Generic skills in the 14-19 curriculum: an international review

Estonia

International case study

Generic skills description	Competencies
Generic skills in the academic and vocational curriculum	Integrated into teaching or core and optional subjects in both the academic and vocational curricula
Skills teaching and learning approaches	Project work in vocational subjects
Generic skills assessment	Embedded in general assessment
Teacher autonomy	Considerable autonomy to embed and adapt the curriculum and teaching approaches

Sheffield Hallam University | Sheffield Institute of Education

CES Centre for Education Systems

This is a case study of generic skills in 14-19 education in **Estonia** developed through a desk review of selected, mostly official documents. It is intended to be read alongside another 9 international case studies and an overarching summary report of the research *Sheffield Institute of Education* undertook in collaboration with *Centre for Education Systems* with funding from *The Charitable Foundation for Educational Development*. The project investigated how 'generic skills' are characterised, understood, and implemented across 10 jurisdictions, with particular reference to the relevance for England.

Authors **Hongjuan Zhu, Lisa Clarkson, Mark Boylan, Charlynne Pullen, Sarah Boodt**

Summary

Estonia's national curriculum designates generic skills as part of a wider set of 'competencies' which are considered essential for all secondary students on academic and vocational routes. These competencies encompass the knowledge, skills, and attitudes necessary for effective performance in a specific area or domain. Competencies can be classified as general or subject specific. In the Estonian system, general competencies are regarded as vital for the holistic development of individuals as human beings and citizens. They are cultivated in students through various taught subjects, extracurricular activities, and interactions with teachers, friends, and families. The general competencies (detailed in section 3) include:

- Values
- Social
- Self-management
- Learning to learn
- Communication
- Mathematics
- Entrepreneurship

On Estonia's vocational secondary education route, the vocational education and training (VET) programme aims to equip students with profession-specific knowledge and skills, including generic skills that are transferable across different industries and job roles. Students are expected to attain the prescribed learning outcomes, encompassing the various competencies that are developed throughout the curriculum.

Education policy in Estonia inserts competencies learning into the curriculum in a diffuse, integrated way rather than as discrete units. The national curriculum framework explicitly builds the competencies into subject areas, seeking to ensure that education provision is well-rounded in skills as well as knowledge. Although there are no standalone qualifications for generic skills, subject-specific assessments are designed to allow students to demonstrate their development in the generic skills.

In summary, the Estonian system prioritises competencies that are standard for all learners. It requires all schools and education institutions to follow this approach, although there is significant teacher autonomy concerning how to teach the generic skills within subjects.

1. Contextual factors

We begin this overview of the country of Estonia with its social and economic context and educational context in section 1.1. Section 1.2 outlines the key systems and structures of the education system and section 1.3 covers the education workforce and professional status. Finally, section 1.4 describes how policy on skills is formed and enacted in Estonia. These aspects are discussed with a particular focus on generic skills.

1.1 Economic, social, and educational context

Estonia has experienced significant societal and economic changes since its independence from the Soviet Union in 1991. The country has transitioned from a centrally planned economy to a market-oriented one, leading to substantial economic growth. Overall, Estonia is considered relatively stable both politically and economically.

However, Estonia has been facing some challenging demographic shifts. Since 2013, the population of Estonia has been declining slightly, primarily as a result of migration patterns and negative natural growth[1]. Like many other European Union countries, Estonia is also grappling with the implications of an ageing population. Demographic changes have had an impact on vocational education and training (VET), resulting in the restructuring of Estonia's VET institutions. The number of state-owned VET providers fell from 54 in 2002/03 to 26 in 2018/19, as smaller providers were merged into regional VET centres. The government's declared aim here was to enhance the quality and efficiency of VET while offering a wide range of qualifications.

