



Vocational education and training in Luxembourg

Short description

Please cite this publication as:

Cedefop (2015). *Vocational education and training in Luxembourg: short description*. Luxembourg: Publications Office. Cedefop information series.
<http://dx.doi.org/10.2801/741212>

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Luxembourg: Publications Office of the European Union, 2015

ISBN 978-92-896-1928-8

doi: 10.2801/741212

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Foreword

Luxembourg's Presidency coincides with the beginning of a new phase in European cooperation on vocational education and training (VET). In June 2015, ministers in charge of VET, the European Commission and European Social Partners endorsed new deliverables renewing their commitment to 'raising the overall quality and status of VET'. The renewal of this commitment comes at a time when VET for young people and adults faces high expectations and challenges. Aspects of inclusion and excellence are under scrutiny. Participation in VET at upper secondary level has decreased across many countries, while a wider variety of post-secondary or tertiary VET-oriented programmes have been created.

Discussing its role, attractiveness and outcomes, as well as reforms and their impact, requires a thorough understanding of VET in its national socio-economic context, as the example of Luxembourg illustrates: while it is often only associated with the dual system (apprenticeships) like the one in Germany, differentiated VET also includes school-based programmes and features that resemble those in France. In European and some other countries the term 'initial VET' would be understood in a broader sense. What we see is a system that reflects different approaches, with European development in specific country contexts. This is also evident in its NQF and the respective links to EQF, or in the 2008 reform which has led to a focus on learning outcomes and introduced a modular approach to the programmes that are considered vocational.

Luxembourg mirrors several of the objectives and challenges that European cooperation in VET aims to address: finding adequate balance between VET excellence and inclusiveness, forging stronger links with the world of work, making apprenticeship-type schemes more attractive, and ensuring access and progression opportunities throughout people's lives, irrespective of their linguistic, cultural and socioeconomic backgrounds. It is not surprising that reform also aimed to improve guidance and progression opportunities. What is interesting in this context, however, is that in Luxembourg VET choices are guided from an early stage by performance and by the views of educational staff, learners and their families.

As a small country, Luxembourg already exemplifies the mobility for learning and working envisaged for Europe. Cross-border learning, most widespread in higher education, is also possible in VET and can take different forms. Besides different types of cooperation in school-based VET that exist among some neighbouring countries, 'duality' in several apprenticeship trades may also refer

to the geographic location: a company based in Luxembourg and a VET school in Germany.

The current review and fine-tuning of its 2008 reform highlights important issues that are also relevant for policy discourse at European level: while times of crisis and rapid economic developments require policy-makers to act speedily and anticipate potential further developments, the impact of reforms in education and training only becomes visible several years down the line; evaluating reforms to see whether outcomes and impact meet the objectives set and make adjustments where necessary is crucial.

At a time, when budgetary constraints, lack of investment, quality jobs and the reskilling and retraining of an ageing workforce continue to hold Europe back, the labour market needs wise hands: people with practical intellectual skills, along with a variety of skills to create more and better jobs. This requires strong commitment to VET and more work-based learning opportunities at different education levels. Understanding VET outcomes and impact requires adequate quantitative and qualitative data and analyses. This has led to increased demand for country-specific information.

Providing 'systems information' to help understand countries' VET is at the core of Cedefop's research and analytical work and its contributions to policy learning. After 40 years it is as important as it was at the outset to assist the European Commission, Member States and social partners in their work on modernising VET.

With this short description, Cedefop aims to contribute to better understanding of Luxembourg's highly differentiated VET.

Joachim James Calleja
Director

Acknowledgements

This short description is the result of a team effort. Marion Biré, Lucie Waltzer and Christian Weiland from the Training Observatory of the National Institute for the Development of Continuing Vocational Training in Luxembourg drafted the short description with the support of Nadine Bastian, the national coordinator of ReferNet Luxembourg. Several national stakeholders have been also consulted (Ministry of National Education, Children and Youth; Chamber of Commerce; Chamber of Trades and Skilled Crafts; Chamber of Agriculture, Chamber of Employees; secondary education directors; Luxembourg University). Silke Gadji coordinated drafting for Cedefop with significant input from Dmitrijs Kuļšs, Jasper van Loo and Eleonora Schmid.

Table of contents

Foreword.....	1
Acknowledgements.....	3
Table of contents.....	4
List of boxes, figures and tables.....	7
1. External factors influencing VET	9
1.1. Demographics.....	9
1.2. Economic background and labour market developments	11
1.3. Educational attainment	16
2. Provision of VET	18
2.1. VET in Luxembourg’s education and training system.....	18
2.1.1. Major VET reform of 2008.....	21
2.1.2. VET governance	22
2.2. Secondary VET.....	24
2.2.1. Technical programmes.....	27
2.2.2. Vocational programmes including apprenticeship.....	28
2.2.3. Technician programmes.....	30
2.2.4. Developing VET programmes	30
2.3. Post-secondary education: master craftsperson programmes	31
2.4. VET at tertiary level	31
2.4.1. Higher technician programmes	31
2.4.2. Vocational bachelor programmes.....	32
2.5. Government-regulated continuing VET.....	32
2.5.1. Vocational secondary education for adults.....	33
2.5.2. Language training	35
2.5.3. Training for job seekers on employer demand	35
2.5.4. Continuing professional development for teachers	35
2.6. Reducing early leaving from education and training.....	36
2.6.1. Remedial measures	37
2.6.2. Mosaic classes	38
2.6.3. Second chance schools	38
2.6.4. Vocational familiarisation programmes supported by guidance.....	39

2.6.5.	Language assistance	39
2.6.6.	Inclusion of learners with special needs.....	40
2.6.7.	Local Action for Youth	40
2.6.8.	Programmes for young job seekers with low skills.....	40
2.6.9.	Guidance and counselling	41
2.7.	Other forms of training	41
2.7.1.	Training offered by professional chambers	41
2.7.2.	Training offered by sectoral organisations	42
2.7.3.	Training offered by the public employment service	42
2.7.4.	Training offered by communities and trade unions	43
2.8.	VET funding	45
2.8.1.	Funding initial VET	45
2.8.2.	Funding for individuals in higher education	48
2.8.3.	Funding continuing VET	48
2.8.4.	Funding training for unemployed and other vulnerable groups	48
3.	Shaping VET qualifications	49
3.1.	Designing qualifications to match labour market needs.....	49
3.2.	Qualifications framework.....	51
3.3.	Validation of prior learning	51
3.3.1.	Validation of formal, non-formal and informal learning.....	51
3.3.2.	Recognition and equivalence of foreign diplomas.....	52
3.4.	Quality assurance	52
3.4.1.	Secondary education.....	53
3.4.2.	Tertiary education.....	54
3.4.3.	Continuing VET	55
3.5.	Transition from VET to the labour market.....	56
4.	Promoting participation in VET.....	58
4.1.	Incentives for learners and enterprises.....	58
4.1.1.	Incentives for learners	58
4.1.2.	Incentives for enterprises	59
4.2.	Guidance and counselling	60
4.3.	Increasing attractiveness of initial VET	62
4.4.	Key challenges	62

List of abbreviations	65
List of references.....	66
Further relevant legislation.....	70
Websites	71
ANNEX 1. Diplomas and certificates	72
ANNEX 2. Certificates and programmes in French and English	80
ANNEX 3. National monitoring of EQAVET indicators	81
ANNEX 4. Glossary	83

List of boxes, figures and tables

Boxes

1. Terms.....	8
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Figures

1. Population structure by nationality (%).....	9
2. Population structure forecast by age (%).....	10
3. Employment by activity sector in 1994 and 2014 (%).....	11
4. Employment by place of residence and nationality in 2014 (%).....	12
5. Employment rate by education level, 2004-14 (%).....	14
6. Unemployment by age in 2008 and 2014.....	15
7. Unemployment rate by education level in 2008 and 2012-14.....	15
8. Population (15-64) by highest level of education attained in 2014 (%).....	16
9. VET graduates by field of study and attainment level in 2012.....	17
10. VET certificates/diplomas by nationality (%).....	17
11. VET in Luxembourg's education and training system in 2014.....	18
12. Early leavers from education and training 2010-14, %.....	37
13. Investment in education 2002-12.....	46
14. School funding in 2012, % (EUR million).....	47
15. Funders of public education in 2012.....	47

Tables

1. Employment by place of residence and activity sector in 2014 (%).....	13
2. VET programmes.....	26
3. Repartition of learners in general and technical secondary education (2007/08 to 2013/14).....	27
4. Training offered by sectoral organisations.....	42

Luxembourg



Area:	2 586 km ²
Capital:	Luxembourg
System of government:	Unitary parliamentary constitutional monarchy
Population:	549 680 (2014)
Per capita gross domestic product (GDP) (nominal):	EUR 83 400 (2013)
Legislative power:	Exercised jointly by the Chamber of Deputies, the government and the Council of State

Box 1. Terms

From a European perspective the term vocational education and training (VET) is understood as 'education and training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly in the labour market' (Cedefop, 2014). Irrespective of the provider or governance scheme, VET can take place at secondary, post-secondary or tertiary level in formal education and training or non-formal settings including active labour market measures. VET addresses young people and adults and can be school-based, company-based or combine school- and company-based learning (apprenticeships).

In Luxembourg, the terms initial vocational training (*formation professionnelle initiale*) and vocational programme tend to be reserved for specific parts of VET. VET for young people, offered mostly at secondary level, is nationally referred to as technical secondary education. It comprises lower cycle pre-VET and medium/upper cycle technician and vocational programmes. Technical programmes are also linked to VET in this report.

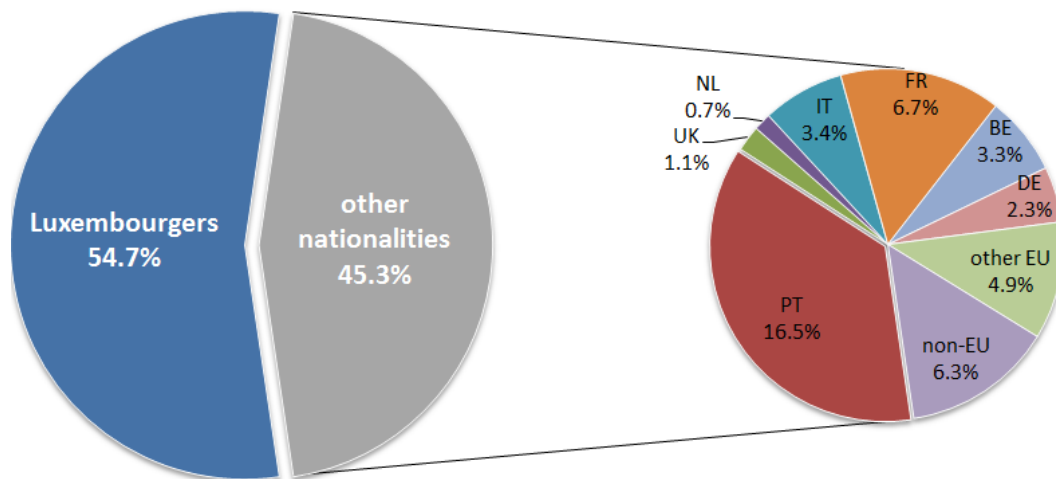
CHAPTER 1.

External factors influencing VET

1.1. Demographics

Luxembourg has 549 680 inhabitants (2014). Since 1991 the population has increased by 43%. Projections indicate a further increase to 0.8 million inhabitants by 2060.

Figure 1. **Population structure by nationality (%)**



NB: 2014 estimates.

Source: Statec, 2014a.

Figure 1 shows that 45% of the country's population are foreign citizens ⁽¹⁾. Their share has more than doubled in the past 25 years. In the first half of the 1960s most of the immigrants came from Italy. However, since 1966, the immigrant population from Portugal increased from 1 100 to 82 400 in 2011 ⁽²⁾ (Statec, 2012) and became the largest in the country. The share of foreign nationals from neighbouring countries has also increased: the French population grew from 1.6% in 1961 to 6.7% in 2014 and the Belgian from 1.7% to 3.3%. The number of Germans living in the country has increased by half but their share in the total population has remained unchanged. The number of foreign nationals

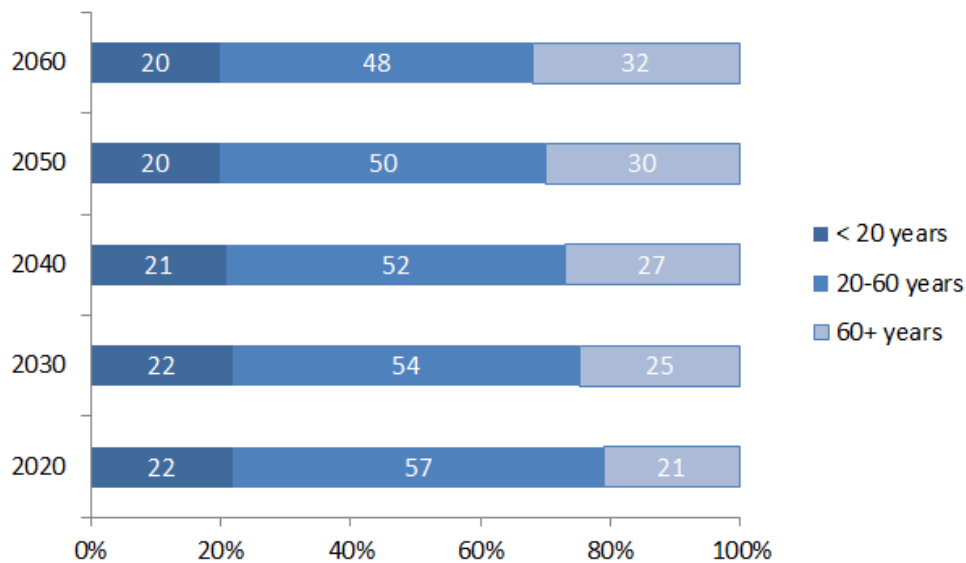
⁽¹⁾ Foreign citizens residing in Luxembourg can obtain Luxembourgish nationality by naturalisation. Legislation requires them to attend citizenship training and to pass an oral Luxembourgish language exam.

⁽²⁾ The latest population census available from 2011.

other than Portuguese, Italian, German, French or Belgian rose from 7 700 (2.4% of the total population) in 1961 to 59 700 (11.6%) in 2011, mostly since the 1980s.

The share of foreign nationals with mother tongue other than the official German, French and Luxembourgish languages is high. Multilingualism is one of the country's strengths but it is also a challenge for education and training (Sections 1.3 and 2.7). The high share of foreign nationals requires education and training and labour market integration policies. A public agency for integration (Office Luxembourgeois de l'Accueil et de l'Intégration) under the auspices of the Ministry of Family, Integration and the Greater Region implements this policy. This includes providing information on training in the official languages (Section 2.6.5) and recognition of foreign diploma and secondary general education ⁽³⁾ and vocational education and training (VET) certificates and reports (Section 3.3.2) ⁽⁴⁾.

Figure 2. **Population structure forecast by age (%)**



Source: Government of the Grand Duchy of Luxembourg (2015), www.grande-region.lu [accessed 29.7.2015].

The age structure of population is expected to change from 2020 to 2060 (Figure 2). The share of older people will increase by 11 percentage points (pp)

⁽³⁾ General education is nationally referred to as '*classique*' education. In the report the term 'general education' is used instead.

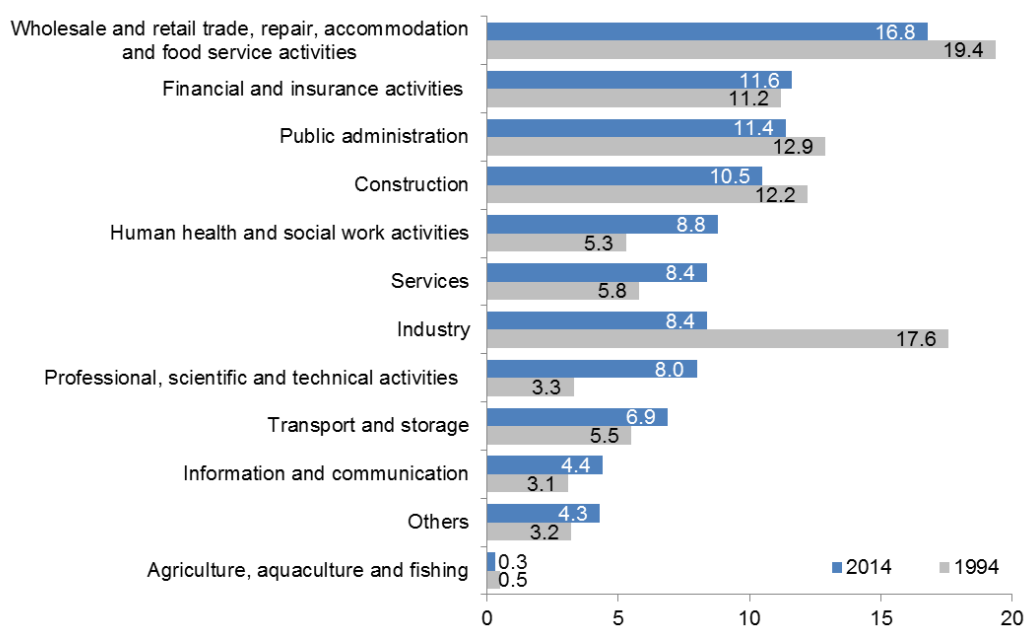
⁽⁴⁾ This information is also easily accessible on well-known web portals such as www.guichet.lu and www.lifelong-learning.lu [accessed 29.7.2015].

and reach 32% by 2060. At the same time the share of 20 to 60 year-olds will decrease by 9pp to 48%. The share of young people will decrease by 2pp to 20%. An ageing population may increase the demand for continuing VET (CVET).

