Izglītības un zinātnes ministrija

A common framework for the assessment of basic digital skills, the identification and planning of training needs and the assessment based on DigComp

Publicēts: 14.03.2024.

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> Living, learning and working in today's 21st century requires a particular skill set and digital skills has been defined as the basis for lifelong learning and being as important as basic literacy and numeracy skills. Digital skills underpins every aspect of our daily life, and those skills should be improved throughout the life span of everyone regardless of obtained education level or age.
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> Digital skills help to find, evaluate, create, and communicate information. The digital literacy is a step towards learning lot of other new thigs, it creates opportunities for career advancement, productivity improvement, as well as helps to stay up-to-date with technological changes.
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> Digital skills for work and for life are at the top of the European Policy Agenda as well as in Latvia. To ensure opportunities for individual's ability to exercise their basic rights to acquire the qualitative education in the formal and non-formal education, compete in the labour market and participate fully in the processes of society there has been created a common framework for acquisition and evaluation of digital skills in the formal education starting from the pre-school and continuing in the non-formal education. This common framework is developed by using the European Digital Competence Framework for Citizens (DigComp) which serves as a reference framework that describes what it means to be digitally competent and where digital competence descriptions are structured and translated into detailed framework of learning outcomes combined with assessment support to the learning process.

INTRODUCTION

In line with the "Guidelines for Digital transformation 2021-2027" – a national level policy planning document outlining unified state policy for the digital development of public administration, the economy and society - Latvia has set the development of society's digital skills as one of its policy priorities, with the expectation that every individual should be provided with the opportunity to acquire the necessary digital skills at any stage of life to exercise their basic rights, compete in the labour market and participate fully in the processes of modern society.

According to the Digital Decade 2023 report on Latvia, the indicators for both digital skills at least at the basic level (51%) and digital skills above the basic level (24%) are slightly lower than the EU average (54% and 26%, respectively). Current national policy planning documents, namely the Education Development Guidelines 2021-2027 and Guidelines for Digital transformation 2021-2027, set the objective of the acquisition of digital skills at all levels of education as a cross-cutting goal and aim at reaching 70% of adult population (age group 16-74) with at least basic digital skills by 2027.

To establish a common framework for the assessment of basic digital skills and the identification and planning of training needs, a systematic and gradual approach has been chosen by the state.

During the period 2014-2020, in the formal education system, including basic and secondary education, a stable

foundation has been created to ensure modern and high-quality education with the introduction of the competence approach in the curriculum (Skola2030). Through amendments to several Cabinet of Ministers regulations, curricula and assessment criteria have been strengthened across all study fields, including digital literacy.

At the same time, to address digital skills for the adult population, two main directions have been chosen, outlined in the Education Development Guidelines for 2021-2027: (i) a revision of national higher education standards to identify appropriate study outcomes and acquired competences; and (ii) introduction of common quality principles for the design and implementation of non-formal education programmes. The inclusion of non-formal education in the common framework is particularly important as an operational response to the learning needs of the population in age groups that typically no longer take part in formal education.

Statements of what an individual should know, understand and be able to do at the end of a learning process are defined in terms of competences (knowledge, skills, responsibility, and autonomy) which together form the concept of learning outcomes. The concept of learning outcomes is a key element in the common framework that the state has established in digital literacy across the education system in Latvia.

Digital competence, in particularly basic digital skills, next to literacy and numeracy, has been defined as the basis for lifelong learning and those skills helps to use digital technologies effectively, wisely, and responsibly. Recommendations of the Council of the European Union on key competences for lifelong learning adopted in May 2018 identifies eight key competences essential to citizens for personal fulfilment, a healthy and sustainable lifestyle, employability, active citizenship, and social inclusion where digital competence is one of them.

Digital competence involves the confident, critical, and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. Digital competence is complex concept which includes information and data literacy, communication and collaboration, media literacy, digital content creation, safety, intellectual property related questions, problem solving and critical thinking.