In 2019, Estonia experienced a significant rise in immigration, with 5,900 individuals receiving residence permits longer than 12 months, a 22.3% increase from 2018. These newcomers comprised primarily labour migrants, family members, education seekers, and others. Intra-EU postings surged by 58%, with Ukraine, Russia, and Finland being the top nationalities of newcomers. However, in 2020, first asylum applicants decreased by 55%, with most applicants originating from Russia, Syria, and Eritrea. Additionally, Estonian emigration to OECD countries decreased by 8% in 2019. Estonia introduced a digital nomad visa in 2020 to facilitate remote work. Plans for a new integration strategy aim to promote cultural diversity and the Estonian language.[2]

Estonia is a multicultural country with a bilingual community. As of April 2018, approximately 69% of the population were Estonians. While most educational institutions deliver instruction in the Estonian language, some schools use Russian or both languages.[3]

Estonia is one of the world's most digitally advanced societies, and it was the first country to offer an e-residency, attracting more than 80,000 e-residents from over 170 countries.[4] The majority

1 Data Commons, 2023 https://datacommons.org/place/country/EST?category=Demographics

2 OECD, 2020 https://www.oecd-ilibrary.org/sites/933badb6-en/index.html?itemId=/content/component/933badb6-en

3 CEDEFOP, 2024 https://www.cedefop.europa.eu/en/countries/estonia#2

4 Enterprise Estonia, n.d. https://estonia.ee/enter/

of companies in Estonia are small or micro businesses. The main economic sectors include information and communications, electronics and components, machinery and metalworking, transport and logistics, and timber and furniture, with the country's top exports reflecting this profile. VET qualifications are essential for employment in these sectors.[5]

Educational overview

In Estonia, education system spans from pre-school to higher education. The pre-school phase is voluntary. Primary and lower secondary education aims to provide solid foundations for students, with a nine-year curriculum covering a wide range of subjects. Upper secondary education offers both general (academic) and vocational pathways, catering to students' diverse interests and career aspirations.[6]

In upper secondary, around one quarter of Estonian young people opt for the VET track, but there are significant disparities in the participation rates of young people from different socio-economic backgrounds. For instance, in eastern Estonia, around 60% of Russian-speaking boys choose VET, whereas in larger cities only 10% of Estonian-speaking girls take it. Although the government monitors these disparities, developed policy responses are so far lacking.[7]

1.2 Key educational systems and structures

Curricula, assessment, and qualifications

The curricula, assessment, and qualifications frameworks in Estonia all emphasise the development of generic skills as vital competencies alongside subject-specific knowledge and competencies. While there are no explicit standalone qualifications for generic skills, the skills are enmeshed in subject areas in the curriculum and considered an essential part of the overall educational experience.

The National Curriculum provides a framework for both the general and vocational education tracks, outlining the expected learning outcomes and competencies for each subject. The general education route in upper secondary schools is designed to:

> "*help students become creative, multi-talented, socially mature and reliable citizens who have discovered a field of endeavour that is best suited to their individual interests and capacities for continuing their future education path*"[8]

This statement of purpose highlights the value of generic skills. The curriculum requires students to complete and pass 96 individual modules as well as pass the upper secondary school final exam and the state exams in Estonian, mathematics, and a foreign language. Students must also complete either a research paper or practical work. Passing general upper secondary education gives students access to higher education or vocational learning.

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5 CEDEFOP, 2024

6 Education Estonia, n.d.-a https://www.educationestonia.org/about-education-system/

7 Pauline, Simon, Anthony, & Benedicte for OECD, 2019 https://www.oecd-ilibrary.org/sites/g2g9fac9-en/1/1/2/index.html?itemId=/content/publication/g2g9fac9-en&_csp_=145adb1c98c65ca8b29b064a861d46eb&itemIGO=oecd&itemContentType=book

8 Ministry of Education and Research, Estonian Government, 2022a https://www.hm.ee/en/education-research-and-youth-affairs/general-education/general-education-estonia

The curricula in the vocational education route are also composed of modules, which are categorised into core studies, elective studies, and general studies modules. The learning outcomes for both the core and elective studies modules are delineated through a range of competencies which include the following generic skills alongside the target vocational and professional knowledge and skills: independence and responsibility, communication skills, self-determination competence, performance competence, information technology competence, and initiative and entrepreneurial competence.[9]

Assessment in Estonia's secondary education focuses on evaluating students' knowledge, understanding, and application of subject-specific content. Generic skills are not separately assessed. Instead, students' development and demonstrations of these skills are required to be embedded in the assessment tasks and criteria of individual subjects.

