EN

Developments in vocational education and training policy in 2015–19

LUXEMBOURG

Cedefop monitoring of vocational education and training policies and systems

Progress towards the medium-term deliverables of the Riga conclusions

Country chapter

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This report was produced by Cedefop and reflects contributions from Cedefop's VET policy and systems team, and Cedefop experts working on common European tools and principles for education and training, and statistics. It is based on detailed information on VET policy implementation submitted by Cedefop's European network of expertise on VET (ReferNet) and other sources.

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Introduction

In June 2015, the ministers in charge of vocational education and training in the EU Member States, the candidate countries and the European Economic Area countries, convened in Riga, agreed on objectives for vocational education and training (VET) policies for 2015-20 ([1]).

Cedefop has been entrusted with monitoring the countries' policies implemented towards reaching these objectives.

This country chapter is part of the monitoring process. It was drafted based on input from the national ReferNet team. It presents an overview of the major policy developments that have taken place in the country in 2015-19, in the areas covered by the Riga medium-term deliverables (MTDs).

The country chapter is structured as follows:

(a) the introductory section Aspects of vocational education and training context in 2015 briefly sketches the VET context in the country in 2015, highlighting selected figures and major policy initiatives that were just being adopted or started at that time. This introductory section is targeted at setting a baseline to put in perspective the policy choices and developments that have taken place since the beginning of the Riga cycle;

(b) five thematic chapters then follow, devoted to the five respective MTDs outlined in the Riga conclusions. Each thematic chapter also begins with a 2015 baseline, more specifically addressing the MTD-related topics. The baseline is followed by the presentation of the major policy developments in the MTD since 2015;

(c) the country chapter ends with a conclusion summarising the main lines of the 2015-19 policy developments and highlighting possible priorities for the future.

This country chapter is part of the information which the European Commission used to prepare the European Semester exercises ([2]) in 2017-19. The chapter also informs the work of Cedefop and the European Training Foundation (ETF) in preparing a joint monitoring report on the implementation of the Riga conclusions. Both the joint report and the country chapter are aimed at

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([1])   *Riga conclusions 2015 on a new set of medium-term deliverables in the field of VET for the period 2015-20, as a result of the review of short-term deliverables defined in the 2010 Bruges communiqué:*
https://www.izm.gov.lv/images/RigaConclusions_2015.pdf

([2])   European Semester: https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester_en

informing the work of EU Member States' Directors General for Vocational Training (DGVTs) and Advisory Committee for Vocational Training (ACVT) on taking stock of the outcomes of the Riga conclusions and preparing the next steps for the EU VET policy for the next few years.

Aspects of vocational education and training context in 2015

In 2015, the share of students enrolled in vocational education and training (VET) programmes was 59.9% in Luxembourg (61% at upper secondary level, above the EU average of 47%) ([3]). However, completion rates in VET were low: only 29% of students used to complete their education in the expected time (64% on average in the OECD) (Cedefop, 2018). Despite frequent grade repetition, completion rates within two years after expected graduation time remained lower (64%) than the OECD average (79%). In upper-secondary vocational education, dual learning with work-based elements accounted for 22.7% of enrolments, less than the EU average (26.5%) (Table 1).

The overall rate of adult participation in lifelong learning was 18% in 2015. However, those most in need were under-represented: only 7% of adults with low educational attainment (international standard classification of education – ISCED levels 0 to 2) participated in lifelong learning, compared to 15.5% of adults with medium-level educational attainment (ISCED 3 to 4) and 25.9% of those with high attainment (ISCED 5 to 8) (Cedefop, 2018).

To address these challenges, revision of the VET Act (2008) was undertaken in 2015. Evaluation of the VET system was carried out in October 2015 by the University of Luxembourg. A revised VET Act was adopted in July 2016 and entered into force in September the same year.

([3]) Eurostat, data for 2015.

Table 1.   **Framework data: score on VET indicators in Luxembourg and in the EU: 2010-15**

Indicator label	2010		2015 (*)			Trend in 2011-15 (per year)		
	LU [f]	EU [f]	Yr	LU [f]	EU [f]	Range	LU	EU
Access, attractiveness and flexibility								
IVET students as % of all upper secondary students	A	A	'14	59.8 [b]	48.0 [b] E1	'13-'14	▪ -0.1	▪ -0.9
IVET work-based students as % of all upper secondary IVET	A	A	'14	22.7 [b]	34.0 [b] E2	'13-'14	▪ -0.6	▪ 0.1
IVET students with direct access to tertiary education as % of all upper secondary IVET			'14	52.1	69.2 E3	'13-'14	▪ -13.5	▪ -1.4
Employees participating in CVT courses (%)	51.0	38.0 [e]	'10	51.0	38.0 [e]			
Employees participating in on-the-job training (%)	20.0	20.0 [e]	'10	20.0	20.0 [e]			
Adults in lifelong learning (%)			'15	18.0 [b]	10.7 [b]			
Enterprises providing training (%)	71.0	66.0 [e]	'10	71.0	66.0 [e]			
Female IVET students as % of all female upper secondary students	A	A	'14	57.6 [b]	42.7 [b] E1	'13-'14	▪ 0.1	▪ -1.0
Employees of small firms participating in CVT courses (%)	34.0	25.0 [e]	'10	34.0	25.0 [e]			
Young VET graduates in further education and training (%)			'15	27.7 [b]	33.0 [b]			
Older adults in lifelong learning (%)		5.3	'15	10.0 [b]	6.9			
Low-educated adults in lifelong learning (%)			'15	7.0 [b] C	4.3 [b C]			
Unemployed adults in lifelong learning (%)			'15	22.0 [b]	9.5 [b]			
Individuals who wanted to participate in training but did not (%)	11.3 [B]	9.5 [e] [B]	'11	11.3	9.5 [e]			
Job-related non-formal education and training (%)	75.9 [B]	80.2 [e] [B]	'11	75.9	80.2 [e]			
Skill development and labour market relevance								
IVET public expenditure (% of GDP)			'13	0.50 [b]	0.56 [b] E4	'12-'13	▪ -0.13	▪ -0.03
IVET public expenditure per student (1 000 PPS units)			'13	13.0 [b]	6.4 [b] E5	'12-'13	▪ -2.7	▪ 0.0
Enterprise expenditure on CVT courses as % of total labour cost	0.6	0.8 [e]	'10	0.6	0.8 [e]			
Average number of foreign languages learned in IVET			'14	2.1 [b]	1.0 [b] E6	'13-'14	▪ 0.0	▪ 0.0
STEM graduates from upper secondary IVET (% of total)	A	A	'14	18.3 [b]	30.0 [b] E7	'13-'14	▪ 0.8	▪ -0.4
Short-cycle VET graduates as % of first time tertiary education graduates			'14	32.2	9.3 E8	'13-'14	▪ 16.0	▪ 0.4
Innovative enterprises with supportive training practices (%)	68.2	41.5 E9	'12	72.1	41.6 E9	'10-'12	▪ 2.0	▪ 0.0
Employment rate for IVET graduates (20- to 34-year-olds)			'15	89.2 [b]	77.2 [b]			
Employment premium for IVET graduates (over general stream)			'15	6.8 [b]	5.3 [b]			
Employment premium for IVET graduates			'15	14.3 [b]	23.7 [b]			

Indicator label	2010		2015 (*)			Trend in 2011-15 (per year)		
	LU [f]	EU [f]	Yr	LU [f]	EU [f]	Range	LU	EU
(over low-educated)								
Workers helped to improve their work by training (%)			'15	79.8	83.7			
Workers with skills matched to their duties (%)	54.4	55.2	'15	55.0	57.3	'10-'15	▪ 0.1	▪ 0.4
Overall transitions and labour market trends								
Early leavers from education and training (%)		13.9	'15	9.3 [b][C]	11.0 [C]			
30- to 34-year-olds with tertiary attainment (%)		33.8	'15	52.3 [b][C]	38.7 [C]			
NEET rate for 18- to 24-year-olds (%)		16.6	'15	7.6 [b]	15.8			
Unemployment rate for 20- to 34-year-olds (%)		13.1	'15	8.6 [b]	12.9			
Employment rate of recent graduates (%)		77.4	'15	84.7 [b][C]	76.9 [C]			
Adults with lower level of educational attainment (%)		27.3	'15	24.0 [b][C]	23.5 [C]			
Employment rate for 20- to 64-year-olds (%)		68.6	'15	70.9 [b]	70.0			
Employment rate for 20- to 64-year-olds with lower level of educational attainment (%)		53.4	'15	58.4 [b][C]	52.6 [C]			
Medium/high-qualified employment in 2020 (% of total)			'16	85.9 [D]	82.8 [D]			

(*)   The data in this column are the data available in 2016. Where 2015 data were not available, data from previous years were used.

(A)   UOE (UNESCO OECD Eurostat) back reconstruction of 2010 values based on ISCED (international standard classification of education) 2011 not yet available.

(B)   AES (adult education survey) 2011, used as proxy for 2010 baseline.

(C)   2014 b flags in Eurostat online tables ignored on the basis of other relevant Eurostat metadata.

(D)   Forecast made in 2016.

(E1)   Based on 28 countries; partial information for NL.

(E2)   Based on 25 countries (missing: ES, PL, RO); partial information for NL.

(E3)   Based on 27 countries (missing: NL); partial information for EL, IT.

(E4)   Based on 19 countries (missing: BE, DK, IE, EL, FR, HR, IT, PT, SK).

(E5)   Based on 21 countries (missing: DK, IE, EL, FR, HR, IT, PT).

(E6)   Partial information for NL.

(E7)   Based on 25 countries (missing: HR, IT, UK).

(E8)   Based on 23 countries (missing: BE, IE, FR, CY, UK).

(E9)   Based on 22 countries (missing: DE, IE, EL, NL, SI, UK).

(b)   Break after 2010, therefore baseline data not included.

(u)   Eurostat: 'low reliability'.

(z)   Eurostat: 'not applicable'.

(e)   Eurostat: 'estimated'.

NB: Definitions in the indicators table differ from those used in national legislation.

EU refers to EU-28, unless otherwise specified. Arrows ↗ or ↘ signal a positive or negative trend based on more than two data points and of magnitude 0.1 per year or more. Trends based on more than two data points but of smaller magnitude are indicated by →; trends based on two points only are marked ▪. Trends are estimated by means of regression models.

Source: Cedefop, 2017a, p. 89.

CHAPTER 1.
MTD 1 – All forms of work-based learning with special attention to apprenticeships

1.1. Baseline 2015

Before the reporting period, the main law regulating VET had been adopted in 2008. It was the ground for a major VET reform which was implemented until 2014. This law defined the regulatory framework for apprenticeship training, including the responsibilities of all relevant stakeholders, remuneration and conditions for in-company training. The reform also introduced key concepts such as the competence-based modular approach. Social partners were acknowledged as essential stakeholders in the organisation and implementation of VET, and a strong partnership between them and the State was in place. A VET Committee had been set up as a consulting body of the Government for all VET system related matters ([4]).

At the beginning of the reporting period ([5]), the Ministry of National Education, Children and Youth (MENJE) was responsible for the implementation and coordination of VET. Together with the five professional chambers, representing employers and employees, the education ministry was responsible for developing VET standards and making sure that labour market needs were taken on board. The professional chambers were – among others – responsible for awarding training authorisations to companies and overseeing apprenticeship contracts.

