

HUOM! Tämä on alkuperäisen artikkelin rinnakkaistallenne. Rinnakkaistallenne saattaa erota alkuperäisestä sivutukseltaan ja painoasultaan.

Käytä viittauksessa alkuperäistä lähdettä:

Meriläinen, R., Isacsson, A. & Olson, S. (2019). Secondary Vocational Education in Finland. *Workforce Education Forum*, 39(1), ss. 43–51.

PLEASE NOTE! This is an electronic self-archived version of the original article. This reprint may differ from the original in pagination and typographic detail.

Please cite the original version:

Meriläinen, R., Isacsson, A. & Olson, S. (2019). Secondary Vocational Education in Finland. *Workforce Education Forum*, 39(1), ss. 43–51.

Secondary Vocational Education in Finland

Meriläinen, Raija
Ministry of Education and Culture
Department of Vocational Education and Training
Meritullinkatu 10, Helsinki
P O Box 29, FI-00023 Government, Finland
raija.merilainen@minedu.fi

Isacsson, Annica
Research Manager
Haaga-Helia University of Applied Sciences
School of Vocational Teacher Education
Ratapihantie 13
00520 HELSINKI – FINLAND
Annica.Isacsson@haaga-helia.fi

Olson, Susan (Manuscript contact)
2016 Finland Fulbright Scholar
Professor Emeritus
The University of Akron
The LeBron James Family Foundation College of Education
Zook Hall
Akron, Ohio 44281-4201
solson@uakron.edu

Publication Date: August 28, 2018

Acknowledgement: Fulbright Finland Scholar program, Haaga-Helia University of Applied Science Award

Abstract

Finland continues to lead the world in the global Program for International Student Assessment (PISA) results (Ministry of Education and Culture, 2016). Much has been written about Finland's common basic curriculum for all (grades one to nine), however little has been shared regarding Finland's secondary vocational education programs. Finland has a dual system of secondary education: academic and vocational. In Finland, education is a civic right for all children (and adults). Finland invest in their children from birth. All children receive tuition free preschool/daycare starting at age one, and a common comprehensive public-school education (grades one to nine) starting at age 7 (Sahlberg, 2015). At the age of 16, half of all students select vocational education as their secondary education curriculum. This article describes how Finland's secondary vocational education programs recent growth and change as well as early outcomes of this growth.

Keywords: Finnish Education System, Finland Secondary Vocational Education

Introduction

Finland continues to lead the world in the global Program for International Student Assessment (PISA) results (Ministry of Education and Culture, 2016). The PISA exam is administered to 15-year old learners around the world and is used to benchmark learning. Much has been written about Finland's common elementary curriculum for all (grades one to nine) (Partanen, 2016; Sahlberg, 2015), however less has been shared regarding Finland's secondary vocational education system and some feel the Finns have a better system (Raddy, 2016; Subrahmanyam, 2014).

Vocational education in Finland refers to programs that prepare youth and adults for the workplace. At one time, the United States also used the name vocational education, however more recently that name changed to career technical education (Krupnick, 2017; Association for and Career Technical Education, 2002).

At age 16, half of all Finnish students select vocational education as their secondary education curriculum. This high level of participation in secondary vocational education makes the Finnish model distinctive from other countries (Virolainen and Stenström, 2014). Finland has managed to elevate the image of vocational education across the country.

We will describe Finland's secondary vocational education 1970 (when major educational reform began) to present and how they have managed to change the image of vocational education during this time. First a brief description of the country of Finland, and then an overview of the Finnish educational system follows. Then a briefing of the development of the current effective compulsory basic education (grades one thru nine) and then a discussion of the development of the current system of secondary vocational education is provided. We then draw conclusions and offers

a brief discussion regarding secondary vocational education in Finland with some US applications discussed.

