# Annex 2:

**Montenegrin Key Competence Framework Programme**

**Project "Integration of Key Competences in the Education System of Montenegro"**

co-financed by the European Union and the Government of Montenegro and implemented by the EPRD Consortium

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**Foreword**

This document was created within the Project *"Integration of Key Competences in the Education System of Montenegro" co-financed by the European Union and the Government of Montenegro through the IPA 2 EU-Montenegro Programme for Employment, Education and Social Welfare.* The project is biennial and has been implemented since 31 August 2019 to 30 August 2021 with the aim to improve the quality of primary and secondary education and support for initial education and continuous professional development of teachers and quality assurance at primary, secondary and higher education levels.

Developing the Montenegrin Key Competence Framework Programme (further referred to Framework) is a central activity of the first phase of the Project. The Framework identifies eight key competences for lifelong learning relevant to the education system of Montenegro and provides definitions and outcomes for pupils and students to be achieved at educational levels. The Framework is also the starting point for all other activities of the Project, for further development of concepts and training, but at the same time it is a prerequisite for the structured integration of key competences into all levels of the education system of Montenegro.

Through the Project, based on the Framework, following products will be developed: *indicators* to monitor the integration of key competences into school learning that will serve supervisors and quality assurance advisors in monitoring the development of key competences; *programme* for development and integration of key competences in the education system of Montenegro - a strategic document that will define the activities of all actors within the educational system over a three-year period; *a training programme* for school principals and teachers, and training for 360 members of school teams, 900 classroom teachers and 960 STEM teachers; *further concepts of quality assurance* of key competences will be developed, as well as new ways of external evaluation of education, including the development of combined exam questions, with focus on the acquisition of functional knowledge. In addition to contributing significantly to the achievement of project objectives, these and other project activities should provide a solid basis for the *self-sustainable development of key competences* in the education system of Montenegro after the end of the Project.

The framework was created by the Project Team, a body composed of representatives of all relevant beneficiary institutions of the Project, while the definitions and outcomes of key competences by educational levels were developed by four working groups: the Working Group on Literacy and Multilingual Competence, the Working Group on Mathematical Competence, Competency in Science, Technology and Engineering, and Digital competence, the Working Group on Entrepreneurial Competence, and Personal and Social Competence, and the Competence on Learning how to Learn, and the Working Group on Civic and Cultural Awareness and Expression Competence. In addition to representatives of the Ministry of Education, the Institute for Education and the Center for Vocational Education, the working groups also included experienced teachers of primary and secondary schools and teachers of the University of Montenegro. The Project sincerely thanks the members of all groups and bodies who have been very dedicated to developing the document.

The Montenegrin Key Competences Framework Programme is submitted for consideration to the Project Steering Committee, after which its implementation will be tested through training of 1,860 primary and secondary school teachers. Once the experience of the system has been gathered, the Framework will be finalized and submitted to the National Council for Education for adoption.

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# Introduction

The global changes brought by the fourth industrial revolution have a significant impact on human work and education, posing serious challenges to education systems in order to educate current and future generations to live and work in the new economy. Changes in society caused by new technologies are becoming faster, harder to track and impossible to predict. Creating a knowledge-based society based on artificial intelligence, robotics, autonomous vehicles, new materials, nanotechnologies, biotechnologies, energy storage, or Internet of Things (IoT) requires the development of such human potentials that can sustain and develop competitiveness, quickly and effectively adapt to changing conditions in markets and new technologies in a non-destructive manner for the community and society, responsibly addressing the quality of life and resources and understanding the causes and consequences of climate change and biodiversity change, and to achieve fundamental societal goals, such as productivity growth, social cohesion, sustainable development and democratic processes. It is essential to include skills and competences for future citizens in education systems, which will focus on greater capacity to adapt to a rapidly changing and inclusive society.

Responding to these challenges, since 2006 the European Union has been developing key competences for lifelong learning[[1]](#footnote-1) so the development of key competences is an important educational imperative for European countries as well as accession countries. The European Reference Framework for Key Competences for Lifelong Learning provides the basic conceptual structure of key competences and defines them as a dynamic combination of knowledge, skills and attitudes in the appropriate context that are needed by all people for personal pursuit and development, active citizenship, social inclusion and employment. Based on the frame of reference, education systems at national level, according to their own needs and priorities, are free to develop new models, based on knowledge for life and for the development of each individual and society as a whole. In addition to the fact that key competences are the basis of the idea of lifelong learning, fostering their development is one of the goals of the vision of creating a European area of education and educational reforms put them at the forefront at all levels of education. All European and highly developed countries involve the development of key competences in their educational policies, strategies, regulations or initiatives.