Apprenticeship had existed in Luxembourg since 1929 and had been since then updated over years (especially in 1945, 1979, 1990). The system in place at the beginning of the reporting period was well developed and offered learners the opportunity to follow cross-border apprenticeship programmes which could not be

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([4]) The committee is composed of representatives of all concerned ministries and administrations, social partners, the guidance services and the parental and pupil associations.
Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse (2016). *Country report: Grand-Duchy of Luxembourg: 2016*.

([5]) This introductory section presents the 2015 state-of-play in the MTD as a baseline for the monitoring exercise. Most of the situation it describes has remained unchanged over the reporting period and is therefore still in place at the end of the reporting period. The next sections in this MTD focus on what has changed with respect to this 2015 baseline, and how.

found in the country. Learners would then take the practical training in a company in Luxembourg while the school-based part would take place at a school in a neighbouring country (6).

In 2013, the *Jobelo!* Programme was initiated to prepare the ground for the launch of the Youth Guarantee (7). The programme was targeted at young people (18-25) who did not complete secondary school. Beneficiaries would receive a two-month theoretical training followed by an orientation stage in a company. They would thus obtain the necessary qualifications required to become an apprentice (or enter the labour market).

1.2. Main actions in 2015-19

1.2.1. Revision of the VET Act

The revised VET Act of August 2016 introduced the concept of *final integrated project* in initial VET in the CCP (8) programmes. The aim was to raise the quality and recognition of programmes on the labour market. Integrated projects combine theoretical knowledge and on-the-job practice. The revised act abolishes the *intermediate integrated project* for some VET programmes (including those with full-time attendance) as it proved to be an organisational

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(6) In October 2017, the Grand-Duchy of Luxembourg, the French Republic and the Conseil Régional Grand EST and DRAAF have signed an agreement on transborder VET, allowing to put in practice the framework agreement on a bilateral level. This agreement allows young pupils from Luxembourg and from Lorraine (regional department of France) to carry out the theoretical part of their training in one country and the workbased-learning part in a company in a neighboring country. On the bases of a dialogue started in 2016, Rhénanie-Palatinat (regional department of Germany) and the Grand-Duchy of Luxembourg have elaborated a bilateral project agreement on transborder VET which has been signed on March 13, 2018. These framework-agreements relative to transborder VET contributes to implement the recommendations in terms of employment by the European Commission. This agreement is a basis to establish a better consultation regarding the promotion of transborder VET in the Greater Region. In September 2018, more than 150 pupils from Luxembourg are doing transborder VET.

Cedefop (2015). *Spotlight on VET: Luxembourg.*Luxembourg: Publications Office. http://www.cedefop.europa.eu/en/publications-and-resources/publications/8089.

http://www.granderegion.net/Citoyens/Se-former/La-formation-professionnelle-transfrontaliere/Formation-professionnelle-initiale

(7) More information on the *Jobelo* programme: http://www.adem.public.lu/en/employeurs/demander-aides-financieres/embaucher-jeune/jobelo/index.html

(8) *Certificat de capacité professionnelle* [certificate of professional competence].

burden for technical secondary schools. For students who do not manage to complete within the normal training period, the apprenticeship phase can be automatically extended by one year by a class council decision. Following the adoption of a new legal act in June 2019, a second year of extension is possible with the agreement of stakeholders.

At the beginning of the school year 2017-18, the term 'technical secondary education' was replaced by 'general secondary education' in the Luxembourgish national context, with general secondary education renamed 'classical secondary education'.

Following the law voted in June 2019, 60-point grades will be progressively reintroduced as of the school year 2019-20. This will be done for the technician diploma programme, the vocational aptitude diploma (DAP) and the certificate of professional competence (CCP). The objective of this adaptation is to facilitate the communication with the learners and their parents.

1.2.2. Expanding the offer of apprenticeship programmes

Since 2015-16, programmes leading to the technician diploma can be offered in the form of apprenticeships.

Since the school year 2017/18, the Chamber of Commerce, together with the Ministry of National Education, Children and Youth ([9]) and the Chamber of Employees, launched the new sales and management technician diploma ([10]) under an apprenticeship contract. This work-based training lasts two years. The candidate works 24 hours/week in a company and follows 16 hours/week of theoretical training in school. Candidates for this programme must hold a sales counsellor diploma of professional competence ([11]), or a similar diploma.

A new master craftsmanship diploma 'artisan in food' was started in November 2017. It addresses a range of trades (baker, pastry cook, caterer, butcher/pork butcher) and offers transversal courses (e.g. food safety, management) as well as specialised ones so that learners may obtain a complete qualification in the domain of food supply. The training is modular and flexible, using blended learning. It follows a competence-based approach and is practice-oriented.

In line with the country's multilingual reality, emphasis is put on increasing the VET offer in French, German and English.

([9]) Ministère de l'Education nationale, de l'Enfance et de la Jeunesse.

([10]) Diplôme de technicien – DT.

([11]) Diplôme d'aptitude professionnelle (DAP) de conseiller en vente.

HelloFuture

Due to the continuous developments in digital technology, Luxembourg industry is evolving and needs young talents in the industrial and the information technology and communication sectors. In response, the *HelloFuture* project was initiated by the High Committee for Industry, in cooperation with the Government of Luxembourg, FEDIL (the voice of Luxembourg's industry) [12], the Chamber of Commerce and Luxinnovation. The project intends to promote various school-based VET programmes with a workplace learning component in the industrial and the information technology and communication sectors. A *HelloFuture* website was set up, where companies offer available apprenticeship places and internships. In 2018, a roadshow visited nearly 30 secondary general education schools, with actions that include promoting apprenticeship programmes and work-based IVET (initial vocational education and training) programmes through various interactive tools and direct contact with professionals from FEDIL. The launch of the *HelloFuture* project was accompanied by a media campaign to promote an up-to-date image of the industry, addressing young people between the ages of 14 and 30.

1.2.4. School-based VET with on-the-job training periods in the workplace

In the school year 2018/19, the Ministry of National Education, Children and Youth and the Ministry of Higher Education introduced four new higher technician diploma [13] programmes [14]: Internet of things (IoT), Game art and game design (AG) [15], Game programming and game design (GP) and Cloud computing [16]. The initiative aims to promote technologies and innovative learning of science (especially computer science), and create a pool of qualified people to set up an environment likely to attract a large number of international firms to Luxembourg. These new courses are attended by a limited number of learners, to ensure the

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[12] FEDIL is a multi-sector business federation representing the industry, construction and business services sectors.

[13] *Brevet de technicien supérieur, BTS.*

[14] http://www.men.public.lu/fr/actualites/publications/themes-transversaux/dossiers-presse/2018-2019/181001-bts-high-tech-lam/index.html

www.bts.lu

[15] Focused on design, story-telling, visual and textual creation of a game, with a small programming component.

[16] A two-year curriculum offering a mix of courses and self-learning sessions and ending with a 12-week internship expected to allow for easy integration into working life. The Cloud computing programme is part of the national digitalisation initiative.

most personalised education possible. A range of partners is involved in the initiative ([17]).

In the school year 2018/19, the Ministry of National Education, Children and Youth and the Ministry of Higher Education also introduced a new higher technician diploma in hospitality management. In school year 2019/20, a new higher technician diploma of medical-administrative assistant is planned to be launched.

The Ministry of National Education, Children and Youth also introduced a new adult training offer leading to a technician diploma in management and business ([18]). The training is delivered partly in evening courses ([19]) and partly in e-learning mode ([20]). On top of this, an in-company apprenticeship component takes place in the last two years. Professional chambers were involved in the initiative.

In June 2018, the Ministry of National Education, Children and Youth and the professional chambers announced their intention to adapt VET programmes to labour market changes ([21]), especially taking on board the needs induced by the digitalisation of trades and occupations. To that end, five secondary schools have started offering, since 2018/19, a new technician programme in smart technologies. The curriculum of the technician diploma in electronics has been entirely revised.

The ministry of education and the professional chambers have started to work on the curricula of a new technician diploma (DT) in e-commerce and a new vocational aptitude diploma (DAP) in the supervision of children in crèche and drop-in centres.

1.2.5. School-based VET with in-school work-based learning

In 2018, the National Youth Service (*Service national de la jeunesse, SNJ*) started a project titled *Training path empowerment* (*Parcours formation*) ([22]). The

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([17]) Isart Digital; the International College of Video Game & Animation 3D-FX (based in Montreal and Paris with a partnership in Tokyo); Luxembourg Creative Industries Cluster (managed by Luxinnovation); the Luxembourg ICT Cluster including the Lycée des Arts et Métiers – LAM).

([18]) http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2018/06/29-blended-learning/index.html

([19]) Four or five days per week between 18.30 pm and 21.10 pm in a secondary school.

([20]) www.ecampus.lu

([21]) http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2019/06/12-sfp/index.html

([22]) http://www.snj.public.lu/fr/news/highlight/le-parcours-formation-%E2%80%93-une-vraie-alternative-%C3%A0-l%E2%80%99inactivit%C3%A9

project addresses young people (16 to 25 years of age) who did not manage to find an apprenticeship place or who are inactive and want to set up a personal and professional project. It offers 10-week training including theoretical modules and practical workshops targeted at developing trainees' social, technical, organisational and creative skills.

1.2.6. Promoting apprenticeship

Campaigns by the employment service and the chamber of commerce have been launched to promote apprenticeships. The chamber's *Winwin* promotion campaign aims to incite companies to offer more training places for apprenticeship and uses apprentices and training companies as testimonials.

In 2018, the Chamber of skilled Trades and Crafts created a new Department, *Perspektiv Handwierk* with a mission to promote the skilled craft trades [23]. The department publishes, in mainstream national media, interviews with craftspeople (*The faces of Craft skills - Les visages de l'artisanat*) who share their passion for their occupations.

In May 2019 the ministry of education launched a new campaign promoting VET and competitions of trades and professions among young people in Luxembourg: Skills united [24]. It aims to create a positive and competitive image of vocational training while encouraging young people to believe in their talents and to develop them. It also aims to motivate more young people to participate in national and international competitions of trades and talents, to recruit new tutors from the school and professional environment to supervise them and to find partners (schools, companies) ready to make the necessary resources for participation available.

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https://www.alj.lu/offres-pour-jeunes/

[23] http://radio.rtl.lu/emissiounen/mainhandwierk/

[24] www.skillsunited.lu

CHAPTER 2.

MTD 2 – Quality assurance mechanisms in line with EQAVET and continuous information and feedback loops to IVET and CVET

2.1. Baseline 2015

2.1.1. Quality assurance in line with EQAVET

At the beginning of the reporting period ([25]), a quality assurance national reference point (QANRP) was in place. It had been set up in 2010 within the Ministry of Education, Children and Youth. The national approach to quality assurance had been developed independently to the EQAVET ([26]). It applied to IVET and related work-based learning programmes but did not apply to continuing vocational education and training (CVET). The Department for the coordination of educational and technological research and innovation – SCRIPT ([27]) used to monitor quality assurance of teaching in all public schools. This was done through specific reports drawn up by the schools to support school development and education quality. Schools had to carry out self-assessment based on their development plans, and following lines set by the SQDA.

