Suomen Ammattijärjestöjen Keskusliitto, SAK) after the Second World War, when employers were forced to accept collective negotiations with organised labour (Nieminen, 2000). The parity-based forms of collective

labour relations were constructed in the manufacturing industries through a process that spread from the national central level to the national sectoral level and finally to the local and workplace levels (Kettunen, 2001). The autonomy of collective agreements was still limited though, due to governmental regulation of wages and prices until the middle of the 1950s, and the disagreements in the relations culminated in the General Strike of 1956 (Kettunen, 2001). In the 1960s, the negotiations between the labour market organisations improved once the trade union movement was gradually reunified between 1964 and 1969 (Bergholm, 2016, p. 59). From the end of the 1960s, the ‘income’ policy began (Bergholm, 2016). A new type of intertwining of labour market agreements with social and economic policies was introduced (Kettunen, 2001). In parallel, the consensus enabling the development of the welfare state was built on the basis of income policy agreements, in which the parties represented the central interest organisations of blue- and white-collar workers, private and public sector employers, agricultural producers, and the government (Kettunen, 2001).

The employers’ organisation wanted to drive its privileges in VET policy issues and established an educational department within the Finnish Employers’ Confederation (STK) in 1952 (Tuomisto, 1986, p. 199–200). It acknowledged the purpose of school-based VET and identified its duties, including research on educational demand, making long-term educational forecasts, and consulting and organising educational bodies to support the planning of education. In parallel, trade unions had no independent line concerning vocational education in the 1950s, but their representatives participated in working with the Council of Vocational Education (Ammattikasvatusneuvosto) and the planning of VET curricula (Heikkinen, 1995, p. 200).

The interest of employer organisations in educational policy continued to increase only in the 1970s with the establishing of the comprehensive school system and the reforming of upper secondary vocational education (Purhonen, 2000). In the 1970s, the Finnish Employers’ Confederation (STK) considered collaborative relations with the trade union movement to be necessary in order to guarantee industrial peace and social stability (Bergholm, 2016, p. 70). However, the employers’ and employees’ attitudes differed from each other with respect to reforming upper secondary education. The employers emphasised occupational skills as a central task of VET, whereas the employees’ organisations stressed that general components should comprise VET (Koskela, 2003, p. 44).

The cooperation between employers, employees and teachers continued in the 1980s. Their organisations participated in the curriculum planning for upper secondary vocational education. The activities of the Vocational Training Council (Ammattikasvatusneuvosto) ended in 1987 and its work was delegated to field-specific Training Committees in 1988 (Laukia, 2013b, p. 93). Different vocational fields had their own Training Committees that consisted of representatives from employer, employee, teacher and educational administrations (Suursalmi, 2003, p. 12). The purpose of these committees was to develop VET in cooperation between employers and educators. Both the employer and employee representatives agreed for the forming of the vocational training to be led by the state and municipalities (Kivinen and Peltomäki, 1999).

## **The period of rapid growth and consolidation of the welfare state from 1970 to 1980**

### *Strengthening school-based VET – The reform of vocational upper secondary education*

The period from the 1960s to 1980s was a period when the issue of enhancing universal general education and equality dominated educational policy, while the stratified development of the education system lost ground (cf., Heikkinen and Henriksson, 2001). In the 1960s, Finland looked to Sweden for educational reform models since it was seen as one of the pioneers of the modern Nordic welfare state (Aho et al., 2006, p. 33). The Finnish Parliament decided to introduce the reform of the common basic education. The reform was implemented during the years 1972–1977 and established a unified comprehensive school system (*peruskoulu*, in Finnish) (Laukia, 2013a; Salminen, 1999). The left-wing government led by the Social Democratic Party made educational reform its primary goal and emphasised the importance of social and economic equality (Aho et al., 2006). The reform divided opinions among politicians, despite its main objective of offering the same quality education in the form of nine years of compulsory comprehensive schooling to all children regardless of their socioeconomic background, domicile, gender or mother tongue.

After the compulsory school reform, which integrated former primary and stratified lower secondary education to cover grades 1–9 (for those aged 7–16 years), it was felt that the reform of the non-compulsory upper secondary education system was also necessary. The reason for reorganising the existing upper secondary education was to improve educational planning and the control of the number of study places, as well as to provide a study place for every compulsory school graduate in either general upper secondary education or vocational upper secondary education (Salminen, 1999; Virolainen and Stenström, 2015).

The 1971 Committee for Education prepared the upper secondary education reform and the government confirmed its direction in 1974. According to the government's decision, vocational education and training should in principle be developed as an educational pathway to higher education studies, and it should be compatible with the upper secondary school system (Klemelä, 1999); however, the reforms of the upper secondary schools and vocational schools were implemented separately. The reform aimed at educational equality, the rationalisation of education, the unification of diffuse VET, a decrease in consecutive qualifications taken by individuals and the removal of dead ends in the educational structure, while it increased the number of study places in order to meet the number of compulsory school graduates (Salminen, 1999).

The Finnish upper secondary vocational education reform was carried out field by field in the period from 1982 until 1988. In contrast to Sweden, the idea of comprehensive upper secondary education was rejected in Finland, because there was no consensus within political parties to make a decision about a unified upper secondary education (Meriläinen and Varjo, 2008). The reform period of 1982–1988 unified vocational curricula into a smaller number of

programmes, resulting in a system with 25 basic programmes and 250 lines of specialisation at school and college levels (Stenström and Virolainen, 2016).

The general education component introduced in the vocational upper secondary and post-secondary education curricula was meant to orient students toward trades and corresponding occupations. The aim of the general education component was to enable young people to develop a more general perspective on the field of production (Ekola, 1991). The national policy of vocational education was to broaden the scope of the VET provision, to raise national standards, and to prepare students to be able to meet the demands of working life. In practice, the teaching of occupational skills and knowledge was reorganised by educational institutions to form part of practica (Klemelä, 1999). Replacing workplace learning with practically oriented studies at VET schools reflected the notion of school-based VET. Along with the reform of the 1980s, there were demands for raising the status of school-based vocational education and training to be on par with the general education (Borgman and Henriksson, 2000). The reform failed to materialise some of the expectations it had been loaded with. The new system did not fully succeed in promoting equality and removing the influence that students' social background held in education (Stenström, 1997). Nevertheless, the vocational upper secondary reform was important in that it was the first time that post-compulsory education was planned as a whole in Finland.