Key competences represent a kind of change in educational doctrine that shifts the focus of education toward the acquisition of functional knowledge, the interactive use of technology, knowledge and skills, the ability to communicate with heterogeneous groups and by autonomous action. Key competences are the cornerstone of employability and flexibility in the global economy, and one of the responses to the challenges of the post-modern era in which change is accelerating and the complexity and interdependence of the local and global is increasing.

However, integrating key competences into education systems is not a simple or short-lived process. Numerous international studies show that education systems continue to seek effective modalities, and that many countries are redesigning national curriculum frameworks and education programmes. There are different motives for this, and above all the necessity of adapting education to challenges such as digitalisation, media literacy, new life concepts for active and engaging citizenship, eliminating deficiencies in existing curricula such as outdated content or lack of coherence of its parts. Society is increasingly mobile, jobs are being automated, technology, especially digital, is playing an increasing role in all areas of work and life. Improving the quality of education is becoming imperative, especially in light of the results of international research and student assessment rankings such as PISA, TIMSS or PIRLS that have indicated a "persistently high proportion of teens and adults with incomplete basic skills".

Montenegro, as a candidate for EU membership, and as a country that has been continuously implementing education reforms[[2]](#footnote-2) since 2000 to create an education system that can meet the challenges of the 21st century, has embraced the concept of integrating key competences into all levels of the education system. Like most European countries, in line with its tradition, Montenegro has incorporated the development of key competences or their broader learning outcomes into their legislation, strategy documents, education programmes and methodological guidance. Key reform activities that form the basis for more effective development of key competences in the education system of Montenegro are:

* The concept of key competences is incorporated into the legislative framework in the formulation of the goals of the law governing the entire education and upbringing system;
* The programme of *Entrepreneurial learning* within the field of activities in preschool education from 3 to 6 years (2016) and the *Education for sustainable development* in the fields of activities in preschool education and upbringing from 3 to 6 years (2015) are implemented as part of the primary programme for this age;
* Key competences have been introduced into reformed primary education programmes (2017), and the Methodological Guidance for Writing Outcome Based Programmes (2017) include key competences in general education programmes;
* Integration of key competences within vocational education has been achieved through the reform of the curriculum based on professional and qualification standards, through the Methodology for the development of professional and qualification standards and the Guidelines for Qualifications (2016), and the Methodology of Curriculum Development (2017);
* The Montenegrin Qualifications Framework was established and a handbook was written (2016);
* The modern quality assurance system for all levels of education has been established, based on self-evaluations and external evaluations;
* Teacher Education Strategy in Montenegro (2017-2024) was adopted, which envisages reforming methodical and didactic subjects and introducing knowledge and skills to develop key competences in initial teacher education at the University of Montenegro;
* UNICEF Montenegro's Education for Life Programme: Key Competences for the 21st Century in Curricula in Montenegro (Pešikan and Lalović, 2016) mapped key competencies and made recommendations for their cross-curricular development;
* The Sustainable Development Education for Pre-primary, Primary and General Secondary Education (2014) programme covers eight cross-curricular topics or areas that are cross-curricular: (1) Climate change (2) Green economy (3) Environmental protection (4) Sustainable cities and cities settlements (5) Biodiversity (6) Health education (7) Human rights education (8) Entrepreneurial learning;
* Several tutorials have been developed to support teachers in implementing cross-curricular topics:

- Guides for the implementation of the cross-curricular topic on entrepreneurial learning for preschool, primary and secondary general education;

- Guide for the implementation of the cross-curricular topic on education for sustainable development for preschool and general education;

- Guide for the implementation of the cross-curricular topic on climate change;

- Guide for the implementation of the cross-curricular topic spatial evaluation and planning;

- Guide for implementing healthy lifestyles;

- A digital literacy implementation guide is under development.