1.2. Economic background and labour market developments

Since mid-2012, the economy grew faster than in neighbouring countries and the euro area. The national statistical office (Statec) projected a 2.9% GDP increase in 2014. In the first half of 2014, the economy was driven mainly by the sustained activity of non-financial services (Statec, 2014b). For 2015, Statec (2015) expects faster growth of between 3.5% and 4%.

Figure 3. **Employment by activity sector in 1994 and 2014 (%)**



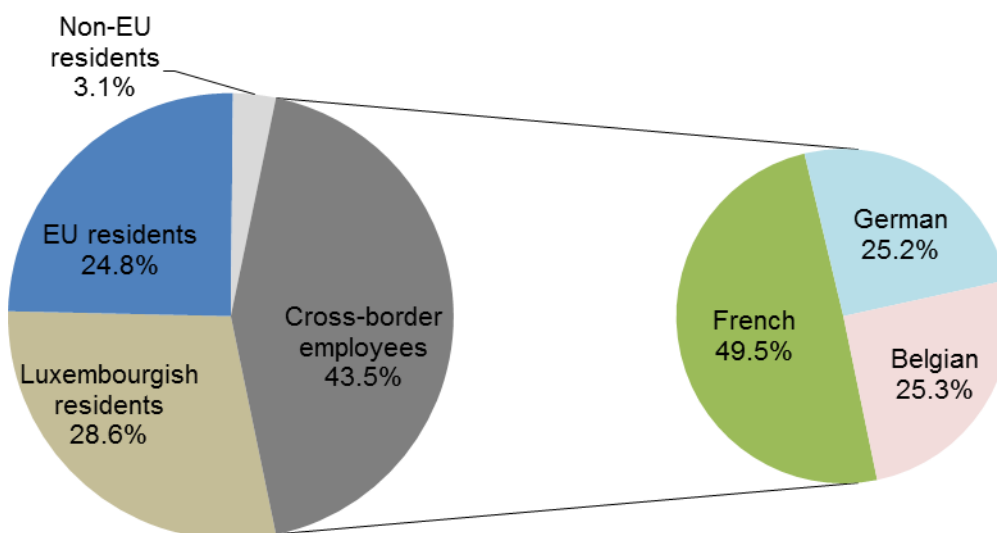
Source: IGSS, 2014.

The economy has undergone structural changes in the past two decades (Figure 3). The industrial economy evolved into a service economy with jobs that often require tertiary level qualifications. Employment in the industrial sector decreased from 17.6% in 1994 to 8.4% in 2014. The service, professional, scientific and technical sectors have had the highest growth. Employment in the service sector increased from 5.8% to 8.4% in 2014; in the professional, scientific and technical sectors it has more than doubled and reached 8% in 2014.

Adapting VET provision to the constantly changing employment structure has been a challenge. In 2014, 40% of employment was concentrated in three sectors: wholesale and retail trade, repair, accommodation and food service activities (16.8%), financial and insurance activities (11.6%) and public administration (11.4%). This last sector includes international civil servants and teachers. In 2013, there were approximately 10 000 international civil servants working in Luxembourg and 9 987 teachers, of which 4 148 were in secondary general and technical education (Statec, 2014a).

Access to skilled craftsperson and commercial activities and some liberal professions is regulated. Commercial activities and skilled craftsmanship in the territory require a business permit issued if the manager satisfies qualification requirements and professional integrity. Qualification requirements for skilled craftsperson companies differ depending on the trade. For main craft trades such as baker/confectioner, dental technician, specialist in mechatronics, the manager must have: a master craftsperson certificate (*brevet de maîtrise*) or a bachelor degree (if not linked to the core business it should be complemented with at least two years of professional experience), or a vocational aptitude diploma (*diplôme d'aptitude professionnelle*, DAP) completed by a managing experience of six years in the field. For secondary craft trades such as miller, dry-cleaner/laundrer, heating mechanic, the manager must have a DAP or similar in a related field or three years' professional experience in the activity (Chapter 2).

Figure 4. **Employment by place of residence and nationality in 2014 (%)**



Source: IGSS, 2014.

As shown in Figure 4, the labour market is also characterised by a high proportion of cross-border workers (43.5%), living in Belgium, Germany and France and working in Luxembourg. While their share of total employment increased by more than 1pp each year until 2009, the crisis stopped this progression. Since then it has remained close to 44% (Statec, 2015). Among the working population 28.6% are Luxembourgish and 24.8% EU residents.

Table 1. **Employment by place of residence and activity sector in 2014 (%)**

Sector of activities	Luxembourgers	Foreign residents	Cross-border employees
Agriculture, aquaculture and fishing	0.3	0.6	0.2
Industry	5.1	5.8	12.2
Construction	3.5	14.8	12.5
Wholesale and retail trade, repair of motor vehicles and motorcycles, accommodation and food services	10.9	19.9	18.8
Transport and storage	6.4	6.0	7.9
Information and communication	3.9	3.6	5.4
Finance and insurance	8.3	12.0	13.5
Professional, scientific and technical activities	4.8	8.7	9.8
Public administration	34.7	3.6	1.0
Human health and social work	13.8	6.6	6.8
Services	4.3	11.0	9.5
Others	4.0	7.4	2.4
Total	100	100	100

Source: IGSS, 2014.

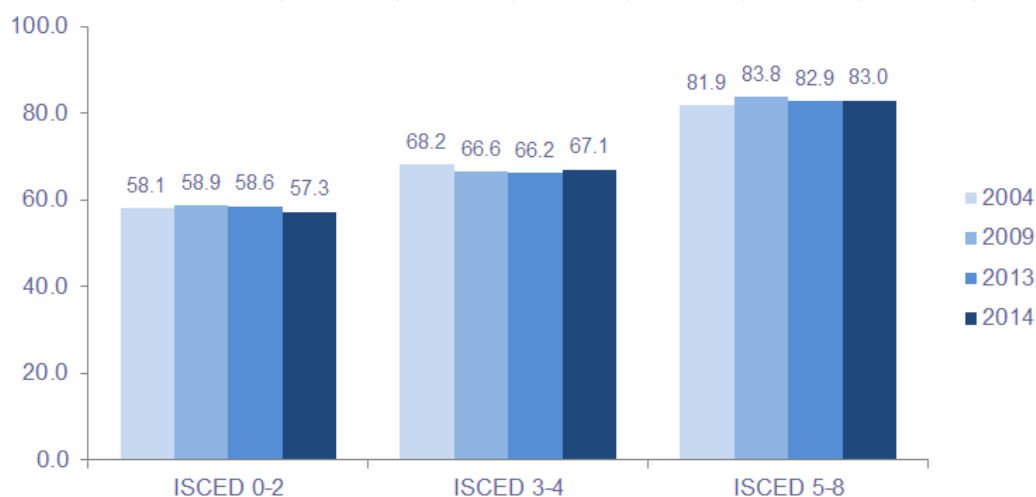
In March 2014, 34.7% of resident workers were employed in public administration and 13.8% in healthcare and social work (Table 1). Foreign resident workers are mainly employed in the wholesale/retail trade, repair of motor vehicles and motorcycles, and accommodation and food services (19.9%), and in the construction sector (14.8%). Cross-border workers mainly work in the wholesale and retail trade, repair of motor vehicles and motorcycles, accommodation and food services (18.8%) and in the financial and insurance sector (13.5%).

The labour market has recovered since the 2008 economic crisis. In 2014, employment grew well above 2% over the year, a trend that continued at the beginning of 2015 (Statec, 2015).

Since 2003, employment has been increasing for all age groups except for 20 to 24 year-olds. In this age group employment decreased from 46.6% in 2008 to 35.4% in 2013, mainly due to increasing enrolment in education and training. Increase in employment has been most prominent (more than 10% in a decade)

for the 50 to 64 age cohort but still remains below the EU average. Educational attainment has a strong impact on employment (Figure 5).

Figure 5. **Employment rate by education level, 2004-14 (%)**



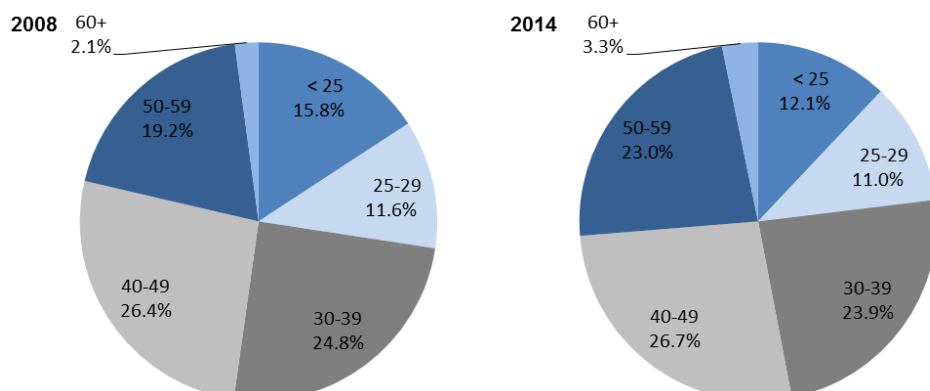
NB: Resident salaries, age 20 to 64 years, ISCED 2011.

Source: Eurostat, 2015. lfsa_ergaed; extracted 22.5.2015.

In 2014, employment of higher education graduates (83%, ISCED 5-6) was 15.9pp higher than that of people with upper and post-secondary non-tertiary background (67.1%, ISCED 3-4) and 25.7pp higher than that of people with pre-primary, primary and lower secondary education (57.3%, ISCED 0-2). For people with higher levels of education, employment has slightly increased (from 81.9% in 2004 to 83% in 2014). For those with medium-level education (ISCED 3-4) and for the low- or non-qualified, it has not changed significantly.

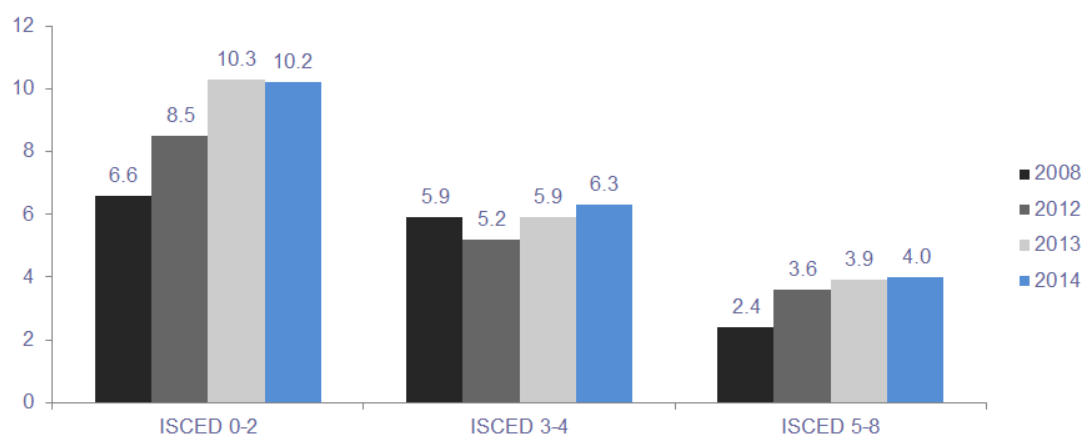
Unemployment is among the lowest in the EU but increased from 2.4% in 2000 to 7.1% in 2014 ⁽⁵⁾. Since then the rate has slowly declined and is expected to remain close to 7% in 2015, though this stabilisation may be due to an increase in the number of beneficiaries of employment measures and not to real economic growth. Since the beginning of the economic crisis, the age structure of unemployment has changed (Figure 6).

⁽⁵⁾ Public employment service (Agence pour le Développement de l'Emploi, ADEM) data.

Figure 6. Unemployment by age in 2008 and 2014


Source: Statec, Table B3014 *Chômeurs par sexe et selon l'âge*.

In contrast to developments in many other European countries, the share of young (<25) unemployed decreased from 15.8% in 2008 to 12.1% in 2014 but is still high compared to the overall unemployment rate of 7.1%. Education level has an important impact on unemployment (Figure 7).

Figure 7. Unemployment rate by education level in 2008 and 2012-14


NB: Data based on ISCED 2011.

Source: Eurostat, 2015. lfsa_urgaed; extracted 25.2.2015.

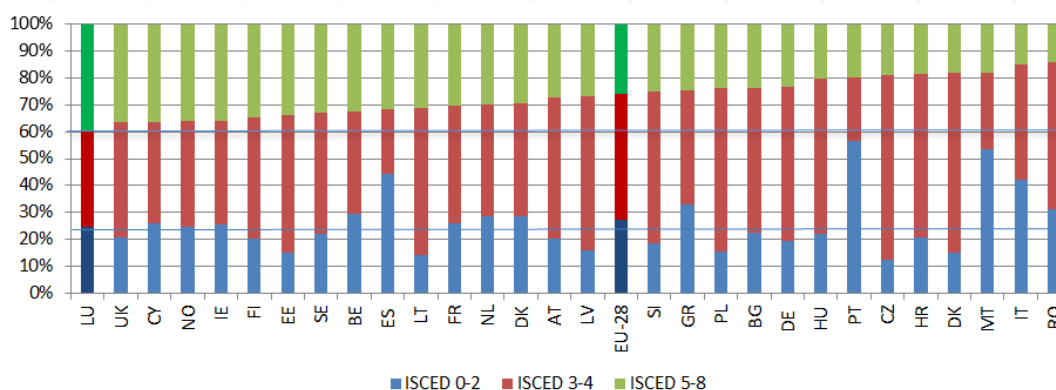
In 2014, the unemployment rate was 10.2% among people with a maximum of lower secondary education (ISCED 0-2), 6.3% for those who have completed upper secondary non-tertiary education (ISCED 3-4), and 4% for those with tertiary education (ISCED 5-6). While in 2008-14 unemployment rose significantly among the lower educated (3.6pp), the increase was moderate for those with tertiary education (1.6pp) and lowest for people with secondary education (0.4pp). These data are collected through the labour force survey (LFS) based on the resident population. Due to the high share of foreign residents having studied outside the country, it is difficult to establish the impact of the Luxembourgish

education system on the national labour market. In 2013, 27.7% of all job seekers were Luxembourgers, 35.8% Portuguese and 36.5% other nationalities.

1.3. Educational attainment

Higher education attainment of residents aged 15 to 64 is the highest in the EU-28, while the share of low- or unqualified people is lower than the EU-28 average (Figure 8). There are generally more foreign residents with higher (tertiary) education than Luxembourgers, who – until the early 2000s – had to study abroad (Chapter 2).

Figure 8. Population (15-64) by highest level of education attained in 2014 (%)



Source: Eurostat, 2015, Table: lfsa_pgaed; extracted 28.4.2015.

In 2014, graduates from technical secondary education accounted for 55% of all secondary education level graduates. Most were enrolled in vocational programmes followed by graduates from technical programmes (Section 2.2).

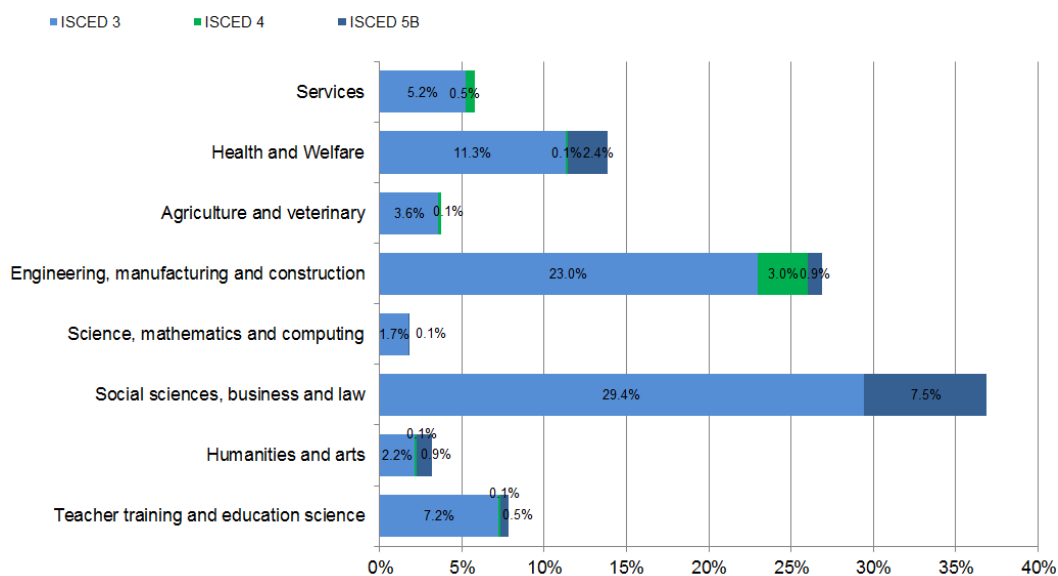
More than 80% of VET graduates participated in ISCED level 3 programmes. As shown in Figure 9, most graduates studied social sciences, business and law (36.9% in total; 29.4% at ISCED level 3⁽⁶⁾ and 7.5% at ISCED level 5⁽⁷⁾) and engineering, manufacturing and construction (26.9% overall; 23% at ISCED level 3⁽⁸⁾, 3% at ISCED level 4 and 0.9% at ISCED level 5) (Sections 2.3 and 2.4). The small share at ISCED level 4 represents people with master craftsperson qualifications (Section 2.3).

⁽⁶⁾ Management, administrative and commercial programmes.

⁽⁷⁾ ISCED level 5 programmes are provided by the University of Luxembourg.