#### *Access to higher education in the 1980s*

In general, there were no direct routes from vocational education to higher education before the upper secondary education reform took place in the 1980s (Numminen, 2000). Some exceptions to this general rule existed though, since some regional higher education institutes in the fields of technology and commerce accepted students who had completed post-secondary vocational programmes (opistoaste, in Finnish). They were able to gain eligibility for higher education, such as on the basis of recommendations or if they completed some additional studies (Kaarninen, 2013, p. 29). In the 1980s, the Ministry of Education designed the Development Plan for Education, in which many revisions were planned to make vocational education more competitive with the general education (Aho et al., 2006, p. 80). A decree (Finland. Asetus 275/1984) was issued to give vocational college (opisto, in Finnish) graduates limited eligibility to progress in the same educational fields as the students at universities. Despite this, stratified compulsory education was abolished, but the routes within post-compulsory vocational education still remained disparate and stratified in aiming at differing groups of entrants.

The vocational upper secondary education reform that took place from 1982 until 1988 initiated a route to higher education through the post-secondary vocational programmes. The Vocational Education Act (Finland. Laki ammatillisista oppilaitoksista 487/1987) opened a channel from VET to university studies and other higher education (Laukia, 2013b, p. 285). The three-year VET programmes provided general eligibility for higher education, while two-year programmes gave eligibility for further studies within the same field. This was the first time that an Act integrated VET consistently and as part of the overall Finnish education



system. The VET route's binary position with respect to general upper secondary education was not abolished though (Lasonen and Young, 1998).

## **Challenges of Europeanisation and globalisation since the 1990s**

### *A need to reform upper secondary and higher education*

Since the 1990s, Finland can be seen as an emerging liberalistic EU state. In 1995, Finland joined the European Union. Furthermore, at the beginning of the 1990s, the concurrent rapid collapse of the banking system and the fall of Soviet trade swiftly changed the social and economic situation (Heikkinen, 2001). The need to reform Finnish upper secondary and higher education had been recognised already before the economic change toward recession, though. In order to find solutions for the development of the education system, two experimental projects were started in parallel: the youth education pilot project and the polytechnics experiment (polytechnics would later be renamed universities of applied sciences, UAS). The experimental reforms were informed by social scientific ideas concerning the development of the welfare state in late modernity, such as the concepts of individualisation and reflexivity (see e.g. Atkinson, 2010; Beck, 1992; Giddens, 1990). The post-WWII reorganisation of welfare services and civic rights by the state had intervened in the continuation of the existing social class structure and familial bonds, thus reorganising society itself.

The central idea of the youth education pilot project in the 1990s was to investigate opportunities for the development of upper secondary education. The experiment was a compromise of educational policy, resulting from left-wing Social Democratic interest in following the Swedish model of a unified upper secondary education system having been rejected (Meriläinen and Varjo, 2008). However, the experiment's legislative framework allowed general and vocational upper secondary institutions to collaborate regionally. The pilot approach did not become a model practised in the whole of the country; yet some interest has remained, particularly in double qualifications.

Contrary to the youth education experiment, the parallel polytechnics experiment received a permanent position later on, in the 1990s. The Finnish polytechnics were developed from former vocational colleges and higher vocational education institutions. The principles underlying polytechnic education derived from the need for a highly trained expert workforce. The polytechnic reform created a binary system of higher education in Finland and established a systematic route for students to extend their studies from VET to higher education. In an international context, the Finnish acronym 'AMK' (ammattikorkeakoulu, in Finnish, literally means 'vocational higher education institution') has also been used to differentiate AMKs from British polytechnics (e.g., Ahola, 2006). Both Finnish traditional science universities and polytechnics were governed by the Ministry of Education (Stenström and Virolainen, 2014b).

Alongside the youth education experiment and establishing AMKs, the upper secondary VET system was reorganised into study programmes based on occupational sectors and fields. Until 1995, students were offered three levels of vocational qualifications: school level (2–3 years), college level (2–4.5 years), and higher vocational level (3–4.5 years). After the curriculum reform in 1995, the number of Finnish upper secondary VET qualifications was reduced considerably and subsequently 77 basic vocational qualifications were provided with each taking 2–3 years to complete (Stenström and Virolainen, 2016).

### *A need to enhance the links between VET and working life*

In the 1990s, the influence of employers' interests in educational policy increased since a severe economic recession and increasing unemployment weakened labour's negotiating power. The market-oriented ideology of the 1990s supported the demands of employers, who succeeded in their labour market and economic policy objectives (Nieminen, 2000). The recession sped up the state's need to enhance the links between school and working life. In particular, the growth of the unemployment rate to 20% led to an increasing demand to develop apprenticeship training, but apart from the school-based VET (Kivinen and Peltomäki, 1999). A new Apprenticeship Act was launched in 1992 (Finland. Laki oppisopimuskoulutuksesta 1605/1992). Its aim was to improve the status of apprenticeship training as a work-oriented form of training in an otherwise mainly school-based vocational education system during the time of recession (Poutanen, 2008). Furthermore, it was hoped that the apprenticeship training would interest unemployed, unskilled young people at risk of marginalisation as a means of gaining a job to earn their livelihood (Kivinen and Peltomäki, 1999). Unfortunately, the attractiveness of the apprenticeship route was hampered by its status as a secondary option, and it consequently remained a minor route of youth education and a less significant part of active labour market schemes for youth.

The international trends in education policy started to have more of an effect on the developing VET in Finland during the 1990s. Accordingly, the issue of lifelong learning became a more prominent theme of educational policymaking as did the development of Finnish adult education in the 1990s. Following the OECD report's considerations regarding the importance of a knowledge-based economy and combined with the demise of Taylorism, the demand for the continuous updating of skills was generally acknowledged (OECD 2007). Growing priority was given to the recognition of informal and non-formal learning in European education and training systems. In Finland, competence-based qualifications for adults came into force with the implementation of the Vocational Qualifications Act in 1994 (Finland. Ammattitutkintolaki 306/1994), and these were also included in the Vocational Adult Education Act (1998). The Finnish National Board of Education created a framework in close cooperation with the leading labour market organisations representing employers and employees and with teachers: so-called qualification committees were organised as the quality of competence in test performances was to be assured on a tripartite basis between the separate representatives of employers, employees, and teachers (Finnish National Board of Education, 2010).

Since 2001, the structure and curricula of initial vocational education and training have been renewed in response to the lack of cooperation between Finnish VET and the working world (Klemelä, 1999). The number of vocational qualifications was reduced to 52 and study programmes to 113. All initial vocational qualifications were extended to consist of 3 years of full-time study (Stenström and Virolainen, 2014a). In addition, on-the-job learning (work-related learning) was simultaneously incorporated into the curriculum, lasting at least 6 months. This has been one of the most central Finnish VET reforms undertaken since the year 2000.