Modernizing Montenegro's education system to respond to lifelong learning needs leads to the need to **introduce a single, integrative document** to link existing fragmented efforts that focus on the development of key competences. Previous activities that have significantly developed the system for key competences have not provided synchronization for all key competences in the same way, or for all levels of education as part of a single unit. However, all activities to date have contributed to the achievement of conditions for vertical and horizontal alignment and cohesion of the system. Creating a consensus by all participants in the system functionally connects elements that already exist in education. The framework document is the widest platform that covers all levels and participants in education with a unique approach to key competences and provides clear recommendations for action, while leaving enough room for specific solutions for each of the key competences and for each level of education.

The Key Competences Framework Programme is a developmental, strategic document and is the basic starting point for a unique approach to the development of key competences for lifelong learning at all levels of education in Montenegro. It is based on the fundamental recommendations of European policies and the educational practices of Montenegro so far, with the aim of providing a useful unifying point for all actors in the education system to cooperate in integrating the development of key competences in the education system in relation to their roles. This refers to all those directly or indirectly involved in education, policy makers, employees of educational institutions - teachers, principals, educators and psychologists, educational counsellors, supervisors, parents, community representatives, or all those who participate in the broad arena of lifelong learning.

# Goals and principles of the Framework Programme

Key competences are developed in a lifelong learning perspective, from early childhood to adulthood, and through formal, non-formal and informal learning in all contexts, including family, school, workplace, personal environment and community. All key competences are considered equally important, and each contributes to a successful life in society. Competencies can be applied in different contexts and in different combinations, overlapping and intertwining, aspects crucial to one area reinforce competence in another area. Skills such as critical thinking, problem solving, teamwork, communication and negotiation skills, analytical skills, creativity and intercultural skills are all key competences. All key competences are necessary and important in the context of sustainable development[[3]](#footnote-3).

**Goals** of the Key Competences Framework Programme are:

* Creating a new perspective for students by enhancing the quality of education, training and lifelong learning so that each individual can fully participate in society and successfully navigate the labour market, and acquire the skills and competences necessary for personal achievement, health, employability and social inclusion;
* Supporting the development of teaching staff as a central part of the education system so that it is ready to explore and apply new ways of learning for a society that is increasingly mobile and increasingly reliant on digital technologies;
* Improving Montenegro's education system and utilizing the full potential of education as a driver of job creation, social justice and active citizenship;
* Developing a European dimension of education, training and lifelong learning.

The development of the Montenegrin Key Competence Framework Programme is based on the following **principles**:

* It is entirely based on the European Framework of Reference for Key Competences for Lifelong Learning and consists of eight key competences tailored to the specificities of the education system of Montenegro;
* Ensures the availability of key competences to each individual;
* Acknowledges the development of key competences in Montenegro's education system so far;
* Defines instruments and procedures for implementation;
* Guided by the principles of: comprehensiveness, science, applicability, transparency and intelligibility.

# Descriptions and outcomes of key competences by education levels

This Framework Programme identifies the following eight key competences relevant to the Montenegrin education system:

1. Literacy competence;
2. Multilingual competence;
3. Mathematical competence and competence in science, technology and engineering;
4. Digital competence;
5. Personal, social and learning to learn competence;
6. Civic competence;
7. Entrepreneurial competence;
8. Cultural awareness and expression competence.

The Framework Programme also defines descriptions (definitions), based on the descriptions of competences from the EU reference framework, as well as the outcomes authentically formulated for each level of education of the entire education system of Montenegro. Levels of education are given according to the International Standard Classification of Education (ISCED) and therefore the National Classification, which has been developed on the same basis[[4]](#footnote-4). The educational levels are determined taking into account not only the age of the pupil or student, but also the way of teaching, and they include:

* Pre-school education[[5]](#footnote-5),
* ISCED 1 – Primary education from the first to the fifth grade (predominantly class teaching),
* ISCED 2 - Elementary education from sixth to ninth grade (subject teaching in primary school),
* ISCED 3 – secondary education (including general secondary and vocational secondary education), and
* Higher education (combining all three cycles of higher education).

The outcomes of key competences are formulated in relation to the description of competences (definition and descriptions of knowledge, skills and attitudes adapted from the EU reference framework), and give a dynamic combination of knowledge, skills and attitudes applied by the student in different contexts and developed throughout life. Their goal is to determine the level of knowledge, skills and attitudes that a learning person (child, pupil, student) needs to achieve to use in life situations that cover all circumstances: personal, civic, social, and areas of economic and professional engagement.