Finland as a Country

Today, approximately 5.5 million people live in Finland (about the population of Minnesota) (Finnish National Agency for Education, 2017). The two official languages of Finland are Finnish and Swedish. Finland as a country does not collect data on race or ethnicity, however they do collect data on the mother tongue of its' citizens. In 2015 (Official Statistics of Finland, 2018), the mother tongue of Finland's population was 89% Finnish, 5.3 % Swedish, 1.3% Russian, .3% English, .8% Estonian, .3% Arabic and three percent various other languages. Only 6.2% of the population is foreign born (Finnish National Agency for Education, 2017), of these 1.9 % are born in countries belonging to the European Union (Official Statistics of Finland, 2018). Finland is a small country with some diversity of its' population, however Finland continues to see an increase growth in persons from other countries coming to Finland (Official Statistics of Finland, 2018).

Those immigrating to Finland do so because of the excellent educational system (Brinded, 2017a) and quality of family life. In 2017, Finland celebrated 100 years as an independent country and in 1995, Finland joined the European Union. Finland also has the lowest rate of poverty in the world and lowest incarceration rate in the world (O'Donnell, 2017). This young country is growing in immigrant population because of the quality of life systems and excellent educational system (Brinded, 2017a).

Finland's Educational System

Finland invest its resources in its' children providing a baby box filled with needed baby clothing and supplies to all newborns in the country. Free high-quality preschool/day care is provided to all children ages one to seven years and most parents participate (Partanen, 2016;

Sahlberg, 2015). Equity in education is about everyone receiving a common comprehensive education in grades one to nine, with no tracking. Scores on the PISA show high achievement overall without large achievement gaps across the country. By the time Finnish students reach age 16, they have a shared common journey of learning with their peers and are free to make the choice between vocational education and academic education (and some cases both); half of these students choose vocational education. And today, Finland is ranked the world's most literate nation in the world (Flood, 2016).

In Finland, education is a national right. Finland is known as a Nordic welfare state and civil rights are detailed in the Constitution of Finland (Heinilä, 2013). All citizens have a right to education (The Constitution of Finland, § 6, Everyone is equal before the law; §16, Educational rights).

Section 16 - Educational rights. Everyone has the right to basic education free of charge.

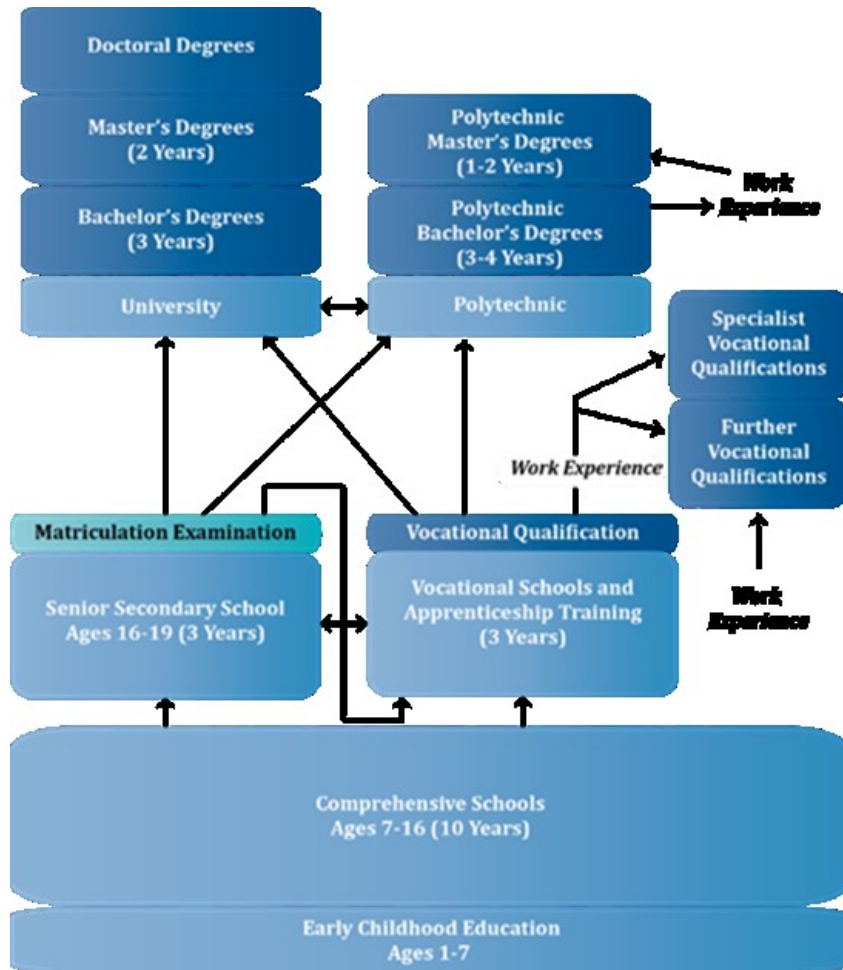
Provisions on the duty to receive education are laid down by an Act. The public authorities shall, as provided in more detail by an Act, guarantee for everyone equal opportunity to receive other educational services in accordance with their ability and special needs, as well as the opportunity to develop themselves without being prevented by economic hardship.