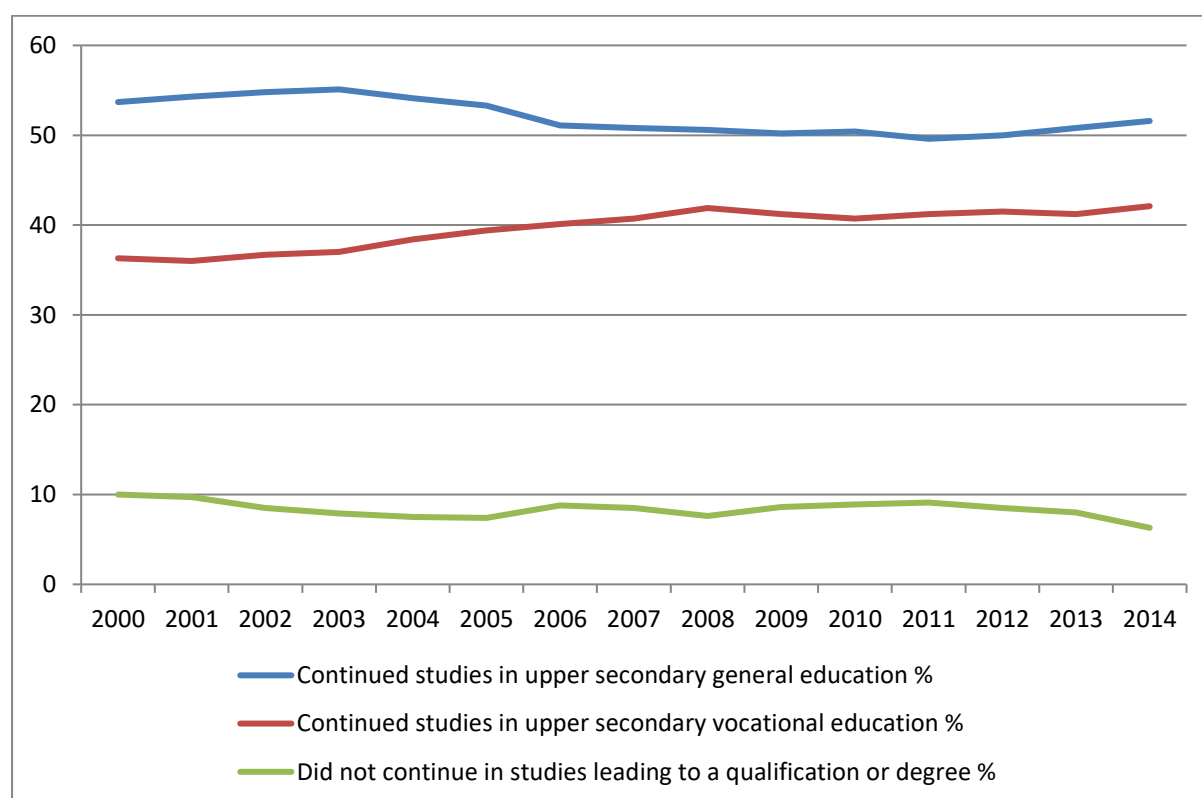
Further efforts to achieve closer cooperation between VET and the workplace also included the adoption of a new form of assessment, that is, vocational skills demonstrations (Stenström et al., 2006). In contrast to adult competence test performances administered by the Qualification Committees, young students were asked to demonstrate their practical skills during their initial VET. It was preferred for students to demonstrate their skills in practical work situations or in practical assignments. The skill assessments were arranged in collaboration with representatives of the school, employers and employees aiming toward formative assessment, differing thus from the adults' summative competence-based qualifications (Räkköläinen, 2011). These enhancements of school-based VET with on-the-job learning and skills demonstrations became distinctive characteristics of Finnish VET in contrast to the Swedish school-based model of organising VET. In Sweden, the links from VET to the working world were increased later, in the 2010s (Virolainen and Persson Thunqvist, 2016).

The curriculum of the Finnish VET system was reformed again as part of a wider VET reform that started in 2015 and is set to continue until 2018. The reform concerns funding, administration, regulation, legislation, qualification structure, models for organising education, and providers of education (Opetus- ja kulttuuriministeriö, 2016). Since VET in Finland is mostly funded by the state, thorough multi-level changes can be expected (see Rauhala, 2013; Stenström and Virolainen, 2014a). The newly reformed model of VET should be in place by 2018. The new curriculum reform reflects the need to harmonise the Finnish VET system with the European Qualification Framework (EQF) and European Credit System for VET (ECVET) (Cedefop, 2008; Virolainen and Stenström, 2015). By defining the initial VET curricula in terms of the competence-based approach and competence points, the national qualification framework seems to continue to follow the prevailing national model. The dominant VET model is school-based even though the curriculum is equivalent to competence-based qualifications targeting adults and is thus somewhat closer to the outcome-based approach. The competence points can be gained through skills demonstrations, which should promote individual pace of progression. As such, the national curriculum framework is still committed to providing equal educational opportunities and access to higher education. Parallel economic cut-backs in the funding for VET institutions related to the recession in Finland that started in 2008, and concerns have been raised about the sufficiency of collaborations between VET schools and employers as well as regarding educational supplies.

The role of outcome-based approaches has been given increased attention in European discussions ever since the European Commission's 2009 recommendation to its partner countries to organise a transfer system for study credits (Cedefop, 2008; Bjørnåvold and Pevec Grm, 2013; Kärki, 2014). The European Credit System for Vocational Education and Training (ECVET) is expected to facilitate the recognition of prior learning and existing competences.

### *Improving the standing of VET in the 2000s*

At present, in Finland almost all young people finishing compulsory comprehensive school have access to either general upper secondary education or upper secondary vocational education and training (Cedefop Refernet Finland, 2011, p. 38). According to the annual statistics for post-compulsory education in Finland, nearly all comprehensive school graduates apply for further studies, and a total of 94% go on to further studies aiming at a qualification or degree (Figure 7.1) (Statistics Finland, 2016a).



*Figure 7.1.* Direct transition to further studies of graduates of the 9th grade of comprehensive school during 2000–2014 (Statistics Finland, 2016a).

The VET reforms introduced after the Second World War have changed the position of vocational education in the Finnish school system. The popularity and status of vocational education and training has increased, particularly since the early 2000s (see Figure 7.1) when work-related learning (on-the-job learning) began to be implemented in the VET curriculum. The increase in Finnish VET's success has coincided with the combination of VET students' eligibility for higher education and the enhancement of educational institutions' connections to the working world, both at the institutional and the regional levels of pedagogy and curriculum planning. Furthermore, international exchange programmes and graduates' opportunities to participate in World Skills competitions have improved the image of VET (Ruohotie et al., 2008; Virolainen and Stenström, 2014).