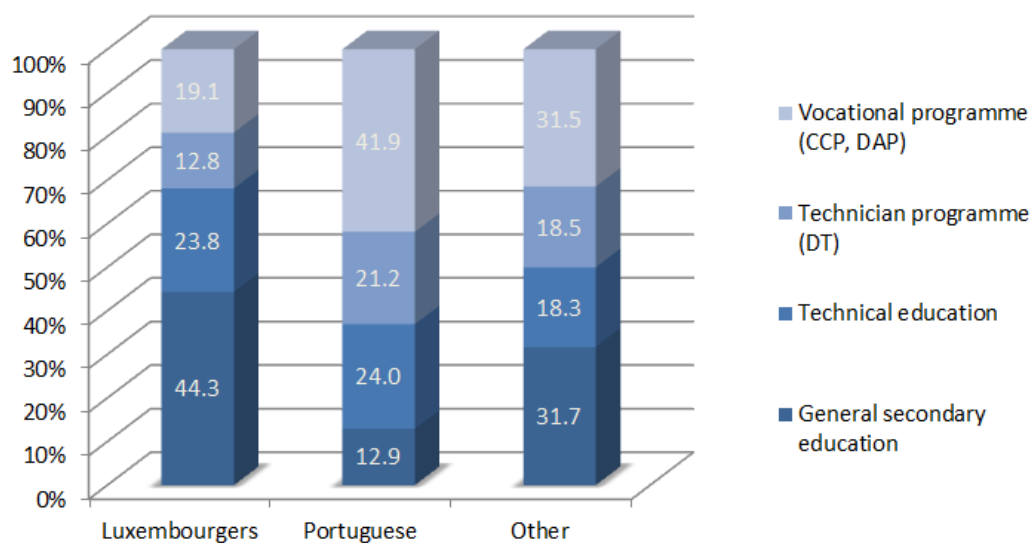
⁽⁸⁾ Civil engineering, electronics and general technics.

Figure 9. VET graduates by field of study and attainment level in 2012



Source: Eurostat, 2015, Table: educ_grad5; extracted 23.2.2015.

Figure 10. VET certificates/diplomas by nationality (%)



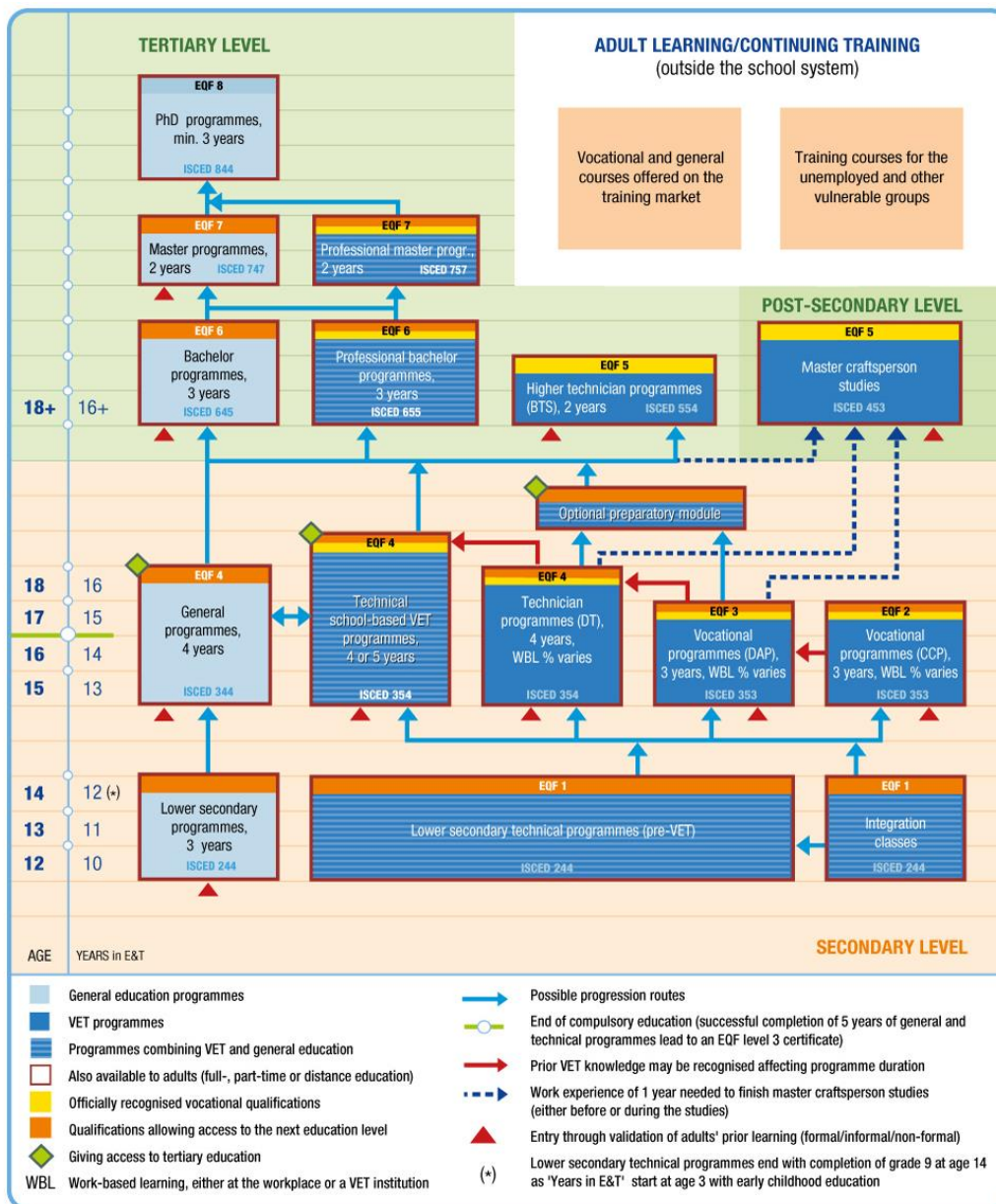
Source: MENJE, 2015b, p. 38.

As shown in Figure 10, there are more Portuguese graduates from vocational, technician and technical programmes (87.1%) than from general secondary education (12.9%), while 44.3% of Luxembourgish graduates hold a general secondary education leaving certificate. This may be linked to their education preferences. In 2013/14, 89% of Portuguese learners in secondary education participated in vocational, technician and technical programmes. Luxembourgish learners participated more (59.3%) in general secondary education (MENJE, 2015a).

CHAPTER 2. Provision of VET

2.1. VET in Luxembourg's education and training system

Figure 11. VET in Luxembourg's education and training system in 2014



NB: ISCED-P 2011.

Source: Cedefop and ReferNet Luxembourg.

Luxembourg's education system is shaped by the country's political, economic, demographic and linguistic particularities, and strongly influenced by its relatively small territory and multinational and multilingual population and workforce. The education system reflects multilingualism. While German is the main language of tuition in primary and lower secondary education, most subjects at upper secondary level are in French. The number of schools offering curricula both in French and German is increasing and it is up to the learners to choose which language path they want to follow. Luxembourgish is mostly used as a spoken language in primary school.

Administration is centralised. The Ministry of National Education, Children and Youth (Ministère de l'Éducation Nationale, de l'Enfance et de la Jeunesse, MENJE) ⁽⁹⁾ is responsible for all types of education, including initial and continuing VET. Initial and continuing higher education is under the Ministry of Higher Education and Research (Ministère de l'Enseignement Supérieur et de la Recherche, MESR) ⁽¹⁰⁾. The professional chambers are officially consulted on education matters and have substantial power.

School attendance is compulsory between 4 and 16, i.e. for at least 12 years, including two years of pre-school education. At the end of primary education (*enseignement primaire*) ⁽¹¹⁾, learners receive an end-of-cycle report, stating the level attained for each competence domain. Learners are guided towards either general or technical secondary education by dedicated councils, which include a teacher working in VET ⁽¹²⁾. The guidance takes account of learning achievement (based on the end-of-cycle report), parent and teacher opinions and performance in standardised basic skills tests (in relation to the national average).

Secondary education

Secondary education comprises two types with different objectives ⁽¹³⁾:

⁽⁹⁾ Hereinafter referred to as education ministry.

⁽¹⁰⁾ Hereinafter referred to as higher education ministry.

⁽¹¹⁾ Primary education starts with pre-school education at the age of three and comprises four cycles; in the last one learners are 10 to 11 years old. Annex 2 provides an overview of programmes and certificates in French and English.

⁽¹²⁾ The councils also include the district inspector, the class teacher, and a teacher working in general secondary education.

⁽¹³⁾ A list of the different diplomas and certificates awarded in secondary general and technical education is provided in Annex 1.

- (a) general secondary education (*enseignement secondaire classique*) which conveys general knowledge in humanities, mathematics and natural sciences and prepares for higher education studies;
- (b) vocational secondary education, referred to as technical secondary education (*enseignement secondaire technique*) which gives access to higher education and/or to the labour market (Box 1 and Section 2.2).

In 2013/14, there were 12 832 (32%) learners in general and 26 998 (68%) in technical secondary education.

Since the law reforming vocational training (SCL, 2008a) entered into force, learners can move from one type of secondary education to another. In both types tuition is in French, German and Luxembourgish.

General secondary education lasts for seven years, split into a three-year lower and four-year upper cycle; it leads to a secondary school leaving diploma (*diplôme de fin d'études secondaires*) (ISCED 344, EQF4). An intermediate certificate (*certificat intermédiaire*) is awarded to all learners after successful completion of five years of secondary education. In technical education, the lower cycle lasts three years and the medium and upper cycles three to five years (Section 2.2).

While most learners in 2013/14 attended public schools (85.3%), some were enrolled in private schools that apply national curricula (3.9%) or in private/international schools that do not apply them (10.9%). International schools are particularly popular in general secondary education. In 2013/14, learners in international schools accounted for 29.5% of the total population in general secondary education (MENJE, 2015a).

Post-secondary education

Post-secondary non-tertiary education offers one type of programme, master craftsperson qualification (*brevet de maîtrise*; 453, EQF 5), which is meant to train future entrepreneurs and industry managers. Access to this programme requires at least EQF level 3.

Higher (tertiary) education

Traditionally, tertiary students acquired their qualifications abroad. In 2003, Luxembourg established its own university (SCL, 2003) with three faculties: science, technology and communication; law, economics and finance; and human sciences, arts and educational science. The university also has two interdisciplinary research centres.

To access university programmes, learners require a general or technical secondary school leaving diploma (*diplôme de fin d'études secondaires; diplôme de fin d'études secondaires techniques*) ⁽¹⁴⁾.

Short-cycle programmes leading to higher technician certificates (*brevet de technicien supérieur, BTS*) are offered by technical secondary schools (Section 2.4). Depending on the study fields and certain conditions, graduates from the short-cycle higher technician programme have the possibility to move on to a university degree.

Adult education

Adults who have not completed secondary education can prepare for technical secondary diplomas and certificates (Section 2.5.1) or the secondary school leaving certificate. The latter can be acquired by attending evening classes or through blended learning ⁽¹⁵⁾.

The Luxembourg Lifelong Learning Centre ⁽¹⁶⁾ offers daytime and evening courses in partnership with the Université de Lorraine. These lead to a diploma which gives access to higher education (*diplôme d'accès aux études universitaires*).

2.1.1. Major VET reform of 2008

The major VET reform of 2008 (SCL, 2008a) was implemented between 2010/11 and 2013/14. It aimed at strengthening the links between VET and the labour market and focused on competence-based and modular qualifications. Key principles of the reform are:

- (a) promoting VET;
- (b) improving VET quality;
- (c) easing access to lifelong learning;
- (d) strengthening partnerships with the business world;
- (e) teaching and evaluation methods based on competences;
- (f) replacing teaching by subject with teaching by units and modules; each module focuses on concrete professional situations; the learning outcomes to be acquired (competences and knowledge) are defined for each module;

⁽¹⁴⁾ Foreign certificates or diplomas need to be recognised as equivalent by the education ministry.

⁽¹⁵⁾ Blended learning combines online and in-person learning experiences.

⁽¹⁶⁾ <http://www.lifelong-learning.lu/Accueil/en> [accessed 29.7.2015].

- (g) assessment and certification in apprenticeships based on learning outcomes; evaluation is qualitative: at the end of each module, apprentices' competences are assessed against the intended learning outcomes;
- (h) training of VET teachers;
- (i) introducing 'adult teachers' and providing special training for them;
- (j) improving collaboration between the State and the social partners.

2.1.2. VET governance

The education ministry is responsible for VET and all other types of education, except for higher education. In cooperation with the Ministry of Labour, Employment and the Social and Solidarity Economy (Ministère du Travail, de l'Emploi et de l'Économie Sociale et Solidaire, MTE) ⁽¹⁷⁾ it is also responsible for training measures for the unemployed.

Higher education is under the responsibility of the higher education ministry.

Cooperation between the State and the social partners is a core principle in VET. As stated in the law reforming VET (SCL, 2008a), social partners are essential stakeholders who contribute to its organisation and implementation. The professional chambers' opinion is systematically sought on laws and regulations on economic, financial and social policy: labour law, social security, taxation, the environment, initial and continuing vocational training, and education. Development and periodic revision of programmes are ensured by curricular teams (Section 3.1).

There are five professional chambers in Luxembourg. The Chamber of Commerce (Chambre de Commerce), Chamber of Trades and Skilled Crafts (Chambre des Métiers) and Chamber of Agriculture (Chambre d'Agriculture) represent employers. The Chamber of Employees (Chambre des Salariés), and Chamber of Civil Servants and Public Employees (Chambre des Fonctionnaires et Employés Publics) represent wage earners. These chambers act as independent policy institutes; they are involved in Luxembourg's legislative procedures and are officially consulted on education matters. They are represented both at national (Economic and Social Council, Tripartite Advisory Committee on Vocational Training) and at European level (Cedefop Governing Board, Advisory Committee on Vocational Training). In contrast to trade unions and employers' associations, membership in the professional chambers is compulsory (with an annual subscription) for all employees and private companies.

⁽¹⁷⁾ Hereinafter referred to as labour ministry.

The professional chambers were created by law in 1924 (SCL, 1924) and in 1964 (Chamber of Civil Servants and Public Employees (SCL, 1964)). They are public establishments, legal persons governed by civil law. Although the professional chambers are supervised by the minister, they enjoy financial autonomy. Since 1929, the chambers have been involved in initial education, especially with regard to VET preparing for an occupation. They also have substantial powers regarding apprenticeships; in 1945, their remit in the establishment, supervision and termination of apprenticeship contracts was extended. Their power and involvement were reinforced by the 2008 law reforming VET (SCL, 2008a and 2008b). Their involvement in vocational training includes:

- (a) identifying training needs;
- (b) guidance and information on training;
- (c) determining the professions or trades offered in VET;
- (d) training offers;
- (e) organising training;
- (f) designing framework training programmes;
- (g) assessing training programmes and the training system;
- (h) qualifications and validating experience acquired.

Professional chambers have established a platform for supervisors/tutors where they can find all the necessary support during apprenticeship. They have also created the label 'training enterprise' to put the companies committed to training young people into the limelight.

The Chamber of Commerce and the Chamber of Trades and Skilled Crafts have appointed apprenticeship counsellors for each trade and profession. Their main mission is to inform companies and apprentices about vocational training issues (legislation, organisation, programmes, class visits). They also assist enterprises and apprentices in practical process where they:

- (a) can intervene as mediators in case of disagreement or conflict between the company, the school or the apprentice;
- (b) participate in organisation of intermediary tests and support the relationship between the school and the company in case of difficulties;
- (c) are available to apprentices who need to reorient themselves and find an appropriate apprenticeship;
- (d) follow their evaluation and, if needed or concerned, take part in the class council and in the disciplinary councils;
- (e) signal irregularities in legislation on vocational training to the competent institutions (ReferNet Luxembourg; INFPC, 2014).

The professional chambers are also authorised by law to organise continuing training courses (Section 2.7.1).

2.2. Secondary VET

The dual system is an important feature of secondary VET (hereafter referred to as technical secondary education), which implies a strong relationship between school-based education and work-based learning in enterprises.

In technical secondary education (*enseignement secondaire technique*, ISCED 353 and 354), learners are prepared both for professional life and enrolment in higher education (Section 2.4). It is divided into three cycles: the lower cycle (*cycle inférieur*), the medium cycle (*cycle moyen*) and the upper cycle (*cycle supérieur*). A preparatory programme (*programme préparatoire*) supports learners who find it difficult to adapt to secondary education. After successful completion of the lower cycle, learners can choose between technical, vocational and technician programmes. Depending on the programme, duration varies between six and eight years. Learners can move from technical to general secondary education and vice versa. Since 2013/14, all technical secondary programmes are based on principles implemented with the recent VET reform (SCL, 2010a; Section 2.1.1).

Lower cycle

The lower cycle of technical secondary education (ISCED 244, EQF 1) is considered as pre-VET and lasts three years. It offers learners an orientation phase in which they can decide on their further education pathway. Upon successful completion, they can continue in the medium cycle of technical, technician or vocational programmes.

In lower general and technical secondary programmes, many subjects are similar (languages, mathematics, arts) though content may differ; in general education they are studied in more depth. Others are only available in one of the paths: while the general programme includes geography, history and natural sciences, the technical programme features technology and humanities. Practical activities in workshops make up an important part of the technical secondary programmes and focus on supporting learners in choosing their career.

Each of the three grades focuses on specific aspects required for progression to the next level: languages (French and German), mathematics, natural sciences, humanities in the first grade; depending on their performance, learners are then directed to a theoretical (*théorique*) or a multidisciplinary (*polyvalente*) path. These two paths are distinguished by their general

orientation, the relative importance of the subjects taught and the teaching methods. In the last grade an additional, more practically oriented path (*pratique*), is available. The decision on admission to the medium cycle is taken by the class council, depending on learner achievements.

The three-year preparatory programme (*programme préparatoire*) is part of the lower cycle of technical secondary education; it is designed for learners who struggle with the regular secondary education curriculum. It is based on a modular approach and gives priority to practical training. After successful completion of the preparatory programme, learners may pass to the second or third grade of the theoretical, multidisciplinary or practical path. They can also enter into vocational programmes (*diplôme d'apitude professionnelle*, DAP or *certificat de capacité professionnelle*, CCP).