The freedom of science, the arts and higher education is guaranteed. (WIPO, 2007, p. 2)

Figure 1 provides an overview of the Finnish educational system. Finland provides public preschool/daycare starting at age one through age seven. Beginning at age seven through age 16 all children complete a common comprehensive basic education. At the end of this time, students decide which program they wish to complete at the secondary level: academic (senior secondary school) or vocational (schools and apprenticeship training). Students may then continue their

education at the university (academic passing matriculation exam and meeting competitive admissions) or university of applied sciences (polytechnic) (meeting competitive admissions).

Figure 1. Finland’s Education System at a Glance



Source: Center on International Education Benchmarking, 2017.

Common Basic Education in Finland

In Finland, public compulsory education is from grade one to grade nine; with a common curriculum for all (Sahlberg, 2015). Tuition, a hot lunch, school supplies, medical care, and counseling are provided for all children. Most (99%) students complete this common basic

education (Finnish National Board of Education, 2016a). Most (97%) come to first grade having attended a public funded preschool program.

Children are raised to be independent at a much earlier age than in the US, even though Finnish children do not start school until age seven (Partanen, 2016). It is not unusual to see an eight-year-old getting on public transportation alone to attend school. These students often have a cell phone in-hand to communicate with their parents. According to the World Economic Forum (Brinded, 2017), Finland is one of the safest countries in the world.

In the early 1970's, there was a visible achievement gap among young adults at the start of comprehensive school due to very different educational orientations associated with Finland's old parallel system (Aho, Pitkänen & Sahlberg, 2006). This knowledge gap strongly corresponded with the socio-economic divide within the Finnish society at the time. The Finnish Parliament then decided that the old parallel type of education system was to be replaced by a common basic education for the first nine years of school with the same curriculum for all (Niemi, 2012, p. 21). During this decade, implementation of the new comprehensive basic education program (grades one through nine) began.

Although students' learning outcomes began to equalize by the mid-1980's, ability grouping in mathematics and foreign languages kept the achievement gap relatively wide. By abolishing ability grouping and placing all students together with common curriculum for all (grades one through nine), the achievement gap between high and low achievers began to decrease (Sahlberg, 2009). Practically, this means that all pupils, regardless of their abilities or interests, studied mathematics, sciences, and foreign languages in the same classes. Earlier all these subjects had three levels of curricula that pupils were tracked based on their performance in these subjects. Ability grouping was abolished in 1985 (Väljjarvi, 2004). The common basic curriculum includes: mother

tongue and literature, a second and third language, math, environmental studies, biology, geography, physics, chemistry, health education, religion/ethics, history and social studies, music, visual arts, crafts, physical education, home economics (family and consumer sciences), artistic and practices electives, and individualized guidance counseling (Finnish National Agency for Education, 2016).