Social partners were strongly involved in the Luxembourgish VET system. The professional chambers would usually take the initiative of proposing new training pathways for IVET following specific demand from the labour market.

CVET was decentralised and its different segments had no common approach to quality assurance. The 2008 VET Law ([28]) also included provisions for CVET, such as a quality label for CVET providers. The Training Observatory,

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([25]) This introductory section presents the 2015 state-of-play in the MTD as a baseline for the monitoring exercise. Most of the situation it describes has remained unchanged over the reporting period and is therefore still in place at the end of the reporting period. The next sections in this MTD focus on what has changed with respect to this 2015 baseline, and how.

([26]) European quality assurance framework in vocational education and training.

([27]) Under the authority of the Ministry of Education, Children and Youth and its Division for the Development of Schools (*Division du développement des établissements scolaires*, previously *School Quality Development Agency* – SQDA).

([28]) Law of 19 December 2008.

established in 2012 by the National Institute for the Development of Continuing Vocational Training (INFPC), provided the government and social partners with detailed statistics and analyses on training issues in IVET and CVET.

2.1.2. Continuous information and feedback loops

Indicators at system level were monitored by the SQDA. The statistics department of the Ministry of Education, Children, and Youth would also monitor the system via the national database of students and teachers.

A tripartite advisory committee on vocational training had been created in 2012 to monitor labour market needs in terms of qualifications and introduce changes to VET accordingly. Training curricula were regularly revised by working groups on curriculum development.

Graduate (and non-graduates) tracking was in place. Different sources (Ministry of Education, Children, and Youth; social security service; employment agency) used to collect information on students who completed initial VET, their entry and early progression in the labour market, also in comparison to other student categories. The Training Observatory of the National Institute for the Development of Continuing Vocational Training would build on these data to analyse the transition of young persons from VET to the labour market (Section 2.2.2).

Since 1997, the Luxembourg Business Federation had been conducting annual surveys on skill needs, alternatively in the industrial and in the information technology and communication sectors. It explored skills needed by enterprises to achieve a good balance between vocational training supply and labour market demand. The survey was the basis for publications which offered forecasts of replacements and new job openings, and related skills and qualifications. The publications provided young people and their parents with insights into education paths, and pushed public authorities, professional chambers and other VET actors to take account of enterprises' skill needs (EEPO, 2015).

2.2. Main actions taken in 2015-19

2.2.1. Quality assurance in line with EQAVET

The VET Law of 2008, which lays down the basic objectives of VET and covers the main aspects of quality assurance, is currently under revision. The revision process takes into consideration the external review of the system carried out by the University of Luxembourg in 2015.

Also, in the reporting period, the Luxembourg International University Institute (IUIL) (²⁹) has developed a tool to analyse the quality of in-company continuing training. The analysis addresses issues related to learner motivation, learning outcomes transfer, and training efficiency. Recommendations to improve the organisation and impact of in-company continuing training are being issued (³⁰).

A National Observatory of School Quality (³¹) was created in January 2018 at the Ministry of National Education, Children and Youth. Its role is to examine the organisation and functioning of schools, at all levels of education. The observatory is composed of eight observers, who work in complete independence and will produce every three years a national report on the school system (with findings based on research) and recommendations. These reports will inform the debate on education policies at national level.

Systematic use of EQAVET indicators to monitor the VET system ('always used' item in Figure 1) in Luxembourg was above the EU average in IVET in 2018. In CVET – where the ministry's remit is limited – the use of EQAVET indicators is below the EU average. Compared to the 2013 data, there was a slight positive shift in the use of indicators in IVET as more indicators were marked as 'always used'. There was no change in CVET.

(²⁹) Not to be confused with the University of Luxembourg (UL), which it has become a part of since then, as the Competence Centre of the UL for continuing professional academic training.

(³⁰) http://qualiform.iuil.lu

(³¹) Observatoire national de la qualité scolaire.
http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2018/02/08-observatoire/index.html

Figure 1.   **Use of EQAVET indicators**
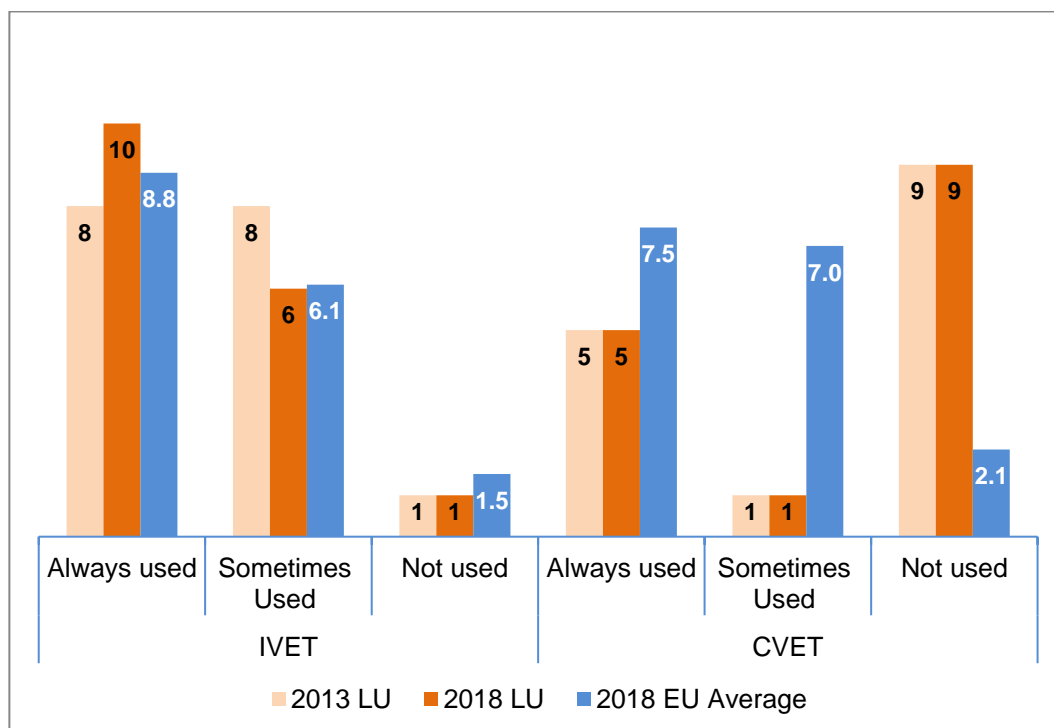
NB: Of the 17 indicators suggested by the 2009 EQAVET recommendation, eight were 'always used' in
     IVET in 2013 in Luxembourg, compared to 10 in 2018 and 8.8 in the EU on average in 2018.
     EU average was calculated based on available information for 31 out of 35 VET systems.
Source: Cedefop calculations based on data of EQAVET Secretariat surveys for 2013 and 2018.

2.2.2.   Continuous information and feedback loops in initial VET

The school development plan (*Plan de développement de l'établissement
scolaire, PDS*) was introduced by the law of 15th December 2016 (SCL, 2016a).
Within this framework, schools are requested to describe their curricular and
extracurricular activities in the PDS to outline their profile and analyse their
general situation. The plans are to be set by a school development committee
(*Cellule de développement scolaire, CDS*). The CDS is coordinated by the school
directorate and involves school staff appointed by the director for a three-year
period that may be renewed. The committee analyses and interprets the school's
data, identifies priority needs, defines development strategies, elaborates the
school charter, the profile and the PDS, ensures internal and external
communication, while establishing a triennial plan for the continuing training of
high-school staff.

The Division for the Development of Schools supports schools'
development, especially in elaborating and implementing the school development
plans (PDSs). The division has provided several transversal tools, such as a

website (³²) dedicated to the development of schools, forms allowing schools to coordinate and follow up their PDS, and adaptable questionnaires to facilitate data collection about the perception of school actors.

A study on the transition from education and training to working life (*transition école – vie active*), carried out by the Training Observatory of the National Institute for the Development of Continuing Vocational Training, showed that apprenticeship graduates (³³) find a first job more quickly than those from school-based VET (³⁴). As a result, the Ministry of National Education, Children and Youth plans to extend the offer of programmes leading to the vocational aptitude diploma (DAP, EQF level 3). Some of the technician programmes (DT, EQF level 4) are now also offered as apprenticeships.

In 2018, the Training Observatory of the National Institute for the Development of Continuing Vocational Training set up the TEVA Barometer, a new tool to monitor the early career stages of recent secondary education graduates in 65 VET trades and occupations (³⁵). The aim is to support the provision of guidance. The barometer provides twenty key indicators covering four stages:

(a) school leaving (rate of school-leavers getting a job);
(b) first job (percentage of first jobs on a permanent contract; average duration of first job);
(c) employment during the first three years after leaving school (percentage of employment under temporary or permanent contracts, by sector and company size);
(d) employment after three years (rate of employment; median hourly wage).

The Ministry of National Education, Children and Youth, the Ministry of Labour, Employment and the Social and Solidarity Economy (MTEESS), and the professional chambers, are involved in the action.

Also, in 2018, a National Programme Council (³⁶) was created, with the aim of allowing for more exchange and debate around educational matters and bridging the educational and professional worlds. The Ministry of National

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(³²) https://portal.education.lu/developpementscolaire

(³³) CATP now DAP, European qualifications framework (EQF) level 3; and CITP/CCM now CCP33, EQF level 2.

(³⁴) DT, EQF level 4.

(³⁵) The Barometer is based on data from the TEVA study (*Transition Ecole-Vie Active – transition from school to working life*), which has been monitoring more than 6000 graduates since 2009. Sources:
http://www.lifelong-learning.lu/Accueil/fr?page=7 ; www.teva.lu

(³⁶) Conseil national des programmes.

Education, Children and Youth also created the *Lëtzebuerger Bildungsdësch*, a national conference on education, which includes all major stakeholders (including scientific experts and civil society) to shape the outlines of educational policies. This platform of discussion and reflection is meant to allow for a larger, continuous debate, independent of the political changes in the country.

The Law of 1 August 2018 established national representation of parents to represent minor learners in primary, secondary and differentiated education (*éducation différenciée*) ([37]). The representation comprises four parents of learners from primary education, six from secondary education (general and technical) and two in differentiated education. The mission of the representation is – either on its own initiative or on the request of the Ministry – to express an opinion on law projects or educational projects. It can also make proposals regarding school life and teaching.

2.2.3. Continuous information and feedback loops in continuing VET

In 2018, the Public Employment Service (Agence pour le développement de l'emploi, ADEM), the MTEESS and the Luxembourgish companies union (UEL) launched the programme *Companies, partners for employment* (*Entreprises, partenaires pour l'emploi*) ([38]). The programme involves enterprises in the development of training targeted at the unemployed, to ensure that the training provided corresponds to company needs. The programme is meant to bridge the gap between job offers requirements and jobseekers' profiles, and ease and increase the hiring of unemployed people, especially in occupations in workforce shortage. Sectoral working groups will allow developing common actions. The programme also encourages the cooperation between the PES, the Chamber of Commerce and the Chamber of skilled Trades and Crafts. The UEL commits to motivate companies to participate in the sectoral working groups. Twice a year, a steering committee will evaluate the programme using several indicators, including the 'number and type of trainings developed in cooperation with companies and UEL'. The programme will last until 2020.

