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Title: The development of Finnish vocational education and training from 1850 to 1945

Year: 2018

Version: Accepted version (Final draft)

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Please cite the original version:

Stenström, M.-L., & Virolainen, M. (2018). The development of Finnish vocational education and training from 1850 to 1945. In S. Michelsen, & M.-L. Stenström (Eds.), *Vocational Education in the Nordic Countries : The Historical Evolution* (pp. 24-45). Routledge. Routledge Research in International and Comparative Education.

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The Development of Finnish Vocational Education and Training from 1880 to 1945

Introduction

The history of Finnish vocational education and training (VET) in the 1800s and 1900s can be seen as a history of solutions that actors have created in response to the need for building an education system that suits a modern nation-state society (Kettunen, 2013). Finland was part of the Swedish Kingdom for about 500 years leading up to 1809, when Finland became part of the Russian Empire as a Grand Duchy. Economically, Finland has been a static, agrarian country with a social structure based on estates (Laukia, 2013a; Klemelä, 1999). During the period as the autonomous Grand Duchy of Finland, Finnish society began undergoing rapid social and economic change and new structures of economy, education and governance were developed. The period under the rule of the Russian Empire has been seen as decisive for the development of indigenous production, education and social policy (Heikkinen, 2001).

Since 1809, different social groups have gained more possibilities to articulate their political and cultural interests (Heikkinen, 2001). Even though the laws passed under the rule of Sweden were retained, ideological and industrial restructuring was starting to take place in the society (Gluschkoff, 2008; Manninen, 2003; Hirvonen, 2002). The Fennoman nationalist movement and ideology was built during that time, in the 19th century. It stated the need for schools, including vocational schools, and contributed to the development of the Finnish language and literature. The movement raised the Finnish language significance to that of Swedish, which was the language of the dominant, high-prestige minority in their common history.

Emerging pressure for the development of political and economic structures was reflected in the statements of an early proponent of the Fennoman movement, the journalist and historian Adolf Ivar Arwidsson. In the 1820s, he started to propagate the need to find a shared understanding for the formation of the Finnish nation (Heikkinen, 2001). Increasing nationalism required the mobilisation of the common people and abandonment of elitism among the Swedish-speaking upper class, who managed to retain much of its power due to existing family networks and continued to form the core of the industrial and administrative elite (Gluschkoff, 2008; Hirvonen, 2002; Heikkinen, 2001). Since the 1840s, the rise of nationalistic ideas meant the development of education, which was seen to play a central role in uniting the nation (Manninen, 2003; Klemelä, 1999). Finally, vocational education started to take shape more effectively after Finland's independence in 1917. The industrialisation had begun to expand slowly and the Finnish economy grew favourable at the end of the 1920s (Laukia 2013b, p. 104). At the beginning, the export industry had no connections to former

guilds and their craft traditions (Sakslind, 1998). Domestic import emerged, and especially those industries (e.g., metal and textile industries) that had previously been orientated toward the Russian market turned to cater to the Finnish domestic market (Rainio-Niemi, 2004, p. 155).

The development of education and its policy in Finland has been periodised by several authors placing emphasis on different characteristic factors of these decades. For example, authors like Tuomisto (1986), Kyöstiö (1955) and Heikkinen (1995) vary in how they emphasise elementary education and the establishment of VET schools, whose programmes were previously based on elementary education. The official phases of Finnish history have been outlined as three periods: 1) the phase under Sweden until 1809; 2) the phase under the Russian Empire as a Grand Duchy 1809–1916; and 3) the phase of Finnish independence since 1917 (see, e.g., Lehtisalo and Raivola, 1999). To portray the early development of VET in Finland, we utilised the periodisation of Kyöstiö's (1955) division as a starting point, but combined it with Tuomisto's (1986) views pointing to the period of general education as the establishment of the folk school system (i.e., elementary education) has provided an important foundation for vocational education. Also, both Kyöstiö (1955) and Heikkinen (1995) agree on the 1840s and 1880s as decades marking decisive historical turning points in broad terms. Kyöstiö (1955) investigated the early stages of VET. He divided the development of early VET into three periods: 1) the pre-phase and time of guild systems until the year 1842; 2) the exploratory stage leading to VET 1843–1885; and 3) the foundation stage of VET from 1885, although the country-wide network of vocational schools (*ammattikoulut*, in Finnish) was created only in the 1960s.

As this chapter elaborates the historical evolution of the Finnish vocational education and training (VET) system mainly at the level of secondary education, we focus on the period ranging from the 1880s to the 1940s, adopting the classification just mentioned. The historical turning points examined in this chapter are divided into three periods: 1) the early roots of Finnish VET; 2) the phase of Finnish general education (referred to as the development of the folk or elementary school system); and 3) the foundation phase of the institutionalised VET.

The early roots of the Finnish VET: Guild systems and Sunday schools

Guild systems

The early roots of the present Finnish vocational education system are found in the growth of medieval craft guilds. In 1720, a decree concerning the guild system was legislated in Sweden and Finland (see also Olofsson and Persson Thunqvist, 2018, this book, p. xxx). It stated that those who wanted to work as a craftsman should undergo four years as an apprentice and journeyman. The route from apprentice to master was neither easy nor short, since it took at least six years and in practice often even ten years. Between one quarter and one third left their apprenticeship without the journeyman certificate (Koskela, 2003;

Kyöstiö, 1955). The guilds had a monopoly for studying craftsmanship in towns. The largest groups of artisans were tailors, shoemakers, blacksmiths and carpenters. The aims of the guilds emphasised a wide-ranging educational perspective and a class-conscious socialisation process. The ruling time of guilds was from the 1740s to 1860s, although the development of the guilds stagnated when Finland became an autonomous Duchy of the Russian Empire and new forms of production started to emerge and change their position (Paloheimo and Uotila, 2015; Heikkinen, 2000). The Finnish guilds never reached a position as strong as the guilds in Denmark.

As the demands of society changed, the vocational education provided by the guilds was criticised. The university student leader and national romantic writer Adolf Ivar Arwidsson saw that the old guild system took too long (six to eight years, on average) and that it was too inflexible to be able to meet the challenges of the economy (Laukia, 2013a). Also, the famous Finnish statesman Johan Wilhelm Snellman criticised the traditional vocational education organised by the guilds and considered the quality of the resulting products too poor (Laukia, 2013a). The guilds operated mainly in towns and differences between rural communities and towns were considerable until the gradual liberalisation of trade and industry (Heikkinen, 2004). In 1868, the obligatory guild system was repealed, most of the former mercantilistic restrictions concerning trade were abolished and the timber industry was liberalised (Rainio-Niemi, 2004). Finland experienced a smooth transition from the old society of privilege to the deliberated class society (Rainio-Niemi, 2004). An important change occurred in 1879, when the workforce gained the freedom to choose their living and work places as a result of new legislation, the ‘Liberation of Occupations Act’ (elinkeinovapauslaki, in Finnish) (Paloheimo and Uotila, 2015; Laukia, 2013a). The Act abolished the privileges of the guild system. Furthermore, the legislation concerning the statutory protection of the workforce ended (Laukia, 2013b, p. 44). In 1883, employers’ rights concerning their employees were redefined when employers’ duty of custody and authority over employees, as well as the right of having them in service for the duration of their contract, was abolished (Rainio-Niemi, 2004). This process launched a modernisation of societal life. Especially people who did not own any land started to move from the countryside to towns in their search for work.