Secondary Vocational Education in Finland

In 1958, Finland established vocational schools via the Act on Vocational Schools. Today, students complete the common basic education, the students (and their parents) can choose either an academic high school or a vocational institute (dual system). Students may also need to relocate themselves at the age of 16 to attend a program of their choice and may need to compete for admission to such a school. Vocational education includes a wide range of subjects that lead to employment immediately following high school and/or continuing education such as culture (music, arts, circus arts, etc.); humanities and education (child care, sign language, recreational instruction); natural resources and environment (agriculture, fisher, forestry, horses, horticulture, environmental protection, etc.); business and administration (entrepreneurs, real estate, management, foreign trade, etc.); health and sport (beauty care, hairdressing, dental lab assistant, pharmaceuticals, practical nurse, sports assistant, massage therapy, etc.); technology, communications, transportation (air traffic control, aircraft maintenance, boat building, building maintenance, construction, electrical engineering, food production, land surveying, logistics, metal work, watchmaking, plastics technology, rubber technology, textiles, interior design, vehicle technology); tourism, catering, domestic services (Finnish National Agency for Education, 2014). Included in the secondary vocational education curriculum is instruction in modern languages (e.g. English), mother tongue (Finnish and Swedish), and related academic subjects such as math, social studies, etc.

During the 1970's upper secondary education (grades 10-12) was divided into academic or vocational (dual system), which continues today. During these three years of schooling (grades 10-12), students study to take the matriculation exam for admission into college or study for entry into the workforce. While both academic and vocational students can sit for the admissions test to the University, most vocational education graduates may continue to higher education via a University of Applied Science (UAS) (Ministry of Education and Culture, 2015). Vocational education prepares students both for the workplace and higher education. Vocational students can continue their education at one of many UAS institutions that provide bachelor's degrees in a variety of vocational subjects free of tuition, however students must pay for their own books and supplies and compete for admission to these programs. Libraries at these institutions offer copies of the required textbooks for students to borrow.

Finland's vocational education and training system has developed over the past 50 years due to the changes and increased success of the common basic education curriculum for grades one through nine. Secondary education (grades 10-12) had a traditional organization until 1985 when the new *Act on General Upper Secondary Education* was abolished, and the new modular curriculum structure was adopted. This change enabled schools to rearrange time scheduling of teaching. Five or six periods replaced two annual semesters. This in turn, changed local curriculum planning because schools had more flexibility to allocate lessons into different periods (Väljörvi, 2004). Those enrolled in the upper secondary vocational programs were to gain a practical experience in their chosen field with the expectation of completing a minimum of six months of on-the-job training. Competence-based education was adopted with representatives from the workplace, teachers and students assessing learning outcomes together. Changes in curriculum structure

provided the needed flexibility for students to gain needed work experience while still attending school Ministry of Education and Culture, 2016a).

In 1990's, curriculums in secondary vocational education were renewed with three years of education across Finland with the aim to increase cooperation between schools and the workplace. In Finland, this transition from bureaucratic central administration to a decentralized culture of trust occurred during the deep economic crisis and public budget cuts of the 1990s (Aho, Pitkänen, & Sahlberg, 2006). By the mid-1990's, greater content choice and flexibility was offered with 18 compulsory subjects being completed in 75 courses of 38 lessons each. Completion of two-thirds of the required curriculum is compulsory for the diploma, however students typically complete between 80-90 courses.

One of the key policy targets in the 21st century has been to increase the attractiveness of vocational education in secondary level (Meriläinen, 2011). The percentage of secondary school students who join vocational schools in the country has risen from 32 to 42 % over the last decades. Per Finnish researchers (Meriläinen, 2011; Opetusministeriö, 2004; Aho et al., 2006), the reason behind this enrollment growth in vocational education is the increased appreciation of vocational training in Finland as a result of improved long-term work in developing the curricula and training structures. One of the key reforms included the provision for a path to qualification for higher education for those studying in vocational schools (*Finland Times*, 2015). Aho and colleagues (2006) say, the basic values and the main vision of education as public service have remained unchanged since 1968.

In 2005, Parliament passed an act that vocational qualifications (credentials) include both the teacher's assessment and a demonstration of skills to prove that a student achieved the vocational proficiency set out in the curriculum (Meriläinen, 2011). Skill demonstrations are to take place at

worksites whenever possible. Employers and their representatives take part in the assessments and students can expect to demonstrate 4 to 10 areas of proficiency during their studies.

The structures of secondary vocational education have been simplified and all initial vocational qualifications (credentials) today consist of 120 credits which equals three years of full time study (Ministry of Education and Culture, 2018). One quarter of the study time is allocated to general education curriculum (science, math, social studies, modern languages, Finnish, Swedish, etc.).