Latvia like other EU Member States in their education systems for assessment of the digital skills uses the approach of the framework of the Digital Competences of European citizens (DigComp), which provides a common understanding of what digital competence is. The DigComp is deemed as central to EU objectives of enhancing digital skills. The framework identifies the key components of digital competence in the five areas and 21 specific competences. It also describes eight proficiency levels, examples of knowledge, skills and attitudes, and use cases in education and employment contexts. The DigComp is used for multiple purposes, such as designing competence assessment tools, creating training courses and materials, and identifying professional digital profiles, in the contexts of employment, education and training, and social inclusion.

A learning outcomes approach to curriculum design focuses on application and the complex integration of knowledge, abilities and attitudes. Learning outcomes explicitly outline performance expectations and identify what the learner is expected to know and do by the end of the learning experience. The learning outcomes principle is - explicitly since 2004 - systematically promoted in the EU policy agenda for education, training and employment at national level, the learning outcomes form the basis on which national qualifications frameworks are built and is increasingly influencing the definition and writing of qualifications and curricula as well as the orientation of assessment and teaching and training. The 2017 European Quality Framework recommendation defines learning outcomes as '…statements of what an individual should know, understand and/or be able to do at the end of a learning process, which are defined in terms of knowledge, skills and responsibility and autonomy'. The learning outcomes perspective is used for a number of different purposes, the most important being:

- Qualifications frameworks and their level descriptors
- Qualification standards
- Curriculum development
- Assessment and validation

Quality assurance

Teaching and training

For all these purposes the learning outcomes approach strengthens the focus on the individual learner and the level of knowledge, skills, and competence s/he is expected to achieve.

In Latvia the transition to a learning outcomes approach, incl. defining digital skills as cross-cutting skills was firstly defined in the Education Development Guidelines for 2014- 2020 adopted by the Saeima on 22 May 2014 and further in the Education Development Guidelines for 2021-2027 adopted by the Cabinet of Ministers on 22 June 2021.

DESCRIPTION OF THE APPROACH TO THE COMMON FRAMEWORK

The key competences, including digital competency, are developed throughout life, through formal, non-formal and informal learning in different environments, including family, school, workplace, neighbourhood and other communities[1]. All key competencies, including digital, are transversal by its nature[2].

While formal education is strictly characterised by state-defined requirements for the education provider, content and implementation process, in return for issuing a state-recognised document on learning outcomes (education document or professional qualification), non-formal education is more flexible by its nature. It is planned by an education provider. The content and planned learning outcomes are defined by the educational provider, who also certifies the achieved learning outcomes. Non-formal education can cover programmes contributing to adult and youth literacy, as well as programmes on life skills, work skills, and social or cultural development[3]. Adults who have finished the formal education in the past, when digital technologies were not yet widespread in everyday life or in education, and digital literacy was not integrated into the education content as a cross-cutting competence more often acquire or develop their digital skills in the form of non-formal education. Therefore, it was important that all levels and forms of education have the same approach to defining digital learning outcomes, especially in non-formal education.

In Latvia, the development of digital skills takes place comprehensively within the entire education process, starting from the formal education in the pre-school and giving pupils the opportunity to both learn and also practically use digital skills throughout the learning process and following the non-formal education if deemed necessary. Upon completion of the specific level of formal education, graduates have acquired comprehensive digital skills literacy.