Estonia has implemented a "wraparound" programme approach to nurture the development of generic skills in its secondary students. For instance, the Entrepreneurship programme is interleaved into various subjects to help students develop an entrepreneurial mindset and skills.[10] Similarly, the Digital Competence framework is applied to different subject areas to enhance students' digital skills and literacy.[11]

School/college organisation

Estonian students enter upper secondary school in grade 10 at age 16. This is the point where secondary education splits into the academic and vocational pathways. Students proceeding on the general (academic) route move to general upper secondary schools, while their peers who opt for vocational routes move to vocational schools. Students can pursue the VET either as vocational secondary education, which typically takes 3-4 years, or as vocational skills training without general education, which is up to 2.5 years in duration. The aim of VET is to develop the competencies and occupational proficiencies necessary for employment, active participation in society, and continual learning.[12]

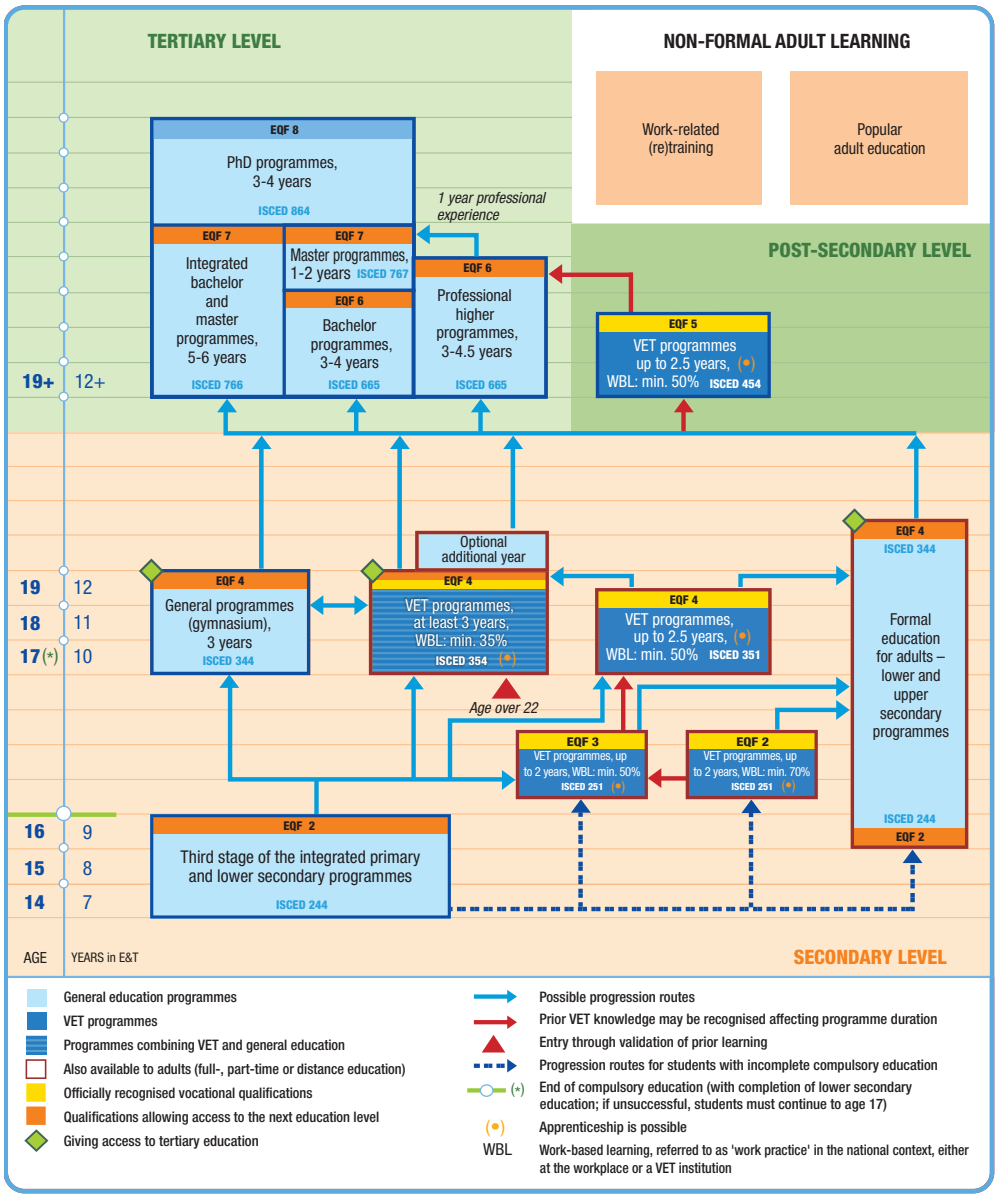
School-level autonomy

Schools in Estonia enjoy a significant level of autonomy. They have the power to shape their own curriculum albeit within the overarching framework of the National Curriculum, and the freedom to determine their goals and areas of focus in education. Principals have the authority to hire and dismiss teachers, manage budget allocation, and assess the need for teacher training. Teacher autonomy is addressed in the next section. [13]

To conclude this subsection, the diagram in Figure 1 outlines Estonia's education system and structures.

9 Estonia Government, 2020 https://www.riigiteataja.ee/en/eli/515012020003/consolide
10 Education Estonia, n.d.-b https://www.educationestonia.org/innovation/entrepreneurship-education/
11 Education Estonia, n.d.-c https://www.educationestonia.org/innovation/digital-competence/
12 Education Estonia, n.d.-a
13 Ibid

Figure 1: Estonia education system, source CEDEFOP Estonia [14]



1.3 Education workforce and professional status