([37]) http://legilux.public.lu/eli/etat/leg/loi/2018/08/01/a855/jo

([38]) https://www.clc.lu/images/clc/news/495/docs/Programme_ADEM_UEL_2018-20201.pdf

MTD 3 – Access to VET and qualifications for all through more flexible/permeable systems, guidance and validation of non-formal and informal learning

3.1.　Baseline 2015

At the beginning of the reporting period ([39]), the Ministry of National Education, Children and Youth was responsible for all types of education, including initial and continuing VET. In cooperation with the Ministry of Labour, Employment and the Social and Solidarity Economy, it was also responsible for training measures for the unemployed. A major VET reform had been implemented in 2010-2014, aiming – among others – to ease access to lifelong learning, and replace teaching by subject with teaching by units and learning-outcomes-based modules (Cedefop, 2015b, p.21) in CCP ([40]), DAP ([41]) and DT ([42]) programmes.

Technical secondary education prepared learners both for professional life and enrolment in higher education. It was divided into three cycles, 'lower', 'medium' and 'upper'. A preparatory programme supported learners who found it difficult to adapt to secondary education. After successful completion of the lower cycle, learners could choose between the technical path (leading to a Technical School Leaving Diploma), the technician training path (leading to a Technician diploma), and the vocational path (leading to a Certificate / Diploma of professional competence). Learners could move from technical to general secondary education and vice versa.

In 2014, the early leaving rate was 11.6% among VET learners aged up to 25. Remedial measures for the entire education system (including VET) had been taken, e.g. in terms of individualised learning support (the so-called 'Mosaic classes' introduced in 2009); a second chance school, established in 2011; and

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([39]) This introductory section presents the 2015 state-of-play in the MTD as a baseline for the monitoring exercise. Most of the situation it describes has remained unchanged over the reporting period and is therefore still in place at the end of the reporting period. The next sections in this MTD focus on what has changed with respect to this 2015 baseline, and how.

([40]) Certificate of professional competence.

([41]) Vocational aptitude diploma.

([42]) Technician diploma.

individual adjustments for special education needs (SEN) learners (Cedefop, 2015b, p. 37-14).

In 2015, a VET reform was being launched, introducing several changes aimed at improving the access to VET and qualification for all. Learners were being allowed to repeat failed modules in an additional year. Bridges between VET programmes were set up. In technician programmes, students who failed with their final project were allowed to follow a remedial session in October of the same year instead of February of the following year.

Adults had access to education and training opportunities regardless of their age, education and employment status. Opportunities were in form of apprenticeships, evening classes and on-the-job training (Cedefop, 2015, p. 33). Rate of adult participation in lifelong learning (18% in 2015) was above the EU average (10.7%) ([43]).

School guidance was provided from the age of 10, during the last two-year cycle of the primary education, when learners were guided towards either general or technical secondary education. Information, guidance and counselling was also offered at secondary school. Regarding vocational guidance, a guidance house (*Maison de l'orientation*) was created in 2012, centralising all vocational guidance services. Information on professions could also be found on the web portal Anelo (Cedefop, 2015, p. 60-61). At tertiary education level, information was provided by the Higher Education Documentation and Information Centre (CEDIES).

A national qualifications framework ([44]) had been designed. A validation mechanism was in place.

3.2. Main actions taken in 2015-19

3.2.1. Guidance

3.2.1.1. *Revision of the guidance procedure and drafting a law on more efficient guidance*

In February 2017, the Ministry of National Education, Children and Youth announced changes in the guidance process. To ease fifth grade ([45]) learners' choice between the many vocational programmes offered, a new guidance

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([43]) Source: Eurostat, tsdsc440 [extracted on 23.6.2017].

([44]) Cadre Luxembourgeois des Qualifications – CLQ.

([45]) Third year of lower secondary school.

procedure was introduced in 2016/17. In the new approach, decisions about possible career paths are only made after extensive discussions between teachers, learners and parents throughout the cycle and the analysis of a series of documents. A new unit for curriculum development (*cellule de développement curriculaire*) in VET actively participates in revising the guidance procedure.

The Law of June 2017 ([46]) provides a legal basis for the functioning of the guidance house (*maison de l'orientation*). A reference framework for school and professional guidance (*cadre de référence pour l'orientation scolaire et professionnelle*) has been set as a tool for secondary schools to structure and evaluate their existing guidance actions and initiatives, and, if needed, introduce new ones. The obligation was introduced for each school to define its own educational and vocational guidance approach while meeting the criteria defined in the reference framework. In every secondary school, a guidance unit (*cellule d'orientation*) is responsible for the orientation process set out in the school's development plan; the unit must comprise at least two members of the teaching staff, two educational or psychosocial staff and at least one guidance counsellor ([47]).

The same law put emphasis on educating young learners in self-guidance. The missions of the former CPOS, now CPAS ([48]), were redefined in that perspective. CPAS will be responsible for providing young people with self-guidance knowledge, methods and skills that enable them build their own personal and career plans. This involves offering psychological, social and educational consultations, helping learners identify their own resources, skills, preferences, aspirations and needs, and assist them in developing a personal and professional project. Target groups include young people out of school, especially those wanting to reintegrate school.

3.2.1.2. *Guidance-related projects*

Initiatives have been taken within the *Youth guarantee* programme, supported by the European Social Fund (ESF) and *Erasmus+*. They mostly relate to guidance and/or empowering young people to manage their educational and occupational careers. The initiatives include:
(a) workshops run in 2015-16, which:

([46]) http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2017/05/12-mo/index.html

([47]) http://www.men.public.lu/catalogue-publications/secondaire/psychologie-orientation/170124-cadre-reference/fr.pdf

([48]) Centre psycho-social et d'accompagnement scolaire (Centre for psychosocial and educational support).

(i) helped young people discover their talents and competences, *Act! Jeunes* (^{49});

(ii) provided professional or education guidance, *Act! Youth – upcycle your life*;

(b) *Level up – build up your life* action (^{50}) launched in November 2015 to familiarise 16- to 29-year-old NEETs (not in education, employment, or training) with construction sector and related career opportunities, and support them in developing their personal plans/projects;

(c) the *Building generation* (^{51}) project (jointly funded by the ESF), a comprehensive initiative to inform young people about the different occupations, technological developments and job prospects in the construction sector, using different events, games and serious games, and competitions;

(d) jointly funded by the ESF, the *Your potential for your job* project was run in 2015-16 for those aged 16 to 30 seeking a job or a training. The goal was to help them clarify their aspirations, develop self-esteem and (self-) presentation skills through workshops and individual sessions;

(e) *TalentCheck* (^{52}), a competence test focusing on concentration, observation, arithmetic, languages, organisational and other skills, developed in 2016 by the Chamber of Commerce. It aims to help learners choose a suitable apprenticeship based on better insights into their own strengths and weaknesses. Companies can also use the results in their selection processes;

(f) the *Erasmus+ 120 pictures and 120 trades for orientation* project, run in 2015-16. Using previously developed software, the project combined information on occupations with language learning. It addressed teachers and trainers helping young people elaborate personal goals, dropouts and apprentices;

(g) the basic-check *Guidance tool* (^{53}), launched in June 2016 by the Chamber of Employees and the Chamber of Trades and Skilled Crafts, is an aptitude test (linguistic reflection, spatial representation, digital logic and practical questions) which analyses the knowledge and skills of fifth grade learners

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(^{49}) https://gouvernement.lu/fr/actualites/toutes_actualites/communiques/2015/09-septembre/24-atelier-jeunes.html

(^{50}) https://www.ifsb.lu/build-up-your-life

(^{51}) http://www.building-generation.lu

(^{52}) https://www.winwin.lu/fr/apprentice/talentcheck.html

(^{53}) http://www.basic-check.lu

(third year of lower secondary education). It is a guidance tool that helps in making choices before learning a trade/profession. The result indicates whether the candidate meets the conditions required for apprenticeship in the trade applied for;

(h) the *EduBoard* project was launched in 2017. *Eduboard* is a new application allowing VET learners ([54]) to monitor online their learning progression: the modules that have to be passed during the training, how many have already been passed and how many remain for successful achievement of the programme. The information is updated biannually, at the end of the class councils. Access to *EduBoard* is strictly personal and secure;

(i) in 2018, the Ministry of National Education, Children and Youth launched Mengschoul ([55]), a new platform targeted at helping young people in their search for a suitable secondary programme and/or school ([56]).

(j) The *Sprong an d'Léier* project is for young people aged 18 to 24 who do not have an apprenticeship contract and are registered with the Beruffsinformatiounszentrum (BIZ), the job information centre at the public employment service (ADEM). The aim is to help them find an apprentice place for the next school year. The project is intended to provide personalised support through small group and individual preparation. An individual training plan is set up and job interviews preparation provided. Potential future jobs are explored in the sectors of construction, hairdressing, personal assistance, catering, and metalworking.

3.2.2. Permeability and flexibility

3.2.2.1. *Different schools for different pupils*

In July 2016, the Government approved draft legislation that set the outlines of a modern secondary school. The aim was to promote '*different schools for different pupils*' (*Ënnerschiddlech Schoule fir ënnerschiddlech Schüler*), and schools that exploit their pedagogical autonomy to open up prospects for the future. A publication *Modernised secondary schools* was produced by the Ministry of National Education, Children and Youth to present the main priorities of the

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([54]) Pursuing a Technician diploma (*Diplôme de technicien – DT*), a Diploma of professional competence (*Diplôme d'aptitude professionnelle – DAP*) or a Certificate of professional competence (*Certificat de capacité professionnelle – CCP*).

([55]) https://mengschoul.lu/

([56]) http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2018/08/16-5e-integration/index.html

reform, including *The promotion of talent* ([57]). Within this framework, schools are allowed to set up projects adapted to the profile of their pupils. They can set up a specific training offer and propose specific extracurricular activities.

Priority in technical secondary education was given to the lower classes. The system previously in place would not allow learners to follow courses at a higher level than the one they were enrolled in, such as following language courses at a higher level. To offer learners a more focused path which stimulates their potential, the organisation of the lower classes has been made more flexible. In the second and third years of lower secondary education, languages and mathematics are offered in basic and advanced courses. The new system allows students to follow the level most suited to their individual profile in each of these disciplines, for example basic in maths and advanced in languages.

3.2.2.2. *New on-the-job training programme in adult education*

A regulation ([58]) adopted in 2015 introduced a two-year on-the-job training programme for those working in the education or social sector (minimum age 21) who do not possess the qualifications required for a secondary level diploma for teachers/trainers in adult education. Its focus is on pedagogy, psychology, languages and professional practice.

3.2.3. Transparency, recognition, validation

3.2.3.1. *National qualification framework ([59])*

The Luxembourg qualifications framework (CLQ) ([60]) is an eight-level framework, covering all types and levels of qualifications. It was linked to the EQF in 2012. Its implementation was relatively slow during 2013-14, partly reflecting the lack of a clear legislative basis and an agreed strategy shared by all stakeholders on how to proceed.

Being host to a large number of workers from neighbouring Belgium, Germany and France, Luxembourg sees the development of the CLQ as a tool for comparison and recognition. The high immigration rate and the large proportion of foreign workers make it necessary to pay attention to the coherence

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([57]) http://www.men.public.lu/catalogue-publications/secondaire/informations-generales-offre-scolaire/modernisation-lycee/lycee.pdf

([58]) http://www.legilux.public.lu/leg/a/archives/2015/0162/a162.pdf
http://www.men.public.lu/catalogue-publications/secondaire/psychologie-orientation/170124-cadre-reference/fr.pdf

([59]) Cedefop, 2017b.