Sunday and preparatory schools

Already since the late 1820s, Finnish Sunday schools had been established by municipalities and private bodies following Nordic examples. A ‘Decree on Sunday Schools’ set out in 1842 required organising the teaching of reading, writing, numeracy and Christian doctrine. As such, Sunday schools provided a general education rather than specific vocational training (Klemelä, 1999, p. 35). The decree ordered that Sunday schools were to be established in each town. Later on, these schools came to be seen as the first actual vocational schools and predecessors for the later expansion of vocational school-based education as they were intended to fulfil the aim of educating apprentices (Klemelä, 1999, p. 34; Tuomisto, 1986, p. 71). In 1858, a decree was established to reform Sunday schools into a school of two grades, followed by a two-grade evening school. After the reform, Sunday school was intended for

apprentices and the evening school for journeymen. Sunday school graduates were not qualified craftsmen until acquiring professional competence through the apprentice-journeyman-master system (Tulkki, 1996, p. 106; Heikkinen, 1995, p. 163). The language of most of the Sunday schools was Swedish (Heikkinen, 1995). Although the tie with Sweden had broken at the beginning of the 1800s, the tradition of Sunday schools had been well-established by the Western influences. The model of the Danish Sunday schools came to Finland via Sweden (Somerkivi, 1950).

The life span of the Sunday school system as a leading education provider lasted around half a century. At the outset, Sunday schools provided a general education for cities' craftsmen, resembling the existing, more religious Sunday schools arranged by Lutheran priests. They were organised by initiative-taking individuals, bourgeoisie or craftsmen in cities such as Turku, Porvoo, Helsinki, Uusikaupunki, Oulu, Tammisaari, Naantali, Kajaani, Vaasa and Viipuri (Somerkivi, 1950). In the beginning, they focused on general education, but later they were redefined to be more professionally oriented by Acts of Senate in 1847 and 1858. They started to lose their importance in 1868, when the guild system was overruled and were then cancelled by an Act passed in 1885 and thereafter reformed as craft schools (i.e., *käsityöläiskoulut*, in Finnish) (Heikkilä, 2003, p. 15; Somerkivi, 1950, p. 16). One reason why the Sunday school system deteriorated was that the folk school system (*kansakoulu*, in Finnish) replaced the general elementary vocational school system. A 'Decree on Folk Education' was given in 1866 (Jalava, 2011; Laamanen, 2000). It was preceded by the reorganisation of communities' governance in the countryside (Puranen, 2011). The reorganisation gave the right for local decision making to groups holding community meetings or authorities empowered by the community. It was in their power to decide on the provision and organisation of basic folk education, regionally. At times, the communities were reluctant to fund folk education and considered the literacy education provided by the Lutheran church sufficient. Similar reforms of local governance took place in cities in 1873 (Puranen, 2011). Folk schools were created to provide a basic education in literacy, mathematics and crafts for children.

Later on, Sunday schools and evening schools were further reformed and developed. According to the 'Decree on Craft Schools' passed in 1885, Sunday schools and evening schools were to be developed gradually into craft schools, whose purpose was to teach skills and knowledge considered necessary for craftsmen (Klemelä, 1999, p. 38). The craft schools followed the tradition of the Sunday schools, where students worked at a workplace during the day and studied in the evenings (Koskela, 2003). The regulations for craft schools were updated by another decree issued in 1900. Besides craft schools operating evenings, this new decree also mentioned so-called 'preparatory vocational schools', which operated in the daytime and were intended for folk school graduates (Klemelä, 1999, p. 39).

Preparatory vocational schools were established because students typically finished folk school at the age of 13 or 14. The 'Decree on Working Conditions' in 1889 required that the daily working hours of children under the age of 12–15 years does not exceed a maximum of seven hours (Klemelä, 1999, p. 40). The work day of those under 15 years of age was

considered too short by employers who thus did not like to hire them. Therefore, there was a need for a preparatory school to fill the gap between folk school and employment. The preparatory school lasted two years. Since the 1920s, the instruction given at vocational preparatory schools developed into the largest and most significant form of VET for crafts and industry (Klemelä, 1999, p. 50).

The need for wider education in crafts and industry was most often argued for with respect to technological developments. Technological development was seen to be raising the demands for professional competence, the work accordingly requiring school-based vocational education. On the other hand, arguments for the necessity of Sunday schools, craft schools and preparatory vocational schools were based on these schools' function as a means of social control (Klemelä, 1999, p. 194).

The phase of general education: Building the folk school

The period from the 19th century to the 1960s can be characterised as a time of building the folk school system as the establishment and introduction of elementary education for the whole of the population was a radical novelty and change for the society. The historical shift from elementary education promoted by church policies to state-led school policies and municipalities followed the general Nordic pattern. The idea of the folk school was based on the idea that each child should get a similar basic education regardless of social class, gender or domicile (Leino-Kaukiainen and Heikkinen, 2011). The folk school education was more versatile than the education provided by the church. The decree on the four-year folk school for rural pupils and the six-year folk school for urban pupils was given in 1866. The Act defined the duty of organising elementary school education for the municipalities and the duty of elementary instruction (e.g., literacy) for the church and home. In practice, the first folk schools were private, financially supported by the state (Leino-Kaukiainen and Heikkinen, 2011). Often the employers of large-scale industry (e.g., Finnish forestry industry companies such as Yhtyneet Paperitehtaat) established folk schools for their employees, because they considered workers required being taught proper manners and attitudes.

The establishment of folk schools by the decree given in 1866 was an outcome of a wider Fennoman programme of folk enlightenment (Laukia, 2013a; Rinne, 2013; Heikkinen, 2004). As a result of the Fennoman movement, some larger towns started organising more systematic teaching of general subjects, home economics and handicraft in continuation classes. In addition, the 'Liberation of Occupations Act' in 1879 in practice abolished the guilds and offered the freedom of choosing one's place of residence to all citizens, thus enabling free movement within the country, and it obliged employers to release employees under the age of 15 to attend preparatory school for learning (Laukia, 2013b; Heikkinen, 2004). In practice, for those under 15 years of age this meant either attending continuation classes in a folk school or at a school for crafts and industry. Initially, the establishment of the folk school system progressed slowly because many municipalities resisted the schools due to their novelty and efforts demanded from local communities (Puranen, 2011;

Heikkinen, 2004). In 1890, over three quarters of the urban children and a fifth of the rural children went to school. The folk school did not become a reality as fast as its founders had hoped. Folk school had been a school for farmers and was becoming a school for workers (Koskela, 2003).

In Finland, the ‘Compulsory Education Act’ came into force in 1921. According to this law, each Finn had a duty to participate in compulsory education from the age of seven until twelve. Mikael Soininen (former Johnsson) in particular, as an active Fennoman, promoted the Finnish cooperative movement and the development of the folk school system. He was both the head of the Teacher Seminar and the inspector and head of the Board of Education (Heikkinen, 2004). Under his influence, handicraft was included in the curriculum of the folk school system (Laukia, 2013a).