Teachers in Estonia are trained at higher education institutions, usually universities. The level and specification of training differs according to the branch of education (general or vocational) the trainee is headed for. General upper secondary teachers train and qualify at master's degree level while vocational teachers' training confers a bachelor's degree. Generally, though, teacher training programmes cover general education studies, in-depth study of a chosen subject or speciality, professional studies, and a final thesis or exam that includes pedagogical research. There are occupational standards for teachers in each type of setting.[15] These standards have been developed to align with the levels specified in the European Qualification Framework (EQF).[16]

14 CEDEFOP, 2024

15 European Commission, 2022 https://eurydice.eacea.ec.europa.eu/national-education-systems/estonia/initial-education-teachers-working-early-childhood-and-school

16 Ibid.

The two-tiered system of teacher qualification (general or vocational) appears to bring disparities to the profession. General education subject teachers with a master's degree can work either in VET or general education schools, specialising in subjects including mathematics, physics, and languages. Vocational teachers, on the other hand, bring expertise in their professional field, have varied qualification requirements at different EQF levels and can work only in vocational schools. Attracting young people to vocational teaching remains a challenge in Estonia; the majority of VET teachers are aged over 50 (although this might reflect patterns of deliberate career shifts from industry to education in mid-life). Estonia's Lifelong Learning Strategy aims to improve working conditions and wages for teachers and raise the status of the profession.[17]

Professional status and autonomy

As indicated above, education providers have significant autonomy at the institutional level in carrying out their duties, including the authority to allocate resources. Similarly, individual teachers have considerable autonomy to select teaching methodologies and approaches.[18] The freedom also applies to choose of specific textbooks, materials and teaching methods that align with their teaching preferences and are deemed suitable for their lessons.[19] This level of discretion allows educators to creatively incorporate generic skills such as critical thinking, problem-solving, and communication into their subject matter, fostering a more holistic and engaging learning experience. Thus, the autonomy afforded to teachers and institutions could play a crucial role in ensuring that generic skills are effectively integrated into the curriculum.