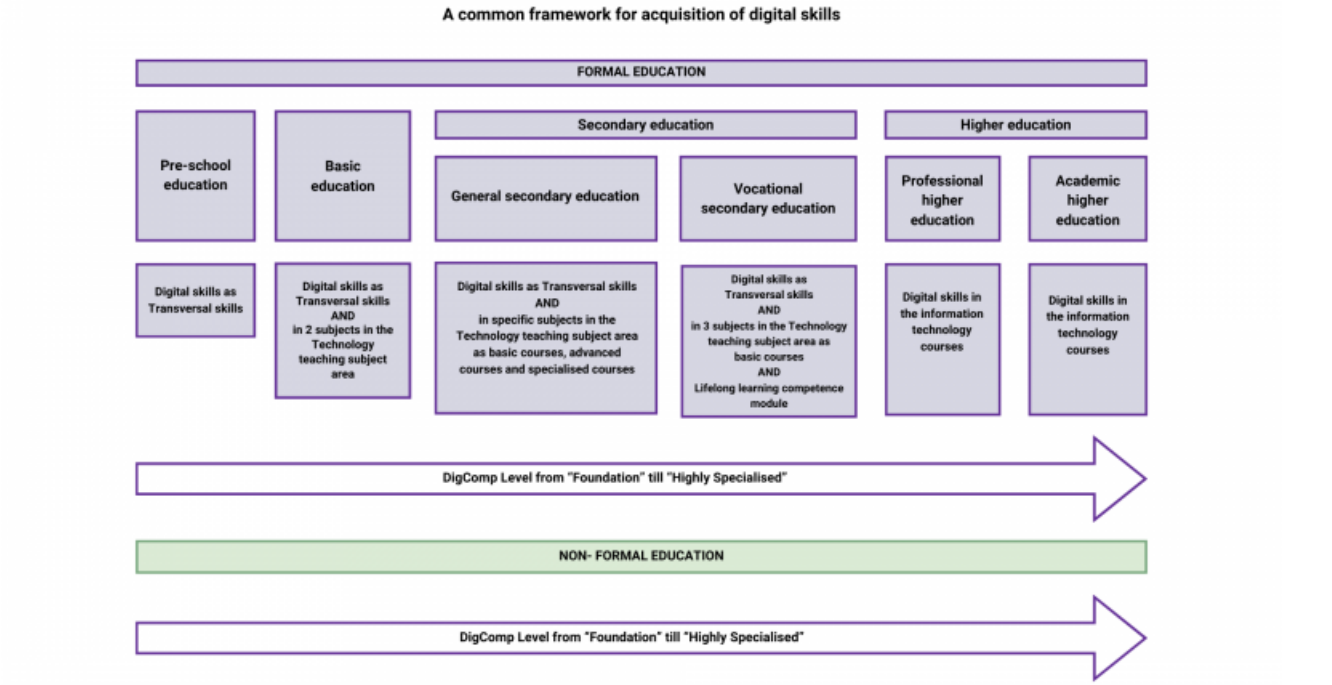
The Education Development Guidelines 2021-2027 envisages the development and implementation of the common framework for criteria in non-formal education and a revision of the higher education standard by supplementing with the determination of appropriate digital skills learning outcomes.

In 2006, reforms in the content of primary education and in 2008 in the content of general secondary education were initiated In Latvia, and in 2012, by developing pre-school education guidelines, the movement towards formal education that meets modern requirements was started. A formal education is a system which includes the levels of basic education, secondary education, and higher education the completion of the programmes of which is attested by an education or professional qualification document recognised by the State.

During the planning period 2014-2020 in the education system of Latvia a stable foundation has been created to ensure a modern and high-quality education. The most significant changes were the introduction of the competence approach in the curriculum (Skola2030) in general education. The new approach of teaching and learning content in the general education starting from pre-school till secondary school was developed, approved, successively introduced with main aim to facilitate pupils to acquire the knowledge, skills and attitudes necessary for today's life. This is the first time that the content and approach to learning is structured in a unified system and successively in all levels of formal education of

children and young people, starting from one and a half year old children in preschool and up to 18 years of age. The education standard of School 2030 (Skola 2030) has been created by focusing on the most essential learning content for the student, to develop proficiency (competence) as a complex result of the student's learning over a longer period of time (in preschool, 1-3, 4-6, 7-9, in grades 10-12).

Nowadays the non-formal education is gaining more and more importance in the development of skills, which is especially important for the acquisition of transversal skills such as digital skills and allows to respond promptly to the educational needs of the individuals and facilitate the quick achievement of necessary results. Issue on acquiring the basic digital skills in the non-formal is especially topical for those who did not have the opportunity to learn digital skills at a sufficient level in the general education. To ensure that the implementation of non-formal education programmes efficiently addresses topical education needs in society the political commitment was needed, which included amendments to the Education Law (Section 46) and delegation to the Cabinet of Ministers to develop the Regulation (Section 14, clause 11[1]). Until 2023 there was no general regulation for the non-formal education in Latvia. The non-formal education is regarded as a logical continuation of the formal education based on the principles of learning outcomes already successfully implemented in the formal education. To ensure the introduction of the learning outcomes also to the non-formal education the common quality principles for the development and implementation of non-formal education programs have been developed.