The continuation of studies after completing the compulsory education was further discussed in, for example, a committee nominated for this purpose [Jatko-Opetuskomitea] (Laukia, 2013b). In the following decades, between the 1920s and 1940s, there were repeated initiatives by the Ministry and Board of Education as well as Teacher Seminars to develop the continuation school system into a practically oriented general vocational system of education (Heikkinen, 2004). In particular, advocates of the comprehensive continuation school system defended it for the majority of the age group (except for grammar school students) and as citizenship education. The original mission of the continuation school system was to provide education for citizenship. Secondly, it was expected to offer occupational guidance, and thirdly to provide practical and occupation-oriented education (Kailanpää, 1962; and see also Heikkinen, 2004). In 1943, continuation school became obligatory for applicants to other schools such as vocational schools. Although the aim of the folk school was to educate good citizens rather than skilled workers, the competition between the students of the folk school system and those of the vocational school system lasted until the end of the 1950s (Laukia, 2013a; Jauhiainen, 2002; Halila, 1963). The administration of the general education was managed by the Ministry of Education, which developed the folk and continuation school systems, whereas the Ministry of Trade and Industry was the proponent of the distinctive VET programme (Heikkinen, 2004).

The foundation phase of institutionalised VET

The rapid population growth and beginning of industrialisation set their own demands for the organisation of education. During the period of 1850–1940 the population of Finland grew by more than two million inhabitants. While there were about 1.6 million inhabitants in the Grand Duchy of Finland in 1859, the population of Finland was nearly 4 million by 1940. The population growth slowed down in rural municipalities, whereas population centres like cities and towns were growing as a result of migration. In 1940, 52% of the population earned their living from primary production (see Table 2.1). Agriculture dominated as the major occupation of the population at the beginning of Finnish independence (since 1917), although industry had started to emerge and diversify since the 1800s. The pressures for educational

reforms increased due to the growth of the economy and industry, but, above all, they were enhanced by societal trends such as the labour movement, the women’s movement, the temperance movement, and the growth of a nationalism (Koskela, 2003).

Table 2.1 *Occupational Distribution of the Population in Percentages of the Workforce 1880–1940 (adopted from Laukia, 2014b, p. 334)*

Year	Agri- culture %	Indus- try and crafts %	Trans- por- tation %	Com- merce %	Public services and inde- pendent professions %	General worker, labourer, etc. %	No occupation or unspecified %	Total %
1880	77.1	6.5	2.1	1.0	2.7	4.2	6.4	100
1890	74.7	8.0	2.1	1.2	2.9	4.4	6.7	100
1900	58.2	10.6	2.8	2.0	2.8	15.8	8.0	100
1910	67.2	11.4	2.9	2.2	2.5	6.0	7.6	100
1920	66.4	13.5	3.3	3.5	3.3	3.9	6.2	100
1930	61.4	15.1	3.8	4.3	4.1	5.0	6.0	100
1940	51.5	21.0	4.6	5.1	6.1	5.3	6.4	100

Vocational education and educated people were needed when new technologies, such as machines, railroads and electricity, were launched. In addition, there was great demand for vocational education and vocational skills because the existing formal education system concentrated only on the education of civil servants and educated citizens. Also, people with an academic education would study technology for additional practical skills. The need to change and reorganise vocational education became recognised (Laukia, 2013a).

The Finnish VET started to diversify in the late 19th century. The first institutions of vocational and professional education and training were created at the beginning of the 19th century, but acquiring occupational skills at an educational institution was still uncommon. In several sectors of production the vocational education and training were initiated by organising the training for foremen. As a result, educational institutions became differential in that the training of management-level professionals was provided at vocational colleges and the training of workers at vocational schools (Klemelä, 1999). For example, schooling for seafaring started in 1813, and schooling for health care and midwifery in 1816 (Tiilikkala, 2011; Klemelä, 1999). The first business school was established in 1839 in Turku (Klemelä, 1999, p. 188). Also, the roots of technical education go back to the 1840s when so called technical ‘real schools’ were established. The first school of agriculture was established in 1840, and the first forestry college in 1861 (Laukia, 2013; Tiilikkala, 2011; Klemelä, 1999, p. 189).

Furthermore, the first schools for crafts and industry were established by the Board of Manufacture on the basis of the 'Training of Craftsmen and Manufacturers Act' for the country passed in 1842, and the 'Technical Real Schools Act' (a base for engineering programmes) passed in 1847 (Heikkinen, 2004). In the capital, Helsinki, the first vocational school was established in 1899. During 1900–1916, several vocational schools were established also in the other coastal cities besides Helsinki, including population centres such as Pori, Porvoo, Kotka and Viipuri. The first inland vocational schools were established in 1912 and 1917 in Tampere and Kuopio. The vocational school system was influenced by higher technical education and craft schools, folk schools, and Sunday schools. In addition, ideas for organising vocational education were sought from abroad, mainly from Germany (by reformistic pedagogical movements, especially the one developed by Georg Kerschensteiner), Austria, Switzerland and the Netherlands (Laukia, 2013a, 2013b). In different VET fields, schools developed different administration and control systems, and they received separate decrees of their own (Klemelä, 1999, p. 194).

In 1920, the lower preparatory vocational school system was abolished and the upper preparatory vocational school system was shaped into a 'general' vocational school system (Nurmi, 1983). The curriculum required of these general vocational schools included the syllabus of the folk school and continuation school systems and they offered both theoretical and practical subjects. In parallel, apprenticeship training and school-based VET started to clearly diverge after 1920, but vocational schools were not established to replace apprenticeship training (Koskela, 2003).

In Finland, between the First and Second World Wars, there were a lot of workplaces where having a vocational education was not required. During 1920–1940, the majority of the folk school graduates did not continue their studies at any educational institutions (Laukia, 2013b, p. 106). On the other hand, there were also places of vocational education that provided advanced-level certificates for certain occupations. On the whole, the vocational education of that time varied a lot regarding extent, level and administration.

Parallel to establishing VET schools, discussions on organising continuation schools progressed. For example, Jalmari Kekkonen, the pioneer and inspector of VET in crafts and industry, suggested that attending a continuation school should serve as the preparation for apprenticeship school to thus replace the declining evening/part-time schools (Heikkinen, 1995). Many farmers also saw continuation school as an alternative to VET in rural communities because of the difficulties in providing full-time education after the initial compulsory grades and organising vocational schools for rural people. The proponents of VET for crafts and industry, on the contrary, defended the need for organising VET as an entity with purposes of its own against the general citizenship education ('School for Citizenship' in 1958) and academic education, and they emphasised VET's link to industry (Heikkinen, 2004). In urban municipalities, VET schools were favoured as a substitute for continuation schools until the 1940s.

The first proponents for organising VET came from the field of administration or were leaders from different industries. The issue of VET was not a separate project for them and was seen to be related to the development of the nation-building project (Heikkinen, 2004). Finnish societal development in the 1920s was particularly affected by the civil war and the societal reforms that followed it. The civil war that Finland went through from 1917 until 1918 represented a stark contrast to the more peaceful consolidation of group interests in other Nordic countries. After the civil war, reforms in land ownership enabled landless farmers to buy their own land and to become independent farmers. Also, new farms were established (Rainio-Niemi, 2004, p. 158; Kettunen, 1986, p. 106). As a result of the land reform, the amount of small-scale, independent farms increased considerably, that is, by around 100,000 farms (Kettunen, 1986, p. 106). Accordingly, basic changes in the agricultural policy of independent Finland were raising a new class of autonomous, small-scale farmers. Eventually, the emergence of this class of small-scale farmers raised the socio-political question of their poor livelihood; they owned too little land and forestry to provide for their family's livelihood. The dissatisfaction with their livelihood led to the demand for other occupations and training, as well as to migration. The government wished to create better conditions for these farmers by providing educational opportunities for them. However, the students of the agricultural schools were mostly boys from large farms (Klemelä, 1999, p. 189).