In Estonia, there is good evidence that education policymakers and practitioners place high importance on continuing professional development (CPD) for teachers. Since 2013, central government has commissioned CPD courses from universities and training providers, which are provided for teachers at no cost to them or their schools. Some training is also funded and decided at local level. Vocational teachers must participate in any CPD related to retention of their professional or technical qualification status. General education teachers can access teacher internships in industry if the area is relevant to the subject they teach. Schools release teachers from teaching so they can participate in these programmes.

Notably, responsibility for teacher CPD in the Estonian system is not just the province of the teacher and the head of their setting. It is a responsibility deemed to be shared with the owner of the school, the Ministry of Education and Research, the institutions providing continuing education, and university teacher training centres. Duties and obligations in CPD include identifying staff training needs, selecting, and planning CPD, allocating resources, organising the training, evaluating it, and keeping records. Teachers are expected to discuss their participation in CPD annually in performance appraisals with their head of school.[20]

17 CEDEFOP, 2024
18 Ministry of Education and Research, 2022a
19 Education Estonia, n.d.-a
20 European Commission, 2022

1.4 Policy formation and implementation

Estonia's education system has clear distinctions in the responsibilities of national government, local government, and schools. The state sets national standards and establishes policies and principles of education funding, supervision, and quality assessment. Implementation is largely devolved to schools. that have substantial autonomy over allocating resources.[21] Although Estonia has high levels of student attainment as rated by PISA (the OECD's Programme for International Student Assessment), there are ongoing concerns, as noted above, about the future implications of an ageing teaching workforce. To tackle this, Estonia began implementing policies in 2013 to align teacher salaries to similar full-time and full-year workers, in efforts to attract younger people to the profession. There was complemented by recognising the importance of CPD for teachers in the Lifelong Learning Strategy 2014-20.[22]

Now in operation is the Education Strategy for 2021-35, a key strand of the long-term national development strategy 'Estonia 2035'. The Education Strategy is designed to equip the Estonian people with the knowledge, skills and attitudes required to fulfil their own potential as well as contributing to the quality of life in Estonia. Two ambitions of the strategy are to increase the number of individuals choosing vocational training, and to increase the places available in higher education. Also underway is a digital transition which will include online provision of some general and vocational learning.[23]

The vocational education system in Estonia is regulated by the Vocational Educational Institutions Act (2013). It governs the establishment, operation, restructuring, and closure of vocational educational institutions.[24]

The Estonian Qualifications Authority appears to be instrumental in moving the education system towards a skills-focused landscape. Working with the Ministry of Education, it is undertaking reforms of the professional qualifications system to establish a more skills-oriented approach that bridges education and the labour market more effectively than the existing system based on professional/occupational standards. The proposed reforms focus on digital solutions and environments to help individuals make informed choices regarding work and study opportunities. skills forecasting, enabling stakeholders to see the growth in areas like digitalisation and the green transition, and strengthening links between education and the labour market.[25]

The Estonian Education Strategy 2021-2035 focuses on enhancing the coherence and flexibility of all levels of education, ensuring equal opportunities for learners of diverse backgrounds. Challenges include to improve the quality of VET, align it with the changing demands of the economy, and reduce drop-out rates from VET programmes. Steps taken include the [recent] implementation of a VET quality assurance system involving employer representatives and ongoing curriculum updates to strengthen students' acquisition of key competencies and increase the flexibility of the professional training offer.