In the period from 2000 until 2014, the interest in VET had increased, after completing their compulsory basic education still more than half of the students continued in general upper secondary education (52%) compared to 42% in initial vocational education and training (Statistics Finland, 2016a). Regarding gender segregation, the shares of men and women among the new students were almost equal (women 51%, and men 49%). However, most fields are gender-segregated, reflecting the gendered division of work in the labour market. For example, in the field of health, welfare and sports, the share of women was 82%, while in the field of technology and transport it was only 20% (Kuusi et al., 2009; Statistics Finland, 2016c).

In contrast, only 32% of the general upper secondary school graduates in 2015, upon passing the matriculation examination immediately continued their studies leading to a qualification or degree from: a university (16%), a university of applied sciences (former 'polytechnic', 11%), or a VET institute (5%) (Statistics Finland, 2016b). In the ten years from 2005 to 2015, the share of general upper secondary school graduates who did not immediately continue with further studies in the autumn upon passing their matriculation examination grew from 58% to 68% (Statistics Finland, 2016b). On the whole, the number of higher education applicants has also remained at a relatively high level in relation to youth unemployment since the 1990s (Alatalo et al., 2017; Virolainen and Stenström, 2014).

Despite its success and the increased participation rate in VET, there still remain some challenges for Finnish VET and its future development. For instance, the attrition rate of dropouts is a challenge. During the academic year 2013–2014, a total of 7% of students attending a qualification or degree programme discontinued their studies and did not resume them in any other education leading to a qualification or degree (Statistics Finland, 2016a).

Also, the increased popularity of VET along with changing work and competence requirements has created new demands regarding VET (Laukia, 2013a). There is a need to develop the VET system so as to be more responsive to the heterogeneous student population in order to meet both the needs of those aiming to participate in Skills Competitions (Ruohotie et al., 2008) and those under the threat of dropping out (e.g., Kuronen, 2010). For those young people who do not get employed directly after completing the VET and those

who want to continue their studies, the opportunities for further and higher education are important.

The prevention of dropping out has included promotion of inclusive policies. Since 1996, youth under 24 years of age have been obliged to participate in education or an apprenticeship training programme in the sense that unless they apply for vocational training or participate in labour market policy programmes, they will lose their unemployment benefits. Since 2013, the Finnish Youth Guarantee has demanded that communities offer everyone under the age of 25 years, as well as those who have recently graduated and are under 30 years of age, either a job, on-the-job training, a study place, or rehabilitation (Ministry of Education and Culture, 2017).

In future, VET providers' role and responsibilities in achieving the goals of both the Youth Guarantee and ambitious, high-achieving students have to be combined with the latest reform of the Finnish VET system adopted since 2016. In addition to the new curricular changes, the decrease in governmental funding (VET budget) is an obstacle to be overcome in trying to achieve Finland's educational and policy goals. Since education providers' funding by the state has been cut and a considerable number of VET teachers have been made redundant, the completion of the personal study plans targeted by the curriculum reform may be compromised. Even though the sizes of the youth cohorts in VET have decreased, the new trend of decreased funding and increased redundancies has raised concern as there are less human resources to support students' individual plans and to organise regional collaborations with the working world. Furthermore, changes in the provision of general, common studies may have an effect on VET graduates' participation in higher education in the future.

#### *Transitions from VET to the labour market and higher education (HE) in the 2000s*

The transition from VET to the labour market or higher education is a critical period for VET graduates. Statistics relating to this transitional phase have often been used as assessment criteria for the effectiveness of VET in many countries, and this has also been the special focus of the Nord-VET project. Since 2008, the Finnish economy has been suffering from recession, which is seen reflected in the employment levels of VET graduates. As an outcome of the recession, Finland's employment rate of IVET (initial vocational education and training) graduates aged 20 to 34 years in 2016 was lower (75.5%) than in Denmark (87.4%) and Sweden (88.7%) (Cedefop, 2017). Furthermore, the Finnish employment rate for 20- to 64-year-olds in 2016 was lower (72.9%) than in other Nordic countries (Denmark 76.5%, Sweden 80.5%, Norway 79.1%), yet higher than in the EU (70%) (Cedefop, 2017).

As the descriptions and analyses in the previous sections show, Finnish education policy has paid a lot of attention to the transitions between different educational levels. Since the VET reform has been completed in the 2000s, there are no longer any dead ends between the different levels of education. The eligibility of VET graduates for higher education was developed in several stages alongside the development of the universities of applied sciences (UAS, formerly 'polytechnics') and in relation to the curricular reforms of upper secondary

VET in 1995 and the 2000s. The statistics indicate that around one quarter (26%) of the new UAS students in 2013 had a VET qualification prior (Hintsanen et al., 2016). The number of those who undertook a direct transition from initial VET to a UAS was smaller; about 14% to 19% of graduates with a VET qualification at the upper secondary level moved on to higher education (HE) at a UAS within three years of their VET graduation (Stenström and Valkonen, 2012; Kilpi-Jakonen et al., 2016). Even though the number of students with a VET background entering HE was not extensive, VET students have emphasised the option of eligibility for HE as having been a motivating factor in their choosing VET in the first place.

On the societal level, the expansion of the HE system through the introduction of the UAS system has been justified by demands for innovation to promote the knowledge society and its economy. The establishment of the UAS system enhanced the professional projects and status of some gender-specific welfare state professions that it addressed in its curriculum, such as giving more educational support to nurses and midwives. In the 2000s, such professions have weakened due to marketisation and managerial ethos influencing the organising of health and social services as part of the changes introduced in the welfare state (Henriksson et al., 2006). Recently, in 2016, some universities of applied sciences introduced qualification-specific entrance examinations for applicants from VET schools. This change may have an effect on VET students' participation in UAS studies in the future.

## **Conclusion**

After the Second World War, Finland shifted from being a socially supported small-scale farming society to becoming a welfare state of social security and paid work (Kettunen, 2001). The modern welfare state was established gradually and its formation played a crucial role in the defining of its education policy (Järvelä, 1991, p. 35). The formation of Finland's VET was also linked to the development of its industrial culture. The structure of the Finnish occupational culture changed from one of agriculture to that of industry later than had occurred elsewhere in Europe, but at a rapid pace following the Second World War due to the increased demand for skilled workers in the labour market as the Finnish industry had to produce the goods necessary to pay the substantial war reparations demanded from Finland.

Taylorist industrial culture assumed there to be a distinction between intellectual and manual labour. The emerging VET followed this distinction by making supervisory education and initial VET separate forms of education (Väärälä, 1995, p. 118). Also, technological developments and a more detailed division of the labour market created an increasing need for VET. The aspirations to increase the cooperation between different vocational sectors strengthened during the 1950s. The drivers for the strengthening of the cooperation were the industries and trades of the network (Heikkinen and Henriksson, 2001). Later, the state and municipalities acted as drivers of the Finnish initial vocational education and training. The law of 1958 initiated Finnish VETs' expansion and further differentiation in the 1960s and 1970s, and promoted the state-led form of school-based VET as the dominant model of VET in Finland (Klemelä, 1999).