Digital skills in the formal education

In the framework of formal education, digital skills are learned both as transversal skills and within a specific teaching subject area. In the formal education standard, digital skills are defined as one of the six transversal skills as well those skills are learned and applied within the framework of the Technology teaching subject area which is one of the seven learning areas of the formal education standard. In general, as the results of the learning the student responsibly uses digital technologies daily to acquire, use and create knowledge, as well as solve tasks and problems, share and use content created by himself and others, skilfully manages his digital identity, communicates effectively and safely and cooperates with others in the digital environment; critically and constructively evaluates the role of technology and media in society. Implementation of the new education content started from school year 2019/2020 at the pre-school, followed gradually at all grades of general education from the school year 2020/2021 and vocational secondary education from 2022. Starting from school year 2022/2023 the new education content is mandatory at all levels of formal education.

The following information provides an overview of other elements of the overall framework for assessment of digital

skills, identification of learning needs, planning and evaluation based on the approach of the framework of the Digital Competences of European citizens (DigComp) at different levels of formal education in Latvia:

Pre-school - Regulations on National pre-school Education Guidelines and Sample Pre-school Education Programmes (adopted on 21.11.2018.). During the pre-school education the child learns to distinguish the virtual world from the real world and understand the role of digital technologies, knows the rules to be followed when using various media, including digital devices.

Basic education (EQF level 1-2) - Regulations Regarding the State Basic Education Standard and Model Basic Education Programmes (adopted on 27.11.2018.), where it is stipulated that the mandatory content of the basic education includes the transversal skill: "digital literacy" assuming that the learner uses digital technologies responsibly and efficiently for the acquisition of knowledge, the creation of new content, the sharing of the content and for the communication, critically and constructively assesses the role of technologies and media in the society. Annex 1 of the legal act stipulates the planned results to be achieved by learner in digital literacy at the end of the 9th grade including *information and data literacy* such as critically analyses the reality created by the media and the reliability of information, *communication* such as responsible use of digital communication for specific purposes, evaluating its suitability for the needs of the target group, *digital content creation*, *safety* such as control and manage his/her digital identity etc. Three subjects in the framework of the Technology teaching subject area are provided: Computer science – from Class 1 with an increased number of hours; Engineering in grade 7; Design and technologies in grades 1-9.

General secondary education (EQF level 3-4) - Regulations Regarding the State General Secondary Education Standard and Model General Secondary Education Programmes (adopted on 03.09.2019.), where it is stipulated that the mandatory content of the general secondary education includes a transversal skill: "digital literacy"; the legal act stipulates compulsory content of the general secondary education, intended results of the acquisition thereof in the fields of study, and principles for the implementation. Annex 1 of the legal act stipulate the planned results to be achieved by the learner for the transversal skill: "digital literacy" at the end of the 12th grade. The content of the Technology subjects area are following: Computer science or Programming I and II and/or Design and technologies I and II and several new optional courses were introduced such as Robotics, Digital Design, etc.

Vocational secondary education (EQF level 4) - Regulations on the national vocational secondary education standard and the national vocational education standard (adopted on 02.06.2020.); The vocational education contains the part of general education where the Standard of general secondary education is applicable and vocational education part where it is stipulated that one of the main tasks of the vocational secondary education is to develop the skills to constantly and independently to improve one's professional qualification as the response to the dynamic changes in society and the labour market, with particular attention to the use of digital technologies in work processes and service provision. Digital skills as a lifelong learning competence module with reference to level of competence are included in the vocational education program samples.

Higher education - Regulations on the state standard of professional higher education (adopted on 13.07.2023.) which entered in force on 21 June, 2023; replacing Regulations of the Cabinet of Ministers No. 803, as amendments to the Regulations of the Cabinet of Ministers No. 512 of the August 26, 2014 "Regulations on the state standard of second-level professional higher education" adopted on 22.12.2022.; and Regulations of the Cabinet of Ministers No. 802 as amendments to the Regulations of the Cabinet of Ministers No. 141 of March 20, 2001 "Regulations on the state standard of first-level professional higher education; adopted on 22.12.2022. and Regulations on the state academic education standard (adopted on 13.05.2014. with amendments adopted on 22.12.2022. on strategic targets of study programmes). In both documents there is stipulated that one of the main tasks of the study programme is to provide that the graduates of each study programme can responsibly and safely choose and apply/ use information technologies in their professional activities, research, and lifelong learning, as well as the graduates, can acquire, create and share digital content. The mapping of the planned study results is used when developing the study tasks, including the acquisition of digital skills and competencies in various study courses and/or study modules, updating the study courses or modules providing that the planned study results are achieved according to the revised goals of a study programme.