([60]) *Cadre Luxembourgeois des qualifications.*

between the framework and those of neighbouring countries. In 2016, a Law on the recognition of professional qualifications ([61]) was adopted; this signals official commitment to the framework and paves the way towards full operational status. The CLQ is expected later on to open up to qualifications awarded outside formal education.

3.2.3.2. *Recognition of diplomas from third countries*

A regulation ([62]) adopted in 2015 provides for the recognition of diplomas or certificates acquired in third countries under certain conditions ([63]) as equivalent to national diplomas.

3.2.3.3. *Validation ([64])*

Validation in Luxembourg is referred to as validation of prior experiential learning (*validation des acquis de l'expérience*, VAE) and is similar to the French model of VAE. It has been operational since 2010. One of the strengths of the system is the common approach across sectors to validating towards formal qualifications, except at levels 6 to 8 for which only partial qualifications can be obtained through validation. Any type of prior experiential learning relevant to the targeted qualification, whether it is the result of formal, non-formal or informal learning activities in education and training, the labour market or the third (non-governmental not-for-profit) sector, can be used to apply for validation. Candidates benefit from support to set up their VAE project. The support is offered in French, German or Luxembourgish and lasts 12 hours maximum. It can be delivered by an employee of the State or by a representative of the professional chambers.

The 2016 Law on the recognition of professional qualifications ([65]) established the CLQ as the formal reference point for recognition of professional qualifications acquired outside Luxembourg. However, Luxembourg lacks an overarching legal framework with general principles for validation for all sectors. Changes in this direction are expected in the coming years.

([61]) Law of 18.11.2016: http://legilux.public.lu/eli/etat/leg/loi/2016/10/28/n2/jo

([62]) http://eli.legilux.public.lu/eli/etat/leg/rgd/2015/01/22/n5

([63]) Which are not covered respectively by the European convention on the equivalence of diplomas leading to admission to universities and the convention on the recognition of qualifications concerning higher education in the European region.

([64]) Cedefop, 2017b; Faragau-Tavares, 2016.

([65]) Law of 18 November 2016:
http://data.legilux.public.lu/file/eli-etat-leg-memorial-2016-231-fr-pdf.pdf

3.2.4. Training, reskilling and upskilling vulnerable groups, jobseekers and employees

3.2.4.1. *Reintegrating vulnerable groups into the labour market*

Measures have been taken to reintegrate the most vulnerable populations into the labour market, particularly jobseekers over 45, workers with reduced work capacity, and disabled workers.

Employment reintegration contract

The contract was implemented as of 2016. It mainly alternates practical and theoretical training. It allows:

(a) employers to pass on their experience and to give a real employment perspective to older jobseekers, people with reduced working capacities or disabled persons;

(b) jobseekers to illustrate their specific capacities while, at the same time, acquiring new competences.

The duration of the employment reintegration contract is 12 months. To benefit from such a contract, jobseekers must have been registered with ADEM for at least one month. Anyone receiving an unemployment allowance, a tide-over allowance, a professional tide-over allowance or income for severely disabled persons shall keep this allowance and receive an allowance of EUR 331.07 per month paid ADEM. At the end of the employment reintegration contract, the employer informs ADEM in writing of the jobseeker's employment possibilities within the company.

Fit4 entrepreneurship

In 2015-19, the House of Training (the training institute of the Chamber of Commerce), working jointly with the Chamber of Trades and Skilled Crafts and ADEM (the Public Employment Service), have been running the *Fit4 entrepreneurship* [66] initiative for the unemployed. The initiative is jointly funded by the ESF and is a coaching and training programme for jobseekers to provide them with the tools needed to create an enterprise. The programme includes entrepreneurial skills assessment, training and coaching. It is foreseen to be continued as a permanent support system for jobseekers.

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[66] http://www.fit4entrepreneurship.lu/

FIT4 Green Jobs – FIT 4 Green & Build Jobs

In 2015-17, the *Fit4 green jobs* project targeted unemployed people under the age of 30 to train them in new skills leading to jobs and techniques of the future in the construction sector. ADEM (the Public Employment Service) was responsible for the project in cooperation with the Institute for Construction Training (IFSB). ADEM selected applicants who would first undergo skills assessment before starting one of the nine training programmes offered.

In 2018-19, the programme was turned into *FIT4 Green&BuildJobs*, which addresses unemployed people without any age limit, whether they have or not work experience in the building sector. Preliminary skills assessment lasts from one to three days, depending on the chosen occupation. If needed, French-language skills are upgraded. Then learners start one of the 12 training courses offered.

Fit4 coding – Fit4codingjobs

Fit4 coding (2015-17) was a training programme for jobseekers (especially dropouts or the unemployed in the process of professional reorientation) who wished to work in the IT sector. It enabled them to apply for a position as developer / junior integrator in a web development agency, a large company, an SME (small and medium-sized enterprise) or a start-up. The programme comprised an intensive training programme (490 hours) to prepare immediately operational web integration specialists and developers.

In 2018-19, the programme was turned into *Fit4codingjobs* (2018-19), still offering a 490-hour training course for Web Integrator / Developer, but now completely in English (the main working language in the IT sector in Luxembourg). Each learner is offered individual mentoring. By September 2018, 100 trainees had graduated from the *FIT4 coding / Fit4codingjobs* programmes.

Evening classes

In cooperation with the employment service, the training centre of the Chamber of Employees offers free access evening classes to registered jobseekers. The training is tailored to meet individual needs according to personal career development plans.

Making training costless for jobseekers

In 2017, an agreement between the Chamber of Employees, the PES and the *Luxembourg Lifelong Learning Centre* led to granting jobseekers free access to a range of newly developed training in IT, accounting and management control.

Training for the IT sector

In 2017, the PES arranged for the development of online courses targeted at the integration of jobseekers in the IT sector.

Fit4 JobStart

This training was launched in 2017 ([67]) by the PES in collaboration with the Chamber of Commerce. It is targeted at young jobseekers (age below 30) registered at the PES. It aims at giving the necessary tools to develop a realistic and concrete professional project with the help of a professional coach. The training lasts three weeks and provides individual supervision, personal guidance, assistance with CV writing, interview simulation, and information on different sectors of the economy.

Fit4 Digital future

Since 2017, *Fit4DigitalFuture* ([68]), proposed by the Chamber of Commerce, has been offering an introduction to the Digital world for young jobseekers aged less than 30 and registered at the PES. Applicants must have at least a secondary school leaving diploma and good skills in English and French languages. The training lasts three weeks. It comprises an ECDL ([69]) test, and focuses on information security, creation of visual identity, creation of a website, project management, and relational data bases.

Training jobseekers at the request of companies and sectors

In 2017, the PES started organising ad hoc training in response to demand from companies and sectors ([70]). The service was put in place by ADEM in collaboration with professional chambers and federations. Chambers make an inventory of training needs in their respective sectors, and candidates are selected by the employers concerned. Employers commit to hiring the participants at the end of the training. An example of this approach was the

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([67]) http://www.adem.public.lu/fr/publications/demandeurs-emploi/2017/Fit4-JobStart/index.html

([68]) http://www.adem.public.lu/fr/publications/demandeurs-emploi/2017/Flyer-Fit4Digitalfuture/index.html

([69]) European computer driving licence.

([70]) See:
http://www.adem.public.lu/fr/publications/index.php?~=do&from=search&r%5B0%5D=f%2Fyear%2F2017&res_length=20&q=%23all&s=desc%28firstreleasedate%29#mainmain

training for security guards, put in place in response to demand from the private security sector. Collaboration between Dussmann and ADEM led to identifying a group of 19 candidates whose profile fitted the company's needs. Candidates took a 3.5 months long training designed by the company in close collaboration with the national centre for continuing training (CNFPC).

Training for jobseekers with disabilities

In 2017-18, ADEM carried out the ESF-cofinanced ([71]) COSP-HR ([72]) project. The project is targeted at jobseekers with disabilities. It aims at assessing the competences of jobseekers with disabilities who have difficulties in finding a job, providing them with guidance, and supporting their professional integration. Project beneficiaries participate in training to improve their communication skills as well as their self-esteem. They also participate in technical workshops, in which they take language and IT classes. At the end of the course, they are delivered an assessment record and career guidance.

Vocational retraining for jobseekers: *Skill you up*

In 2018, the PES and the Chamber of Commerce developed training targeted to jobseekers aged 30+, having completed five years of secondary education, and wishing to enter a new occupation and/or a new sector of activity ([73]). The training components include skills assessment; coaching ([74]); 'soft skills' training ([75]); 'technical training' ([76]); follow-up and networking workshops ([77]).

([71]) Other joint financers are the Ministry of work, employment and social economy; and the Ministry for Family, Integration and the Greater Region.

([72]) Centre d'orientation socio-professionnelle – Handicap et Reclassement:
https://adem.public.lu/en/demandeurs-demploi/handicap/COSP-HR.html

([73]) http://adem.public.lu/fr/publications/demandeurs-emploi/2018/Flyer-skill_you_up/index.html
http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2018/08/16-5e-integration/index.html

([74]) Accept and integrate the transition between having a job and being a jobseeker, identify resources to help manage this difficult situation and break isolation, develop potential, define an action plan to progress in the implementation of a new project.

([75]) Complete an ideal job description, develop self-marketing, optimise image on networks.

([76]) Develop the skills and competences required by the professional project and action plan.

([77]) Follow-up of the action plan implementation.

3.2.4.2.   *Training/upskilling jobholders*

In 2015, the federation of craftsmen launched skills/competence centres to help companies keep skilled employees abreast of developments in technology, management and economy. The centres offer training in construction engineering and building completion work (*centres de compétences génie technique du bâtiment et centre de compétences parachèvement*) ([78]).

Several stakeholders, including the training institute of the Chamber of Commerce (The House of Training), the Higher Institute of Economy (*Institut Supérieur de l'Économie*) and the construction engineering competence centre collaborated to establish an IT competence centre, the LIDIT (Luxembourg Institute for Digital Training). This aims to ensure continuous adequate skills supply to meet companies' technological, managerial and economic needs. The centre is to act as a sectoral technological observatory, establish a coherent integrated sectoral CVET system and cooperate with the employment service to train/upskill jobseekers.

In 2017, the *FORM IN* project ([79]) was launched to identify and address the training needs of construction sector companies settled in the North of the country. The training exercises take place on site or in places close to the companies. Depending on needs, courses are delivered in French, German or Portuguese. The aim is to adapt employees' competences to new regulatory requirements and new working methods.

The new law voted in June 2019 introduces a model of 'on-the-job' vocational training, which will allow employees who do not have certification for their trade or profession to complete training in parallel with their job and to obtain a diploma at the same time.

3.2.4.3.   *Training for migrants, asylum seekers and refugees*

In 2018, the Ministry of National Education, Children and Youth, in collaboration with Caritas, set up six integration courses (of Grade 5 level) for migrants and asylum seekers ([80]). The courses include linguistic enhancement in French and German, mathematics, digital and civic skills training, as well as guidance sessions. Based on their results, the trainees are directed to upper secondary education or vocational training.