Key competencies include attitudes and feelings, environmental awareness, conceptual and procedural knowledge, and processes of applying knowledge and skills to real-world tasks and challenges. Given such "lifelong" and broadly understood competencies, learning outcomes for key competences are formulated without separating the cognitive and affective domain as well as the domain of "soft" skills, but formulated rather broadly, with "embedded" knowledge, skills and attitudes. The outcomes of key competencies describe what students achieve at each educational level at the end of the learning process. They point to concepts, principles, and developmental learning processes; they are sometimes expanded by parentheses and explanations and have sometimes more than one explanatory verb and can be broken down into narrower outcomes. In relation to the structure of the anticipated learning outcome, some outcomes indicate a correlation with each other.

## **Literacy competence**

Literacy is the ability to identify, understand, express, create, and interpret concepts, feelings, facts and opinions in both oral and written forms, using visual, sound/audio and digital materials across disciplines and contexts. It implies the ability to communicate and connect effectively with others, in an appropriate and creative way. Development of literacy forms the basis for further learning and further linguistic interaction. Depending on the context, literacy competence can be developed in the mother tongue, the language of schooling and/or the official language in a country or region.

This competence involves the knowledge of reading and writing and a sound understanding of written information and thus requires an individual to have knowledge of vocabulary, functional grammar and the functions of language. It includes an awareness of the main types of verbal interaction, a range of literary and non-literary texts, and the main features of different styles and registers of language.

Individuals should have the skills to communicate both orally and in writing in a variety of situations and to monitor and adapt their own communication to the requirements of the situation.

This competence also includes the abilities to distinguish and use different types of sources, to search for, collect and process information, to use aids, and to formulate and express one’s oral and written arguments in a convincing way appropriate to the context. It encompasses critical thinking and ability to assess and work with information.

A positive attitude towards literacy involves a disposition to critical and constructive dialogue, an appreciation of aesthetic qualities and an interest in interaction with others. This implies an awareness of the impact of language on others and a need to understand and use language in a positive and socially responsible manner.

### **Goals for pre-school education**

Literacy competency in preschool age is developed through:

* Expanding and enriching vocabulary through play, song and other content and activities
* Developing the ability of confident verbal and nonverbal communication
* Developing the ability to listen while understanding the meaning
* Developing speech skills

### **Outcomes for ISCED 1**

At the end of the ISCED 1 primary school learning process (grades first to fifth), the student:

* Applies basic language standards in reading and writing (reads age-appropriate literary and non-literary texts with an understanding of written information; writes texts based on the model)
* Uses learned rules of grammar and spelling, and vocabulary appropriate to the context in writing and speaking
* Participates actively in interpersonal communication
* Distinguishes between types of literary and non-literary texts, and basic language styles
* Communicates orally and in writing using appropriate vocabulary
* Compares concepts and data from different sources
* Highlights key terms and related data that classifies, compares and supplements, remembers and uses in new situations
* Interpreters images, characters, folders, and simple charts and tables and other types of non-continuous text
* Separates the essential from the irrelevant after listening to or reading and analysing texts
* Demonstrates interest and openness to participate in constructive dialogue by communicating arguments and responding adequately to the arguments of others, accepting or refuting them
* Take care not to hurt the emotions of others

### **Outcomes for ISCED 2**

At the end of the ISCED level 2 learning process in primary school (grades sixth to ninth), the student:

* Applies language standards in reading and writing (reads literary and non-literary texts with an understanding of written information; writes texts based on given data)
* Applies functional grammar and spelling in writing and speaking
* Increases the number of words in the vocabulary including terms from different areas
* Identifies and interprets concepts, feelings, facts, opinions and attitudes orally and in writing
* Adapts verbal interaction, different styles and language registers to the context
* Communicates orally and in writing in various situations, adapting their own communication to the needs of the situation and using appropriate vocabulary and digital technologies
* Finds, evaluates, processes and presents different types of data and information using different types of data and information sources
* Uses information and data to argue its claims using digital technologies for word processing, presentation, and searching and processing data and information
* Critically expresses an opinion, distinguishes facts from subjective opinion, and recognizes false news
* Participates critically in constructive dialogue, respecting the qualities of good speech (eg vocabulary appropriate to the situation, appropriate speech that includes purposefulness, precision, clarity of speech, etc.) and showing interest in interacting with others
* Expresses awareness of the influence of language on others by respecting one's own and others' emotions, refraining from verbally attacking others and hurting others