After Finland's independence in 1917, the number of vocational schools and students increased gradually (see Table A2.1, Appendix, although towns were not very interested in establishing new vocational schools as these operated with limited financial support from the state (Laukia, 2013a). The first 'Vocational Institutions Act' (Laki ammattioppilaitoksista) was issued in 1939, but it came into effect only in 1942 because of the Second World War. In the 1940s, the curriculum of vocational schools included also general subjects, such as the mother tongue (Finnish language), arithmetic, physics and citizenship education. In those days, however, cooperation with industry and commerce was limited to visiting firms.

Due to both ideological reasons and the lack of vocational schools, Finnish employers started to express more interest in organising vocational training, but only from the early 20th century onward, when private industries like Wärtsilä, Kymi and Yhtyneet Paperitehtaat started to set up schools of their own (Laukia, 2013b, p. 116; Kivinen and Peltomäki, 1999). In the Finnish industry of the 1920s, the production of pulp, newsprint and plywood as well as metal and textiles was increasing rapidly and there was acute demand for an educated labour force (Rainio-Niemi, 2004, pp. 154–155). These schools, so-called private industrial schools (Yksityisteollisuuden ammattikoulut, in Finnish) operated under the Department of Trade and Industry. Administratively, these private industrial schools operated like municipal schools and followed the Ministry's guidelines. The private industrial schools focused more on working life than did the regular vocational schools. Later on, many of these schools changed into institutes providing specialisation and further training (Laukia, 2013b, p. 116). The former education system demanded from the students admitted to these schools that they adapt to the changes in learning requirements reflecting the changes in society (urbanisation and industrialisation). During 1939–1959, students were recruited for industrial vocational

schools on the basis of their folk school education, as was the case for public vocational schools (Laukia, 2013, p. 249).

On a national level, the Institute for Occupational Advancement (Ammattienedistämislaitos, in Finnish) was founded as a result of the educational project of artisans and small-scale manufacturers in 1922 (Kettunen, 2013). The institute was owned by a private foundation but financially supported by the government. It started to arrange lectures on non-technical topics for foremen in the manufacturing industry (Kettunen, 2013). Despite the organisation, Finland's crafts remained marginal compared to the export (metal and wood-processing) industry, rural industries and rural agricultural production. At the end of the 1920s, on the administrative state level, the systematisation and centralisation of vocational education and training was planned for the first time (Klemelä, 1999). The Vocational Education Department was established to the Ministry of Trade and Industry in 1942. Prior to its establishment, the administration of VET was diffuse (Heikkinen, 1995, p. 351).

VET and social inclusion

In the early stages, discussions about organising post-compulsory education and the vocational education track alongside the general upper secondary education took place with concern over the increasing number of general upper secondary school graduates. During 1930–1935, their annual number was around 2,000–2,500. The State Council appointed a committee to restrict the flood of upper secondary school graduates (Laukia, 2013b, p. 161; Kiuasmaa, 1982, p. 227). According to this committee, the annual graduation rates were excessive. The problem stemmed from the fact that besides youths from the traditional Swedish-speaking intelligentsia, the general upper secondary schools also attracted students from the working class and farming families, and women's schooling increased as well. The emergence of a Finnish-speaking intelligentsia was seen as suspicious by some of the existing elites.

According to the committee's report, the provision of VET was to be increased so that working-class Finnish-speakers and youths from farming families could seek education and training for practical occupations (Laukia, 2013b, p. 162). The committee's recommendations thus supported the prevailing class and gender division. By increasing the number of places for VET, the places for the upper secondary education would be secured for the offspring of the intelligentsia (Laukia, 2013, p. 162).

At the beginning of the 1900s, the number of vocational school students was quite modest in comparison to that of the secondary and general upper secondary school students (see Table 2.2). In 1910, there were 10,600 students in vocational schools and their number had increased to 20,400 students by 1940. Correspondingly, the enrolment figures for secondary schools were around 24,300 students in 1910, and circa 59,300 students in 1940 (Laukia, 2013b). While the number of VET students increased, the size of the youth cohort also

increased. Therefore, the share of educated citizens did not increase in the same proportion as the overall number of students.

Table 2.2 *Vocational Upper Secondary Education and Secondary School Students from 1910 to 1970 (Laukia, 2013b, p. 328, p. 334)*

Year	VET students	Secondary school students
1910	10,639	24,354
1920	14,009	32,448
1930	18,013	49,589
1940	20,380	59,302

VET was expected to prevent poverty and protect the youth from marginalisation. Education policy, social policy and professional skill requirements were intertwined (Kaarninen, 1995, p. 69). In the period from 1900 to 1940, most VET students came from working-class families in towns schools had been established there to prevent social problems and marginalisation (Heikkilä, 2003). In smaller towns, students' background varied more. There were few vocational school students from farming families as these schools were located in towns or other larger population centres (Laukia, 2013, p. 142). VET was also gender specific (Klemelä, 1999). Crafts education was aimed at boys. Separate preparatory schools were established, those for boys and those for girls. Originally, the most important VET field for women was home economics, since most women working outside their home were employed to work in the homes of more affluent families.

The decree issued in 1920 stated that vocational schools were meant both for boys and girls. In practice, vocational schools were established separately for boys and girls for different fields. Girls' and boys' vocational schools also differed in terms of their aims (Jauhiainen, 2002). The aim of girls' education was to prepare them to become housewives and servants. Boys were trained for employment outside their home and to become supporters of their families. The views about the different aims of VET for boys and girls were related to perceptions about women's role in the labour market in general. Women's work outside their home was questioned, but their learning practical tasks in connection with either home-based or paid work was accepted (Lähteenmäki, 1995). The gender issue was also seen in vocational teacher education. Vocational teacher education for so-called male branches was provided in Hämeenlinna, and correspondingly for so-called female branches in Jyväskylä (Laukia, 2013b, p. 214).

The demand for VET for the young did not arise from the economic development only; people were also concerned about the youths' development, use of time and societal inclusion. At school, working-class youths could be controlled and raised for citizenship by teachers and under the Ministry's supervision (Kivirauma, 1992).

Emerging employer and employee organisations and their relations

Finnish employees started to organise themselves into employer and business organisations at the beginning of the 1900s. The primary reason employers began organising themselves as a group was their urge to build a counterforce to the emerging labour unions and to unite against workers' strikes (Nieminen, 2000). Another reason was that employers wanted to express their interests to the state with more weight. The aim of the organisations was to 'conduct studies and give a voice to opinions on the demands of the confederation and its members regarding legislative, administrative, technical and economic issues' (Nieminen, 2000; Mansner, 1981, p. 35).