([78])   http://www.fda.lu/medias/news/la-fda-presente-ses-centres-de-competences

([79])   http://www.fonds-europeens.public.lu/fr/projets-cofinances/fse/2014-2020/1045/index.html

([80])   http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2018/08/16-5e-integration/index.html

Preparatory courses for higher education are under way for holders of a diploma allowing access to higher education who are not yet language-proficient.

CHAPTER 4.
MTD 4 – Key competences in both IVET and CVET

4.1.   Baseline 2015

In 2015 ([81]), seven years after a major VET reform, teaching and evaluation methods were based on competences; for each VET programme a set of competences had been defined that pupils had to acquire to be considered able to exercise a trade or a profession. VET curriculum included general, general-specific and vocational units and modules. General units/modules provided learners with competences in languages, citizenship and sports. General-specific units/modules provided basic competences that allowed coping with work situations (e.g. mathematical competences and natural sciences competences). Vocational units/modules used active pedagogical methods and developed competences for specific work situations and taught how to apply the key competences. Curricula working groups (74 in total) have ensured that key competences were adequately integrated in the curricula at all levels. The Ministry of National Education, Children and Youth regularly monitored modules with high (>50%) failure rate and asked VET schools to elaborate on the failure reasons. The results fed into the curricular working groups that made the necessary changes in the curricula ([82]).

A recent survey (Cedefop, 2017c) showed that, compared with general education graduates, those who completed VET programmes felt they had:
(a) stronger:
    (i)   sense of initiative and entrepreneurship;
    (ii)   ability to be creative;
    (iii)   communication skills;
(b) weaker:
    (i)   cultural awareness;
    (ii)   foreign language knowledge;

([81]) This introductory section presents the 2015 state-of-play in the MTD as a baseline for the monitoring exercise. Most of the situation it describes has remained unchanged over the reporting period and is therefore still in place at the end of the reporting period. The next sections in this MTD focus on what has changed with respect to this 2015 baseline, and how.

([82]) http://www.cedefop.europa.eu/en/publications-and-resources/country-reports/key-competences-vocational-education-and-training-luxembourg

(iii)   mathematical skills (Figure 2).

Figure 2.   **Self-evaluation of acquired skills in general education and VET in 2016**
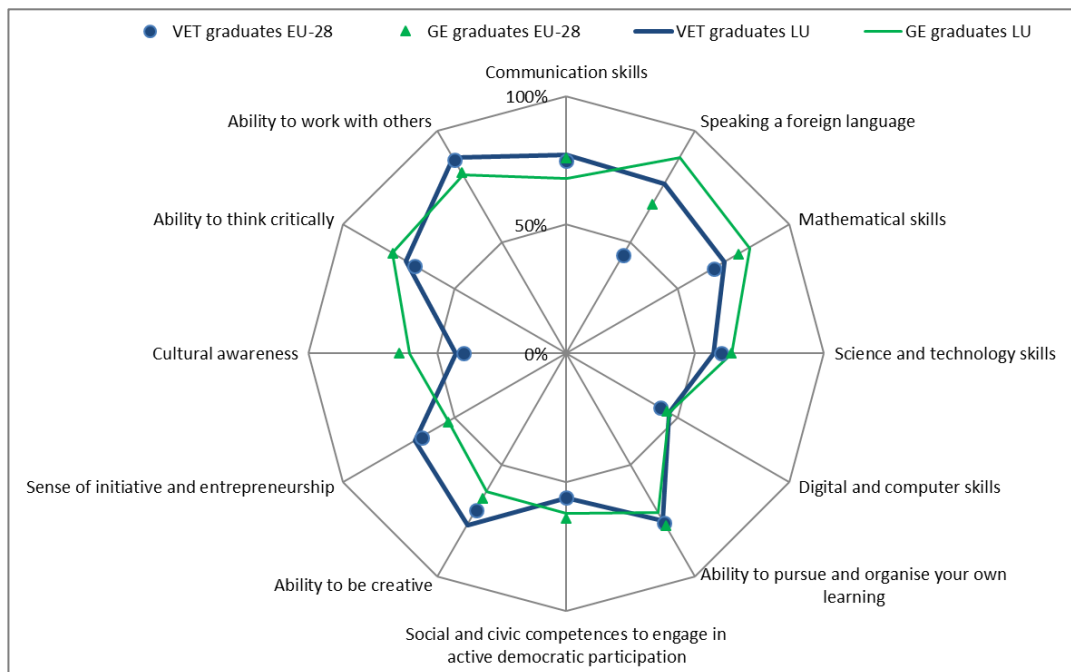
The context of key competences in 2015 was mainly characterised by an increasing share of young low achievers in reading, maths and science compared with the 2012 PISA ([83]) results (Figure 3). Although this setback trend was also seen in the EU, the average share of low achievers was higher in Luxembourg.

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([83]) Programme for international student assessment.

Figure 3. **Share of 15-year-olds with low achievement in reading, maths and science**
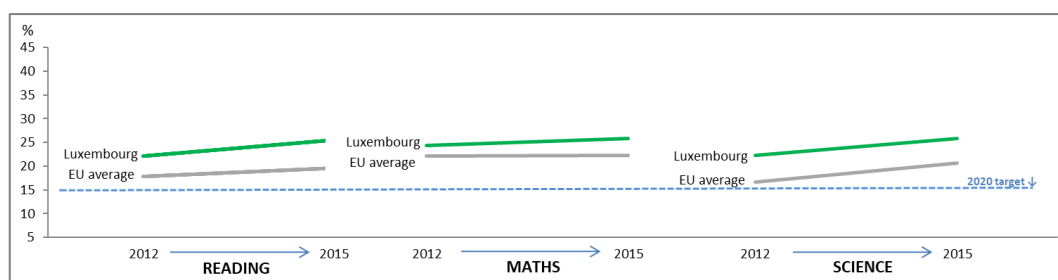
NB: Low achievement means failing level 2 on the PISA scale.
Source: OECD, 2014; OECD, 2016.

As VET enrolled 61% of all upper secondary learners in the country ([84]), this trend necessarily also affected the key competences trained for in VET programmes (INFPC, 2016a).

At the beginning of the reporting period, a challenge to the acquisition of key competences (for example communication in the official languages) lied in the fact that Luxembourg is a multilingual country with three official languages (German, French and Luxembourgish) while a high share of residents have other mother tongues ([85]).

4.2. Key competences addressed in the reporting period

Table 2 outlines the key competences in initial and continuing VET that were addressed in the reporting period. A description of policies is provided in the following sections.

Table 2. **Key competences addressed in 2015-19**

	IVET	CVET
Country language(s) and literacy	YES	YES
Foreign languages	YES	
Digital competence	YES	YES
Maths	YES	
Science	YES	
Technology	YES	

([84]) Calculated from Eurostat table educ_uoe_enrs04; 2015 data.

([85]) http://www.cedefop.europa.eu/en/publications-and-resources/country-reports/key-competences-vocational-education-and-training-luxembourg

	IVET	CVET
Social and civic competences	YES	YES
Learning to learn		
Financial literacy		
Entrepreneurship competence	YES	
Cultural awareness and expression		
Key competences as a package		

NB: The list derives from the 2006 EU key competences framework for lifelong learning; it has been restructured and expanded with additional competences that can be considered key.

Source: Cedefop based on ReferNet input.

4.3. Key competences in initial VET

The 2015 reform of evaluation and progression in VET also covers key competences. In 2017, the government committed to a strategy to promote the Luxembourgish language. Several initiatives at the secondary education level, including technical secondary schools, are under way:

(a) promote Luxembourgish;

(b) develop reading competences;

(c) offer optional orthography, culture/literature, creative writing courses and compulsory Luxembourgish in international schools.

Several pilot projects promote key competences at national level. The following examples showcase how digital, maths, science and entrepreneurship competences are being promoted as part of the national *Digital (4) education* strategy.

4.3.1. *Bee creative*

Since 2015, the *Bee creative* project has offered equal access to ICT tools for all, including VET learners. It contributes to developing digital competences (programming, security, design, communication) by establishing so-called makerspaces: places where young people and adults can experiment with computers, robots, 3D printers, laser-cut machines and other equipment in workshops assisted by ICT experts. Makerspaces are currently available throughout the country and their number is growing.

From the school year 2017-18 on, schools have the possibility to make available digital tablets to their pupils in the context of pedagogic projects. The aim of the ministry is that, within five to seven years, each pupil has an iPad ('one2one'). Pupils have the possibility to rent the iPads at a moderate price and to acquire them after four years. Schools are called upon to develop a concept for the use of digital tools in class and to adapt teaching methods accordingly.

4.3.2. *MathemaTIC*

Almost 6 000 learners from 114 school have participated in the pilot phase (2015-16) of the *mathemaTIC* online maths teaching and learning platform. The platform applies digital technologies to improve the learning process in the classroom and allows teachers to follow learner performance and provide feedback in real time. It is available in several languages and the content is adapted to curricula. The platform was made available for lower secondary VET as of school year 2017/18.

4.3.3. *Future hubs*

Since 2015, several secondary education programmes, including VET, have been labelled *future hubs* to promote the use of technologies and innovative learning in science, especially in computer science. They focus on programming, management of big data, financial applications and development of games; they offer DT and DAP diplomas ([86]). The hub concept is about school as a meeting place, discovery and contact with modern technologies, where young people are fascinated by science and technology. An innovative pedagogical approach combines several disciplines and uses English as core language due to its domination in ICT.

4.3.4. *Promotion of entrepreneurship in secondary education*

In 2016, the *Promotion of entrepreneurship in secondary education* project was launched. This promotes entrepreneurship profiles in secondary schools, including VET. Learners are invited to address challenges ([87]) taking place at school or in a company. The education and economics ministries support the project and are represented in the steering committees of each participating school.

Agreements signed between schools and the Ministry of National Education, Children and Youth also promote entrepreneurship. Four such agreements have been signed: with the École privée Marie Consolatrice school, Lycée Ermesinde, Lycée technique de Lallange, and Lycée technique École de Commerce et de Gestion. The agreements establish 'entrepreneur-schools' (*école entrepreneuriale*). Becoming an entrepreneur-school makes it a duty for the school to promote initiative spirit and entrepreneurship and cultivate the sense of

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([86]) DT (*Diplôme de technicien*): technician diploma. DAP (*Diplôme d'aptitude professionnelle*): diploma of professional competence. For details on DT and DAP diplomas, see INFPC, 2016a, Section 2.

([87]) Around 40 challenges are available; they have been designed by a working group represented by entrepreneurs and teachers and supported by *Erasmus+*.

creativity and originality in young people. Entrepreneur-schools have access to a network of companies that enable coming closer to the professional world.

4.3.5. *Luxembourg Tech School*

The Luxembourg Tech School (LTS) ([88]) is a new extracurricular school concept to support the development of future digital leaders. It is targeted at students aged 15 to 20 who are passionate about the digital realm and eager to learn and apply technology in a real business context. The pilot phase started in September 2016 with about 30 students from general secondary education. LTS is supported by the Ministry of National Education, Children and Youth and Digital Luxembourg. Students follow a Business and Technology programme divided into three blocks: game development, big data, and digital technologies for finance ('fin tech'). Students receive personalised coaching and work on their own projects, which they showcase at the end of each block. Coaches help them to reflect on the work done, the problems found and the next steps to be taken. LTS classes are hosted in nine schools.