Medium and upper cycles

The medium and upper cycles of technical secondary education offer (mainly) school-based VET programmes, apprenticeships and similar schemes. Learners acquire occupational qualifications for which a certificate or a diploma is awarded ⁽¹⁸⁾. There are four different programmes within these cycles ⁽¹⁹⁾:

- (a) technical programmes (*programme technique*) leading to a secondary school leaving diploma (*diplôme de fin d'études secondaires techniques*) (ISCED 354, EQF 4);
- (b) vocational programmes leading to a vocational capacity certificate (*certificat de capacité professionnelle*, CCP) (ISCED 353, EQF 2);
- (c) vocational programmes leading to a vocational aptitude diploma (*diplôme d'apitude professionnelle*, DAP) (ISCED 353, EQF 3);
- (d) technician programmes (*programme de la formation de technicien*) leading to a technician diploma (*diplôme de technicien*, DT) (ISCED 354, EQF 4).

⁽¹⁸⁾ See Annex 1 for a list of the occupational diplomas offered by VET programmes. Annex 2 provides an overview of the available certificates and programmes in French and English.

⁽¹⁹⁾ See also ReferNet, 2014.

Table 2. VET programmes

	Duration	EQF level	ISCED 2011	Career opportunities	Further learning opportunities
Vocational programme- CCP	3 years	2	353	Semi-skilled worker	DAP
Vocational programme – DAP	3 years	3	353	Skilled worker	Master craftsperson Higher technical studies (*)
Technician programme	4 years	4	354	Technician	Higher technical studies (*)
Technical programme	4-5 years	4	354	Technician	Higher education
Master craftsperson programme	3 years (extendable up to 6 years)	5	453	Entrepreneur	
Higher technician certificate – BTS	2 years	5	550	Higher technician	Bachelor (**)

(*) Subject to completion of preparatory modules.

(**) Depending on study field.

Source: ReferNet Luxembourg.

Between 2007/08 and 2013/14, the total number of learners in secondary education increased from 35 927 to 39 830. Over the years, the share between general and technical secondary education has remained relatively stable: around 32-33% of learners attend the general and 66-67% the technical path. This shows the high attractiveness of VET.

The total number of learners in technical secondary education (at all levels) has increased since 2007/08. At that time 23 805 learners attended technical secondary education programme, with the number increasing to 26 998 in 2013/14. Since 2007, technical programmes have become more attractive for learners: the share of VET students in technical programmes rose from 39% in 2007/08 to 45.6% in 2013/14. At the same time, vocational programmes (DAP and CCP) lost their attractiveness and their share decreased from 34% to 28.9%. The share of VET learners in technician programmes remained relatively stable at 25-26%.

Table 3. Repartition of learners in general and technical secondary education (2007/08 to 2013/14)

	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14
Learners in technical secondary education (lower, medium and upper level) of which:	23 805	24 323	25 184	25 879	26 330	26 627	26 998
<i>Lower technical secondary education</i>	11 762	12 081	12 421	12 746	12 915	13 152	13 316
<i>Medium and upper level technical secondary education of which:</i>	12 043	12 242	12 763	13 133	13 415	13 475	13 682
<i>Technical programmes (medium and upper cycle)</i>	4 739	4 840	5 220	5 405	5 677	5 897	6 239
<i>Technician programmes (medium and upper cycle)</i>	3 162	3 182	3 198	3 315	3 378	3 494	3 483
<i>Vocational programmes (medium and upper cycle)</i>	4 142	4 220	4 345	4 413	4 360	4 084	3 960
Learners in general secondary education (lower and upper cycle)	12 122	12 469	12 757	12 825	12 975	12 958	12 832
Total learners in secondary education	35 927	36 792	37 941	38 704	39 305	39 585	39 830
% of total learners in general secondary education	33.7%	33.9%	33.6%	33.1%	33.0%	32.7%	32.2%
% of total learners in technical secondary education	66.3%	66.1%	66.4%	66.9%	67.0%	67.3%	67.8%
% of learners in technical programmes (*)	39.4%	39.5%	40.9%	41.2%	42.3%	43.8%	45.6%
% of learners in technician programmes (*)	26.3%	26.0%	25.1%	25.2%	25.2%	25.9%	25.5%
% of learners in vocational programmes (*)	34.4%	34.5%	34.0%	33.6%	32.5%	30.3%	28.9%

(*) Percentage of the total number of learners in technical secondary education at medium and upper level.

Source: MENJE, 2015c.

2.2.1. Technical programmes

The technical programmes (ISCED 354, EQF 4) ⁽²⁰⁾ cover grades 10 to 13, for some social and health professions grades 10 to 14. There are four strands (referred nationally as 'divisions') (Annex 1):

- (a) administrative and commercial;
- (b) health and social care;

⁽²⁰⁾ In the national context technical programmes are not regarded as IVET programmes.

- (c) general technical;
- (d) artistic.

The curriculum includes general and technical education; the latter includes practical and theoretical classes. The share of the technical part depends on the grade and on the chosen field and varies from approximately 25 to 65%. Students who succeed in technical programmes are awarded a technical secondary school leaving diploma (*diplôme de fin d'études secondaires techniques*). This diploma confers the same rights as that from general secondary education; depending on the strand and section, students can enter the labour market or pursue higher education.

2.2.2. Vocational programmes including apprenticeship

Vocational programmes last three years and combine company-based and school-based learning. The general education, the theoretical part of VET, and some practical modules are offered in technical school and school workshops.

Learners are responsible for finding a training place in an enterprise. The vocational guidance service of the public employment service (Agence pour le Développement de l'Emploi, ADEM ⁽²¹⁾ (Section 4.2)) supports young people through counselling and a central register of all available apprenticeship places. Once the learner has signed a contract with a company, (s)he has the legal status of an apprentice and receives an apprenticeship allowance which varies between EUR 400 and 1 200 depending on the trade/profession learned (SCL, 2012a, 2013). Upon successful completion of an academic year, learners receive a premium allowance (SCL, 2012b) based on a monthly rate of EUR 130 for CCP or EUR 150 for DAP and DT. The best apprentices receive an award which also includes a prize of EUR 1 500 (Section 4.1.1).

Enterprises offering apprenticeship places need to comply with certain criteria, verified by the professional chambers (Section 2.1.2). Financial support and an award to encourage their engagement are available (Section 4.1.2). VET trainers, who receive special training (Section 2.1.1), supervise the apprentices in the training companies.

In accordance with the amended VET legislation of 2008 (Section 2.1.1), an apprenticeship is based on key principles such as:

- (a) qualitative assessment of learning outcomes (letter grades and transcript of acquired and non-acquired skills rather than marks in figures);
- (b) modular system allowing apprentices who fail a required module to continue their training and catch up at a later stage during their apprenticeship.

⁽²¹⁾ Hereinafter referred to as public employment service.

Learners can choose between two types of vocational programmes, leading to:

- (a) vocational capacity certificate (*certificat de capacité professionnelle, CCP*);
- (b) vocational aptitude diploma (*diplôme d'aptitude professionnelle, DAP*).

Vocational programmes can be followed in one of two different tracks:

- (a) the concomitant track (*filière concomitante*), where learning in school and in an enterprise takes place in parallel throughout the apprenticeship. Depending on the profession, the two parts can be organised as day-release (such as two days per week in school and three days in enterprise) or block-release scheme (for example, nine weeks at school and nine weeks in enterprise); the allocated time may also vary depending on the profession;
- (b) the mixed track (*filière mixte*) which is suitable for some professions. This programme offers theoretical and practical training in school in the first year. After successful completion of the school-based part, training is continued in line with the concomitant track.

Vocational programmes: CCP (ISCED 353, EQF 2)

This apprenticeship programme prepares learners for the labour market and leads to the vocational capacity certificate (*certificat de capacité professionnelle, CCP*). It is designed for students with learning difficulties who cannot access studies leading to a vocational aptitude diploma (*diplôme d'aptitude professionnelle, DAP*) or a technician diploma (*diplôme de technicien, DT*). This certificate attests that the holder has the social and basic practical skills for a trade/profession as a semi-skilled worker. Students graduating from CCP can progress to the second year of the DAP programme in the same field. By decision of the class council, the learner can even be admitted to the last year of the DAP programme in the same field (SCL, 2013).

Vocational programmes: DAP (ISCED 353, EQF 3)

The vocational aptitude diploma (*diplôme d'aptitude professionnelle, DAP*) also prepares learners for the labour market. The DAP programme may also be offered as full time track (*filière de plein exercice*), where all training occurs in an education institution, with 12 weeks' practical training or more within an apprenticeship or internship contract. The DAP certifies that the holder has the skills to perform the trade/profession in question as a skilled worker. DAP graduates may progress to the third year of a technician programme in the same field of study, the third year of the technical programme, or become a master craftsperson (*brevet de maîtrise, ISCED 453, EQF 5*). Subject to completing supplementary preparatory modules they can also pursue higher technical studies (*études techniques supérieures, ISCED 550 or 650*).

In 2014/15, the most popular vocational programmes are administrative and commercial agent, assistant nurse and care assistant. There are trades/professions for which both a CCP and DAP are available (such as hairdresser). They usually both contain general and vocational subjects – mandatory and optional ones – but with some difference. The general education part of both programmes includes a module on citizenship education: learners in DAP also have to study either French or German. The main differences are in the learning outcomes: credit units and modules are more detailed and extensive in the DAP programmes.

However, the shares of general education, VET theory and practice in vocational programme curricula vary by trade. Vocational learning ratios (practical training in companies and in vocational training school) for each trade/profession are defined by the education ministry on the advice of professional chambers.

Given the small size of the country, not all qualifications are offered by its education system. Learners can follow a cross-border apprenticeship, implying that they do their practical training in a company based in Luxembourg, while attending school in one of the neighbouring countries.

2.2.3. Technician programmes

Technician programmes (*programme de la formation de technicien*, ISCED 354, EQF 4) cover grades 10 to 13 and prepare learners for the technician diploma (*diplôme de technicien*, DT) (Annex 1). This programme is offered as a full time track (*filière de plein exercice*), where all training occurs in an education institution and includes a minimum job placement of 12 weeks. Training focuses on the labour market, aiming at a high professional level, and prepares students for higher technical education through optional preparatory modules. These modules can be acquired either within the normal or extended duration of the studies. The technician diploma certifies that the holder is competent to perform the trade/profession in question. It differs from DAP by in-depth and diversified competences as well as in-depth general education. DT graduates may progress to the third year of the technical programme.

In 2014/15, the most popular programmes are those training for administration and business and computer science.

2.2.4. Developing VET programmes

The development of the CCP, DAP and DT programmes is based on the following elements:

- (a) occupational profile: lists the areas of activities as well as the activities and tasks of future occupations after two to three years of workplace experience;

- (b) training profile: based on the occupational profile by areas of competence: occupational and general competences;
- (c) training programme based on the training profile:
 - (i) defines the learning outcomes for each competence and regroups them by learning domain;
 - (ii) organises the learning domains and outcomes in modules and credits;
 - (iii) curriculum: determines the content of the different modules.

2.3. Post-secondary education: master craftsperson programmes

The master craftsperson qualification (*brevet de maîtrise*; ISCED 453, EQF 5) entitles the holder to settle in the craft industry as self-employed and to train apprentices. The qualification confers the title of master craftsperson in the particular trade.

Preparatory programmes are organised by the Chamber of Trades and Skilled Crafts. To access these programmes, learners are required to have reached at least EQF level 3. Learners should also have at least one year of work experience to be able to take the final exam. The programmes are modular and the number of hours may vary by trade. However, all modules have to be accomplished within six years. The master craftsperson qualification does not give any access right for higher education; progression opportunities depend on the certificate gained at secondary level.

2.4. VET at tertiary level

2.4.1. Higher technician programmes

In VET at tertiary level, a higher technician certificate (*brevet de technicien supérieur*, BTS; ISCED 550, EQF 5) is awarded to students who complete two years of studies in one of the following fields (Annex 1):

- (a) applied arts;
- (b) commerce;
- (c) health;
- (d) industry;
- (e) services;
- (f) crafts.

To be admitted to the programme learners require either a general or a technical secondary school leaving diploma (*diplôme de fin d'études secondaires*,

diplôme de fin d'études secondaires techniques), or a technician diploma (*diplôme de technicien – DT*) complemented by optional modules.

BTS programmes alternate; they provide both theoretical instruction and training in a work environment. The programmes are offered in public and private secondary schools, and technical schools recognised by the State. Depending on the domain, BTS graduates can pursue bachelor studies.

BTS graduates applying to the University of Luxembourg only apply to the management bachelor programme. Application forms are evaluated by the course director and an evaluation committee. Learners need to have obtained the 120 ECTS of the BTS to enter the third year of the management bachelor programme. Bachelor learners ⁽²²⁾ who have acquired their BTS abroad only need to attend the two semesters of the third year while the BTS graduates from Luxembourg will have to complete, in addition, a third semester abroad.

2.4.2. Vocational bachelor programmes

Vocational bachelor (*bachelor professionnel*) programmes are accessible to holders of a general or technical secondary leaving diploma or a technician diploma in the field of study. These programmes last over six semesters including one semester of compulsory mobility abroad. Vocational bachelors are offered in the following fields:

- (a) IT;
- (b) engineering (electrical, energy and environment, mechanical engineering);
- (c) management (insurance, banking or business sector);
- (d) educational sciences;
- (e) social and educational sciences.

Vocational bachelor programmes prepare students for career entry or for an application-oriented master degree (vocational master, *master professionnelle*).

2.5. Government-regulated continuing VET

All adults have access to education and training opportunities regardless of their age, education and employment status. Adult education, and continuing vocational training more specifically, allow everyone at different stages of their lives to pursue training, be it to obtain a first degree, to develop or improve knowledge, to change careers or to adapt to new technologies. This section

⁽²²⁾ Bachelor students need to complete one year abroad (Section 2.4.2).

explains continuing vocational training leading to qualifications; other forms of training for adults are covered in Section 2.7.

The national portal ⁽²³⁾, managed by the National Institute for the Development of Continuing Vocational Training (Institut National pour le Développement de la Formation Professionnelle Continue, INFPC), presents an extensive catalogue of more than 6 000 courses offered by 138 registered training providers. The portal also centralises information on training: news, legislation, practices, training environment, studies and analyses.

2.5.1. Vocational secondary education for adults

The following opportunities are available for adults:

- (a) last year of lower cycle;
- (b) technical programmes: evening and young adult classes;
- (c) technician programmes;
- (d) vocational programmes: adult apprenticeship;
- (e) vocational programmes: evening classes;
- (f) vocational programmes: on-the-job training.

2.5.1.1. Last year of lower cycle for adults

Adults may attend the last year of the lower cycle (grade 9) and then access the technical and technician programme as well as a vocational programme (Section 2.2).

2.5.1.2. Technical programmes for adults: evening and young adult classes

Adults can enrol in evening classes in grades 10 to 13 of the administrative and commercial technical programmes and in grades 10 and 11 of the health care programmes.

Young adults may also enrol in daytime administrative and commercial technical programmes in grades 10 and 11. These programmes are reserved for students who have failed at school or who wish to reorient themselves. Successful completion leads to award of a technical secondary school leaving diploma.

2.5.1.3. Technician programmes for adults

The only technician diploma currently available is the aircraft mechanic technician diploma (cat B), which can be gained by attending an adult apprenticeship. Applicants must have an apprenticeship contract with an air

⁽²³⁾ <http://www.lifelong-learning.lu/Accueil/en> [accessed 29.7.2015].

carrier, hold a DAP in the mechanical or electro-technical fields or the previous CATP (certificate of technical and vocational capability), and have sufficient knowledge of English. Training to obtain an aircraft mechanic technician diploma is certified by an international 'aircraft maintenance licence'.

2.5.1.4. *Vocational programmes for adults: adult apprenticeship*

Except for admission criteria, there are no differences between apprenticeships for adults and young people. Those 18 years old and above, having left school more than one year before and willing to learn a trade or to change their career, can follow an 'adult apprenticeship' leading to DAP or CCP (Section 2.2.2); this is available both to job holders and seekers registered at the public employment service. Upon proof of certain work experience, a dedicated committee may orient the adult learner to the suitable grade. The committee includes representatives of the education ministry, Vocational Training Service, labour ministry, guidance service of the employment service, Chamber of Commerce, Chamber of Trades and Skilled Crafts, Chamber of Agriculture, and Chamber of Employees (SCL, 2010b).

Theory training takes place in a technical secondary school or at the national continuing vocational training centre. The practical part is apprenticeship in an enterprise. Adult apprentices receive allowances equal to the minimum wage for unskilled workers (EUR 1 921) as defined in a 2010 regulation (SCL, 2010b).

The 2008 reform introduced a modular system for apprenticeship (Section 2.1.1 and 2.2.2) which guarantees the validity of any module acquired during initial training for a certain period of time, aiding access to lifelong learning.

2.5.1.5. *Vocational programmes for adults: evening classes*

Within vocational programmes, employed adults can acquire a vocational aptitude diploma (DAP) as administrative and commercial agent. The theoretical part is provided through evening classes in a technical secondary school or in the national continuing vocational training centre. The practical part is acquired through full-time employment in a company. The list of training programmes available through evening classes varies from year to year.

2.5.1.6. *Vocational programmes for adults: on-the-job training*

The nursing assistant vocational aptitude diploma (*diplôme d'aptitude professionnelle, aide-soignant*) can be obtained through on-the-job training. This training is suitable for those with some work experience in the care sector, who have not had the opportunity to undertake IVET. The three-year training course leads to a nursing assistant DAP. Applicants must fulfil admission criteria such as professional experience of minimum 2 500 hours in the care sector, an

employment contract (minimum 50% part-time) and the agreement of their employer.

2.5.2. Language training

The National Institute of Languages (Institut National des Langues) follows the Council of Europe's common European reference framework and offers training for adults in eight foreign languages. The training prepares for an internationally recognised communication skills certificate in a specific language. The institute offers training to teachers of Luxembourgish, leading to a certificate (*Zertifikat Lëtzebuenger Sprooch a Kultur*) and also acts as the national certification centre for diplomas and certificates in Luxembourgish.

