Promoting digital literacy

POLICY DEVELOPMENT | **PRACTICAL MEASURE/INITIATIVE** | LUXEMBOURG

Timeline

2015 **Implementation** 2016 **Implementation** 2017 **Implementation**
2018 **Implementation** 2019 **Implementation** 2020 **Implementation**
2021 **Implementation** 2022 **Implementation** 2023 **Implementation**
2024 **Implementation**

ID number 28369

Background

The number of jobs for advanced digital skills profiles is increasing. Therefore, the Ministry of Education, Children and Youth new education strategy aims to introduce coding in school curricula and focus on computational thinking. The ministry also supports extra-curricular learning for motivated learners to develop digital competences.

Objectives

The Ministry of Education digital education strategy aims to focus first on IT infrastructure and security and, second, on the introduction of coding and computational thinking in school curricula.

Description

In 2015, the Digital Education strategy was developed, including five dimensions broken down into specific projects; the strategy's major focus is on IT infrastructure and equipment.

In 2015, the National Youth Service and Department for Coordination of Educational and Technological Research and Innovation (SCRIPT) developed the Bee Creative project. This contributes to developing digital literacy and creativity (programming, security, design, communication) and entrepreneurship, by establishing the so-called makerspaces: these are workshops where young people and adults can experiment with computers, robots, 3D printers, laser-cut machines and other equipment assisted by ICT experts. Makerspaces have grown throughout the country and their number continues to grow. The Bee Creative project is part of non-formal education. The project was extended, in 2016, to the age group 6-12 (Bee creative 4 kids), in collaboration with the Luxembourg Institute of Science and Technology, and part-funded by the National Research Fund. The Training Institute of National Education (IFEN) offers regular exchange sessions and continuing training to teachers interested in makerspaces.

The Luxembourg Tech School (LTS) is an extracurricular school concept to support the development of future digital leaders. It targets secondary education learners aged 15 to 20, including VET learners, who are passionate about the digital realm and eager to learn and apply technology in a real business context. The pilot phase started in September 2016 with about 30 learners from nine general secondary education schools. LTS is supported by the Ministry of Education, Children and Youth and the Digital Luxembourg initiative by the Ministry of State. In level one, learners follow a business and technology programme divided into three blocks: game development, big data, and digital technologies for finance (fintech). Learners receive personalised coaching and work on their own projects, showcasing them at the end of each block. In the Level up programme, they pursue three blocks: space resources; artificial Intelligence for finance; artificial Intelligence for arts and creativity.

Since 2018, the ICDL (International Certification of Digital Literacy, previously ECDL), the international standard for digital competences, has been introduced into the curricula of the IVET- diplomas 'DAP administrative and commercial agent' and 'DT administrative and commercial agent'. Certified candidates present a professional know- how of digital tools as well as a solid knowledge in the daily use of a computer and various programs, Office Pack included. The Chamber of Employees acts as accredited body for ICDL testing and delivery of certificates.

2015 Implementation

2016 Implementation

2017 Implementation

2018 Implementation

2019 Implementation

The Ministry of Education, Children and Youth supports the supply of IT hardware to schools according to their educational purposes. The programme One2One continued, aiming at supplying every learner in secondary education with a tablet or portable PC: each device is provided for annual rental at a modest cost. In September 2019, 32 secondary schools (Lycées) participated in the project with a total of 12 140 tablet PCs.

In 2019, the Government of Luxembourg decided to implement a new governing body, the Digital Skills and Jobs Coalition. This is a platform for exchange among ministries, social partners, non-profit organisations, companies, schools, and education providers. It helps matchmaking between supply and demand for digital training courses, and the promotion of basic and advanced digital skills.

As of 2019, there were 33 makerspaces in Luxembourg, including 28 in secondary schools and 5 in primary schools and education and reception services.

2020 Implementation

On 6 February 2020, the Ministry of Education, Children and Youth launched a new strategy for digital education from primary school to secondary technical and classical education: Simply digital - Future competences for strong children (*einfach digital - Zukunftskompetenze fir staark Kanner*). The strategy aims at strengthening the competences of the 21st century by a set of measures with a stronger focus on the promotion of computational thinking and coding.