The General Confederation of Employers in Finland (Suomen Yleinen Työnantajaliitto, in Finnish) started to operate in 1907, but the first national branch-level organisations had already been established during 1899–1900 by tailors, bakeries and the printing industry (Nieminen, 2000). At the beginning of the 1900s, the newly organised employer organisations took a cautiously positive attitude toward collective agreements at first, but after a dispute over the terms of the collective agreements as well as strikes and lockouts in the metal industries during 1908–1909, they started to fight against collective branch-level agreements (Nieminen, 2000).

In 1918, the employers reorganised the General Confederation of Employers in answer to the labour market's growing demands and renamed it to the Finnish Employer's Confederation (Suomen Työnantajain Keskusliitto, STK, in Finnish). Employers united their forces to keep the rising labour movement divided by fighting against collective agreements (Nieminen, 2000). Many employer organisations decided not to negotiate with trade unions, therefore collective agreements were rare until after the Second World War (Nieminen, 2000). For example, in the 1920s, the General Confederation of Employers forbade the employers' organisations or individual employers to negotiate with organised labour. The main aim was to keep the relationship between employers and employees firmly bilateral (Rainio-Niemi, 2004, p. 174). With respect to VET, this meant that there was not any agreement nor negotiations between the interest groups concerning the development of vocational education nationally.

As the international labour movement started to emerge, interest in city workers' positions started to emerge in Finland in the 1880s, and a workers' association was established in Helsinki in 1883. Especially the cane manufacturer Viktor Julius von Wright wanted to improve the workers' circumstances and consolidate relations between employers and employees. He had acquainted himself with the 'social questions' and social democratic movement during his studies and visits abroad, such as in Germany (Pinomaa, 1931). The aim of the Wrightist workers' movement was to improve the workers' economic and cultural position, such as by developing the folk school system as a basis for further studies (Laukia, 2013b, p. 46). The craftsmen and professional workers of the towns joined the Wrightist associations. Although the movement aimed at improving relationships between employers and employees as well as to foster vocational education, no vocational education and training system based on the relationships between employers and employees arose (Heikkinen, 2011). At the beginning of the twentieth century, the political workers' movement replaced

the Wrightist workers' movement (Laukia, 2013b, p. 46).

The Association of Finnish Trade Unions (Suomen Ammattijärjestö, SAJ, in Finnish), later called the Central Organisation of Finnish Trade Unions (SAK), was established in 1907. It aimed to promote union coverage, to accumulate information, to publish activities, to consult member organisations and to foster international cooperation (Rainio-Niemi, 2004, p. 129). The adopted principle of equality between political and corporate functional branches of the labour movement and the strategy for addressing the class struggle went hand in hand with the aims of the Social Democratic Party (Rainio-Niemi, 2004, p. 129).

At the beginning, the trade unions were not yet interested in vocational education, and as late as in 1930 they had no demands for vocational education (Heikkinen, 1995, p. 194). The workers resisted participation in apprenticeship training because of its low salary. Until the 1940s, it was characteristic that the workers were organised through political parties, and the trade union was built on its connections with these (Heikkinen, 1995, p. 194; Kettunen, 1986). Accordingly, the trade unions were not independent from the parties. The current position of the trade unions arose only in 1940, when the employers' union (STK) accepted the Central Organisation of Finnish Trade Unions (SAK) as the workers' representative and as a negotiation party.

The demand of the labour movement for power and equity in industrial relations was largely based on the living conditions of rural workers, crofters and landless people (Waris, 1932; Heikkinen, 2004). The industrial relations after Finland's independence and civil war (1917–1918) pushed the negotiations toward a corporatist regulation of work conditions. The state moderated consensual negotiations between employers and employees at the local and national level (Heikkinen, 2004). Still, collective bargaining was not particularly well-developed in Finnish industries in the 1920s and 1930s. Its effectiveness depended on the industrial field, showed seasonal variation, and was characterised by locality (Kettunen, 1986). A coordinated labour market system emerged in Finland only after World War II (Rainio-Niemi, 2004, p. 171).

In 1917, the Finnish Senate nominated the Vocational Training Council (Ammattikasvatusneuvosto) to assist the Board of Industry with issues concerning vocational education. The Council consisted of one representative of the Council (state administration), three teachers of VET, three representatives of employers, and three representatives of employees (Laukia, 2013b, p. 93). The status of the Council was regularised in 1926, and in 1942 became part of the Ministry of Trade and Industry. The regulation defined the composition of the employers' representatives as follows: one member from large-scale industry, one member from small-scale industry, and one member from agriculture. The composition of the employees' representatives was also regulated: three members should represent different occupations and fields of industry. The representation of employers, employees and teachers in the Council initiated a basis for multi-actor cooperation, negotiation and defining of educational goals as well as cooperation for VET in Finland. It

enhanced the centralised approach and official bodies' role of organising VET, consolidating educational interests over party interests.

Formation of apprenticeship training as youngsters' minor route to the labour market

In Finland, apprenticeship training became considerably weaker when traditional guilds were abolished in 1868. Even if the traditional guilds ceased to exist, their duties were reorganised when the law by parliament ordered societies for merchants and handicrafts to be established in towns (Kettunen, 2001). These societies earned the right to acknowledge masters and journeymen (Heikkilä, 2003; Laine-Juva and Änkö, 1968; Somerkivi, 1950). Membership in these societies was an obligation to masters of occupations. The dominant crafts of the time included professions such as shoemaker, tailor, painter, carpenter, bricklayer, tanner, clockmaker and blacksmith (Heikkilä, 2003). These societies acted locally and did not become particularly strong due to the low level of agreement between competing members (Heikkilä, 2003). Their duty was to control the training of novices. During the rule of guilds, it had only been possible to gain a position as an acknowledged craftsman via an apprenticeship and further studies as a journeyman. The role of traditional occupations changed when industrial production of goods increased and replaced manufacturing step by step. While in the early 19th century apprenticeship had been seen as the road to the status of a skilled master for many rural children and a lawful way to earn a livelihood (Kivinen and Peltomäki, 1999), the situation changed further in 1879 due to the freedom of trade and freedom of occupation.

In towns, the low status of handicrafts and poor economic situation of landless citizens drove apprentices to become employees as unskilled factory workers, while the masters gradually became entrepreneurs and employers (Kivinen and Peltomäki, 1999; Särkikoski, 1993). Apprentices and journeymen were paid like other employees, and the apprenticeship tradition became part of the system of wage-paid employment but without the former opportunities to advance in a career to the skilled position of a master (Kivinen and Peltomäki, 1999). Small entrepreneurship remained in a relatively weak position in the sparsely populated countryside, and apprenticeship training seemed to wither. In Finland, the increased social effects of industrial wage work resulted in the promotion of vocational education, which was seen as a way to normalise wage work and regulate the lives of working life families in towns (Kettunen, 2013). The developing Sunday schools and crafts education replaced the educational duties of the former guild system in towns (Heikkilä, 2003).