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21 OECD, 2016

22 Ibid.

23 Ministry of Education and Research, 2022a

24 Ministry of Education and Research, 2022b https://www.hm.ee/en/education-research-and-youth-affairs/general-education/vocational-education

25 Ministry of Education and Research, 2022a

2. Generic skills

Estonia's national curriculum sets out a range of competencies which together describe the knowledge, skills, and attitudes necessary for effective performance within a specific domain of activity or discipline. Competence is further classified into general competences and subject-specific competences. General competences are crucial for fostering the growth of individuals into well-rounded humans and responsible citizens. They are developed through academic and vocational subjects, as well as students' extracurricular activities and their interactions with teachers, friends, and families. The following skills are framed as general competencies in the Estonian curriculum:[26]

- **Values competence:** the ability to assess human interactions and activities based on moral norms, appreciate connections with others, nature, cultural heritage, and art, and cultivate a sense of aesthetics.
- **Social competence:** the capacity to realise one's potential, actively participate as a responsible citizen, support democratic progress, adhere to societal values and norms, collaborate with others, embrace interpersonal differences, and consider them when interacting with others
- **Self-management competence:** the skill to understand and evaluate oneself, identify strengths and weaknesses, adopt a healthy lifestyle, resolve personal and relational challenges, and maintain mental and physical well-being.
- **Learning to learn competence:** the aptitude to organize the learning environment, acquire necessary information, plan, and follow study schedules, apply acquired knowledge and learning strategies in diverse contexts, solve problems, analyse one's strengths and weaknesses, and recognise the need for continuous learning.
- **Communication competence:** the proficiency to express oneself clearly and relevantly, considering the context and audience, present and defend viewpoints, comprehend, and interpret information and literature, write various types of texts using appropriate language and style, and prioritize accurate language usage and expressive skills.
- **Mathematics competence:** the ability to use mathematical language, symbols, and methods in practical applications, solving problems across different domains and spheres of life.
- **Entrepreneurship competence:** the capability to generate and implement ideas, utilizing acquired knowledge and skills in various contexts, identify problems and opportunities, set and achieve goals, organize collaborative efforts, demonstrate initiative, take responsibility for outcomes, adapt to changes, and make informed decisions when taking calculated risks.

26 Estonia Government, 2014 https://www.riigiteataja.ee/en/eli/524092014014/consolide Note that for concision the translated description is abridged for some competencies.

The VET standard in Estonia aims to equip students on vocational routes with profession-specific knowledge and a range of relevant skills, including generic skills that are transferable across different industries and job roles. Each student who completes vocational secondary education is expected to attain the prescribed learning outcomes, encompassing various competencies that educators seek to cultivate in students throughout the curriculum.[27] These general competencies in the VET, which are very similar to those listed above, are: learning competence; communicative competence; self-determination competence; performance competence; information technology competence; and initiative and entrepreneurial competence.

27 Estonia Government, 2020

3. Subject and vocational skills

The mandatory subjects in the national curriculum for grades 7 to 9 in the academic pathway are:[28]

- language and literature.
- foreign languages
- mathematics
- natural science (science, biology, geography, physics, chemistry)
- social studies (personal, social and health education (PSHE), history, civics, and citizenship education)
- music and art
- technology (employment studies, handicraft and home economics, technology studies)
- physical education.

As noted above, the general education system in Estonia requires students to pass a wide range of modules in order to graduate in upper secondary education, so students study core compulsory subjects – languages and mathematics – alongside their chosen optional subjects. The generic skills/competencies set out in section 3 are integrated by the teacher into the teaching of the core and optional subjects.

Curricula for vocational training comprise both national and school curricula. National vocational curricula are the foundations for upper secondary vocational training. They are implemented through regulations authorised by the Minister of Education and Research, but first developed in collaboration with social partners, considering professional standards, vocational education standards, and the general national curriculum for upper secondary schools. School vocational curricula, on the other hand, are devised for each specific vocation or profession offered by the school, and are based on vocational education standards and associated vocational standards[29]Learning outcomes are aligned with competency requirements in modules in the vocational secondary education curriculum.