In the 1970s and 1980s, the general education policy also included increasing educational and regional equality. The set target of the education policy was to educate the whole age group in compulsory education and in the post-compulsory education. The function of the VET system was to guarantee social mobility and the possibility of getting a job (Väärälä, 1995). Full employment was the goal of the society, but in the 1990s the stable labour market became unstable mainly due to the economic depression and simultaneous globalisation. The changed labour market situation demanded different kinds of skills and necessitated reforming the VET system. For VET, this meant placing increased emphasis on individuality, employability and entrepreneurship.

In addition, the 1980s and 1990s were decades in which Finnish VET was struggling to gain esteem as a general upper secondary education. As a result, VET's general content and curriculum were developed to meet the changing demands of the working world. In the 1990s, the adoption of lifelong learning policies promoted the abolishment of dead ends in Finland's educational structure and implemented opportunities for transitioning from VET to higher education were developed. Further on, VET's developments in the 2000s emphasised building firmer connections with the working world.

It is typical of the Finnish VET system that the degree of cooperation between employers, employees, education administrators and teachers has varied between the different VET reforms, depending on their main focus, but such cooperation has been a continual part of VET since it was introduced in 1917 by the Vocational Training Council. In the Finnish school-based model of VET, the role of ministry-led committees and negotiations between employers and employees as well as with various other interest groups has been significant in defining its curriculum and programme structure (see, e.g., Ekola, 1991; Salminen, 1999). The development of the Finnish VET system has seen the interests of employers and trade union actors, as well as of other interest groups like teachers and communities, mediated and coordinated via state bureaucracy in several consecutive reforms during the 1980s, 1990s and 2000s (see also Busemeyer, 2015, p. 39).

Since the Second World War, both Finnish vocational upper secondary and post-secondary education expanded, and successive reforms reconstructed VET into its current, improved form (Virolainen and Stenström, 2015). Participation in VET increased in the 2000s, and the attraction to the Finnish school-based system of vocational education and training has been steadily growing until recently. The latest reform phase started in 2015 and is set to continue until 2018. The improvements to the initial VET's status were mostly the outcome of the reforms of its curriculum and qualification structure, as well as having opened the way for VET graduates' eligibility for higher education.

In particular, three developmental trends have had a crucial impact on the current status of VET. First of all, the general education component within VET was developed along with its continuous pedagogical renewal. From the early stages of the Finnish VET system, the curriculum of vocational education has included both practical and theoretical studies. This



has created a basis for participation in higher and further education as well as for lifelong learning.

Secondly, higher and further education opportunities have been created to provide the option of continued learning beyond VET. The Finnish universities of applied sciences were developed from former vocational colleges and higher vocational education institutions in the 1990s, and the removal of dead ends in the education system has increased the prestige of VET.

Thirdly, practical studies (work-based learning) have been an important component of vocational training education, although they have not been dominant in Finnish VET since the time of the craft guilds in the 19<sup>th</sup> century. And since the introduction of a legislative framework in 1958 and the implementation of a financial basis via the welfare state, VET has been institutionalised and developed into a school-based system. Compared to other Nordic countries, it is notable that Finnish VET emerged on a large scale only after the Second World War as the apprenticeship model typical to Denmark and Norway was not particularly strong in Finland prior to the war. Also, the later apprenticeship training has played only a marginal role in educating comprehensive school graduates in VET.

The reforms of the Finnish VET system have reorganised its relationship to the working world on several occasions. In the 1960s, the cooperation between education and the working world was increased, marking a partial shift from school-based learning to learning at the workplace. The upper secondary education reform in the 1980s, on the contrary, aimed at enhancing school-based vocational education independent from business life and replaced work training with practically oriented studies. Until the turn of the millennium, initial vocational education was mainly organised by vocational schools with few links to the working world. Since the turn of the millennium, a number of new initiatives have been taken with the aim of strengthening the relation between vocational education and working life. These include, in particular, the adoption of on-the-job learning periods in the curriculum and related vocational skills demonstrations. The main outcome of these latest reforms has been increased participation in VET (see also Stenström and Virolainen, 2014b, p. 48; Virolainen and Stenström, 2014).

The latest curriculum reform, which adopts a more competence-based approach, continues to enhance the connections between educational institutions and the working world. The increasingly more competence-based approach reflects the adoption of European trends in Finnish education policy. This adoption of a strongly competence-based approach has raised concerns about a possible shift toward narrowly defined outcome-based qualifications as seen elsewhere in Europe, such as in the United Kingdom (Wolf, 2011). Steering toward such an outcome-based approach has been criticised as some see it as a threat to understanding the meaning of the general skills and theoretical knowledge learned in vocational education (Young and Allais, 2009).

## REFERENCES

- Aho, E., Pitkänen, K. and Sahlberg, P. (2006) *Policy Development and Reform Principles of Basic and Secondary Education in Finland Since 1968*, Washington, D.C., The World Bank, 2.
- Ahola, S. (2006) 'From 'different but equal' to 'equal but different': Finnish AMKs in the Bologna Process', *Higher Education Policy*, vol. 19, no. 2, pp. 173–186.
- Alatalo, J., Mähönen, E. and Räisänen, H. (2017) *Nuorten ja nuorten aikuisten työelämä ja sen ulkopuolisuus*. Helsinki, Ministry of Economic Affairs and Employment, TEM-analyyseja, 76.
- Antikainen, A. (1993) *Kasvatus, koulutus ja yhteiskunta*, Helsinki, WSOY.
- Atkinson, W. (2010) *Class, Individualization, and Late Modernity: In Search of the Reflexive Worker*, New York, Palgrave Macmillan.
- Beck, U. (1992) *Risk Society: Towards a New Society*, London, Sage.
- Bergholm, T. (2016) *A History of the SAK (the Central Organisation of Finnish Trade Unions)*, Helsinki, SAK, The Finnish Federation of Trade Unions [Online]. Available at <https://www.sak.fi/materials/publications/other-material/a-history-of-the-sak-2016-08-02> (Accessed 11 October 2017).
- Bjørnåvold, J. and Pevec Grm, S. (2013) *Analysis and Overview of NQF Developments in European Countries: Annual Report 2012*, Luxembourg, Publications Office of the European Union, 17.
- Borgman, M. and Henriksson, L. (2000) 'Laaja-alaista vai eriytyvää ammattikasvatusta? Sosiaali- ja terveystieteiden ammatillisia kohtaamisia', in Rajaniemi, A. (ed) *Suomalaisen ammattikasvatuksen historia*, Helsinki, Opetus-, kasvatus- ja koulutusalojen säätiö, pp. 140–145.
- Bussemeyer, M. R. (2015) *Skills and Inequality: Partisan Politics and the Political Economy of Education Reforms in Western Welfare States*, Cambridge, Cambridge University Press.
- Cedefop (2008) *The Shift to Learning Outcomes: Conceptual, Political and Practical Developments in Europe*, Luxembourg, Publications Office of the European Union.
- Cedefop (2017) *On the Way to 2020: Data for Vocational Education and Training Policies: Country Statistical Overviews – 2016 Update* [Online]. Available at <http://www.cedefop.europa.eu/en/publications-and-resources/publications/5561> (Accessed 5 March).
- Cedefop ReferNet Finland (2011) *Finland: VET in Europe – Country Report 2011* [Online]. Available at [http://libserver.cedefop.europa.eu/vetelib/2011/2011\\_CR\\_FI.pdf](http://libserver.cedefop.europa.eu/vetelib/2011/2011_CR_FI.pdf) (Accessed 20 November 2016).
- Christiansen, N. F., Petersen, K., Edling, N. and Haave, P. (eds) (2006) *The Nordic Model of Welfare: A Historical Reappraisal*, Copenhagen, Museum Tusculanum.