At that time, employers' interests in developing VET were diverse and depended on the field of production. On the one hand, the factory owners had little interest in instructing apprentices. Since the skill requirements for many duties were low, a skilled labour force could be hired from abroad and investment in training was not considered profitable (Kivinen and Peltomäki, 1999). The Taylorist principles of management and dividing tasks into smaller entities which demanded less skills were seen as a way to support small-scale industries in competition (Kettunen, 2013; Heikkilä, 2003). Accordingly, it was considered

possible to learn the necessary skills through experience at work in the factories, therefore theoretical knowledge was not needed. Some societies responsible for supervising training in towns considered specialist vocational schools better than traditional apprentice training (Heikkilä, 2003, p. 17). On one hand, the employer organisation (Finnish Employers' Confederation, EK) supported apprenticeship in addition to school-based VET (Laukia, 2013b, p. 222) as these emphasised the training of skilled workers. Yet, the employee organisations (Central Organisation of Finnish Trade Unions, SAK) were against this as they viewed apprenticeship as a narrow vocational qualification with limited future options and without general education subjects. Also, the trade union considered it a better solution to increase the number of vocational schools (Kivinen and Peltomäki, 1999). It suspected that apprenticeship training would provide employers with a cheap labour force (Kivirauma, 1992).

When the apprenticeship training did not recover through initiatives taken of increasing industrial life, the Finnish state tried to get municipalities and industrial enterprises to take responsibility for training (Heikkinen, 2000). Accordingly, the Apprenticeship Act was issued in 1923.

Apprenticeship training was meant to prepare for acquiring a craft or industrial occupation that required at least two years of learning. Apprentices were 15–18 year-olds. In the 1920s, the number of apprenticeships was increasing, but in the 1930s the popularity of this option decreased due to economic recession and the attraction of vocational schools (Laukia, 2013b, p. 105). The employers were not enthusiastic about the law issued on apprenticeships in 1923 as it meant more regulation, and subsequently it was soon declared a failure (Kivinen and Peltomäki, 1999; Helvelahti, 1949). Employers also wanted to have compensation for the education they provided. The government paid employers a small sum for taking on a poor apprentice, but they were not satisfied with the compensation for training apprentices at the workplace (Kivinen and Peltomäki, 1999). In general, they refused to negotiate with organised workers (Rainio-Niemi, 2004). Apprentices' wages were considered to be too high and the wages of qualified workers did not differ very much from those of unskilled workers. Altogether, the reasons for employers' dissatisfaction with the new Apprenticeship Act were numerous. It was seen to create too many obligations for employers; it was difficult to terminate apprenticeship relations, the young apprentices were unwilling to commit themselves to long-term apprenticeship relations, there was no motivation to teach apprentices, authorities did not supervise apprenticeships, and arranging the theoretical instruction as part of an apprenticeship was problematic. These difficulties remained quite the same until the 1990s (Kivinen and Peltomäki, 1999, pp. 77–78). The gradual development of the legislation for apprenticeship training before the Second World War is presented in Table 2.3.

Table 2.3 *Apprenticeship in Finland from the 17th Century to the 1920s (adopted from Kivinen and Peltomäki, 1999, p. 81)*

Period	Legislation	Description
Early industrialisation, 18 th to late 19 th century	Ordinance on halls (1739)	<ul style="list-style-type: none"> ● increasing competition ● increasing number of apprenticeships ● division of labour
First industrial age, late 19 th and early 20 th century	Freedom of trade (1879) Lower-level trade schools (1885)	<ul style="list-style-type: none"> ● apprentices become wage earners ● handicrafts become small-scale industries ● general education
Issue of vocational education	Apprenticeship Act (1923)	<ul style="list-style-type: none"> ● general vocational schools (1920) ● fostering craft and industry occupations

The apprenticeship system declined in Finland for several reasons. First, the traditional guild system was abolished in 1868 and the societies that were to supposed take their position in supervising apprenticeship training did not succeed in forming a new, acknowledged and appreciated system. In parallel, industrialisation changed the forms of production, and the freedom of occupation gained in 1879 increased citizens' opportunities for choosing their career. Also in parallel, vocational schools, preparatory schools and special vocational schools, including schools founded by industrial enterprises themselves, began to attract students (Heikkilä, 2003; Kivinen and Peltomäki, 1999). In addition, several consecutive parliaments made decisions that promoted equal educational opportunities and the institutionalisation and centralisation of schooling in the public sector. Furthermore, the Federation of Finnish Employers was in favour of school-based VET. The systematisation and centralisation of vocational education and training was planned for the first time at the end of the 1920s (Klemelä, 1999). The administration of vocational education and training was dispersed under several ministries and central administrative boards until the 1960s.

Conclusion

The years 1880–1945 can be seen as a period of building the basis for the Finnish nation-state society and VET system. During this period, Finland emerged from being an autonomous Grand Duchy of the Russian Empire to become an independent state as of 1917. The Fennoman nationalist movement had started to promote a shared understanding of the formation of the Finnish nation already in the 1820s (Heikkinen, 2001). The rise of

nationalistic ideas meant making the development of education a priority in the society as education was seen to play a central role in uniting the nation (Klemelä, 1999).

The first institutions of vocational and professional education and training were created at the beginning of the 19th century. In the first place, training was initiated to promote the adoption of new technologies, industries and knowledge, and to educate supervisors. Employers' interest lay in keeping the control of supervisory qualifications in their own hands (Kettunen, 2013). Vocational education started to develop more effectively after Finland's independence in 1917, when the number of vocational schools and students gradually increased. In the 1920s and 1930s, the large-scale industry and its employers were the main drivers of the employers establishing their own vocational schools. The lack of employer coordination and worker orientation toward state-led vocational schools influenced employers to invest mainly in their own vocational schools, also due to patriotic nationalism, while the trade unions had no organised demands for vocational education in the 1930s (Heikkinen, 1995, p. 194).

In addition, towns (municipalities) were key drivers of organising VET, even though their interest in establishing new vocational schools was limited due to the lack of financial support even with normative incentives from the state. In parallel, municipalities also had to take charge of organising continuation classes in folk school, and subsequently the municipalities were not eager to uphold two parallel systems (continuation folk school classes and VET) (Laukia, 2013b, p. 290). The first 'Vocational Institutions Act' was launched in 1939, but came into effect only in 1942 because of the Second World War. The Act confirmed the position of vocational schools and the position of the state as the main drivers of VET (Laukia, 2013b, p. 291)

An Apprenticeship Act was passed, aiming at extending the apprenticeship system to the existing industry already in 1923, but it was later declared a failure (Kivinen and Peltomäki, 1999). The number of apprentices increased in the 1920s, but decreased again in the 1930s because of the economic repression and the emerging attractiveness of vocational schools.

The period of Finnish VET from the 1840s to the 1940s featured a trend of increasing school-based education and decreasing apprenticeship training, although the development of a school-based form of VET into the dominant model of initial vocational education training only began after World War II. Several traits of the societal development contributed to the enhancement of school-based education and the decline of the apprenticeship system, as follows.

First, the introduction of a school-based vocational education was connected with the rising nation state and increasing state control over organising education and society more generally. The central role of the state and the municipalities had been emphasised in the planning of the Finnish VET since the late 19th century (Kettunen, 2001).

Second, school was a seemingly neutral forum for social mobility, which served the interests of the Fennoman movement that promoted the concept of Finland as an autonomous nation during the time when Finland was still a Grand Duchy under Russian rule. The Finnish

nationalist movement and its interest in establishing and unifying Finnish-speaking people as one nation gained momentum through the establishment of the Finnish folk education system. The building of the school-based VET system was accelerated by the relatively late but rapid industrialisation and its demands to adjust to the technological changes of the times. The shift from an agricultural toward an industrialised society started to take place and created new groups of industrial workers in towns (Waris, 1932).