4.3.6. Promoting culture and history

In 2018, the Ministry of National Education, Children and Youth set up a new website ([89]) targeted at promoting the culture and history of Luxembourg through several themes (history, theatre, media, languages). Also, all teachers and secondary school learners were granted a three-year access to Educ'Arte, the Educational portal of the cultural Arte TV channel, including over 1 000 videos available in French, German and English ([90]).

4.4. Key competences in continuing VET

The *9+Integration* (*9e plus intégration*) scheme was set up in 2016. It is targeted at English speaking adult migrants lacking knowledge of Luxembourg's official languages but intending to pursue studies in VET or higher education. The

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([88]) http://www.techschool.lu/

([89]) www.kulturgeschicht.lu

([90]) https://portal.education.lu/multi-script/Online-Material/ArtMID/14119/ArticleID/561013/Educ%E2%80%99ARTE

https://mengschoul.lu/

http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2018/08/16-5e-integration/index.html

scheme offers personalised training in maths and French for free. By the end of 2016, sixty trainees from this scheme were able to enrol in VET.

Some other training actions (for example *Step by step to adult education*) provide learning opportunities that cover basic skills (writing, reading and maths) and enable access to VET and adult apprenticeships.

In May 2018, the Ministry of Labour, Employment and the Social and Solidarity Economy, in cooperation with the Ministry of Economy and the Public Employment Service (ADEM), launched the pilot project *Digital Skills Bridge* ([91]). This is targeted at people in work but whose positions are changing or at risk due to the digital transformation. The project is open to all companies, regardless of sector of activity or size, and offers them technical assistance to plan the company's future jobs and skills management. Employees benefit from a skills assessment and an individual advisor to support them throughout the process: from identification of a new position, through accelerated, tailor-made and pragmatic training courses, until integration into the new function. The project secures employee career paths, whether in the current company or at a new one. The pilot started in November 2018 with 15 companies and 350 employees. Four training bodies have been selected through a call for tenders to deliver the soft and digital skills training needed.

([91]) https://www.skillsbridge.lu https://mengschoul.lu/

http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2018/08/16-5e-integration/index.html

MTD 5 – Systematic initial and continuing professional development of VET teachers and trainers ([92])

5.1.   Baseline 2015

At the beginning of the reporting period ([93]), several types of teachers and trainers were at play in VET programmes:

   (a) secondary school teachers and technical education teachers;
   (b) masters of technical education (usually teaching vocational theory subjects and practice);
   (c) teaching assistants;
   (d) adult trainers;
   (e) in-company trainers (nationally referred to as apprentice tutors).

   The first two categories used to teach in technical school-based programmes, in technician programmes, and in vocational programmes. Masters of technical education would teach vocational theory and practice. Adult trainers mainly worked at the national CVET centre and in second chance schools.

5.1.1.   Access to VET school teaching: entry requirements and initial training

Until 2015, the training of secondary school teachers and technical education teachers was carried out through close cooperation between the University of Luxembourg and the Institute for Continuing Training, IFC. In 2015, both were replaced in this role by IFEN, the newly established Training Institute for National Education (*Institut de Formation de l'Education Nationale*). Table 3 shows their respective specifics and entry requirements.

([92]) INFPC, 2016b.

([93]) This introductory section presents the 2015 state-of-play in the MTD as a baseline for the monitoring exercise. Most of the situation it describes has remained unchanged over the reporting period and is therefore still in place at the end of the reporting period. The next sections in this MTD focus on what has changed with respect to this 2015 baseline, and how.

Table 3. **Types of teaching and entry requirements for teachers and masters**

Type of teacher	Type of teaching	Required diploma
Secondary school Teachers A1	Technical and general secondary education	BA and MA
Technical education Teachers A2	Technical secondary education	BA
Master of technical education B1	Technical secondary education	Master Craftsman Diploma or BTS [94]

The induction phase for these categories in the public education system lasted two years.

Adult trainers were introduced in the wake of the 2008 VET reform. They worked at the national CVET centre (CNFPC), in the National School for Adults (*Ecole Nationale pour Adultes, ENAD*, previously second chance schools) or at the National Language Learning Institute (*Institut National des Langues, INL*). Their training and admission requirements were regulated in 2011:

(a) depending on the type of training they were to provide, candidates had to have a bachelor or master degree or a master craftsperson certificate;

(b) they also had to pass tests in two of the country's official languages and a competitive entrance examination (*concours*).

Successful candidates would undergo a two-year induction training while teaching. The induction training was focused on pedagogy, combining theory and practice (240 hours). The theoretical part included specific features of adult teaching as well as training in lifelong guidance. The Institute for Continuing Training (IFC) was responsible for the training.

Teaching assistants had to undergo 60-hour in-service training during their first year of service [95].

5.1.2. In-company trainers: entry requirements and initial training

Enterprises [96] offering practical training or apprenticeship had to designate one or more apprentice tutors to supervise apprentices throughout their apprenticeship. The apprentice tutor would be in charge of the practical training and the pedagogic supervision of the apprentice. Each apprentice tutor had to undergo mandatory three-day training, organised by the competent professional

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[94] BTS (*Brevet de technicien supérieur*): higher technician diploma.

[95] Laws of 29 June 2010 and the grand-ducal regulation of 16 March 2012.

[96] Law of 19 December 2008.

chamber. The training would cover legal, pedagogic and assessment aspects. Holders of a master craftsperson diploma (or equivalent) could be exempted from this requirement. An information platform for (potential) apprentice tutors was also available.

5.1.3. VET school teachers: main lines for CPD

Grand-Ducal regulations determining the secondary and technical secondary school teachers' work ([97]) foresaw a minimum of eight hours of certified continuing professional training (CPD) per year. CPD of school staff was free of charge and taking place during their working hours but, if possible, not during the time of school lessons. Legislation did not offer any explicit incentives like salary increases or credits for promotion to teachers to encourage their participation in CPD.

Specific training modules were in place in companies to familiarise teachers with business reality and the specificities of different economic sectors. The focus of VET on in-company practical training ensured the use of, and familiarity with, state-of-the art equipment and technology. The in-service training offered for teachers was closely linked to real jobs and allowed them to remain up to date.

Review of 2010-15 policy developments (Cedefop, 2015a) showed that:

(a) the in-service training offer for teachers was updated annually and included training on how to manage mini enterprises or training enterprises and how to use ICT and digital tools;

(b) the legislation also provided for teacher training based on key competences;

(c) there were workshops for teachers to help learners improve job search techniques;

(d) a business week during which teachers would gain insight into trends in various sectors was regularly organised;

(e) training on how to deal with pupils with learning disorders and on dropout prevention was part of the continuing training offered to teachers and trainers.

The Education technology centre (founded in 1993) would also make educational materials available to teachers, address ICT questions, and produce educational media.

([97]) *Règlement grand-ducal du 24 juillet 2007 portant fixation de la tâche des enseignants des lycées et lycées techniques.* Also see ministerial instruction of 5 July 2010 concerning the organisation of general and technical high schools (lycées and lycées techniques).

5.2. Initial training for teaching/training staff in VET schools 2015-19

In its 2015 national reform programme, Luxembourg indicated its intention to reform the professional development of teachers and trainers. Legislation in 2015 ([98]) established a Training Institute for National Education (*Institut de Formation de l'Education Nationale*, IFEN) to organise professional induction (and CPD) for teaching and socio-educational staff, including VET teachers. Its tasks include advising and supporting schools in developing CPD plans for their staff. This reform made initial training (and CPD) more coherent and improved the quality of teaching by harmonising the induction phase and focusing it on professional practice and didactics.

Following the reform, a candidate to the teaching profession first has to take preliminary tests in the three national languages (German, French and Luxembourgish) followed by a competitive examination (*concours*) organised by the Ministry of National Education, Children and Youth. Then a three-year induction phase is obligatory. During this phase, which combines theory and practice, participants already work as teachers. At the end of the programme they receive a certificate based on the evaluation of their portfolios. Reform of the induction phase was aligned with the overall reform of public administration agents.

A subsequent regulation in 2015 ([99]) set out the competences that teachers have to develop during the induction phase and in their first years in service. These include competence-based teaching and assessment, and using ICT for teaching and learning. The regulation also provided for the assessment of candidate teachers.

Since the academic year 2016/17, a second route to the teaching profession has been available: a master's programme in secondary education (EQF 7), at the University of Luxembourg. It offers courses in didactics for students holding a bachelor degree in mathematics, or in German language and literature, or in French language and literature.

([98]) http://legilux.public.lu/eli/etat/leg/loi/2015/07/30/n2/jo

([99]) http://www.legilux.public.lu/leg/a/archives/2015/0166/a166.pdf

5.3. CPD for teaching/training staff in VET schools 2015-19

The 2015 legislation establishing the Training Institute for National Education (IFEN) stipulates that the induction phase is followed by mandatory CPD schemes offered by IFEN to develop and refresh the competences of teaching staff. These include training (leading to certification), coaching, supervision, job shadowing and exchange networks. With the support of IFEN, schools may also develop optional CPD plans for their staff (*Schulinterne Lehrer/innen-Weiterbildung*) to align teachers' training activities to the school's objectives. Regulations in 2015 and 2016 set to 48 hours in three years, the minimum CPD volume that each teacher has to undergo ([100]).

In 2016, the centre for computerised administration of education (*Centre de gestion informatique de l'éducation*, CGIE) published a guide on mobile learning to help school leaders and teaching staff in secondary education and training use ICT in a targeted and systematic way. The guide draws on extensive research and consultation as well as national and international experience. Promoting the use of mobile devices and digital learning tools in high schools is part of the education ministry's *Digital (4) education* strategy, supporting the government's goal to reinforce the country's position in ICT. ICT is considered helpful to adapt teaching and learning methods to the needs and pace of individual learners. The centre also organised in 2017, in cooperation with the SCRIPT ([101]), a conference on *high-level e-DUCATION* for national education decision-makers, to encourage reflection on how synergies between pedagogy, didactics, mobile technologies and new learning strategies are likely to change teaching and learning.

Within the *Hellofuture* initiative ([102]), an education toolbox helps teachers deal with various industry-related subjects and support learners in their education and career choices and selection of apprenticeships or internships.

The project *Teachers meet businesses*, carried out by the Chamber of Commerce and the Training Institute for National Education (IFEN), addresses secondary education teachers looking for insights into industry developments to improve the training and guidance they provide for their students. The project

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([100]) https://ssl.education.lu/ifen/obligation-de-formation?$entry.menu_entry_parameter.getData%28%29=$entry.menu_entry_value.getData%28%29;

([101]) The coordination service for research and technological and pedagogical innovation. While both CGIE and SCRIPT have been in in place since the 1990s, the mission, organisation and tasks of SCRIPT were amended in early 2017. http://legilux.public.lu/eli/etat/leg/loi/2017/03/14/a439/jo.

([102]) See Section 1.2.3.

allows teachers to discover a growing economic sector and become familiar with the corresponding qualifications and competences. In 2018-19, the project focused on start-ups and business incubators ([103]).