- Dobbins, M. and Busemeyer, M. R. (2015) 'Socio-economic institutions, organized interests and partisan politics: The development of vocational education in Denmark and Sweden', *Socio-Economic Review*, vol. 13, no. 2, pp. 259–284.
- Ekola, J. (1991) 'Miten onnistui ammatillisen keskiasteen koulunuudistuksen toimeenpano?', in Ekola, J., Vuorinen, P. and Kämäräinen P. (eds) *Ammatillisen koulutuksen uudistaminen 1980-luvulla: Selvitys uudistuksen toteutumisesta ja toteutusympäristöstä*, Helsinki, VAPK-kustannus, 30, pp. 7–64.
- Finland. *Ammattitutkintolaki 306/1994* (1994) [Online]. Available at <http://www.finlex.fi/fi/laki/alkup/1994/19940306> (Accessed 20 November 2016).
- Finland. *Asetus opistoasteen tutkintojen niveltämisestä korkeakouluopintoihin 275/1984* (1984) [Online]. Available at <http://www.edilex.fi/smur/19840275> (Accessed 20 November 2016).
- Finland. *Laki ammatillisesta aikuiskoulutuksesta 21.8.1998/631* (1998) [Online]. Available at <http://www.finlex.fi/fi/laki/ajantasa/1998/19980631> (Accessed 20 November 2016).
- Finland. *Laki ammatillisista oppilaitoksista 487/1987* (1987) [Online]. Available at <http://www.finlex.fi/fi/laki/alkup/1987/19870487> (Accessed 20 November 2016).
- Finland. *Laki ammattioppilaitoksista 184/1958* (1958) [Online]. Available at <http://www.finlex.fi/fi/laki/smur/1958/19580184> (Accessed 20 November 2016).
- Finland. *Laki oppisopimuskoulutuksesta 1605/1992* (1992) [Online]. Available at <http://www.finlex.fi/fi/laki/alkup/1992/19921605> (Accessed 20 November 2016).
- Finnish National Board of Education (2010) *Vocational Education and Training in Finland: Vocational Competence, Knowledge and Skills for Working Life and Further Studies*, Helsinki, Finnish National Board of Education [Online]. Available at [http://www.oph.fi/download/131431\\_vocational\\_education\\_and\\_training\\_in\\_finland.pdf](http://www.oph.fi/download/131431_vocational_education_and_training_in_finland.pdf) (Accessed 20 November 2016).
- Giddens, A. (1990) *The Consequences of Modernity*, Cambridge, Polity Press.
- Haapala, P. (2006) 'Suomalainen rakennemuutos', in Saari J. (ed) *Historiallinen käänne: Johdatus pitkän aikavälin historian tutkimukseen*, Helsinki, Gaudeamus, pp. 91–124.
- Heikkinen, A. (1995) *Lähtökohtia ammattikasvatuksen kulttuuriseen tarkasteluun: Esimerkkinä suomalaisen ammattikasvatuksen muotoutuminen käsityön ja teollisuuden alalla 1840–1940*, PhD thesis, Tampere, University of Tampere.
- Heikkinen, A. (2001) 'The transforming peripheries of vocational education: Reflections from the case of Finland', *Journal of Education and Work*, vol. 14, no. 2, pp. 227–250.
- Heikkinen, A. and Henriksson, L. (2001) 'Ammatillisen kasvun ajat ja paikat', in Anttila, A.-H. and Suoranta, A. (eds) *Ammattia oppimassa*, Tampere, Työväen historian ja perinteen tutkimuksen seura, pp. 206–263.

- Henriksson, L., Wrede, S. and Burau, V. (2006) 'Understanding professional projects in welfare service work: Revival of old professionalism?' *Gender, Work & Organization*, vol. 13, no. 2, pp. 174–192.
- Hintsanen, V., Juntunen, K., Kukkonen, A., Lamppu, V.-M., Lempinen, P., Niinistö-Sivuranta, S., Nordlund-Spiby, R., Paloniemi, J., Rode, J.-P., Goman, J., Hietala, R., Pirinen, T. and Seppälä, H. (2016) *Liikettä niveliin: Ammatillisesta koulutuksesta ammattikorkeakouluun johtavien opintopolkujen ja koulutusasteiden yhteistyön toimivuus*, Helsinki, Kansallinen koulutuksen arviointikeskus, 2.
- Itälä, J. (2000) 'Ammatillisen koulutuksen rooli Suomen rakentamisessa', in Rajaniemi, A. (ed) *Suomalaisen ammatikasvatuksen historia*, Helsinki, Opetus-, kasvatus- ja koulutusalojen säätiö, pp. 41–69.
- Kaarninen, M. (2011) 'Oppikoulu yhteiskunnan rakentajana' in Heikkinen, A. and Leino-Kaukiainen, P. (eds) *Valistus ja koulunpenkki. Kasvatus ja koulutus Suomessa 1860-luvulta 1960-luvulle*, Helsinki, Suomen kirjallisuuden seura, pp. 405–429.
- Kaarninen, M. (2013) "Pitäisi olla puoleksi runoilija voidakseen kirjoittaa historiaa...": Kirjoittavat naiset ja isänmaan historia nuorisolle, in Jalava, M., Kinnunen, T. and Sulkunen, I. (eds) *Kirjoitettu kansakunta: Sukupuoli, uskonto ja kansallinen historia 1900-luvun alkupuolen suomalaisessa tietokirjallisuudessa*, Helsinki, Suomalaisen Kirjallisuuden Seura, 136, pp. 149–188.
- Kaisaniemi, A. (1987) *Keskiasteen koulunuudistus 9: Tietoja ammatillisesta koulutuksesta ja sen uudistamisesta: Oppisopimuskoulutus ja ammatilliset pätevyystutkinnot*, Helsinki, Valtion painatuskeskus.
- Kettunen, P. (2001) 'The Nordic welfare state in Finland', *Scandinavian Journal of History*, vol. 26, no. 3, pp. 225–247.
- Kettunen, P. (2013) 'Vocational education and the tensions of modernity in a modern Nordic periphery', in Buchhardt, M., Markkola, P. and Valtonen, H. (eds) *Education, State and Citizenship*, Helsinki, Nordic Centre of Excellence NordWel, 4, pp. 31–55.
- Kilpi-Jakonen, E., Erola, J. and Karhula, A. (2016) 'Inequalities in the haven of equality? Upper secondary education and entry into tertiary education in Finland', in Blossfeld, H.-P., Buchholz, S., Skopek, J. and Triventi, M. (eds) *Models of Secondary Education and Social Inequality: An International Comparison*, Coltenham, Edward Elgar Publishing, pp. 181–196.
- Kivinen, O. and Peltomäki, M. (1999) 'On the job or in the classroom? The apprenticeship in Finland from the 17th century to the 1990s', *Journal of Education and Work*, vol. 12, no. 1, pp. 75–93.
- Klemelä, K. (1999) *Ammattikunnista ammatillisiin oppilaitoksiin: Ammatillisen koulutuksen muotoutuminen Suomessa 1800-luvun alusta 1990-luvulle*, PhD thesis, Turku, University of Turku.