Digital skills in the non-formal education

In accordance with the provisions of Education Law (Section 14, clause 11^1 and Section 46, which entered into force on 11 October 2022), the non-formal education were expanded to all age groups (previously were only adult non-formal education programmes), and definition of the non-formal education programme was provided stipulating that non-formal education programmes provide an opportunity for a person throughout his or her life, regardless of previously acquired education, to acquire new competences and to develop existing competences in accordance with the interests of personal development and the demands of the State or an employer. It should be noted that the main purpose of the non-formal education is to provide the learner with the necessary knowledge, skills, abilities, and attitudes as quickly and flexibly as possible, as well as to promote person's comprehensive development and social inclusion. The non-formal education is a supplement to the formal education but does not replace it and in the non-formal education the quality requirements of formal education (such as standard etc.) are not applicable.

Recently a unified approach to identify and evaluate basic digital skills using levelling approach (defined as a combination of knowledge, skills, and attitudes) was only in formal education. But by approving the Regulation of the Cabinet of Ministers No. 395 "Procedure for issuing a permit for the implementation of the non-formal education programme" on 13 July 2023 the unified approach has been introduced also in the non-formal education. The Regulation of the Cabinet of Ministers filled in a missing part in terms of learning outcomes of a common framework as regards to the non-formal education. The common quality principles are applicable to all non-formal programs, including those for acquiring the digital skills. And in particular the digital skills the provisions for the assessment of basic digital skills, the identification and planning of training needs and the assessment based on Digital Competence Framework for Citizens (DigComp 2.1.) are included as mandatory condition. The legal act stipulates rules for structuring the planned learning outcomes according to the levels of the DigComp while the Annex of the Regulations of the Cabinet of Ministers includes descriptions of levels thus establishing a common framework for the assessment of basic digital skills, the identification and planning of training needs and the assessment based on the DigComp.

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[1] https://op.europa.eu/en/publication-detail/-/publication/297a33c8-a1f3-11e9-9d01-01aa75ed71a1/language-en
[2] Ibid
[3] https://uis.unesco.org/en/glossary-term/non-formal-education

IMPLEMENTATION AND APPLICATION OF THE COMMON FRAMEWORK IN PRACTICE

The main task is to successfully complete the started reform process of the formal education system and ensure its management. At the same time, it is essential to provide each individual further development of its current knowledge and possibilities to learn knew knowledge, skills, attitudes, and values during the whole lifetime beyond the formal education settlement and regardless their attained education level by participating in the non-formal education. To enable a common framework including for the assessment of basic digital skills, which was successively introduced in the formal education system, in the non-formal education the Cabinet of Ministers has approved the Regulation of the Cabinet of Ministers No. 395 "Procedure for issuing a permit for the implementation of the non-formal education program" on 13 July 2023. The regulation filled in a missing part in terms of learning outcomes of a common framework as regards to the non-formal education, including digital skills as well as stipulated the common quality principles for the development and implementation of non-formal education programs.

The learning outcomes principle is systematically promoted in the EU policy agenda for education, training and employment. At national level, the learning outcomes form the basis on which national qualifications frameworks are built and is increasingly influencing the definition and writing of qualifications and curricula as well as the orientation of assessment and teaching and training.

Digital skills are regarded as one of the components of the education system. The established framework both for formal and non-formal education ensures that digital skills are assessed, training needs are identified and planned taking into account the approach of the framework of Digital competences of European citizens (DigComp).

Benefits for individuals

The assessment of basic digital skills in the formal education is carried out in accordance with the Education Standard at the specific level of the formal education, identification and planning of the training needs are organised in accordance with the education standard.