Today the educational level of working age population is as follows: 13% completed basic education (through grade 9); 45% secondary education (through 12th grade); and 42% postsecondary/higher education (Finnish National Agency for Education, 2017). In 2015, of the students that completed their basic education (grades one through nine), 52% completed the secondary academic program, 42% the secondary vocational program, 2% completed other and 3% did not continue immediately after basic education.

Summary and Discussion

Over the past 50 years Finland have gone through many educational reform efforts that have impacted secondary vocational education. In the 1970's, Finland emphasized equity of access to education for all (Niemi, 2012). By the 1980's, Finland began to restructure secondary education to increase access for all to education, both academic and vocational (Sahlberg, 2009). By the 1990's, Finland moved to decentralization of education and empowering their teachers' greater control on how the national curriculum was to be taught (Aho et al., 2006). At the turn of this century Finland, efforts to be part of the European educational system were being developed while working on efficient use of resources for education by increasing class sizes and distribution of national resources to schools (Meriläinen, 2011). During the 2010's, Finland pushed for greater work-based

learning with half of all students enrolling in secondary vocational education (Ministry of Education and Culture, 2015a).

Finland took a different approach to similar educational and social concerns. The common elementary (grades one through nine) curriculum appears to have addressed a wide achievement gap during this time of education as demonstrated with PISA scores (Sahlberg, 2015). The K-12 curriculum has two assessments; the matriculation exam for those wishing to pursue a university education after high school and the PISA exam.

The fact that all children enroll in identical comprehensive schools (grades one through nine) regardless of their socioeconomic background or personal abilities and characteristics has resulted in a system where schools and classrooms are heterogeneous in terms of pupil profiles and diverse in terms of educational needs and expectations (Väljörvi & Malin, 2003). Comprehensiveness, the leading idea in implementing the basic values of equity in education, also means that all students receive a free, two-course warm meal daily, free health care, transportation, learning materials, and guidance counseling in their own schools. All children attend free preschool education (Ministry of Education and Culture, 2015a). Vocational education programs are funded and approved based on economic need and demand.

Replicating Finland's educational system and vocational education system is difficult in the United States. The United States does not define education as a national right, but a responsibility delegated to the states. Recently, New Jersey started giving out free baby boxes to all newborns in their state to lower infant mortality rates, replicating Finland's program that has been in place since the 1930's (Trachtman, 2017).

Opportunities to continue one's education at the postsecondary level free of cost has growing interest in the US. There are state efforts to provide free community college education

(two-year colleges) (National Conference of State Legislation, 2016). Kentucky passed legislation to offer, and three states (Oregon, Minnesota, and Tennessee) currently have programs in place, and over ten other states are in legislative discussion regarding free or reduced cost community college education often focusing on vocational programs. In Finland, this opportunity is controlled by funding at the program level to match market need and admission is controlled to match the market and funding.

Including apprenticeships and greater work-based learning as Finland does in secondary vocational education could be implemented in the United States as well (Subrahmanyam, 2014). Efforts to include business and industry more with guaranteed high paying skilled jobs at the end of secondary programs could help turn around declines in secondary vocational education enrollments.

In the United States, each state system of vocational education can learn from Finland and perhaps replicate some of their policies and practices. Finland feels it can also learn from the United States as shown in their Fulbright Teacher Exchange program (The Fulbright Center, 2018). Each year Finland selects practicing teachers from Finland to come to the United States to learn. Faculty from the United States may also apply for opportunities to teach in Finland's secondary vocational education programs and learn from Finland (The Fulbright Center, 2018a).

Raddy (2016) a Finnish Fulbright Distinguished Award in Teaching recipient, observed five characteristics of Finland's vocational education system. These five characteristics include: 1) Vocational education is a choice; 2) Vocational education is not a dead end; 3) Vocational education covers a board range of careers; 4) Vocational education is supported by all in society; and 5) Vocational education keeps more kids in school and leads to more employed citizens. These five characteristics serve as a summary of the Finnish secondary vocational system.