2.5.3. Training for job seekers on employer demand

The public employment service and the education ministry collaborate in providing training for job seekers. Training schemes are organised directly for a sector or an enterprise at the request of employer(s). Training content is decided jointly with the employer who, in agreement with the education ministry and the labour ministry, recruits learners after successful completion of the scheme. Training schemes generally last between six weeks and three months and are complemented with period(s) of job placement.

2.5.4. Continuing professional development for teachers

Against the backdrop of constant developments in education and training, the Further Education Institute (Institut de Formation Continue) of the Department for Coordination of Educational and Technological Research and Innovation (Service de la Coordination, de la Recherche et de l'Innovation Pédagogiques et Technologiques, SCRIPT) organises advanced training activities in three areas:

- (a) personal professional development;
- (b) teaching methods and tools;
- (c) organisational development.

Continuing professional development responds to individual, local or national needs and can be organised in many forms: brainstorming and information exchange meetings, conferences, seminars, courses, and workshops.

The training targets:

- (a) all teachers and psycho-socio-educational staff (primary education, secondary and technical secondary education, special education);
- (b) members of school management/inspectors;
- (c) trainers (tutors in enterprises, trainers in adult learning);
- (d) members of working groups, national committees and project management teams.

There are no explicit criteria for the training of trainers; continuing training trainers must satisfy the same criteria as teachers in initial education, at least for public-sector continuing training institutions. The 2008 law reforming VET created a new profession in lifelong learning: the adult trainer. Adult trainers receive targeted, practice-oriented training that takes account of the specific needs of adults. Trainers in companies are also trained, which was not the case before the 2008 reform (Section 2.1.1).

In 2015, the parliament approved the law establishing a Training Institute of National Education (Institut de formation de l'Éducation nationale, IFEN) by 2016. Its mission is to design, implement and evaluate the professional insertion (internship) and the professional development of teachers and psycho-social staff in education. It will also:

- (a) improve the quality of teaching and support teachers;
- (b) implement public service statutory and salary reform;
- (c) harmonise teacher integration into the workplace ⁽²⁴⁾ through internship schemes;
- (d) adapt the institutional framework to the complexity of professional insertion and continuing education.

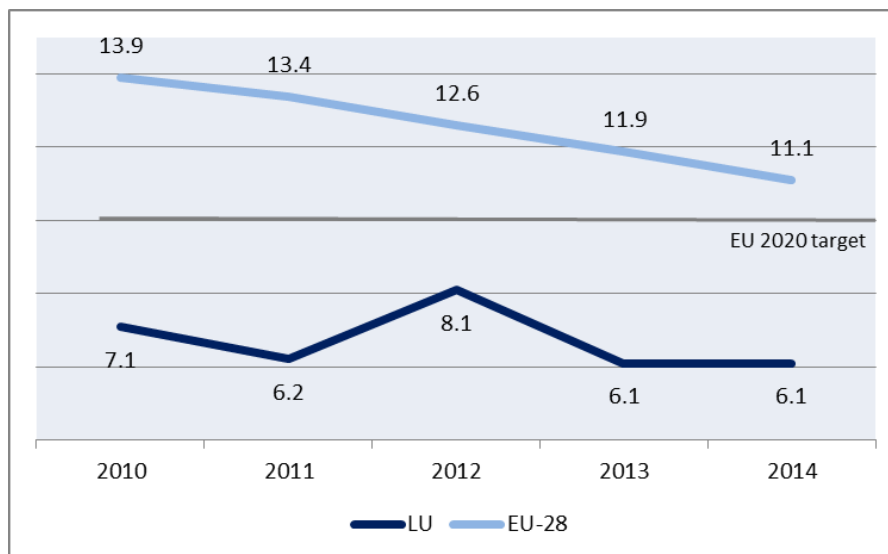
2.6. Reducing early leaving from education and training

Two types of indicator can be used to measure early leaving from education and training: the Eurostat indicator comparable across the EU (% of the population aged 18 to 24 with, at most, lower secondary education and not in further education or training); and national statistics based on administrative data on early school leavers among learners in secondary education (mainly 12 to 19 year-olds but also including young people up to 25) ⁽²⁵⁾.

⁽²⁴⁾ In French: *insertion professionnelle*.

⁽²⁵⁾ National statistics refer to the number of learners in secondary education who, during a given school year, have:

- (a) left school 'temporarily' without acquiring a certificate or diploma but resumed their education and training at a later stage either in the country or abroad;
- (b) left school 'permanently' (at least until the new data on secondary education learners are published) without acquiring a certificate or diploma. This category also includes those who had left, were temporarily reintegrated but left school again.

Figure 12. **Early leavers from education and training 2010-14, %**

NB: % of the population aged 18 to 24 with, at most, lower secondary education and not in further education and training.

Source: Eurostat code: t2020_40; extracted 24.4.2015.

As demonstrated in Figure 12, the share of early leavers from education and training according to Eurostat is below the EU 2020 target of 10%. However, these data are subject to important variations due to the small sample size in the country and may not necessarily allow for the causes of early school leaving at national level to be easily identified. In response to the lack of reliable data, the national education authorities produce annual statistics based on administrative data and on a survey of early school leavers. These data indicate a higher early leaving rate for those up to age 25 (11.6%); this is about twice as high as the rate calculated via the labour force survey in 2013. The share of early leavers is relatively high among the migrant population, especially for those not having one of the three national languages as mother tongue (MENJE, 2015b).

PISA results for 15-year-old students show performance somewhat below the OECD average in mathematics, reading and science. Demands in most upper secondary programmes are high, which leads to repetition of grades and failures. Measures to address this are included in the foreseen amendments to the 2008 VET reform (MENJE, 2015b).

All skills and competences acquired during initial education are considered acquired for the entire life. Anyone who has interrupted studies can resume them.

2.6.1. Remedial measures

Remedial measures were introduced with the recent VET reform (SCL, 2008a) to help any learner struggling to make his/her way of learning more effective or to provide him/her with further support in certain areas. They are decided by the

class council, proposed to the learner and implemented by the director. Remedial measures may take the form of:

- (a) individualised learning support;
- (b) additional learning time;
- (c) support with homework;
- (d) support in acquiring learning techniques.

If the learner does not demonstrate enough motivation, the school director may decide to stop participation in the remedial measures.

2.6.2. Mosaic classes

The action plan for dropout prevention ⁽²⁶⁾ addresses learners with motivation problems and in 2005/06 initiated a pilot project of mosaic classes with four secondary schools. Through support based on a 6 to 12 week individualised management plan, the mosaic classes aim to reintegrate students in their initial grade or in a grade appropriate to current development. Since 2009, 'mosaic classes' have been introduced in the entire school system including VET (SCL, 2009b).

In 2013/14, mosaic classes in 20 schools have welcomed 255 learners, approximately the same number as in the previous year (MENJE, 2015c). Since their creation, the mosaic classes have welcomed 1 455 learners.

2.6.3. Second chance schools

The first 'second chance' school in Luxembourg (*école de la deuxième chance*, E2C) was set up in 2011 and targets young people (16 to 24) who have dropped out of school or do not find an apprenticeship place. The goal is to help these young people develop general, social and practical skills that empower them to (re)integrate in a general or technical secondary programme, an apprenticeship or the labour market. Learner motivation is essential for the success of the programme; learners have to show a real willingness to engage again in school to be admitted.

The pedagogical approach differs from the one used in mainstream education. The training includes general subject modules and practice in schools, placement in enterprises and complementary activities. The programme is organised in small groups, with tutors supervising learners. The duration of this training scheme varies from several months to two years.

⁽²⁶⁾ Following pilot project *Prävention der Schulverweigerung* (Petry and Neunkirch, 2009).

In July 2013, 120 learners graduated from second chance school; 40% then registered in a secondary school, 49% entered a new grade of second chance school to obtain a certified qualification, 3.5% entered working life and 7.5% are looking for an apprenticeship or adapted training. Since 2013/14, the second chance school has increased its capacity by 200 learners (MENJE, 2014b).

2.6.4. Vocational familiarisation programmes supported by guidance

Secondary schools offer programmes to help young people to build a career plan (*initiation professionnelle divers métiers*). Similar courses (*cours d'orientation et d'initiation professionnelles*) are organised by the national centres for continuing vocational training (Centres Nationaux de Formation Professionnelle Continue, CNFPC). They enable young people to build a realistic career plan through meetings with managers who present their professions.

In addition to refresher courses on basic skills, training placements allow young people to validate their career plans and gain initial professional experience. The COIP programme lasts for one year, addressing learners aged 16 to 18 who do not meet the conditions to access secondary technical education programmes, do not have the required skills to enter the labour market, or left school early. They can attend those classes to return to formal education and training and move towards secondary technical education (*enseignement secondaire technique*). The COIP programme includes practical and vocational elements (workshop and training placements) as well as a general education component delivered in modules. In 2012/13, IPDM and COIP registered around 320 participants.

2.6.5. Language assistance

Integration classes (*classe d'insertion*) of the lower cycle of technical secondary education have been created for students who have a good academic record in their country of origin, but do not have a sufficient command of the languages used for tuition. Based on language skills gaps, pupils receive intensive support in learning French or German.

Students who arrive in the country without knowledge of German or French are offered a welcoming class. They follow intensive courses of French and introductory courses in Luxembourgish. The class council assesses students' skills and decides when it is time to integrate them either in a technical secondary education class, in an integration class of the lower cycle, or in a specific language class for the medium cycle.

Specific language classes (RLS classes, *classes à régime linguistique spécifique*) are offered to students who speak French but lack sufficient

knowledge of German at the medium and upper cycles. In the upper cycle of technical secondary education, some curricula are taught in French.

2.6.6. Inclusion of learners with special needs

Following legislation (SCL, 2011) on access to qualifications for learners with special needs, a committee was set up (Commission des Aménagements Raisonables) by 23 colleges deciding for each individual case what kind of adjustment needs to be offered. These adjustments allow integrating learners with special needs, who would otherwise have been excluded, in regular classes. They include, for example, extra time during exams, adjusted exam assignments and the option to use technological and human assistance.

2.6.7. Local Action for Youth

The education ministry together with the Local Action for Youth (Action Locale pour Jeunes) have developed a systematic procedure to identify young people leaving education and training early. It is based on information available in the national register of learners in secondary education (*fichier élèves*). The service staff contact the young people to determine their current activities, their education, employment or training status. They also offer individualised support in restarting education or engaging in a professional project. In 2011-12, the staff of 10 regional offices contacted 2 480 school dropouts.

2.6.8. Programmes for young job seekers with low skills

Young people with low skills require specific training and intensive monitoring. Specific measures were integrated into the Youth guarantee scheme to provide the best possible support for these youths ⁽²⁷⁾.

The 'Job-Elo!' programme addresses young job seekers aged 18 to 24 with low or no qualifications and no professional experience. The programme offers them two months' training in the Centre for Social and Professional Guidance (Centre d'Orientation Socio-Professionnelle), followed by an introductory period of one month in companies. If the experience proves successful, young people can then enrol in a one-year in-company training programme (work-support contract), which can lead to an apprenticeship or a fixed term employment contract. In 2014, the success rate was 77.9% for young people who started this training programme and the data for 2015 are even more promising.

⁽²⁷⁾ See also

<http://ec.europa.eu/social/main.jsp?catId=1161&langId=en&intPageId=3345>
[accessed 29.7.2015].

Other training programmes targeting youth with low skills include ‘career and professional project’ workshops, set up in partnership with the Luxembourg School of Commerce (2014), as well as business-oriented workshops. These programmes are an integral part of the Youth guarantee (European Commission, 2015).

2.6.9. Guidance and counselling

The Psychological and Educational Guidance Centre (Centre de Psychologie et d’Orientation Scolaire, CPOS) offers support services to young people (aged 12 to 29) and their families. It offers psychological support and counselling, and addresses behavioural and learning difficulties, as well as family or relational problems.

2.7. Other forms of training

Non-government-regulated continuing vocational education and training (CVET) is offered by private institutions and CVET centres (*offreurs de formation*). The various training opportunities they offer adults frequently do not lead to qualifications within government-regulated VET but to sector qualifications.

Private training institutions are subject to the rules of the right to practise, and must hold a ministerial authorisation to provide continuing training. For capital companies (legal entities) and partnerships (natural persons) the authorisation to practise as a ‘manager of a continuing vocational training body’ is issued by the Ministry of the Economy (Ministère de l’Economie) at the recommendation of the education ministry. Each body must comply with the worthiness⁽²⁸⁾ and qualifications criteria required.

2.7.1. Training offered by professional chambers

The Chambers of Commerce, Trades and Skilled Crafts, Agriculture and Employees have offered training since World War II in line with member demands.

Throughout the year, the chambers organise open public courses, work placements, seminars and lectures on general management and technical subjects. Some of these courses lead to official certificates (Sections 2.7.1). Each

⁽²⁸⁾ Vocational worthiness applies to the director and is assessed on the basis of his/her criminal record for actions of up to the preceding 10 years. Vocational credentials for managers of a continuing vocational training body can be gained either by proving a certain level of qualifications or professional experience.

year, the professional chambers update their training offer and publish training catalogues. They have contributed to increasing the training offer and eased accessibility by offering training at affordable prices.

2.7.2. Training offered by sectoral organisations

Several institutions/centres offer sectoral training to their target groups. A specific feature here is that workers hired by temporary work companies also receive tailored training depending on their needs.

Table 4. Training offered by sectoral organisations

Sector	Provider	Training offer
Banking sector	Institute for Banking Training in Luxembourg (IFBL)	Training for employees in the banking sector and provides qualifications, for example in retail banking, private banking, insurance, and risk management
Civil service sector	Further Education Institute (SCRIPT)	Advanced training for teachers (Section 2.5.4)
	National Institute of Public Administration ⁽²⁹⁾	CVET for staff working in State agencies and municipalities
Construction sector	Institute for Construction Training (IFSB)	Competence centre offering training in building, security and management
Health sector	National Institute of Continuing Medical Training (ILFMC)	Health care specific training such as cardiology
	Continuing vocational training centre of Dr Robert Widong	Sectoral training programmes for all medical staff of the Luxembourg Hospital Alliance members. The centre also provides professional development for trainers in the hospital sector
Temporary work sector	Fund for training in the temporary work sector	Training for permanent and temporary workers in temporary work companies

Source: ReferNet Luxembourg.

2.7.3. Training offered by the public employment service

The public employment service offers the following types of training to job seekers:

- (a) return to work training placement for employment ⁽³⁰⁾: this is on-the-job and designed for job seekers 30 years old and above;
- (b) employment induction contract: this contract is reserved for employers who can offer young job seekers a job prospect (employment) once they have

⁽²⁹⁾ In cooperation with the Ministry of the Civil Service and Administrative Reform (Ministère de la Fonction Publique et de la Réforme Administrative) and the Ministry of Home Affairs (Ministère de l'Intérieur).

⁽³⁰⁾ See <http://portal.lifelong-learning.lu/Detail/Article/Orientation/stage-de-reinsertion/en> [accessed 29.7.2015].

- completed their training. It provides practical training during working hours, making it easier for them to integrate into the labour market;
- (c) employment support contract: the objective is to help young job seekers to improve their skills (theory and practice) and prepare for their (re)integration into the labour market;
 - (d) training, reintegration, insertion and placement of disabled workers: when the disability status of a person is officially recognised, the guidance and vocational rehabilitation committee may propose suitable measures to the director of the employment service; these include induction or adaptation periods or rehabilitation work, adapted to the person's age, degree and nature of disability, and taking account of his/her previous and remaining placement, training or retraining capacity;
 - (e) the Youth guarantee ⁽³¹⁾ was launched in June 2014. It commits national authorities (National Employment Agency, Local Action for Youth, National Youth Service, etc.) to offer young people between 16 and 25 high-quality guidance to help them find a job, make it possible to return to school or an apprenticeship, or to offer work experience in projects on a voluntary basis. Each is offered support tailored to his/her background, personal situation and aspirations.

2.7.4. Training offered by communities and trade unions

In addition to the public employment service, training for job seekers is provided by non-profit organisations/associations, such as:

- (a) 'Co-labour s.c.' is active in the horticultural, forestry and environmental sector. Co-labour's main objective is professional (re)integration through guidance, qualification and labour market integration;
- (b) 'Competence a.s.b.l.' is an association that helps individuals and organisations to develop skills. The association provides specific support to two types of job seekers (under 25 and over 45 years) experiencing difficulties in finding a job;
- (c) 'Forum for employment' (Forum pour l'Emploi a.s.b.l.) develops back-to-work schemes for the unemployed that include both off- and on-the-job training (learning by doing) in the service and construction sectors;
- (d) the Rëm Schaffen scheme regularly offers training for job seekers registered with the public employment service. The association guides, informs and helps job seekers to set realistic professional objectives. It also assists with

⁽³¹⁾ <http://www.jugendgarantie.lu/> [accessed 29.7.2015].

- job applications, informs on labour market opportunities, and helps people identify their abilities and regain self-confidence;
- (e) the Centre for training and professional integration for women (Centre de Formation et d'Insertion Professionnelle pour Femmes, NAXI) provides training to improve their recruitment chances;
 - (f) ProActif a.s.b.l.'s actions and projects aim to create an environment that promotes employment and helps job seekers (re)integrate in the labour market. The association helps them overcome potential obstacles that have prevented them from finding a new job;
 - (g) 'Zarabina a.s.b.l.' offers group training as well as individual advice in professional life, continuing training and career development. The approach is based on tailored strategies that systematically and effectively take into account the daily constraints and the personal objectives of its clients;
 - (h) local and regional centres for initiative and management (Centres d'Initiative et de Gestion Local/Régional, CIGL/CIGR) help unemployed people find a job and reintegrate into the labour market. The centres offer various vocational training services. The associations collaborate with the local municipalities which offer job opportunities;
 - (i) the Centre for Social and Professional Guidance offers information and advice, training and skills development to job seekers registered at the public employment service. Two months' social and technical training aims to guide them towards the primary job market, a social initiative or any other suitable system to make their professional integration easier;
 - (j) in their training centre (Centre de Formation Syndicale du Luxembourg, CFSL) the Luxembourg trade unions develop training programmes for the members of its founder, the Chamber of Employees. It also organises thematic conferences and seminars on health, safety and wellbeing at work.