- Koskela, H. (2003) *Opiskelijoiden haasteellisuudesta ammattiopintoihin sitoutumisen substanssiteoriaan. Grounded theory – menetelmän soveltaminen ammattioppilaitoksen opettajien kuvauksiin opetettavistaan*, PhD thesis, Joensuu, University of Joensuu.
- Kuronen, I. (2010) *Peruskoulusta elämäkouluun: Ammatillisesta koulutuksesta syrjäytymisvaarassa olevien nuorten aikuisten tarinoita peruskoulusuhteesta ja elämäkulusta peruskoulun jälkeen*, PhD thesis, Jyväskylä, University of Jyväskylä.
- Kuusi, H., Jakku-Sihvonen, R. and Koramo, M. (2009) *Koulutus ja sukupuolten tasa-arvo*, Helsinki, Sosiaali- ja terveysministeriö.
- Kärki, S.-L. (2014) 'Lähtökohdat, kansallinen tahtotila ja osaamisperusteisuuden tuomat muutokset', in *Osaamisperusteisuus todeksi – askelmerkkejä koulutuksen järjestäjille*, Helsinki, National Board of Education, 8, pp. 6–8.
- Lasonen, J. and Stenström, M.-L. (1995) *Contemporary Issues of Occupational Education in Finland*, Jyväskylä, University of Jyväskylä, Institute for Educational Research.
- Lasonen, J. and Young, M. (eds) (1998) *Strategies for Achieving Parity of Esteem in European Upper Secondary Education*, Jyväskylä, University of Jyväskylä, Institute for Educational Research.
- Laukia, J. (2013a) 'Education of skilled workers and citizens: Vocational education in Finland', in Aaltonen, K., Isacson, A., Laukia, J. and Vanhanen-Nuutinen, L. (eds) *Practical Skills, Education and Development: Vocational Education and Training in Finland*, Helsinki, HAAGA-HELIA University of Applied Sciences, pp. 9–19.
- Laukia, J. (2013b) *Tavoitteena sivistynyt kansalainen ja työntekijä: Ammattikoulu Suomessa 1899–1987*, PhD thesis, Helsinki, University of Helsinki.
- Meriläinen, R. and Varjo, J. (2008) 'Integroidun nuorisoasteen historiallinen rakentuminen osana suomalaista koulutusjärjestelmää ja -politiikkaa', *Ammattikasvatuksen aikakauskirja*, vol. 10, no. 3, pp. 13–25.
- Michelsen, S. and Høst, H. (2018) 'Norwegian VET and the ascent of social democracy', in Michelsen, S. and Stenström, M.-L. *Vocational education in the Nordic countries*, see pages from the book in proof.
- Ministry of Education and Culture (2017) *The Youth Guarantee in Finland provides employment, training and a customised service* [Online] Available at <http://minedu.fi/documents/1410845/4150027/The%20Youth%20Guarantee%20in%20Finland/9efd3ac2-0a68-464b-b152-62a8ce2008bb>. (Accessed 26 November 2017)
- Nieminen, A. (2000) 'Finnish employer confederations – Streamlining inner organization and regulating national capitalism', Jensen, C. S. (ed) *Arbejdsgivere i Norden: En sosiologisk analyse af arbejdsgiverorganisering i Norge, Sverige, Finland og Danmark*, København, Nordisk Ministerråd, pp. 287–371.
- Numminen, U. (2000) 'Strategies for improving vocational education: The Finnish case', in Stenström, M.-L. and Lasonen, L. (eds) *Strategies for Reforming Initial Vocational Education and Training in Europe*, Jyväskylä, University of Jyväskylä, Institute for Educational Research, pp. 74–91.

OECD (2007) *Qualifications Systems: Bridges to Lifelong Learning* [Online]. Available at <http://www.oecd.org/edu/skills-beyond-school/38465471.pdf> (Accessed 27 September 2017).

Opetus- ja kulttuuriministeriö (2016) Luonnos hallituksen esitykseksi eduskunnalle laiksi ammatillisesta koulutuksesta ja eräksi siihen liittyviksi laeiksi, Helsinki, Ministry of Education and Culture.

Olofsson, J. and Wadensjö, E. (2006) *Lärlingsutbildning – ett återkommande bekymmer eller en oprövad möjlighet?* Stockholm, Finansdepartementet, Regeringskansliet, 4.

Poutanen, M. (2008) ‘Joustavuutta, mahdollisuuksia ja rajoituksia 1990-luvulla’, in Lankinen, S. and Viinisalo, K. (eds) *Ajatuksia oppisopimuskoulutuksesta: Koulutuspolitiikkaa eilen ja tänään*, Helsinki, Helsingin kaupunki, Opetusvirasto, pp. 71–91.

Purhonen, K. (2000) ‘Teollisuuden ja työnantajain keskusliitto koulutuspoliittisena vaikuttajana’, in Rajaniemi, A. (ed) *Suomalaisen ammattikasvatuksen historia*, Helsinki, Opetus-, kasvat- ja koulutusalojen säätiö, pp. 260–265.