### **Outcomes for secondary education (ISCED 3)**

At the end of the ISCED 3 (secondary education) learning process, the student:

* Applies rich vocabulary, including professional terms, according to situations
* Creates literary texts expressing concepts, feelings, facts, opinions and attitudes
* Applies functional literacy in everyday life situations, learning and work
* Develops the skill of participating in public, mass and intercultural communication using visual, audio and digital material in disciplines and contexts
* Communicates using various communication channels (oral, written, digital, media, etc.) effectively connecting with others, in an appropriate and creative way
* Collects, records / stores, organizes and evaluates information and data by checking the reliability of sources
* Presents, interprets and compares information and data from multiple sources using graphs and diagrams
* Critically analyses arguments and claims, presenting them through participation in discussions and debates
* Initiates and participates in dialogue in an argumentative, critical, and constructive manner
* Actively listens to and respects the opinions, attitudes and emotions of others using language in a positive and socially responsible way

### **Outcomes for higher education**

At the end of the higher education learning process, the student:

* Functionally uses the language of the profession, finds and analyses professional and scientific texts
* Critically compares and analyses information (facts, claims, concepts) from the literature relevant to the research field
* Presents complex ideas and concepts (e.g. business ideas, innovations, new scientific knowledge, etc.) concisely and convincingly, appropriate to the context, using various forms of graphic, visual, digital and audio presentations
* Writes seminar, professional, scientific and other papers respecting the rules of academic integrity
* Initiates and participates in constructive and critical dialogue

## **Multilingual competence**

This competence defines the ability to use different languages appropriately and effectively for communication. It broadly shares the main skill dimensions of literacy: it is based on the ability to understand, express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing) in an appropriate range of societal and cultural contexts according to one’s wants or needs. Languages competences integrate a owntorical dimension and intercultural competences. It relies on the ability to mediate between different languages and media, as outlined in the Common European Framework of Reference. As appropriate, it can include maintaining and further developing mother tongue competences, as well as the acquisition of a country’s official language(s).

This competence requires knowledge of vocabulary and functional grammar of different languages and an awareness of the main types of verbal interaction and registers of languages. Knowledge of societal conventions, and the cultural aspect and variability of languages is important.

Essential skills for this competence consist of the ability to understand spoken messages, to initiate, sustain and conclude conversations and to read, understand and draft texts, with different levels of proficiency in different languages, according to the individual’s needs. Individuals should be able to use tools appropriately and learn languages formally, non-formally and informally throughout life.

A positive attitude involves the appreciation of cultural diversity, an interest and curiosity about different languages and intercultural communication. It also involves respect for each person’s individual linguistic profile, including both respect for the mother tongue of persons belonging to minorities and/or with a migrant background and appreciation for a country’s official language(s) as a common framework for interaction.

In 2001, the Council of Europe adopted the **Common European Framework of Reference for Languages[[6]](#footnote-6)**, which established six levels of (foreign) language proficiency: A1, A2, B1, B2, C1 and C2. The framework has developed outcomes for each of the levels, as well as tools for monitoring and assessing progress, for the development of language learning programs and curricula and the like. Outcomes relevant to the levels of this Framework related to comprehension (listening and reading), speech (speech interaction and speech production) and writing are:

Level A1:

* Understands familiar words and basic phrases that refer to me, my family and the immediate specific environment, if the interlocutor speaks slowly and clearly;
* Recognizes familiar names, words and very simple sentences, e.g. on advertisements placed in public places, posters or in catalogues;
* Conducts a simple conversation, provided that the interlocutor is ready to repeat or reformulate sentences more slowly and that he is ready to help him express what he wants to say;
* Asks and answers simple questions on well-known topics or to meet their immediate needs;
* Uses simple phrases and sentences to describe where he lives and the people he knows;
* Writes a short, simple postcard, e.g. send holiday greetings;
* Fills in forms with personal data, e.g. enter your name, nationality and address in the hotel registration form.