Third, school was a relatively autonomous area for learning and discipline, reconciling class interests that had clashed in the Civil War in 1918. Instructional aims and teaching arrangements could be defined independently at the school level.

Fourth, schools were differentiated as various types—folk school (elementary), continuation school, vocational school, apprenticeship training—that emphasised their particular function and special character (Heikkinen, 1995, p. 390).

Relating to different occupational fields, schools further developed specific administration and control systems, and also received separate decrees of their own (Klemelä, 1999, p. 194). Diversifying and growing industries replaced agriculture and estate-based production as the dominant forms of production, and the demand for skills in specialised occupational fields changed rapidly. This intensified the juxtaposition of general versus vocational education as the main forms of post-compulsory education. This juxtaposition of general upper secondary education and vocational upper secondary education later increasingly became the topic of policy discussions. Demands to reorganise their relation in order to provide equal opportunities along either path later inspired several reforms and pilots, such as the compulsory school reform, upper secondary reform and youth education pilot projects.

REFERENCES

- Bergholm, T. (2016) *History of the SAK (the Central Organisation of Finnish Trade Unions)*, Helsinki, SAK, The Finnish Federation of Trade Unions
- Gluschkoff, J. (2008) *Murtuva säätyvalta, kestävä eliitti: Senaattori Lennart Gripenbergin sukupiiri ja sääty-yhteiskunnan muodonmuutos*, Helsinki, Suomalaisen Kirjallisuuden Seura.
- Halila, A. (1963) *Jyväskylän seminaarin historia*, Porvoo, WSOY.
- Heikkilä, D. (2003) 'Käsityön ammatillinen opetus Suomessa 1700-luvulta nykypäiviin', in Anttila, P., Heikkilä, D. and Ylönen, I. *Suomalaisen käsityökoulutuksen vaiheita 1700-luvulta 2000-luvulle*, Jyväskylä, Suomen käsityön museo, pp. 7–48, 22 [Online]. Available at <http://www.craftmuseum.fi/kassaatko/julkaisut.htm> (Accessed 27 September 2017).
- 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. (2000) 'Suomalaisen ammattikasvatuksen alkuvaiheita', in Rajaniemi, A. (ed.) *Suomalaisen ammattikasvatuksen historia*, Helsinki, Opetus-, kasvatust- ja koulutusalojen säätiö, pp. 10–25.
- 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. (2004) 'Models, paradigms or cultures of vocational education', *European Journal of Vocational Training*, no. 32, pp. 32–44.
- Heikkinen, A. (2011) 'Elatus, oppi, ja kumppanuus', in Heikkinen, A. and Leino-Kaukiainen, P. (eds.) *Valistus ja koulunpenkki: Kasvatus ja koulutus Suomessa 1860-luvulta 1960-luvulle*, Helsinki, Suomalaisen Kirjallisuuden Seura, pp. 37–73.
- Helvelahti, H. J. (1949) 'Oppisopimuslaki ja sen uudistaminen', *Käsityö ja Teollisuus*, vol. 45, no. 2, pp. 26–27.
- Hirvonen, P. (2002) 'Saarnatuolista sisäpiiriin: Alfred Kihlman ja liikemiesverkostojen muotoutuminen 1850–1860-luvun Suomessa', *Historiallinen aikakauskirja*, vol. 100, no. 4, pp. 364–374.
- Itälä, J. (2000) 'Ammatillisen koulutuksen rooli Suomen rakentamisessa', in Rajaniemi, A. (ed.) *Suomalaisen ammattikasvatuksen historia*, Helsinki, Opetus-, kasvatust- ja koulutusalojen säätiö, pp. 41–69.
- Jalava, M. (2011) 'Kansanopetuksen suuri murros ja 1860-luvun väittely kansakoulusta', in Heikkinen, A. and Leino-Kaukiainen, P. (eds.) *Valistus ja koulunpenkki*, Helsinki, Suomen Kirjallisuuden Seura, pp. 74–94.
- Jauhiainen, A. (2002) *Työväen lasten koulutie ja nuorisokasvatuksen yhteiskunnalliset merkitykset: Kansakoulun jatko-opetuskysymys 1800-luvun lopulta 1970-luvulle*, PhD thesis, Turku, University of Turku.
- Kaarninen, M. (1995) *Nykyajan tytöt: Koulutus, luokka ja sukupuoli 1920- ja 1930-luvun Suomessa*, Helsinki, Suomen Historiallinen Seura.
- Kailanpää, A. (1962) *Kansalaiskoulu*, Porvoo, WSOY.
- Kettunen, P. (1986) *Poliittinen liike ja sosiaalinen kollektiivisuus: Tutkimus sosialidemokratiasta ja ammattiyhdistysliikkeestä Suomessa 1918–1930*, PhD thesis, Helsinki, Suomen Historiallinen Seura.
- Kettunen, P. (2001) 'Millaisiin kysymyksiin ammatillisella koulutuksella vastattu?', in Anttila, A.-H. and Suoranta, A. (eds.) *Ammattia oppimassa*, Tampere, Työväen historian ja perinteen tutkimuksen seura, pp. 52–91.
- Kettunen, P. (2013) 'Vocational education and the tensions of modernity in a Nordic periphery', in Buchardt, M., Markkola, P. and Valtonen, H. (eds.) *Education, State and Citizenship*, Helsinki, Nordic Centre of Excellence NordWel, pp. 31–55.
- Kiuasmaa, K. (1982) *Oppikoulu 1880–1980: Oppikoulu ja sen opettajat koulujärjestyksestä peruskouluun*, Oulu, Pohjoinen.
- 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.