A dedicated platform (kodeieren.lu) brings together teachers and experts in coding so they organise activities aimed at learners in schools. It supports teachers in implementing the *Einfach kodéieren* strategy. The platform aims to inspire and help teachers to experiment with computational thinking and coding in order to share these experiences in a playful way with learners, with the support of experts.

LTS offered a new programme, Level G0, on the creation of animated digital art. Learners discover the basics of coding and how computers work, then get to work with

materials and objects. The classes take place weekly and are offered in German/Luxembourgish and English to learners aged 11 to 14.

In 2020, LTS and Croix Rouge Luxembourg organised a programme, Creative Coding for ALL, in a summer camp for young refugees aged 11-15. Course participants were introduced to the basic coding concepts and elements of computational thinking in a playful, creative, and fun way. With individual classes, support and donation of laptops, the initiative aimed at empowering young learners with specific needs by giving them an introduction to creative coding.

2021 Implementation

In September 2021, the course, Digital sciences, was introduced in 18 pilot secondary schools, starting at the lower class of general and technical secondary education, including VET, with the intention to extend it progressively to all the first years of secondary education. The objective is to attract learners to the digital economy, a sector in which employment has been strongly expanding. The new discipline focuses on five main topics, addressing both the technical and human aspects of digitalisation: communication; critical thinking; big data, internet of things (IoT); programming, computational thinking, collaboration; robotics; and artificial intelligence (AI) and creativity. The new course can be taught by teachers from various fields of expertise (humanities, languages, art education, mathematics and computer science), thanks to the training courses offered by the Training Institute of National Education (IFEN).

In 2021, the Ministry of Digitalisation presented its national action plan for digital inclusion. The plan is centred around three interdependent strategic actions subdivided into 40 initiatives to ensure the digital inclusion of all citizens: increasing motivation and creating digital confidence; facilitating access to digital technology; and developing digital skills.

16 initiatives are presented as part of the action Developing digital skills. The most prominent are:

(a) implementation of the *einfach digital* (Simply digital) education strategy;
(b) development of a participatory, vocational training course on digital inclusion for associations and organisations dealing with digitally-isolated audiences;
(c) training on the safe use of the internet for children and young people in primary and secondary schools, and for senior citizens;
(d) increased interest in STEM subjects through the initiatives, Scienteens Lab - De Labo fir Jonker, Luxembourg Science Centre, Bee creative and Science.lu;
(e) governance of the Digital skills and Jobs coalition;
(f) provision of specific courses for basic digital literacy by the Department of Adult Education of the Ministry of Education, Children and Youth;
(g) support for young jobseekers from the Ministry of Labour, Employment and the Social and Solidarity Economy through the Youth eAcademy project.

In the school year 2020/21, the programme, Creative coding for ALL continued; 25 young learners aged 11 to 18 followed the same content as taught in the LTS Level G0 programme. Weekly classes take place in three locations and online. They are offered in small groups to guarantee the highest level of individual support in terms of language, background and learning pace. When feasible, learners integrate into the regular LTS Level G0 programme with Luxembourgish learners.

2022 Implementation

In the school year 2022/23, the Digital sciences course, was offered in all the first years of lower secondary education, including VET. The 18 pilot secondary schools continued the introduction of digital science in the second year of lower secondary education.

In 2022, as part of the National Action Plan for Digital Inclusion, implemented by the Ministry of Digitalisation, a digital inclusion web portal was launched. It presented all the essential information about digital inclusion and its ecosystem in Luxembourg:

actors; a catalogue of existing offers in Luxembourg related to digital inclusion; courses, information sessions, wi-fi spaces; and a toolbox with useful links to publications, practical guides, thematic sheets, videos or tutorials available online. The portal is available in four languages: French, German, Luxembourgish and English.