28 Estonia Government, 2014
29 Ministry of Education and Research, 2022b

4. Teaching and learning approaches

As noted in section 2.3, upper secondary school teachers, both on the academic and vocational routes, have a large degree of freedom to use their preferred teaching approaches – as long as their students study the required elements of the national curriculum. Teachers are permitted to use any appropriate methods and materials, with a view to supporting young people to become not just well educated, but independent learners as well.[30] Educational publishers have produced materials that meet curriculum requirements, and schools can decide which schemes and books to purchase, provided they adhere to the curriculum. Although the government makes certain recommendations, such as using approaches that involve students in research work, the guidance is not compulsory and ultimately the pedagogies and materials are decided by the school and teacher.

Given the pedagogical freedoms given to teachers, professional development is particularly important in the Estonian system to ensure that teachers are selecting the best approaches for their classes and individual students. Teacher engagement with CPD is regarded as a professional obligation with the responsibility for CPD shared with other education stakeholders.

30 Ibid

References

CEDEFOP (2024). *Vocational education and training in Europe - Estonia*. Retrieved May 2024, from: https://www.cedefop.europa.eu/en/countries/estonia#2

Data Commons (2023). *Estonia: Demographics*. Retrieved May 2024, from: https://datacommons.org/place/country/EST?category=Demographics

Education Estonia. (n.d.-a). *Estonian education system*. Retrieved September 2023, from: https://www.educationestonia.org/about-education-system/

Education Estonia. (n.d-b). *Entrepreneurship Education: Developing a sense of initiative and entrepreneurial mindsets*. Retrieved May 2024, from: https://www.educationestonia.org/innovation/entrepreneurship-education/

Education Estonia. (n.d.-c). *Digital Competence: Empowering teachers and students*. Retrieved May 2024, from: https://www.educationestonia.org/innovation/digital-competence/

Enterprise Estonia. (n.d.). *E-Estonia*. Retrieved September 2023, from: https://estonia.ee/enter

Estonia Government. (2014). *National curriculum for basic schools*. Retrieved September 2023, from: https://www.riigiteataja.ee/en/eli/524092014014/consolide

Estonia Government. (2020). *Standard of Vocational Education*. Retrieved from September 2023, from: https://www.riigiteataja.ee/en/eli/515012020003/consolide

Estonia Parliament. (2022). *Vocational Educational Institutions Act*. Retrieved from September 2023, from: https://www.riigiteataja.ee/en/eli/ee/514012019002/consolide/current

European Commission. (2022). *Estonia - Teachers and education staff*. Retrieved September 2023, from: https://eurydice.eacea.ec.europa.eu/national-education-systems/estonia/initial-education-teachers-working-early-childhood-and-school

Ministry of Education and Research. (2022a). *National Implementation Plan of the Council recommendation on VET1: Estonia* . Retrieved September 2023, from: https://www.hm.ee/sites/default/files/documents/2022-10/annex_-_estonian_national_implementation_plan_of_the_council_recommendation_on_vet.pdf

Ministry of Education and Research. (2022b) *Vocational Education*. Retrieved September 2023, from: https://www.hm.ee/en/education-research-and-youth-affairs/general-education/vocational-education

OECD. (2016). *Education Policy Outlook: Country Profile Estonia.* OECD. Retrieved September 2023, from: https://www.hm.ee/sites/default/files/documents/2022-10/education-policy-outlook-country-profile-estonia.pdf

OECD. (2020). *International Migration Outlook – Estonia.* Retrieved September 2023, from: https://www.oecd-ilibrary.org/sites/933badb6-en/index.html?itemId=/content/component/933badb6-en

Pauline, M., Simon, F., Anthony, M., & Benedicte, B. for OECD (2019). Vocational Education and Training in Estonia. In *OECD Reviews of Vocational Education and Training.* Retrieved May 2024, from: https://www.oecd-ilibrary.org/sites/g2g9fac9-en/1/1/2/index.html?itemId=/content/publication/g2g9fac9-en&_csp_=145adb1c98c65ca8b29b064a861d46eb&itemIGO=oecd&itemContentType=book

Sheffield Hallam University, City Campus, Howard Street, Sheffield, S1 1WB, United Kingdom
Phone: +44 (0)114 225 5555

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