References

- Aho, E., Pitkänen, K., & Sahlberg, P. (2006). *Policy development and reform principles of basic and secondary education in Finland since 1968*. Washington, DC: World Bank.
- Association for Career and Technical Education (2002, Feb.). An association is reborn. *Techniques*. pp. 44-45. Retrieved from www.acteonline.org/general.aspx?id+2389#.WWqnAoWeGhe
- Brinded, L. (2017 Feb. 6). These are the safest countries in the world for expats. *World Economic Forum*. Retrieved from <https://www.weforum.org/agenda/2017/02/these-are-the-safest-countries-in-the-world-for-expats>
- Brinded, L. (2017a Feb. 9). The best countries for raising a family, as voted by expats. *World Economic Forum*. Retrieved from <https://www.weforum.org/agenda/2017/02/the-best-countries-for-raising-a-family-as-voted-for-by-expats>
- Center on International Education Benchmarking. (2017). *Finland overview*. Retrieved from <http://ncee.org/what-we-do/center-on-international-education-benchmarking/top-performing-countries/finland-overview/>
- Flood, A. (2016 March 11). Finland ranked world's most literate nation *Guardian*. Retrieved from <https://www.theguardian.com/books/2016/mar/11/finland-ranked-worlds-most-literate-nation>.
- Finland Times* (2015 April 24). Vocational education gains popularity. *STT Report*. Retrieved from <http://www.finlandtimes.fi/education/2015/04/24/16234/Vocational-education-gains-popularity>.
- Finnish National Agency for Education (2017). *Education in Finland*. Retrieved from http://www.oph.fi/download/175015_education_in_Finland.pdf

Finnish National Agency for Education (2016). *Basic Education*. Retrieved from

http://www.oph.fi/english/curricula_and_qualifications/basic_education/curricula_2014

Finnish National Board of Education (2016a). *Compulsory education in Finland*. Retrieved from

http://www.oph.fi/download/180148_Compulsory_education_in_Finland.pdf

Finnish National Agency for Education (2014). *Vocational Upper Secondary Education*. Available at

http://www.oph.fi/english/curricula_and_qualifications/vocational_upper_secondary_education

Heinilä, H. (2013). Students in vocational education In K. Aaltonen; A. Isacson, J. Laukia, & L.

Vanhanen-Nuutinen (Eds.) *Practical skills, education and development: Vocational education and training in Finland* (pp. 238-250). Helsinki, Finland: Haaga-Helia University of Applied Science, School of Vocational Teacher Education.

Krupnick. M. (2017, August 29). After decades of pushing bachelor's degrees, US needs more tradespeople. *PBS News Hour*. Retrieved from

<http://www.pbs.org/newshour/updates/decades-pushing-bachelors-degrees-u-s-needs-tradespeople/>

Meriläinen, R. (2011). *Valkolakki vai haalarit, vaiko molemmat. Koulutuspolitiikan vaikuttajien*

näkemykset toisen asteen kehityksestä [White hat or overalls, or of both. Education and training leaders that the views of secondary education development]. Doctoral dissertation

Helsingin yliopisto. Käyttäytymistieteellisen tiedekunnan julkaisuja. [University of Helsinki, Faculty of Behavioral Sciences, Department of Teacher Education, Helsinki, Finland]

Retrieved from

<https://helda.helsinki.fi/bitstream/handle/10138/27400/valkolak.pdf?sequence=1>.

Ministry of Education and Culture (2018). *Vocational education and training: Policies and development*. Retrieved from http://minedu.fi/en/policies-and-development_vet

Ministry of Education and Culture (2018a) *Placement and Qualification. Education Statistics in Finland*. Retrieved from <https://vipunen.fi/en-gb/vocational/Pages/Tutkinnon-suorittaneiden-sijoittuminen.aspx>

Ministry of Education and Culture. (2016, December). *Finland and PISA*. Retrieved from <http://www.minedu.fi/pisa/?lang=en>

Ministry of Education and Culture. (2016a, February). *Key projects: Reform Finnish Competence and Education*. Helsinki, Finland. Retrieved from http://www.oph.fi/download/177618_key_projects_reform_finnish_competence_and_education.pdf