The assessment of basic digital skills in the non-formal education is carried out by the provider of the non-formal education programs. In the description of the non-formal educational programs which are aimed to the acquisition of digital competences the learning results to be achieved should be structured according to digital literacy which is defined in the framework of the digital competences of European citizens (DigComp) indicating the complexity of the tasks to be performed and the autonomy of performance.

In addition, when elaborating the description of the non-formal education programme, it is necessary to include information on requirements in relation to the previously acquired education and experience in the programme-related field, the level of prior knowledge and the description on evaluation of acquisition of the learning outcomes to be achieved in the programme.

The provider of the non-formal education programmes, when organising the study group and prior commencement of training shall ascertain the knowledge of the potential participants; then organises training in accordance with the description of the non-formal education programme and at the end of the programme implementation, evaluates learning outcomes. According to the Regulation of the Cabinet of Ministers No. 395, the evaluation of the learning outcomes is a responsibility of the provider of the non-formal education programmes and is carried out in accordance with the description of the non-formal education programme. Evaluation of the learning outcomes is foreseen during the learning process and/or at the end of the learning by using different tools, e.g. a test, individual task etc. The main aim of the evaluation of the learning outcomes is to determine whether the planned results stated in the programme's description have been achieved and reflect the acquired level of knowledge in the certificate. At the end of the training a certificate for the acquisition of non-formal education is issued, where information on learning results is included and this information are structured in accordance to framework of the digital competences of European citizens (DigComp), which serves as a basis for identifying and planning of training needs.

The approach ensures that learners who plan to acquire and learn basic digital skills within the non-formal education programme are assessed for basic digital skills and by using the results of the assessment, the learning needs of the individual are identified which are used for further planning of training and evaluation of the achieved results.

In addition, the established framework will allow the possibility to develop the recognition of the obtained learning results as well as enables learners to include the evaluation in their Curriculum Vitaes and to identify and plan further learning needs, be it in formal or non-formal education, for example to continue to acquire digital skills by combining and supplementing learning outcomes acquired in the formal education with those acquired in the non-formal education. In this way, the presence of the common framework facilitates the permeability and inter-operability of formal and non-formal education in both directions.

Benefits for education providers

The common framework promotes a common understanding for the education providers in particular for non-formal education providers, about the State requirements to provide qualitative non-formal education, including the framework for the assessment of basic digital skills, identification, planning of training needs. This framework is mandatory for every non-formal education provider.

At the education system level, the introduced framework enables, for example, to announce a state support tender for digital skills training for a certain DigComp level, based on monitoring the DESI indicator progress, including the share of persons with basic digital skills.

Benefits for society

By establishing the common framework prerequisites have been created to ensure qualitative and accessible education offer for society in Latvia. And by using the common framework, incl. learning results obtained within the non-formal education will allow participants more accurately choose the particular non-formal education programme, supplementing skills and knowledge gained in a formal education settings, from a wide range of offer that matches their existing knowledge and needs, to more predictably assess the quality of the education programme, including the achievement of the planned learning outcomes, as well as the possibility to use a single reference system for the assessment of learning outcomes, thus ensuring the permeability and recognition of learning outcomes.

Already now, when defining learning needs, the state order is based on the DigComp framework and the Regulation of the Cabinet of Ministers No. 395 “Procedure for issuing a permit for the implementation of the non-formal education program” provided the legal framework for such an approach.

USEFUL MATERIALS AND LINKS

- Regulation of the Cabinet of Ministers No. 395 “Procedure for issuing a permit for the implementation of the non-formal education program"
- Regulations on National pre-school Education Guidelines and Sample Pre-school Education Programmes
- Regulations Regarding the State Basic Education Standard and Model Basic Education Programmes
- Regulations Regarding the State General Secondary Education Standard and Model General Secondary Education Programmes
- Regulations on the national vocational secondary education standard and the national vocational education standard
- Regulations on the state standard of professional higher education
- Regulations on the state academic education standard
- Guidelines for providers of the non-formal education programmes for the elaboration of non-formal education programmes

https://www.izm.gov.lv/lv/common-framework-assessment-basic-digital-skills-identification-and-planning-training-needs-and-assessment-based-digcomp