The 2012 adult education survey (AES) ⁽³²⁾ showed that, on average, 10% of adults attend formal education and training activities. This rate is higher (18%) among young adults (25 to 34) and remains relatively low for other age groups (6%-9%). Participation in non-formal learning is higher than in formal education and training. According to the survey, 68% of adults took part in non-formal learning. The rate remains high in all age groups for employees but is lower for inactive people (retired, 30%; people with disabilities, 34%) and for the

⁽³²⁾ The AES survey was conducted among a representative sample of residents aged between 25 and 64 and covers formal, non-formal and informal learning activities in which adults participated during the 12 months preceding the survey.

unemployed (42%). Almost half the adults participated in informal learning, mostly for personal development (55%) but also for work-related reasons. Most informal learning is linked to the use of computers, healthcare, languages and arts.

The latest continuing vocational training survey (CVTS4) ⁽³³⁾ shows that 70% of companies with 10 employees or more offer training to their employees. The figure varies depending on sector and company size: almost every big company (250 employees or more) and 61% of small enterprises (10 to 19 employees) provide training. In 2010, more than 50% of the employees in the country participated in CVET courses. However, there are considerable differences between sectors: while two thirds of the employees in the financial and other services sector participate in training, the share in the construction sector was only 31%.

2.8. VET funding

2.8.1. Funding initial VET

Total education expenditure increased from 4.9% in 2008 to 5.6% in 2013 ⁽³⁴⁾. Luxembourg devotes the highest level of financial resources to education among the OECD ⁽³⁵⁾ countries per student. At secondary level, the expenditure per student is EUR 16 226 (USD 17 633), while the OECD average is about EUR 8 280 (USD 8 998) (OECD, 2013) ⁽³⁶⁾.

In 2012, funding for initial public education was EUR 1.62 billion, or 3.8% of GDP (MENJE, 2014a), shared between the three levels of initial education: primary, general secondary, and technical secondary. Education is financed at two levels: central government and local administrations (106 municipalities). More than half (54.7%) of the funding goes to primary education (EUR 887 million). At secondary level, expenditure on technical education is higher (EUR 463 million, 28.6% of total funding) than general education (EUR 271 million,

⁽³³⁾ The latest CVTS4 survey was conducted in 2010. The next CVTS will take place in 2016 with 2015 as reference year.

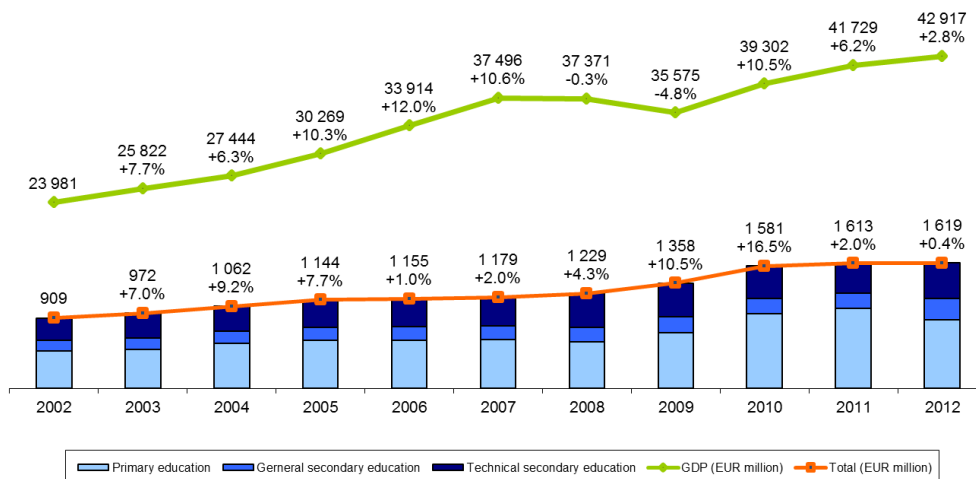
⁽³⁴⁾ Eurostat (table gov_10a_exp).

⁽³⁵⁾ Organisation for Economic Cooperation and Development.

⁽³⁶⁾ European Central Bank Euro foreign exchange reference rate as on 21 July 2015 EUR/USD=1.0867, <https://www.ecb.europa.eu/stats/exchange/eurofxref/html/index.en.html> [accessed 29.7.2015].

16.7% of total funding). It covers remuneration of teachers, administrative and technical staff, operating costs and investments (Figures 13 and 14).

Figure 13. Investment in education 2002-12



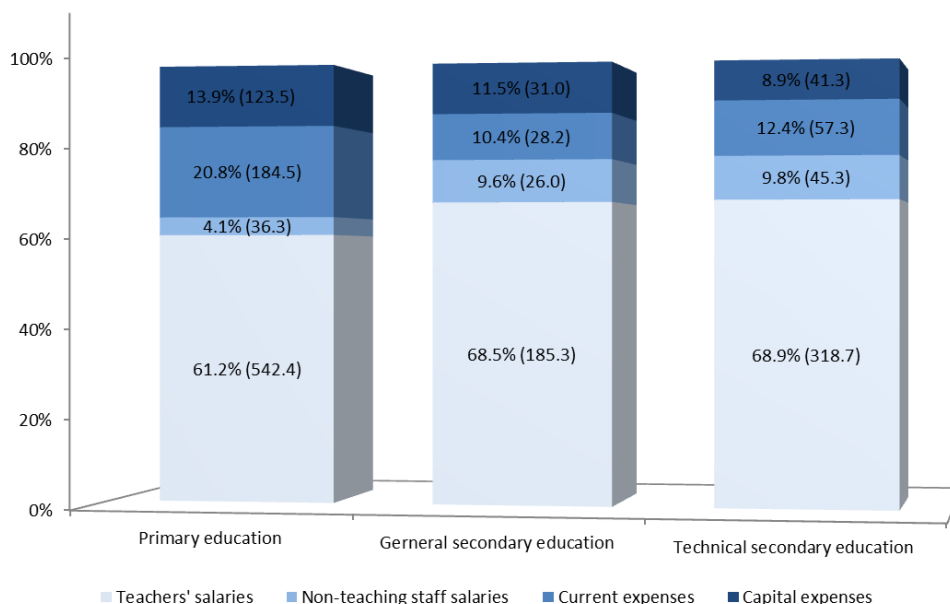
Source: MENJE, 2014a.

Public funding for general and VET schools has been slightly, but constantly, increasing in the past decade. There was a break in time series in 2009; since then the State has been fully in charge of remunerating primary education teachers, previously shared between the State and the communes.

Public funding includes:

- teachers' salaries,
- non-teaching staff salaries,
- current expenses (goods and services to ensure the daily functioning of educational services; school allowances; care of children outside school hours at municipal level for extra-curricular and after-school activities; the costs incurred by school medicine and school transport),
- capital expenses (movable and immovable assets).

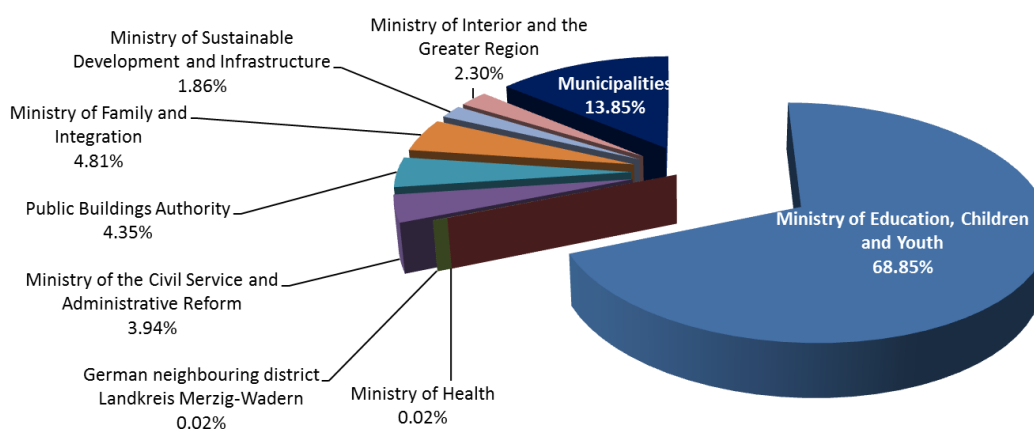
Figure 14. School funding in 2012, % (EUR million)



Source: MENJE, 2014a.

As shown in Figure 14, salaries make up the highest costs for all education programmes (61-68%); at around 68% they are more or less similar for general and technical secondary education. The share of current expenses is higher in primary education than in general or in technical secondary education, possibly because care of children outside school hours at municipal level is more costly at this level. Capital expenses are significant in basic education (13.9%), including mainly construction, expansion or refurbishment of school buildings, and accommodation facilities.

Figure 15. Funders of public education in 2012



Source: MENJE, 2014a.

According to the latest available data, total central government expenditure (the cumulative expenditure of the various ministries and administrations involved in the financing of education) was nearly EUR 1 396 million. With a total contribution of 86.15%, the State is the primary funder of education in Luxembourg. Teachers' and non-teaching staff salaries are equal to 63.78% and 5.05% of total central government education expenditure: the education ministry finances most. The 106 communes contribute 13.85%, or about EUR 224 million: teachers' salaries (12.9%), non-teaching staff salary (21.7%), current expenses (46.4%), and capital expenses (85.4%).

Apart from national funds, money spent on public education can also come from foreign sources. The Schengen-Lyzeum Perl is a German and Luxembourgish high school set up in 2007, located in Germany close to the border. Learners can acquire the general and technical secondary school leaving diplomas (administrative and commercial division). The Landkreis Merzig-Wadern (LKMV), a German neighbouring district, pays 60% of the running costs and 50% of the building maintenance and the investment for the school equipment. The Luxembourg State pays the other part.

2.8.2. Funding for individuals in higher education

The government offers higher education students financial support in the form of a grant and a loan, up to EUR 17 700 per academic year: the grant and loan proportions depend on the applicant's income (Cedies, 2014). Tuition fees are taken into account when calculating the financial support. In each academic year, higher education students apply for the support twice: before the winter and summer semesters.

2.8.3. Funding continuing VET

Continuing training for employees or for individuals (private initiative) is normally funded by the enterprises or individuals themselves. However, in some sectors, companies must pay a levy to sectoral training providers to benefit from specific access conditions and prices. Companies may also contribute to training centres voluntarily to benefit from specific access conditions and prices. Companies and individuals can receive support and incentives for CVET, often non-financial but linked to working time arrangement (Chapter 4).

2.8.4. Funding training for unemployed and other vulnerable groups

Training for the unemployed and other groups excluded from the labour market is supported by the labour and the education ministries. The labour ministry finances training schemes run by the national centres for continuing vocational training and training schemes run by private centres under contract with the labour and the education ministries. The public employment service also provides financial support for different training programmes for job seekers (Section 2.7.3).

CHAPTER 3.

Shaping VET qualifications

3.1. Designing qualifications to match labour market needs

VET standards are developed in cooperation between the education ministry and the professional chambers (Section 2.1.2). Curricula are based on occupational standards and informed by skill needs in enterprises. The following institutions ensure VET provision in line with labour market needs:

- (a) Permanent Labour and Employment Committee (Comité Permanent du Travail et de l'Emploi): the ministries of education and labour, cooperate through this committee. It is responsible for reviewing the labour market situation regularly. Its working methods include analysis of job supply and skills demand;
- (b) Training Observatory: established in 2012 by the National Institute for the Development of Continuing Vocational Training (INFPC), it provides the government and social partners with detailed statistics and reliable qualitative analyses on training issues; these are useful insights for public policy and private strategies in the lifelong learning domain;
- (c) Employment Observatory: established by the labour ministry; analyses labour market data, publishes a labour market dashboard and organises annual conferences on relevant labour market issues and employment;
- (d) Competence Observatory: to help improve initial and continuing training offers, the competence observatory of the Luxembourg International University Institute (Institut Universitaire International Luxembourgeois), in cooperation with companies, identifies and anticipates competence needs in sectors and occupations. Analyses cover the trade, law, health, food and catering sectors, management, socio-professional integration and green professions;
- (e) Business Federation of Luxembourg: since 1997 has conducted annual surveys ⁽³⁷⁾ on skill needs, alternatively in the industrial and in the information technology and communication sectors. It explores skill needs of enterprises to achieve a good balance between vocational training supply

⁽³⁷⁾ This survey is conducted in collaboration with the Luxembourg Bankers' Association, the Luxembourg Confederation of Commerce, the Chamber of Commerce and the education ministry, with support from the European Union (EURES).

and labour market demand. The survey is the basis for the *Qualifications of tomorrow (Les qualifications de demain)* publication. It offers forecasts of enterprise skill requirements for replacements and new job openings, and the associated qualification levels. The publication provides young people and their parents with insights into education paths and encourages public authorities, professional chambers and other VET actors to take account of enterprises' training needs in CVET.

The main bodies responsible for designing qualifications are curriculum teams and national vocational commissions.

A curriculum team is associated with a specific profession or group of professions; training centres and schools are equally represented. The education minister decides on the maximum number of representatives for each team.

The curriculum team:

- (a) develops and revises programmes for the trades and professions it is responsible for;
- (b) ensures consistency between the objectives of school-based and work-based training;
- (c) provides guidelines and procedures for continuous assessment of learners at school and in the workplace, in cooperation with the respective committees. The guidelines and procedures feed into evaluation frameworks adopted by the education minister;
- (d) develops and evaluates the 'integrated project' (*projet intégré*) that replaces the former final exams. The project aims to check whether the student has developed the complex competences needed to solve a real or simulated work situation.

National vocational commissions (*commissions nationales de formation*) exist for each field of general and technical secondary education; they propose course content, methods and evaluation criteria to the education minister. The commissions are made up of:

- (a) a teacher from each school where CCP or DT and DAP programmes are offered (Sections 2.2.2 and 2.2.3);
- (b) a representative of the national general education commissions (*commissions nationales de l'enseignement général*), designated by the minister;
- (c) a representative of each professional chamber associated to the training;
- (d) representatives of the higher council of health professions and employer representatives in the case of health sector professions;
- (e) employer representatives of education and social institutions, in the case of social sector professions.

3.2. Qualifications framework

The development and implementation of the European qualifications framework for lifelong learning (EQF) is seen as an opportunity to make explicit the existing (implicit) education and training levels and the links between them. The key objective of the eight-level national qualifications framework (*cadre luxembourgeois des qualifications*, CLQ) is to increase transparency of qualifications. The CLQ serves as a non-binding guiding framework for stakeholders: individuals, education and training providers, and the labour market.

The CLQ was referenced to the EQF and QF-EHEA in 2012. Beginning in 2014, a committee represented by the education ministry and the higher education ministry published a report which detailed the links between the CLQ and the EQF and to the qualifications framework in the European higher education area. Levels 6-8 include qualifications awarded by Luxembourg University only. VET qualifications have been assigned to EQF levels 2-5, with the higher technician and the master craftsperson certificate, for instance, at the latter.

The philosophy of the CLQ is to show that lifelong learning is not fragmented and that it should not be restricted to formal qualifications. The referencing report, however, only reflects formal education and training, which is changing and moving towards a learning outcomes approach. Once this change is complete, a new report reflecting an adjusted lifelong learning framework, including qualifications acquired through non-formal and informal learning, will be published.

3.3. Validation of prior learning

3.3.1. Validation of formal, non-formal and informal learning

The 2008 legislation (SCL, 2008b) reforming VET stipulates that everyone has the right to have his/her prior learning and occupational experience validated to obtain a professional qualification. Validation of prior learning (*validation des acquis de l'expérience*) is a procedure that recognises the value of learning at school (incomplete qualifications), non-formal and informal learning, and work experience. Individuals who have at least three years (5 000 hours) of practical experience in a particular field may request certification from the education ministry.

Validation is possible for all VET diplomas and certificates. If all conditions are met, the process, leads to a certificate or diploma or to a part thereof.

Experience must be directly related to the requested certification. At higher technician certificate level, an ad hoc evaluation committee is set up for each individual asking for recognition of prior learning (SCL, 2009a) ⁽³⁸⁾.

At university level, validation of non-formal and informal learning allows experience to be recognised to access bachelor or master studies. The request is considered by a board of examiners whose members are appointed by the Chancellor, following recommendation of the dean of the relevant faculty (SCL, 2003).

3.3.2. Recognition and equivalence of foreign diplomas

A dedicated service of the education ministry assesses the equivalence of foreign general and technical secondary education and vocational education diplomas against national diplomas. A diploma certifying educational attainment may be issued for an incomplete secondary education cycle.

The recognition of foreign higher education diplomas is conducted by the higher education ministry. In May 2015, the Benelux countries signed an agreement for mutual recognition of higher education diplomas. Approval of diplomas is required to get access to certain jobs and regulated professions: for instance, for the teaching profession in humanities and sciences, medicine, dentistry, veterinary medicine or pharmacy, as well as for lawyers (condition to exercise the profession of a lawyer). In the fields of medicine, dentistry, veterinary medicine and pharmacy, the approval procedure applies only to holders of diplomas awarded by countries outside the EU.

3.4. Quality assurance

A national approach to quality assurance has been devised, and evaluation and review procedures are in development stage. There is no real quality framework, but legislation and the current organisation take the quality component into account.