- Kivirauma, J. (1992) *Työvoimatarpeesta koko ikäluokan kouluttamiseen: Ammatillisen koulutuksen suunnitteluperiaatteiden tarkastelua 1900-luvun alusta 1980-luvulle*, Turku, University of Turku, 160.
- Klemelä, K. (1999) *Ammattikunnista ammatillisiin oppilaitoksiin: Ammatillisen koulutuksen muotoutuminen Suomessa 1800-luvun alusta 1990-luvulle*, Turku, University of Turku, 48.
- Koskela, H. (2003) *Opiskelijoiden haasteellisuudesta ammattiopintoihin sitoutumisen substanssiteoriaan: Grounded theory -menetelmän soveltaminen ammattioppilaitoksen opettajien kuvauksiin opetettavistaan*, PhD thesis, Joensuu, University of Joensuu.
- Kyöstiö, O. K. (1955) *Suomen ammatikasvatuksen kehitys käsityön ja teollisuuden aloilla: I, Ammatikasvatuksen esivaihe vuoteen 1842: Die Vorstufe der Berufserziehung bis 1842*, PhD thesis, Jyväskylä, Jyväskylän kasvatusopillinen korkeakoulu.
- Laamanen, H. (2000) *Kenen koulu, sen kansa: Lehdistökeskustelu kansakoulun muodosta ja sisällöstä kansakouluasetuksesta piirijakoasetukseen (1866–1898)*, Vantaa, H. Laamanen.
- Lähteenmäki, M. (1995) *Mahdollisuuksien aika: Työläisnaiset ja yhteiskunnan muutos 1910–30-luvun Suomessa*, PhD thesis, Helsinki, Suomen Historiallinen Seura.
- Laine-Juva, Y. and Änkö, M. (1968) *Käsityön ja pienteollisuuden parissa: Helsingin Käsityö- ja Teollisuusyhdistys 1868–1968*, Helsinki, Helsingin Käsityö- ja Teollisuusyhdistys.
- Laukia, J. (2013a) 'Education of skilled workers and citizens: Vocational education in Finland', in Aaltonen, K., Isacsson, 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: Ammatikoulu Suomessa 1899–1987*, PhD thesis, Helsinki, University of Helsinki.
- Lehtisalo, L. and Raivola, R. (1999) *Koulutus ja koulutuspolitiikka 2000-luvulle*, Porvoo, WSOY.
- Leino-Kaukiainen, P. and Heikkinen, A. (2011) 'Yhteiskunta ja koulutus', in Heikkinen, A. and Leino-Kaukiainen, P. (eds.) *Valistus ja koulunpenkki: Kasvatus ja koulutus Suomessa 1860-luvulta 1960-luvulle*, Helsinki, Suomalaisen Kirjallisuuden Seura, pp. 16–36.
- Manninen, J. (2003) 'Valoa valtion yössä: Modernin valtion oppi Suomessa 1830–1831', *Historiallinen Aikakauskirja*, vol. 101, no. 2, pp. 228–247.
- Mansner, M. (1981) *Suomalaista yhteiskuntaa rakentamassa: Suomen Työnantajain Keskusliitto 1907–1940*, Helsinki, Teollisuuden kustannus.
- Nieminen A. (2000) 'Finnish employer confederations: Streamlining inner organization and regulating national capitalism', in Jensen, C. S. (ed) *Arbejdsgivere i Norden: En sociologisk analyse af arbejdsgiverorganisering i Norge, Sverige, Finland og Danmark*,

- København, Nordisk Ministerråd, pp. 287–371, 25.
- Nurmi, V. (1983) *Kasvatuksen traditio*, Porvoo, WSOY.
- Olofsson, J. and Persson Thunqvist, D. (2017) ‘Sweden: The formative period for VET (1850–1945)’ in Michelsen, S. and Stenström, M.-L. (eds) *Vocational Education in the Nordic Countries: The historical evolution (1st ed.)*, Oxford, Routledge, pp. ??–??.
- Paloheimo, M. and Uotila, M. (2015) ‘Elinkeinoluivat ja talouselämän monipuolistuminen 1800-luvun alun Suomessa’, *Ennen ja nyt: Historian tietosanomat*, no. 3 [Online]. Available at <http://www.ennenjanyt.net/2015/09/elinkeinoluivat-ja-talouselaman-monipuolistuminen-1800-luvun-alun-suomessa/> (Accessed 28 September 2017).
- Pinomaa, V. (1931) *Viktor Julius von Wright: Käsityöläisveteraanin muistelmia*, Helsinki, K. F. Puromiehen kirjapaino.
- Puranen, J. (2011) *Eripuraa kansakouluista: Kansakouluriidat Kuopion kihlakunnassa 1876–1904*, Pro Gradu thesis, Joensuu, University of Eastern Finland.
- Rainio-Niemi, J. (2004) ‘Paths in the Austrian and Finnish history: Finland’, in Konrad, H., Pletersek, M., Rainio-Niemi, J., Stenius, H. and Strutz, A. *Smallcons Project: A Framework for Socio-Economic Development in Europe? The Consensual Political Cultures of the Small West European States in Comparative and Historical Perspective* [Online]. Available at https://static.uni-graz.at/fileadmin/_Persoenliche_Webseite/strutz_andrea/Results_WP10.pdf (Accessed 27 September 2017).
- Rinne, R. (2013) ‘Koulutuksen muotoutuminen ja sen selitykset’, in Antikainen, A., Rinne, R. and Koski, L. (eds) *Kasvatustieteologia*, 5th rev. ed., Jyväskylä, PS-kustannus, pp. 49–99.
- Sakslind, R. (1998) *Danning og yrkesutdanning: Utdanningssystem of nasjonale moderniseringsprosjekter*, Oslo, Norges forskningsråd, 103.
- Somerkivi, U. (1950) *Sunnuntaikoulujen perustamisesta*, Erip.: Suomen kouluhistoriallisen seuran vuosikirja Koulu ja menneisyys VIII, Turku, Suomen Kouluhistoriallinen Seura.
- Särkikoski, T. (1993) ‘Teorian ja käytännön välissä: Tekniikan professionaalistuminen Suomessa’, in Konttinen, E. (ed) *Ammattikunnat, yhteiskunta ja valtio: Suomalaisten professioiden kehityskuvia*, Jyväskylä, University of Jyväskylä, 55, pp. 78–105.
- Tiilikkala, L. (2011) ‘Ammatillinen opettajuus ja opettajankoulutus’, in Heikkinen, A. and Leino-Kaukiainen, P. (eds) *Valistus ja koulunpenkki: Kasvatus ja koulutus Suomessa 1860-luvulta 1960-luvulle*, Helsinki, Suomalaisen Kirjallisuuden Seura, pp. 312–324.
- Tulkki, P. (1996) *Valtion virka vai teollinen työ? Insinöörikoulutus sosiaalisena ilmiönä 1802–1939*, PhD thesis, Turku, University of Turku.
- Tuomisto, J. (1986) *Teollisuuden koulutustehtävien kehittyminen: Tutkimus teollisuustyönantajien koulutustoiminnan ja kvalifikaatiointressien historiallisesta kehityksestä Suomessa*, PhD thesis, Tampere, University of Tampere.

- Waris, H. (1932) *Työläisyhteiskunnan syntyminen Helsingin Pitkänsillan pohjoispuolelle*, Helsinki, Into (2016).
- Violainen, M. and Stetröm, 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)

Appendix

Table A2.1 *Students in Vocational Education in the First Year of Each Decade from 1820 to 1940 (adopted from Klemelä, 1999)*

	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940
Seafaring institutions	11	48	110	128	127	173	209	156	245	218	107	255	353
Business colleges			38	7	24	47	67	443	754	1,975	3,160	3,199	3,352
Agricultural schools								539	1,053	1,783	1,910	3,997	3,130
Forestry schools									14	157	167	172	315
Institutes of technology								223	449	552	503	1,574	2,068
Vocational schools								1,650	2,605	2,993	3,438	4,657	5,893
Handicraft schools									3,173	2,065	3,502	1,934	2,540
Domestic services									35	843	1,183	2,062	2,519
Nursing and health education									64	53	39	163	525
Total	11	48	148	135	151	220	276	3,011	8,392	10,639	14,009	18,013	20,380

Captions:

The number of students in agricultural schools includes students in gardening institutions.

The number of students in institutes of technology in 1900 does not include students of the Pori industrial school.

The number of students in domestic education in 1900 does not include the number of students in specific housewife education institutions.

Differing from other fields of education, the number of students in nursing education refers to the number of graduates from 1910 to 1960, according to Statistics Finland. The number of students in nursing and health education in 1980 includes students who participated in beauty care and other types of health education. The student number of 1990 includes those participating in nurse and health education according to the broader new classification practice.

The class 'other middle-level institutions' includes art education, guarding and protection institutions, sports and arts leader etc. institutions, and centres of education.

The names of handicraft education institutions also changed throughout 1980 and 1990.