Level A2:

* Understands phrases and most frequently used words in the area of ​​immediate personal interest (e.g. simple information about yourself and family, information related to shopping, immediate environment, work);
* Understands the basic meaning of short, clear and simple messages and public announcements;
* Reads very short, simple texts;
* Finds specific, predictable information in simple, everyday written materials such as advertisements, brochures, menus and timetables, and understands short, simple personal letters;
* Communicates in simple and common situations that require a simple and direct exchange of information on familiar topics and activities;
* Participates in noticeably short conversations, although he usually does not understand enough to support the conversation himself;
* Uses a series of phrases and sentences to describe in simple language own family and other people, own living conditions, own education and own current or previous job;
* Writes short, simple notes and messages;
* He writes a quite simple personal letter, e.g. letter of thanks.

Level B1:

* Understands the main ideas of a clear standard conversation on familiar topics that he regularly encounters at work, school, leisure, etc.;
* Understands the main messages of many radio and television programs on current events or topics of personal and professional interest if they are expressed relatively slowly and understandably;
* Understands texts that are mostly written in ordinary language or the language of the profession in which he / she works;
* Understands the description of events, feelings and desires in personal letters;
* Copes with most situations that may arise while traveling through an area where the language is spoken;
* Involves, without preparation, in conversations about familiar topics that are of personal interest or related to everyday life (eg family, hobbies, work, travel and current events);
* Simply connects sentences to describe experiences and events, your dreams, hopes and aspirations;
* Briefly explains and explains own views and plans;
* Tells a story or retells the contents of a book or film and describes own reactions;
* Writes a simple related text on a familiar topic or topic of personal interest;
* Writes a personal letter describing your experiences and impressions.

Level B2:

* Understands longer speeches and lectures and follows even complex arguments if the topic is at least somewhat familiar;
* Understands most TV news and current affairs programs;
* Understands most films in a standard language;
* Reads articles and reports that deal with contemporary issues in which the writer takes certain views or expresses certain opinions;
* Understands contemporary literary prose;
* Communicates fluently and spontaneously enough, allowing normal interaction with the native speaker;
* Actively participates in discussions within familiar situations, explaining and defending their views;
* Speaks clearly and in detail on many topics related to the area of ​​self-interest;
* Explains own views on a current topic, citing the advantages and disadvantages of various approaches;
* Writes a clear, detailed text on a wide range of topics of interest;
* Writes a composition or report conveying information or stating reasons for or against a particular point of view;
* Writes a letter in which he clearly expresses the meaning he personally attaches to certain events and experiences.

### **Goals for pre-school education**

The multilingual competence in preschool age is developed through:

* Encouraging children's interest in learning a foreign language through play, music, songs, colouring, etc.;
* Acquisition of English vocabulary through play, song and other content and activities;
* Developing memory and imitation skills in children;
* Getting to know other cultures through storytelling, song, drawing and colouring.

### **Outcomes for ISCED 1**

At the end of the ISCED 1 elementary school learning process (grades first to fifth), the student:

* Uses vocabulary, basic grammatical norms of the first foreign language (as a rule of English), at level A1 of the Common European Framework of Reference for Languages
* Listens, reads, speaks and writes one foreign (usually English) language at level A1 of the Common European Framework of Reference for Languages
* Recognizes the specifics of a foreign language and typical differences in relation to the mother tongue (e.g. transcription, capitalization, persuasion, etc.)
* Uses appropriate situations and resources to learn foreign languages (e.g. cartoons, picture books, video games, etc.)
* Respects the linguistic and cultural identity of each individual and respects differences

### **Outcomes for ISCED 2**

At the end of the ISCED level 2 learning process in primary school (grades sixth to ninth), the student:

* Uses vocabulary, grammatical norms, basic types of verbal interaction and registers of the first foreign language (usually English) at level A2 of the Common European Framework of Reference for Languages
* Uses vocabulary, basic grammatical norms of another foreign language, at level A1 of the Common European Framework of Reference for Languages
* Analyses the specifics of foreign languages, including social conventions
* Listens, reads, speaks and writes the first foreign (usually English) language at level A2 of the Common European Framework of Reference for Languages
* Listens, reads, speaks and writes another foreign language at level A1 of the Common European Framework of Reference for Languages
* Uses different communication situations and resources for learning different languages ​​(eg Internet, online courses and e-tests, movies, music, communication via social networks, etc.)
* Expresses a positive attitude towards other languages ​​and cultures
* Shows interest in studying other languages ​​and cultures
* Recognizes the role of the official language (s) as a common framework for interaction