Rauhala, P. (2013) Kohteleeko julkinen rahoitus tasavertaisesti eri koulutusmuotoja? *Ammattikasvatuksen aikakauskirja*, vol. 15, no. 2, pp. 9–19.

Ruohotie, P., Nokelainen, P. and Korpelainen, K. (2008) ‘Ammatillisen huippuosaamisen mallintaminen: Teoreettiset lähtökohdat ja mittausmalli’, *Ammattikasvatuksen aikakauskirja*, vol. 10, no. 1, pp. 4–16.

Räkköläinen, M. (2011) *Mitä näytöt näyttävät? Luotettavuus ja luottamus ammatillisten perustutkintojen näyttöperusteisessa arviointiprosessissa*, PhD thesis, Tampere, University of Tampere.

Sakslind, R. (1998) *Danning og yrkesutdanning: Utdanningssystem of nasjonale moderniseringsprosjekter 103*, Oslo, Norges forskningsråd.

Salminen, H. (1999) ‘Ammattikorkeakoulu-uudistuksen ja keskiasteen tutkinnonuudistuksen yhteneväisyyksiä ja eroja’, *Kasvatus*, vol. 30, no. 5, pp. 472–490.

Statistics Finland (2015) *Main Type of Activity of Completers of Qualifications One Year After Graduation by Field of Education and by Region of Residence in 2007 to 2014* [Online]. Statistics Finland’s PX-Web databases. Available at [http://pxnet2.stat.fi/PXWeb/pxweb/en/StatFin/StatFin\\_\\_kou\\_\\_sijk/010\\_sijk\\_tau\\_101.px/?r\\_xid=af068c55-4337-4457-9b80-5a23905c9c37](http://pxnet2.stat.fi/PXWeb/pxweb/en/StatFin/StatFin__kou__sijk/010_sijk_tau_101.px/?r_xid=af068c55-4337-4457-9b80-5a23905c9c37) (Accessed 20 November 2016).

Statistics Finland (2016a) *Discontinuation of Education Decreased* [Online]. Available at [http://www.tilastokeskus.fi/til/kkesk/2014/kkesk\\_2014\\_2016-03-17\\_tie\\_001\\_en.html](http://www.tilastokeskus.fi/til/kkesk/2014/kkesk_2014_2016-03-17_tie_001_en.html) (Accessed 20 November 2016).

Statistics Finland (2016b) *Entrance to Education 2015* [Online]. Available at [http://tilastokeskus.fi/til/khak/2015/khak\\_2015\\_2016-09-28\\_en.pdf](http://tilastokeskus.fi/til/khak/2015/khak_2015_2016-09-28_en.pdf) (Accessed 27 October 2017).

- Statistics Finland (2016c) *Vocational Training 2015* [Online]. Available at [http://www.stat.fi/til/aop/2015/aop\\_2015\\_2016-09-27\\_en.pdf](http://www.stat.fi/til/aop/2015/aop_2015_2016-09-27_en.pdf) (Accessed 20 November 2016).
- Stenström, M.-L. (1997) *Educational and Gender Equality in Vocational Education: The Case of Commercial Education in Finland*, PhD thesis, Jyväskylä, University of Jyväskylä.
- Stenström, M.-L., Laine, K. and Kurvonen, L. (2006) ‘Practice-oriented assessment in Finnish VET – Towards quality assurance through vocational skills demonstrations’, in Stenström, M.-L. and Laine, K. (eds) *Quality and Practice in Assessment: New Approaches in Work-Related Learning*, Jyväskylä, University of Jyväskylä, Finnish Institute for Educational Research, pp. 89–120.
- Stenström, M.-L. and Valkonen, S. (2012) ‘Ammatillisen koulutuksen opintourat’, in Stenström, M.-L., Virolainen, M., Vuorinen-Lampila, P. and Valkonen, S. *Ammatillisen koulutuksen ja korkeakoulutuksen opintourat*, Jyväskylä, University of Jyväskylä, Finnish Institute for Educational Research, pp. 23–108.
- Stenström, M.-L. and Virolainen, M. (2014a) *The Current State and Challenges of Vocational Education and Training in Finland: The Finnish Country Report 1B* [Online]. Available at [http://nord-vet.dk/indhold/uploads/Finnish-country-report-1B\\_0912\\_2014.pdf](http://nord-vet.dk/indhold/uploads/Finnish-country-report-1B_0912_2014.pdf) (Accessed 20 November 2016).
- Stenström, M.-L. and Virolainen, M. (2014b) *The History of Finnish Vocational Education and Training: The Finnish Country Report 1A* [Online]. Available at [http://nord-vet.dk/indhold/uploads/report1b\\_fi.pdf](http://nord-vet.dk/indhold/uploads/report1b_fi.pdf) (Accessed 20 November 2016).
- Stenström, M.-L. and Virolainen, M. (2016) ‘Towards the enhancement of school-based VET in Finland’, in Berner, E. and Gonon, P. (eds) *History of Vocational Education and Training in Europe: Cases, Concepts and Challenges, 14*, Bern, Peter Lang, pp. 327–347.
- Suursalmi, P. (2003) *Kolmikantaperiaatteen toteutuminen ammatillisen peruskoulutuksen näytöissä*, Helsinki, Opetushallitus.
- Tuomisto, J. (1986) *Teollisuuden koulutustehtävien kehittyminen: Tutkimus teollisuustyönantajien koulutustoiminnan ja kvalifikaatiointressien historiallisesta kehityksestä Suomessa*, PhD thesis, Tampere, University of Tampere.
- Virolainen, M. and Persson Thunqvist, D. (2017) ‘Varieties of universalism: Post-1990s developments in the initial school-based model of VET in Finland and Sweden and implications for transitions to the world of work and higher education’, *Journal of Vocational Education and Training*, vol. 69, no. 1, pp. 47–63.
- Virolainen, M. and Stenström, M.-L. (2014) ‘Finnish vocational education and training in comparison: Strengths and weaknesses’, *International Journal for Research in Vocational Education and Training*, vol. 1, no. 2, pp. 81–106 [Online]. Available at <http://www.ijrvet.net/index.php/IJRVET/article/view/32/15> (Accessed 20 November 2016).

Virolainen, M. and Stenström, M.-L. (2015) *Recent Finnish VET reforms and innovations: Tackling the current challenges: The Finnish Country Report 1C* [Online]. Available at [http://nord-vet.dk/indhold/uploads/report1c\\_fin.pdf](http://nord-vet.dk/indhold/uploads/report1c_fin.pdf) (Accessed 20 November 2016).

Wolf, A. (2011). Review of Vocational Education – the Wolf Report. Gov. UK, London: Department of Business, Innovation & Skills, Department of Education [Online]. Available at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/180504/DFE-00031-2011.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf) (Accessed 24 November).