The Chamber of Skilled Trades and Crafts supported IMS Luxembourg and CARE Luxembourg in the launching of the new initiative 'Digital Challenge' which offers companies the opportunity to go further than a traditional training day. The Digital Challenge enables companies and young people between 16 and 26 to get together in teams to respond to a challenge linked to digitalisation and/or sustainable development, and proposed in advance by an organisation.

2023 Implementation

In the 2023/24 school year, the Digital sciences course was extended to the two first grades of lower secondary education.

The second Digital challenge took place in October 2023. The companies were able to propose ideas to be considered in relation to digitalisation or sustainable development within their organisation by organising challenges to be taken up by groups of 2 to 5 young people aged between 16 and 26.

To promote Robotics and Smart technologies, the first edition of the week of Robotics (Robotikwoch) was organised in October 2023 by the SCRIPT in collaboration with the CNFPC. The event featured 15 educational workshops and demonstrations in the field of robotics. More than 40 classes, nearly 1,000 learners, from initial and secondary schools, took part in the event. One afternoon was dedicated to Smart Technologies training: six secondary schools offered training in intelligent technologies to young people, parents and the general public.

2024 Implementation

In the 2024/25 school year, the Digital sciences course was generalised for all learners across the entire lower secondary cycle.

From school year 2023/2024, the ICDL is also integrated into the IVET-Diploma"DT tourism et communication".

The Chamber of Skilled Trades and Crafts, in partnership sectoral partners, supported the fourth "Digital Challenge" which took place in October 2024. Companies welcome young people aged 16 to 26 for one day and offer them the opportunity to take up a challenge related to an issue of digitalisation and/or sustainable development for their organisation and/or their sector.

Bodies responsible

- Ministry of Education, Children and Youth
- Department for Coordination of Educational and Technological Research and Innovation (SCRIPT)
- Chamber of Skilled Trades and Crafts
- Chamber of Commerce

Target group

Learners

Learners in upper secondary, including apprentices
Adult learners
Unemployed and jobseekers
Low-skilled/qualified persons

Education professionals

Teachers
Adult educators

Entities providing VET

Companies
VET providers (all kinds)

Other stakeholders

Social partners (employer organisations and trade unions)

Thematic categories

Modernising VET infrastructure

Improving digital infrastructure of VET provision

Modernising VET offer and delivery

Acquiring key competences

Teachers, trainers and school leaders competences

Supporting teachers and trainers for and through digital

Subsystem

IVET

Further reading

Ministry of Education strategy press release 2020 on Simply digital (Einfach digital)

Simply digital (Einfach digital)

Education portal, one2one

www.kodeieren.lu

The Digital Skills and Jobs Coalition

Digital science

National action plan for digital inclusion

Luxembourg tech school website

Creative coding for ALL

Digital inclusion web portal

Digital Challenge

Related policy developments

2024 **Implementation**

Teacher continuing professional development

The 2015 legislation establishing the Training Institute for National Education (IFEN) stipulates that IFEN offers mandatory teacher CPD schemes to develop and refresh the competences of teaching staff, these include training leading to certification, coaching, supervision, job shadowing and exch

LUXEMBOURG

Type of development

Regulation/Legislation

Subsystem

IVET

2024 **Implementation**

Guide on digital education for teachers and school leaders

In 2016, the Education IT Management Centre (Centre de gestion informatique de l'éducation, CGIE) published a mobile learning guide to help school leaders and teaching staff in secondary education and training, use ICT in a targeted and systematic way.

LUXEMBOURG

Type of development

Strategy/Action plan

Subsystem

CVET

2024 **Implementation**

Upskilling and reskilling measures for jobseekers

ADEM, in cooperation with different stakeholders, developed the following main upskilling and reskilling measures for jobseekers.

Skill you up

LUXEMBOURG

Type of development

Practical measure/Initiative

Subsystem

CVET

Cite as

Cedefop, & ReferNet. (2025). Promoting digital literacy: Luxembourg. In Cedefop, & ReferNet. (2025). *Timeline of VET policies in Europe* (2024 update) [Online tool].

https://www.cedefop.europa.eu/en/tools/timeline-vet-policies-europe/search/28369