Quality standards for VET providers are part of legislation and used for accreditation and funding. Guidelines and standards are used to promote a culture of continuous improvement. Over the past 10 years, the education and training system has been overhauled to provide the resources needed to cope with the challenges of a rapidly changing environment. Administrative structures

⁽³⁸⁾ See

http://www.ltecg.lu/jma/index.php?option=com_content&view=category&layout=blog&id=62&Itemid=226 [accessed 29.7.2015].

have been changed to allow modern school management with a degree of autonomy. In 2004, the legislation promoted partnership-based school community approaches and school initiatives to improve the quality of education. For VET (programmes leading to CCP, DAP and DT), the education ministry coordinates the implementation of the EQAVET recommendation ⁽³⁹⁾.

National indicators related to the 10 proposed by the recommendation are used and monitored nationally (Annex 3). While most are applied in IVET, their use for CVET, which is not monitored centrally, varies by sector or provider.

3.4.1. Secondary education

In IVET, there are provisions for the external review of VET providers, with methodology for internal and external evaluation. Stakeholders, including teachers/trainers and learners, contribute to developing a quality assurance approach (see below). Their participation in monitoring and evaluation has also been agreed. A common quality assurance framework for IVET providers is being developed and also applies to associated work-based learning. A law is being prepared that aims to oblige all secondary schools, including those in VET, to elaborate a quality development plan.

The Department for Coordination of Educational and Technological Research and Innovation (SCRIPT) – under the authority of the education ministry – and its School Quality Development Agency (Agence pour le Développement de la Qualité Scolaire, ADQS) are responsible for quality assurance of school education. The national vocational commissions and the curriculum teams for specific professions or groups of professions (Chapter 3) also focus on quality as part of their activities. The main tasks of ADQS include:

- (a) providing methodological and scientific support for schools in assessing the quality of tools used to design and implement school development plans;
- (b) ensuring collaboration with various government, international and European actors.

ADQS has developed a national reference framework for school communities' self-assessment. The current framework is the result of research at international level and discussions held nationally with the school community. This framework has seven dimensions. Each dimension is divided into descriptors and indicators (SCRIPT-ADQS, 2015) which allow collection of information on:

⁽³⁹⁾ See EQAVET recommendation at [http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009H0708\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009H0708(01)&from=EN) [accessed 29.7.2015].

- (a) initial conditions (location of the institution, student population description, proportion of pupils with special educational needs) institutional staff, material resources;
- (b) teaching and learning (competence development, learning and teaching conditions, organisation of teaching and learning);
- (c) the quality approach (quality development strategies, internal assessment);
- (d) school management;
- (e) staff development;
- (f) school culture;
- (g) results and effects.

It helps to have:

- (a) a global view of school quality;
- (b) a tool to clarify and set development objectives for the different dimensions of school quality;
- (c) a common reference to help set up exchange networks.

School development committees (*cellules de développement scolaire, CDS*) bring together stakeholders at secondary school level to discuss progress in quality assurance. Their mission includes analysing school data, identifying priorities, and developing and implementing quality strategies. Since 2011/12, 26 CDS have been set up in 33 colleges.

ADQS offers each secondary school individualised methodological support in line with the priorities and pace chosen by the CDS and school management:

- (a) every year schools receive institution-specific reports to support school development and education quality. They include information on school demography, performance (graduation rate, class repetitions), processes in place (initiatives supporting success, specific measures for learner supervision) and perceptions of stakeholders (students, parents and teachers);
- (b) school development plans (*plans de développement scolaire, PDS*) in continuity with the plan for educational success (*plan de réussite scolaire, PRS*) established in primary schooling: secondary schools can use these plans to present their strengths and weaknesses, potential opportunities or obstacles that block the proposed school development, to identify priority needs, and to establish objectives and concrete actions for a three-year period. The CDS are in charge of drafting the school development plans.

3.4.2. Tertiary education

Short-cycle programmes leading to higher technician certificates (*brevet de technicien supérieur, BTS*) (Section 2.4.1) are evaluated externally before being

accredited by the higher education ministry for a period of five years. After this time, the accreditation has to be renewed through a new evaluation. This procedure should ensure that the programmes are relevant to the related professional sector (SLC, 2009a).

The university is largely free to design and implement its own quality assurance processes. At Luxembourg University, quality culture and regular quality control through internal and external evaluation of teaching, research and technical, administrative and logistic services are key elements. Luxembourg has been a member of the European Quality Assurance Register for Higher Education (EQAR) since 2008 ⁽⁴⁰⁾.

3.4.3. Continuing VET

Even though there is no real quality framework, quality is a major concern and is covered in the legislation and in the organisation of CVET. Quality will be a major issue in the future of CVET (Section 4.4).

The white paper on the national lifelong learning strategy (Anefore, 2012; www.S3l.lu), defines six cross-cutting key principles and related measures and recommendations for implementation. These include developing the quality of lifelong learning and establishing a framework for the quality of adult education and training. This framework will be based on:

- (a) a quality label awarded to training providers that meet specified criteria in structure and content of the training offer;
- (b) accreditation of training offers. The working group on training provider accreditation set up in 2014 will continue working on this issue in 2015.

A quality label for municipal governments and non-profit associations can be awarded in CVET by the education minister for a five-year period (SCL, 2000). Courses must be of general interest in so-called areas of general education and social advancement. They must meet educational and financial quality criteria. Objectives and course content must be in line with the priorities for adult education.

Quality criteria and priorities are defined for periods of up to five years by the education ministry based on the advice of the Adult Education Advisory Committee. The committee consists of the persons in charge of the Adult Education Department, two representatives delegated by schools offering evening classes, a representative of the Department of Vocational Education and

⁽⁴⁰⁾ Although there are no agencies registered in Luxembourg three foreign EQAR agencies operate in the country.

a private sector representative. The committee may also involve adult training experts in its work.

While some private providers commit to quality assurance approaches, a large part of adult education is not subject to systematic evaluation or quality assurance.

3.5. Transition from VET to the labour market

Transition from VET to the labour market is monitored by different bodies conducting studies and analyses:

- (a) the Training Observatory has a project on transition from school to work [*Transition École-Vie Active*, INFPC, 2014a] that analyses labour market entry and the professional trajectories of secondary education graduates. The first results show that 81% of the students who took part in a vocational or a technician programme in 2007/08 were employed three years after they had left school (INFPC, 2014b). The share reaches 85% for graduates against 64% for non-graduate learners. The percentage may also differ depending on the programme they attended: from 67% for semi-skilled workers, who attended programmes leading to a CCP (or previously CITP and CCM), to 84% for skilled workers from DAP (or previously CATP) programmes. In the technician programme (DT), 80% of the learners are in employment three years after they left school ⁽⁴¹⁾;
- (b) in 2010, an analysis of the transition between school and the first job was published by Statec, the National Institute of Statistics and Economic Studies of Luxembourg (Statec, 2013). It was based on the results of the 2009 labour force survey, which included a module on the entry of young people into the labour market;
- (c) in 2012, the statistical and analysis service of the education ministry (Service des Statistiques et Analyses) published a paper on school to work transition based on 2 869 questionnaires completed by learners (MENFP, 2012): almost two thirds of the respondents indicated that they pursue studies after secondary education, while 29% entered the labour market and 7% neither pursued studies nor entered employment;
- (d) the Luxembourg International University Institute (Institut Universitaire International Luxembourgeois) and the Luxembourg University have developed a joint project to evaluate the employability of graduates, to

⁽⁴¹⁾ Except for the technical programmes.

improve and adapt curricula. Seven curricula have already been analysed: European criminal law master, professional master in entrepreneurship and innovation, bachelor in educational and social sciences, bachelor in engineering, master in psychology evaluation and assessment, master in European law, and bachelor in business administration. The results of these analyses are presented in detailed reports ⁽⁴²⁾.

⁽⁴²⁾ See <http://www.iuil.lu/en/applied-research/ul-employability> [accessed 29.7.2015].

CHAPTER 4.

Promoting participation in VET

4.1. Incentives for learners and enterprises

Participation in IVET and CVET is promoted by financial and non-financial incentives for learners and enterprises. No specific incentives for VET providers (based on merit or similar) are available.

4.1.1. Incentives for learners

4.1.1.1. *Individual training leave*

The objective of individual training leave (*congé individuel de formation*) is to ease access to continuing training. Employees working in the company for at least six months, self-employed workers and individuals in a liberal profession (and having been affiliated to the social security system for at least two years) can benefit from 80 days of paid leave during their entire career, but not more than 20 days per two years. Employers can have salaries reimbursed by the government. Training must be provided by an institution issuing certificates recognised by the government. The employee is required to submit a request to the education ministry that approves the leave – stating the number of days granted – or refuses it.

4.1.1.2. *Language training leave*

Language training leave (*congé linguistique*) allows employees, the self-employed and individuals in a liberal profession of all nationalities to learn Luxembourgish for social and professional integration. The courses take place during normal working hours. The maximum paid leave is 200 hours over a professional career. Employers can have salaries reimbursed by the government. The request must be sent to the labour ministry by the employer prior to the start of the course; the leave can be deferred by the employer if it disrupts company operations.

4.1.1.3. *Unpaid training leave and personal working time arrangement*

The 2006 Grand Ducal regulation on the organisation of working time (*organisation du temps de travail*) (SCL, 2006) stipulates a general obligation to reach an agreement on access to CVET through inter-occupational social dialogue to be signed between the trade union federations and the Union of

Enterprises. Organising working hours within a flexi-time arrangement and unpaid leave for vocational training purposes is part of this regulation.

Unpaid training leave (*congé sans solde pour formation*) releases the worker from duties to take part in professional training. The agreement applies to private sector employees who have been employed for at least two years, regardless of the type of employment contract. During the leave, the employment contract is suspended. The employer can refuse the unpaid leave, if the applicant is a high-level executive or if the company employs fewer than 15 employees. The employer can also defer the unpaid leave for up to one year where the leave is no more than three months or for up to two years where the leave exceeds three months.

Employees working flexi-time may request amendment of their working time to support participation in training (*aménagement personnel du temps de travail*). The employer can refuse to grant such an amendment based on operational needs or impact on the efficient organisation of the business.

4.1.1.4. *Tax exemptions*

Every income tax payer may deduct expenses for professional development from taxable income (*déductibilité fiscale*). Such expenses must have a direct link with the business activity performed by the employee and allow improving professional knowledge. They must be paid by the participant and refund claimed through a tax declaration.

4.1.1.5. *Apprentice award*

The best apprentice award sponsored by the Rotary Club has existed for 21 years. Apprentices are rewarded for their career, interest in the business, talents but also for their tenacity and discipline. Together with the award, the apprentice receives EUR 1 500 (Section 2.2.2).

4.1.2. **Incentives for enterprises**

4.1.2.1. *State shared funding for CVET*

A company can receive State funding (operated by the education ministry) for investment in CVET (*cofinancement de la formation en entreprise*). Private companies established in Luxembourg that undertake most of their activities inside the country are eligible. The training targets:

- (a) employees affiliated with the national social security system;
- (b) persons bound to the company by an employment contract (fixed-term or permanent);
- (c) subcontractors working for the applicant company;

(d) owners of craft, trade, industry, agriculture or forestry companies.

The share of funding is calculated on the basis of the investment in CVET (INFPC, 2014b). The company can choose between two options:

- (a) direct grant: 20-35% of investment (depending on the profile of employee);
- (b) tax credit: 14-25% of investment (depending on the profile of employee).

4.1.2.2. *Support for learning Luxembourgish*

Private sector companies legally established in the country can partly ⁽⁴³⁾ recover the costs associated with learning Luxembourgish. Eligible costs include training fees and the costs of study materials and are paid by the labour ministry.

4.1.2.3. *Funding for additional apprenticeship places*

The Fund for Employment provides financial support for the creation of apprenticeship places to encourage enterprises to hire apprentices. It partly reimburses the apprenticeship allowance (27% for DAP training and 40% for CCP training) and covers the employer's share of social security costs for the apprentice (SCL, 2012b). Applications for financial support must be submitted by the enterprises and the apprentice to the public employment service before the 1st of July of the year following the year in which the learning ended.

4.1.2.4. *Apprenticeship award for a training company*

Since 2013, the award for the best training company has been presented each year during the apprenticeship graduation ceremony to the company that commits itself most to apprenticeships (creation of apprenticeship places, follow-up of apprentices).

4.1.2.5. *Funding for campaigns promoting apprenticeship*

The labour ministry grants financial aid from the Fund for Employment for public information campaigns to promote apprenticeships within professional chambers.

4.2. **Guidance and counselling**

Initial guidance is provided to learners at the end of primary school. Learners receive guidance for choosing either general or technical secondary education. In secondary school, a number of guidance (pedagogical projects, individual

⁽⁴³⁾ Depending on the number of applications; the total amount of EUR 100 000 is available each year for this purpose.

coaching) and information/counselling (publication, websites, student fairs) activities are offered to learners. The psychology and school guidance service (SPOS), in coordination with teachers, helps learners (and their parents) to become aware of their competences and potential.

Most guidance services operate within the guidance house initiative (*maison de l'orientation*, 2012). The initiative centralises administrations and counselling services that help people move into working life through access to guidance services. It focuses on young people but anyone can find information and advice there. The guidance house includes:

- (a) the vocational guidance service of the public employment service which informs on trades/professions and apprenticeship placement;
- (b) the Centre of Psychology and School which helps students in their school or career guidance and may provide psychological support;
- (c) the National Youth Service (Service national de la jeunesse) which aids the acquisition of practical experience through the voluntary Youth Service;
- (d) local associations for young people (*associations locales pour la jeunesse*) which offer individual coaching to achieve their school or professional project;
- (e) the school reception centre for newcomers for 12 to 17 year-old immigrant students;
- (f) the National Agency for Erasmus+ informs and manages European programmes in education and training.

The Higher Education Documentation and Information Centre (Centre d'Étude, de Documentation et d'Information sur l'Enseignement Supérieur) is available to people who require general information about higher education.

The web portal Anelo ⁽⁴⁴⁾ is an information and exchange platform for all young people preparing for training, studies or work experience. It centralises information on:

- (a) trades and professions ⁽⁴⁵⁾;
- (b) the steps to follow during a job search;
- (c) ePortfolio tool that allows young people to gather important documents and certificates showing their strengths and skills;
- (d) how to gain practical experience in the world of work (jobs for students, volunteer services);
- (e) where to find information on guidance and support.

⁽⁴⁴⁾ www.anelo.lu [accessed 29.7.2015].

⁽⁴⁵⁾ <http://beruffer.anelo.lu> [accessed 29.7.2015].

4.3. Increasing attractiveness of initial VET

The education ministry and the professional chambers regularly organise campaigns and develop new mechanisms to promote VET, including apprenticeship, among learners, their parents and enterprises:

- (a) in 2014, the education ministry published the brochure *Accompany your child to vocational training* (in FR, DE and PT) for parents with information on IVET and how to enrol in it;
- (b) *Increase your chances of success (augmente tes chances de réussite)* was a publication produced in 2010, explaining to pupils the advantages and changes in vocational training;
- (c) the Chamber of Trades and Skilled Crafts launched the craftsmanship promotion 'hands up' initiative. This informs young people about careers in craft trades: their value, richness and diversity, and showcases its innovative approaches. At the heart of the initiative is its website ⁽⁴⁶⁾, which presents useful information about craft trades, and training necessary to access them, in a user-friendly way in French and German;
- (d) to assist people (mostly adults) interested in the master craftsperson qualification, the Chamber of Trades and Skilled Crafts organises annual information sessions;
- (e) the Chamber of Commerce has developed a portal for supervisors of apprentices, with information on teaching/training methods ⁽⁴⁷⁾;
- (f) the Chamber of Trades and Skilled Crafts has created a 'training enterprise' label to identify enterprises committed to training young people.

Other initiatives that increase young people's awareness of VET are:

- (a) 'girls' day/boys' day' to discover professions which are unusual for their gender. It aims at contributing to more gender diversity in the choice of professions;
- (b) the biennial WorldSkills and EuroSkills competitions, bring together young VET students and graduates from different countries to demonstrate technical skills.

4.4. Key challenges

Youth unemployment and investment in skills are high on the policy agenda. There are continued efforts to reduce youth unemployment ⁽⁴⁸⁾ by reinforcing

⁽⁴⁶⁾ www.handsup.lu [accessed 30.8.2015].

⁽⁴⁷⁾ <https://evaluation.lsc.lu/> [accessed 30.8.2015].

stakeholder involvement and by strengthening education and training measures. These measures aim to improve the match between young people's skills/qualifications and labour market demand. They focus on people with low education levels.

In line with the Europe 2020 headline targets, policies also focus on keeping early leavers from education and training below 10%, which according to national statistics, is still above this target.

As in many complex reforms, the implementation of the 2008 VET reform (Section 2.1.1) has revealed weaknesses of the system. Bringing about change has been difficult. Adapting to new realities has proved challenging for institutions, teachers and students. To fine-tune the reform, amendments to the current legislation have been prepared (to be decided in 2015). Evaluation of the reform will provide stakeholders with evidence pointing towards further changes needed.

The major amendments concern:

- (a) changes in apprenticeship provision and job placement agreement, offering more training at the level of basic vocational programmes (CCP);
- (b) introduction of a final integrated project ⁽⁴⁹⁾ that replaces final exams for CCP;
- (c) access restrictions (numerus clausus) for certain VET programmes upon decision of the minister, after consultation with the professional chambers;
- (d) discontinuation of the intermediate integrated project (which used to take place in the middle of the training programme) for training in full-time or mixed-time tracks;
- (e) simplification of the criteria used to evaluate student progress in VET programmes;
- (f) preparatory modules for higher technical studies become optional for DT to promote wider access to the programme.

An external qualitative and quantitative evaluation of the reform will also be conducted to provide the stakeholders with in-depth evidence to inform adaptation to the existing system (to be published in 2015).

Another important issue is to reinforce the links between the world of education and training and the world of work. In VET, more emphasis has been put on dovetailing in-firm and school-based training phases, and on strengthening on-the-job training requirements.

⁽⁴⁸⁾ Information on the Youth guarantee is provided in Sections 2.6.8 and 2.7.3.