In the school year 2018/19, the Training Institute for National Education (IFEN) has introduced new courses, including one on apprenticeship contracts and another one on 'alternative pathways to become a VET graduate' ([104]). The objective of the first course is to enable participants to identify the various components of an apprenticeship contract, pay particular attention to the rights and obligations of parties involved, and better understand the link between the school curriculum and workplace training. The training on 'alternative pathways to become a VET graduate' aims to inform attendees about the procedures of adult apprenticeship and validation of non-formal and informal learning.

5.4. Initial training of adult trainers 2015-19

The 2016 amendment of the 2011 adult trainer regulation requires candidates to have passed tests in all three official languages, instead of only two, before being allowed to take the entrance exam for the induction phase ([105]). It confirmed the change in responsibility for adult trainer training from IFC to the Training Institute for National Education established by legislation in 2015 (Section 5.2).

([103]) https://www.houseofentrepreneurship.lu/en/news/detail/teachers-meet-businesses-a-la-rencontre-des-startups-et-des-incubateurs-1/

http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2018/08/16-5e-integration/index.html

([104]) www.ifen.lu https://mengschoul.lu/

http://www.men.public.lu/fr/actualites/articles/communiques-conference-presse/2018/08/16-5e-integration/index.html

([105]) http://legilux.public.lu/eli/etat/leg/rgd/2016/08/24/n3/jo

Statistical overview: 2019 update

Table 4 updates the figures that were provided in Table 1. Although Table 1 may contain data for 2015, these are not systematically repeated here. In some cases, not repeating is due to breaks in time series, which prevent comparability. In other cases, values differ due to methodological changes.

Table 4.   **Score on VET indicators in Luxembourg and in the EU: 2015, last available year and recent change**

Indicator label	2015				Last available year					Recent change		
	LU	f	EU	f	Yr	LU	f	EU	f	Range	LU	EU
Access, attractiveness and flexibility												
IVET students as % of all upper secondary students	**61.4**		47.3	ce	'17	**61.6**		47.8	ce	'15-'17	**0.2**	0.5
IVET work-based students as % of all upper secondary IVET	**22.1**		28.3	ce	'17	**21.9**		27.9	ce	'15-'17	**-0.2**	-0.5
IVET students with direct access to tertiary education as % of all upper secondary IVET	**47.3**		68.1	ce	'17	**46.1**		68.6	ce	'15-'17	**-1.2**	0.4
Workers participating in CVT courses (%)	**61.8**		40.8		'15	**61.8**		40.8				
Workers participating in on-the-job training (%)	**42**		34		'15	**42**		34				
Adults in lifelong learning (%)	**18**	b	10.7		'18	**18**		11.1		'15-'18		0.4
Enterprises providing training (%)	**77.1**		72.6		'15	**77.1**		72.6				
Female IVET students as % of all female upper secondary students	**59.3**		42	ce	'17	**59**		42.7	ce	'15-'17	**-0.2**	0.7
Employees of small firms participating in CVT courses (%)	**36.8**		30		'15	**36.8**		30				
Young VET graduates in further education and training (%)		u	33		'18		u	33		'15-'18		0
Older adults in lifelong learning (%)	**10**		6.9		'18	**11.2**		7.3		'15-'18	**1.2**	0.4
Low-educated adults in lifelong learning (%)	**7**		4.3		'18	**7.3**		4.3		'15-'18	**0.3**	0
Unemployed adults in lifelong learning (%)	**22**		9.5		'18	**29.7**		10.7		'15-'18	**7.7**	1.2
Individuals who wanted to participate in training but did not (%)					'16	**14.4**	b	11.4				
Job-related non-formal education and training (%)					'16	**76.1**		79.4				

Indicator label	2015				Last available year					Recent change		
	LU	f	EU	f	Yr	LU	f	EU	f	Range	LU	EU
Skill development and labour market relevance												
IVET public expenditure (% of GDP)	**0.6**		0.5	ce	'16			0.5	ce	'15-'16	**-0.1**	0
IVET public expenditure per student (1000 PPS units)	**15.2**		7.1	ce	'16			7.4	ce	'15-'16		0.3
Enterprise expenditure on CVT courses as % of total labour cost	**0.8**		0.9		'15	**0.8**		0.9				
Average number of foreign languages learned in IVET	**2.1**		1	ce	'17	**2.1**		1	ce	'15-'17		0
STEM graduates from upper secondary IVET (% of total)	**17.6**		29.2	ce	'17	**14**		29.1	ce	'15-'17	**-3.6**	0
Short-cycle VET graduates as % of first time tertiary education graduates	**17.9**				'17	**31.7**		14.3	b ce	'15-'17	**13.8**	
Innovative enterprises with supportive training practices (%)					'16	**70.8**		37.7				
Employment rate for IVET graduates (20-34 year-olds)	**89.2**	a	77.2		'18	**81.1**	a	80.5		'15-'18	**-8.1**	3.3
Employment premium for IVET graduates (over general stream)	**6.8**	a	5.4		'18	**-3.2**	a	6.6		'15-'18	**-10**	1.2
Employment premium for IVET graduates (over low-educated)	**14.3**	a	23.7		'18	**16.9**	a	23.3		'15-'18	**2.6**	-0.4
Workers helped to improve their work by training (%)	**79.8**		83.7		'15	**79.8**		83.7				
Workers with skills matched to their duties (%)	**54.5**		57		'15	**54.5**		57				
Overall transitions and labour market trends												
Early leavers from education and training (%)	**9.3**	b	11		'18	**6.3**		10.6		'15-'18	**-3**	-0.4
30-34 year-olds with tertiary attainment (%)	**52.3**	b	38.7		'18	**56.2**		40.7		'15-'18	**3.9**	2
NEET rate for 18-24 year-olds (%)	**7.6**	b	15.8		'18	**8**		13.7		'15-'18	**0.4**	-2.1
Unemployment rate for 20-34 year-olds (%)	**8.6**	b	12.9		'18	**7.4**		9.4		'15-'18	**-1.3**	-3.5
Employment rate of recent graduates (%)	**83.5**	b	75.9		'18	**87.5**		80.6		'15-'18	**4**	4.7
Adults with lower level of educational attainment (%)	**24**	b	23.5		'18	**21.4**		21.9		'15-'18	**-2.6**	-1.6
Employment rate for 20-64 year-olds (%)	**70.9**	b	70		'18	**72.1**		73.1		'15-'18	**1.2**	3.1
Employment rate for 20-64 year-olds with lower level of educational attainment (%)	**58.4**	b	52.6		'18	**58.9**		56.1		'15-'18	**0.5**	3.5
Medium/high-qualified employment in 2030 (% of total)					'18	**91.6**	D	85.8	D			

EU refers to EU-28, unless otherwise specified.
(D) Forecast made in 2018.
(ce) Cedefop estimate based on available country data
(b) Eurostat: 'break in time series'.

(u) Eurostat: 'low reliability'.
(z) Eurostat: 'not applicable'.
(e) Eurostat: 'estimated'.
(d) Eurostat: 'definition differs'.

Source: Cedefop, 2020.

In 2017, 61.6% of all upper secondary students in Luxembourg were enrolled in IVET. This percentage is 13.8 points above the EU average. It appears that the percentage of upper secondary students in IVET is slightly higher (0.2 points more) compared to the situation in the country in 2015.

In 2017, 21.9% of all upper secondary IVET students were enrolled in a work-based learning setting which is slightly lower (0.2 points less) than in 2015. In contrast the EU average is 27.9%.

In 2018, 18% of adults participated in lifelong learning activities, the same percentage as in 2015.The EU average is 11.1%.

In 2018, the employment rate for IVET graduates (20-34 years old) was 81.1%. It appears that the employment rate for IVET graduates (20-34 years old) is lower by 8.1 points compared to the situation in the country in 2015. The EU average is 80.5%.

Conclusion

Since 2015, Luxembourg has developed broad VET reform which strongly addresses the main lines of the Riga conclusions. Several steps have been taken to reinforce and expand work-based learning and apprenticeships, develop quality assurance mechanisms including information and feedback loops, while extensively using the EQAVET indicators. Improving access to VET and qualifications for all has been taken particularly seriously; there have been initiatives in guidance, flexibility and permeability, transparency/recognition/validation, and training/reskilling/upskilling the vulnerable, jobseekers and employees. Luxembourg has also been active over the last three years tackling the declining trend in key competences through launching a series of projects and actions in digital competences and languages. Important steps were taken to update the training of VET teachers and trainers.

The main changes in 2017 have taken place in MTDs 3 and 4. In MTD 3, a new law reforming the guidance system was adopted ([106]). Substantial initiatives were taken to expand the range of training courses for jobseekers, following a variety of approaches ([107]). In MTD 4, the Luxembourg Tech School was established to improve the digital competences of the young ([108]).

Compared to 2015-17, the main changes in 2018-19 have taken place in MTDs 1, 2 and 4. In MTD 1, a range of new school-based VET programmes was introduced, with on-the-job training in the workplace (Section 1.2.4) and in-school work-based learning (Section 1.2.5). In MTD 2, a National Observatory of School Quality was established (Section 2.2.1). A national body representing parents of learners from primary, secondary and differentiated education was created (Section 2.2.2). A new tool to monitor the early career stages of recent secondary education graduates (the TEVA Barometer) was set up (Section 2.2.3). A programme was launched to involve companies in the design of training for the unemployed (Section 2.2.3). In MTD 4, an initiative was taken to promote cultural knowledge (Section 4.3.6).

The actions carried out show that the main lines of the Riga conclusions are being addressed. Yet, information available to Cedefop suggests that an issue which could benefit from further consideration is that of making more systematic use of EQAVET indicators to monitor developments in continuing VET. Further

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([106]) See Section 3.2.2.1.

([107]) See Section 3.2.4.1.

([108]) See Section 4.3.5.

structuring the training of in-company trainers (apprentice tutors) could be considered as well.

Acronyms

ADEM	*agence pour le développement de l'emploi* (public employment service)
AES	adult education survey
CGIE	*centre de gestion informatique de l'éducation* (centre for computerised administration of education)
CLQ	*cadre Luxembourgeois des qualifications (*Luxembourg qualifications framework)
CNFPC	national CVET centre
CPD	continuing professional development
CRE	*contrat de réinsertion-emploi* (employment reintegration contract)
CVET	continuing vocational education and training
DGVT	Director General for Vocational Education and Training
EQAVET	European quality assurance in vocational education and training
EQF	European qualifications framework
ESF	European Social Fund
Eurostat	statistical office of the European Union
GDP	gross domestic product
GE	general education
ICT	information and communications technology
IFC	*Institut de Formation Continue* (Institute for Continuing Training)
IFSB	Institute for Construction Training
INFPC	National Institute for the Development of Continuing Vocational Training
ISCED	international standard classification of education
IUIL	Luxembourg International University Institute
IVET	initial vocational education and training
LIDIT	Luxembourg Institute for Digital Training
LISKO	centre for integration and social cohesion
NEETs	not in education, employment, or training
NQF	national qualifications framework
OECD	Organisation for Economic Cooperation and Development
PISA	programme for international student assessment
PPS	purchasing power standards
QANRP	quality assurance national reference point
SCRIPT	service for research and technological and pedagogical innovation
SME	small and medium-sized enterprise
STEM	science, technology, engineering and math programmes
SQDA	school quality development agency
UOE	UNESCO, OECD and Eurostat

VAE	*validation des acquis de l'expérience* (validation of prior experiential learning)
VET	vocational education and training

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