Ministry of Education and Culture (2015). *Finnish vocational education and training in a nutshell*. Helsinki, Finland: Finnish National Board of Education. Retrieved from http://www.oph.fi/download/146428_Finnish_Education_in_a_Nutshell.pdf

Ministry of Education and Culture (2015a). *Every child in Finland has the same educational starting point*. Retrieved from http://minedu.fi/en/article/-/asset_publisher/every-child-in-finland-has-the-same-educational-starting-point

National Conference of State Legislation (2016 April 25). *Free community college*. National Conference on State Legislation. Retrieved from <http://www.ncsl.org/research/education/free-community-college.aspx>

Niemi, H. (2012). The societal factors contributing to education and schooling in Finland. In H. Niemi, A. Toom, & A. Kallioniemi (eds) *Miracle of Education* (pp. 19-38). University of Helsinki, Finland.

- O'Donnell, N.S. (2017 March 26). What we can't learn from Finland Schools: Apples, oranges, and denial. *Huffington Post*. Retrieved from http://www.huffingtonpost.com/nicole-stellon-odonnell/we-cant-learn-from-finlands-schools_b_9513544.html
- Official Statistics of Finland (OSF) (2018 August 2). *Vocational education* [e-publication]. ISSN=1799-1986. Helsinki: Statistics Finland. Retrieved from http://www.stat.fi/til/aop/index_en.html
- Opetusministeriö (2004). Koulutus ja tutkimus [*Education and Research*] 2003-2008. Retrieved from http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2004/liitteet/opm_190_opm06.pdf?lang=fi
- Partanen, A. (2016). *The Nordic theory of everything: In search of a better life*. New York: Harper Collins Publishers.
- Raddy, E.A. (2016 November 14). Five ways Finland gets vocational and technical education right. *Education Weekly*. Global Learning Blog. Retrieved from http://blogs.edweek.org/edweek/global_learning/2016/11/five_ways_finland_gets_vocational_and_technical_education_right_lessons_for_the_united_states.html
- Sahlberg, P. (2015). *Finnish Lessons 2.0 What can the world learn from educational change in Finland?* (2nd Ed.) New York: Teachers College Press.
- Sahlberg, P. (2009, April). *A short history of educational reform in Finland*. Retrieved from <http://www.oxydiane.net/IMG/pdf/Finland-Sahlberg.pdf>
- Subrahmanyam, G. (2014 January 15). Vocational education: Why the Finns do it better. *The Guardian*. Retrieved from <https://www.theguardian.com/global-development-professionals-network/2014/jan/15/youth-unemployment-vocational-training-finland>

The Fulbright Center (2018). Finland Fulbright Grants. Available in English from

<http://www.fulbright.fi/sites/default/files/stipendiohjelmat.pdf>

The Fulbright Center (2018a). Fulbright for US Citizens. Retrieved from

<http://www.fulbright.fi/en/grant-programs/for-americans>

Trachtman, T. (2017 January 26). New Jersey gives out free baby boxes in move to lower infant mortality rates *CNN*. Retrieved from <http://www.cnn.com/2017/01/26/health/new-jersey-baby-boxes-safe-sleep/index.html>

Väljörvi, J. (2004). Implications of the modular curriculum in the secondary school in Finland. In J. van den Akker, W. Kuiper and U. Hameyer (Eds.), *Curriculum landscapes and trends* (pp. 101-116). Dordrecht: Kluwer.

Väljörvi, J. & Malin, A. (2003). The two-level effect of socio-economic background. In S. Lie, P. Linnakylä and A. Roe (Eds.) *Northern lights on PISA: Unity and diversity in Nordic countries in PISA 2000* (pp. 123-132). Oslo: University of Oslo, Department of Teacher Education, and School Development.

Virolainen, M. & Stenstrom, M. (2014). Finnish vocational education and training in comparisons: Strengths and weaknesses. *International Journal for Research in Vocational Education and Training*. 1(2), pp. 81-106.

WIPO (2007) *The constitution of Finland*. Retrieved from

http://www.wipo.int/wipolex/en/text.jsp?file_id=194303