⁽⁴⁹⁾ Integrated projects aim to check whether the student has developed the complex competence needed to solve a real or simulated work situation.

In collaboration with professional chambers, the government is putting more emphasis on implementation of quality assurance in work-based learning. This implies defining the process that will ensure better quality without disrupting doing business and discouraging employers to offer apprenticeship and job placements (Sections 2.2.2 and 3.4).

The national lifelong learning strategy was adopted in 2012. After its publication, the education ministry, in cooperation with adult education and training stakeholders, put in place a range of measures to improve the quality of and access to training offers. In 2013, the Advisory Committee on Lifelong Learning was established to set up an action plan to ensure the implementation of the strategy and to encourage continued dialogue between relevant stakeholders. In 2014, the committee, including representatives from various ministries, professional chambers and the National Institute for the Development of Continuing Vocational Training, created several working groups:

- (a) validation of formal, non-formal and informal learning;
- (b) training organisation accreditation;
- (c) training of trainers;
- (d) access to training;
- (e) access to higher education.

During 2015, the working groups will meet regularly to set their objectives in relation to the measures outlined in the lifelong learning strategy, define expected results, and propose a working plan to achieve them.

List of abbreviations

AES	adult education survey
ADEM	public employment service
ADQS	School Quality Development Agency
BTS	higher technician certificate
CCP	vocational capacity certificate or basic vocational programme
CDS	school development committees
CNFPC	National Centre for Continuing Vocational Training
CLQ	national qualifications framework
CVET	continuing vocational education and training
CVTS	continuing vocational training survey
IVET	initial vocational education and training
DAP	vocational aptitude diploma
DT	technicians diploma
EQF	European qualifications framework
INFPC	National Institute for the Development of Continuing Vocational Training
IPDM	professional initiation to various jobs
MENFP	Ministry of National Education and Vocational Training (before December 2013)
MENJE	Ministry of Education, Children and Youth (since December 2013)
MESR	Ministry of Higher Education and Research
MTE	Ministry of Labour, Employment and the Social and Solidarity Economy
PDS	school development plan
PRS	plan for educational success
SCRIPT	Department for Coordination of Educational and Technological Research and Innovation
SCL	Central Service of Legislation (Legilux)
VET	vocational education and training

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www.cdm.lu	Chamber of Trades and Skilled Crafts
ec.europa.eu/eurostat	Eurostat
www.fedil.lu	Business Federation Luxembourg
www.fonction-publique.public.lu	portal of the civil service
www.fsi.lu	fund for training in the temporary work sector
www.girlsday.lu	girls' day Luxembourg
www.grande-region.lu	the portal of the Greater Region
www.ifbl.lu	Institute of Banking Training in Luxembourg
www.ifsb.lu	Institute for Construction Training
www.infpc.lu	National Institute for the Development of Continuing Vocational Training
www.inl.lu	National Languages Institute
www.institutfmc.lu	Luxembourg Institute for Continuing Medical Training
www.lifelong-learning.lu	national portal for lifelong learning
www.lllc.lu	Luxembourg Lifelong Learning Centre
www.luxembourg.public.lu	gateway to the Grand Duchy of Luxembourg
www.eco.public.lu	Ministry of Economy
www.men.public.lu	Ministry of National Education, Children and Youth (MENJE)
www.mesr.public.lu	Ministry of Higher Education and Research (MESR)
www.script.lu	Department for Coordination of Educational and Technological Research and Innovation
www.statistiques.public.lu	National Institute of Statistics and Economic Studies of Luxembourg (Statec)
www.widong.lu	Centre for Continuing Vocational Training Dr Robert Widong

ANNEX 1.

Diplomas and certificates

General (classic) secondary education

Secondary school leaving diploma

- (a) modern languages
- (b) mathematics and computer science
- (c) natural sciences and mathematics
- (d) economics and mathematics
- (e) visual arts
- (f) musical sciences
- (g) humanities and social sciences

Technical secondary education

Technical secondary school leaving diploma

- (a) administrative and commercial division
 - management
 - communication and organisation
- (b) general technique division
 - general technique
 - computer science
- (c) division of health professions and social professions
 - training of the nurses
 - training of the educator
 - health science section
 - social science section

Technician diplomas

Aircraft mechanic – category B
Technician in 3D design
Technician in administration and business
Technician in agriculture
Technician in automotive technology
Technician in building services engineering
Technician in civil engineering

Technician in communication electronics
Technician in computer science
Technician in energy electronics
Technician in forestry and natural environment
Technician in graphic art
Technician in horticulture
Technician in hotel business
Technician in image editing
Technician in logistic services
Technician in mechanics
Technician in metal construction
Technician in tourism

Vocational diploma: DAP – vocational aptitude diploma

(a) DAP – vocational aptitude diploma

- Administrative and commercial agent
- Aircraft mechanic – category A
- Architectural drafter
- Assistant nurse
- Baker-confectioner
- Bakery products salesperson
- Beauty therapist
- Bookbinder
- Bricklayer
- Butcher
- Butchery products salesperson
- Cabinet maker
- Care assistant
- Carpenter
- Clothing alteration hand
- Confectioner and ice cream maker
- Construction and industrial mechanic
- Cook
- Cutting machine operator
- Dental laboratory technician
- Dressmaker
- Driving instructor
- Electrician
- Electronics technician – communication
- Electronics technician – energy

- Farmer
- Floriculturist
- Florist
- Garden and landscape designer
- Hairdresser
- Horticulturist
- Hotelier-restaurateur
- Industrial and maintenance mechanic
- Information technology specialist
- Installer for heating and sanitary systems
- Joiner
- Locksmith
- Marbler
- Mechanic for viticultural and agricultural engines
- Mechatronics technician
- Metal worker
- Motor vehicle body builder
- Motor vehicle body painter
- Motor vehicle body repairer
- Motor vehicle technician
- Operator in forestry and natural environment
- Optical products salesperson
- Optician
- Painter and decorator
- Parquet floor layer
- Pharmacy technician
- Photographer
- Plasterer
- Restaurant waiter
- Restaurateur
- Roofer
- Salesman
- Salesperson in clothing alteration
- Stonemason
- Swimming instructor
- Tailor
- Tiler
- Tinsmith
- Traiteur
- Travel agent

- Visual merchandiser
- Warehouse operator
- Warehouse operator – automobile sector

(b) DAP via cross-border apprenticeship

- Advertising merchant
- Agricultural services specialist
- Animal keeper
- Audiovisual media clerk
- Automobile business administrator
- Automobile upholsterer
- Bank clerk
- Bicycle mechanic
- Blacksmith for horses
- Bobbin winder
- Brewer and maltster
- Bureau communication tools manager
- Chemical laboratory assistant
- Chimney sweep and stove fitter
- Clerk in public administration
- Construction mechanic – specialisation in welding
- Cooling device installer
- Craft glazier
- Designer of digital and print media
- Dry construction builder
- Electronics technician for automation technology
- Electronics technician for devices and systems
- Electronics technician for industrial engineering
- Electronics technician for motors and drive technology
- Equine manager
- Event manager
- Event technology specialist
- Filling station attendant
- Freight forwarding and logistics services clerk
- Funeral services specialist
- Furrier
- Glass blower
- Glazier
- Gold- and silversmith
- Gunsmith

- Hearing aid audiologist
- Heavy goods vehicle driver
- Heavy goods vehicle mechanic
- Industrial cleaner
- Industrial draughtsperson
- Industrial sales representative
- Information technology specialist – specialisation in applications development
- Information technology specialist – specialisation in systems integration
- Insurance and financial services broker
- Insurance management assistant
- Interior decorator
- IT products salesman
- Knitting and sewing machine mechanic
- Maker and repairer of musical instruments
- Maker of orthopaedic footwear
- Make-up and manicure artist
- Management assistant in wholesale and foreign trade
- Marketing and communication manager
- Mechanic in plastics and rubber processing
- Media agent
- Miller
- Milliner
- Motorbike mechanic
- Orthopaedic technician and truss maker
- Pedicurist
- Pipe, sewer and industrial service technician
- Process mechanic for coating technology
- Professional caterer
- Qualified dental employee
- Real-estate agent
- Recycling and waste management technician
- River boatman
- Roller shutters and sunshade mechatronic technician
- Scaffolder
- Scene painter and scene sculptor
- Screed layer
- Screen printer
- Sewage engineering technician
- Shoemaker

- Shoemaker and repairer
- Sign and luminous advertisement maker and installer
- Skilled express and postal services employee
- Specialist in food technology
- Specialist in furniture, kitchen and removal services
- Specialist in the hotel business
- Specialist veterinary employee
- Sports and fitness administrator
- Stitching leather specialist
- Technical building equipment installer
- Technical product designer
- Textile cleaner
- Thermal and noise insulation fitter
- Visual marketing designer
- Warehouse operator for electronic devices
- Warehouse operator for energy devices
- Watchmaker
- Water supply engineering technician
- Water supply engineering technician
- Winemaker

CCP – vocational capacity certificate

Painter and decorator
Automotive mechanic assistant
Baker-confectioner
Bicycle mechanic
Bricklayer
Butcher
Car upholsterer
Chimney mason and sweep
Clothing alteration hand
Confectioner and ice cream maker
Cook
Decorative glass worker
Dressmaker
Electrician
Florist assistant
Furrier
Garden and landscape designer assistant

Gardener assistant
Glazier
Hairdresser
Hatter
Housekeeping aide
Industrial cleaner
Installer for heating and sanitary systems
Interior decorator
Leather craftsman
Marbler
Miller
Motor vehicle body builder
Motor vehicle body painter
Motor vehicle body repairer
Parquet floor layer
Plasterer
Restaurant waiter
Roofer
Sales assistant
Shoe repairer
Shoemaker
Shutters and blinds builder
Stonemason
Tailor
Tiler
Wine grower

BTS – higher technician certificate

(a) applied arts

- audiovisual and cinema
- animation drawing
- prepress operator

(b) commerce

- assistant manager
- accounting and tax manager
- trade and marketing manager

(c) health:

- nurse responsible for general care
- nurse anaesthesia and reanimation
- paediatric nurse

- psychiatric nurse
 - midwife
 - medical technical assistant in surgery
 - medical technical assistant radiology
- (d) industry:
- buildings and infrastructure
 - site manager
 - technical engineering
 - telecommunication network services,
- (e) crafts
- wood technology
- (f) services
- writing techniques (*ecritures appliquées*)
 - automatic engineering
 - computer sciences

ANNEX 2.

Certificates and programmes in French and English

<i>bachelor professionnel</i>	vocational bachelor
<i>brevet de maîtrise</i>	master craftsman certificate
<i>brevet de technicien supérieur (BTS)</i>	<i>higher technician certificate</i>
<i>certificat de capacité professionnelle (CCP)</i>	vocational capacity certificate
<i>certificat intermédiaire</i>	intermediate certificate
<i>diplôme d'accès aux études universitaires</i>	diploma for access to higher education
<i>diplôme d'aptitude professionnelle (DAP)</i>	vocational aptitude diploma
<i>diplôme de fin d'études secondaires</i>	secondary school leaving diploma
<i>diplôme de fin d'études secondaires techniques</i>	technical secondary school leaving diploma
<i>diplôme de technicien (DT)</i>	technician diploma
<i>éducation secondaire classique</i>	general secondary education
<i>enseignement primaire</i>	primary education
<i>enseignement secondaire technique</i>	technical secondary education
<i>études supérieures et universitaires</i>	higher education and university studies
<i>études techniques supérieures</i>	higher technical studies
<i>formation professionnelle initiale</i>	initial vocational training
<i>programme de la formation de technicien</i>	technician programme
<i>programme préparatoire</i>	preparatory programme
<i>programme professionnel</i>	professional programme
<i>programme technique</i>	technical programme

ANNEX 3. National monitoring of EQAVET indicators

EQAVET indicators	Organisation	National monitoring
No 1 Relevance of QA systems for VET providers: (a) share of providers applying internal QA systems defined by law/at own initiative (b) share of accredited VET providers	Education ministry	Agency for the Development of School Quality (including support). (See below).
No 2 Investment in teacher and trainer training: (a) share of teachers and trainers participating in further training (b) amount of funds invested	Education ministry	Professional chambers The qualification of teachers and trainers is a legal requirement in IVET ⁽⁵⁰⁾ . The education ministry and the professional chambers provide training for IVET teachers and trainers (Section 2.5.4). The participation rate and funds invested are monitored.
No 3 Participation rate in IVET/CVET programmes: Number of participants by type of programme and individual criteria	Education ministry	Statec The statistical department of the education ministry monitors participation in IVET and CVET. The national statistical office manages CVTS and AES data collection. In IVET, a centralised information system is used to monitor participation and completion rates.
No 4 Completion rate in IVET programmes: Number of persons having successfully completed/abandoned IVET programmes, by type of programme and individual criteria	Education ministry	Completion and dropout rates in IVET are monitored by the statistical department of the education ministry. The 2008 VET reform aims to increase the number of qualified people and reduce dropout rates (Section 2.7).

⁽⁵⁰⁾ In this table the term IVET refers only to CCP, DAP and DT programmes and does not include the technical programmes.

<p>No 5 Placement rate in IVET programmes: (a) destination of IVET learners at a designated point in time after completion of training, by type of programme and individual criteria (b) share of employed learners at a designated time after completion of training, by type of programme and individual criteria</p>	<p>Education ministry, labour ministry</p>	<p>In IVET, this indicator is used by the statistical department of the education ministry and labour ministry. As CVET is not monitored centrally these indicators are difficult to implement.</p>
<p>No 7 Unemployment rate according to individual criteria</p>	<p>Labour ministry, public employment service, Statec</p>	<p>Monitored by the National Statistical institute (Statec) and the labour ministry.</p>
<p>No 9 Mechanisms to identify training needs in the labour market: (a) information on mechanisms set up to identify changing demands at different levels (b) evidence of their effectiveness</p>	<p>Education ministry, professional chambers</p>	<p>In IVET, training needs are identified by the tripartite national vocational commissions (Section 3.1) supervised by the education ministry. These commissions are composed of experts representing the labour market nominated by the professional chambers and by teachers representing the education sector. All initial training programmes are validated by the professional chambers before implementation. Several observatories (Section 3.1) have been created to provide government with statistical and qualitative data on the labour market skill needs.</p>
<p>No 10 Schemes used to promote better access to VET: (a) information on existing schemes at different levels (b) evidence of their effectiveness</p>	<p>Education ministry, labour ministry, higher education ministry, Ministry of Family, Integration and the Greater Region, professional chambers</p>	<p>The different guidance services have recently been regrouped in a single location to increase networking and efficiency (Section 4.2).</p>

ANNEX 4. Glossary

apprentice	A learner being trained in a workplace under an apprenticeship contract.
apprenticeship	Systematic, long-term training alternating periods at the workplace and in an education institution or training centre. The apprentice is contractually linked to the employer and receives remuneration (wage or allowance). The employer assumes responsibility for providing the apprentice with training leading to a specific occupation (Cedefop, 2014).
apprenticeship counsellor	A person who, under the authority of the minister and the competent professional chambers, closely monitors the learner's progress for the employer responsible for his or her training; this person also acts as the interlocutor of the two parties for questions or problems that may arise.
competence	An organised set of knowledge, aptitudes and attitudes that a person has to possess to be able to practice a trade or profession.
continuing vocational training	A scheme which enables to acquire, maintain and expand vocational knowledge and skills, adapt them to social and technological requirements or obtain promotion at work.
formal learning	Learning that occurs in an organised and structured environment in an education or training institution or on the job and is explicitly designated as learning in terms of objectives, time or resources.
informal learning	Learning resulting from daily activities related to work, family or leisure. It is not organised or structured in terms of objectives, time or learning support. Informal learning is mostly unintentional from the learner's perspective (Cedefop, 2014).
initial vocational training	A scheme which aims to provide general and vocational training, organised by alternating between education and workplace settings, to obtain a vocational qualification leading to an official diploma.
learning outcome	What the learner knows, understands and is able to achieve after completion of a learning process.
lifelong learning	All learning activity undertaken throughout life, which results in improving knowledge, know-how, skills, competences and/or qualifications for personal, social and/or professional reasons (Cedefop, 2014).

module	The basic element of a training credit preparing for one or more vocational, social and personal skills of a field of learning.
non-formal learning	Learning embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support). Non-formal learning is intentional from the learner's point of view (Cedefop, 2014).
qualification	Certification of the set of skills belonging to the training profile of a specific trade or profession, which leads to a diploma or certificate.
skill	An organised set of insights (knowledge), aptitudes (know-how) and attitudes (life skills) needed to perform the tasks and activities of a profession or trade.
training body	The undertaking, administration, public institution, foundation, association or professional offering an apprenticeship or traineeship.
validation of formal, non-formal and informal learning	A means of evaluating and recognising a wide variety of skills acquired throughout life in different contexts, such as education, work and leisure, to obtain a certificate or diploma.
work-based learning	Acquisition of knowledge and skills through carrying out – and reflecting on – tasks in a vocational context, either at the workplace (such as alternance training) or in a VET institution (Cedefop, 2014).

Vocational education and training in

Luxembourg

Short description

Luxembourg's vocational education and training (VET) is highly differentiated. Apprenticeships and school-based VET coexist. While some features may seem similar to those in other countries, taking a closer look is important to understand national concepts and terms. Luxembourg's education and training system reflects its geographic and socioeconomic context: its small size, the close ties with its neighbours, its multilingual nature and high share of foreign nationals, and the well-established cooperation with social partners. Recently implemented reform has strengthened the links to the labour market and brought about a shift towards competence-based and modular vocational programmes. The implementation of this reform has also revealed weaknesses in the system; evaluation of the reform will provide stakeholders with evidence of a need for further changes.

By providing an insight into its main features and highlighting related policy developments and challenges, this short description contributes to better understanding of VET in Luxembourg.

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Publications Office



9 789289 619288