### **Outcomes for secondary education (ISCED 3)**

At the end of the ISCED 3 (secondary education) learning process, the student:

* Applies vocabulary and functional grammar of the main types of verbal interaction and registers of the first foreign language (as a rule of English), at the level of B1 / B2 of the Common European Framework of Reference for Languages
* Uses vocabulary, grammatical norms of the basic type of verbal interaction and registers of another foreign language at least at the level of A1[[7]](#footnote-7) of the Common European Framework of Reference for Languages
* Respects social conventions, cultural aspects and the variability of foreign languages ​​in communication
* Listens, reads, speaks and writes the first foreign language (usually English) at the B1 / B2 level of the Common European Framework of Reference for Languages
* Listens, reads, speaks and writes a second foreign language at least at level A1 of the Common European Framework of Reference for Languages
* Finds and uses different communication situations and resources for learning different languages ​​(e.g. professional and other literature, films, music, communication via social networks, digital tutorials and tutorials, online courses, exchange opportunities, study and other trips, courses and language schools, etc.)
* Demonstrates respect for cultural differences, interest and curiosity about different languages ​​and intercultural communication through behaviour and action
* Respects the official language(s) as a common framework for interaction

### **Outcomes for higher education**

At the end of the higher education learning process, the student:

* Understands texts and other media that use vocabulary characteristic of the profession
* Finds, searches and uses literature in different languages
* Effectively and flexibly uses language in social and business situations (eg meetings, presentations, seminars, professional and scientific conferences, etc.)
* Communicates orally and in writing in a foreign language on topics specific to the profession, including writing seminar, professional, scientific and other papers

## **Mathematical competence and competence in science, technology and engineering**

Mathematical competence is the ability to develop and apply mathematical thinking, knowledge and skills to solve various problems in everyday situations. It is based on knowledge of mathematical concepts and complete mastery of computation, with an emphasis on understanding processes and activities, i.e. to develop functional mathematical knowledge and skills, which can be applied in different situations. Mathematical competence includes, to varying degrees, the ability and willingness to adopt and use other forms of mathematical thinking and to present their application (formula, model, constructs, graphs, mathematical modelling).

Competence in science refers to the ability and willingness to explain the natural world by making use of the body of knowledge and methodology employed, including observation and experimentation, in order to identify questions and to draw evidence-based conclusions. Competences in technology and engineering are applications of that knowledge and methodology in response to perceived human wants or needs. Competence in science, technology and engineering involves an understanding of the changes caused by human activity and responsibility as an individual citizen.

Necessary knowledge in mathematics includes a sound knowledge of numbers, measures and structures, basic operations and basic mathematical presentations, an understanding of mathematical terms and concepts, and an awareness of the questions to which mathematics can offer answers. An individual should have the skills to apply basic mathematical principles and processes in everyday contexts at home and work (e.g. financial skills), and to follow and assess chains of arguments.

An individual should be able to reason mathematically, understand mathematical proof and communicate in mathematical language, and to use appropriate aids including statistical data and graphs and to understand the mathematical aspects of digitalisation.

A positive attitude in mathematics is based on the respect for truth and a willingness to look for reasons and to assess their validity.

For science, technology and engineering, essential knowledge comprises the basic principles of the natural world, fundamental scientific concepts, theories, principles and methods, technology and technological products and processes, as well as an understanding of the impact of science, technology, engineering and human activity in general on the natural world. These competences should enable individuals to better understand the advances, limitations and risks of scientific theories, applications and technology in societies at large (in relation to decision-making, values, moral questions, culture, etc.).

Skills include the understanding of science as a process for the investigation through specific methodologies, including observations and controlled experiments, the ability to use logical and rational thought to verify a hypothesis and the readiness to discard one’s own convictions when they contradict new experimental findings. It includes the ability to use and handle technological tools and machines as well as scientific data to achieve a goal or to reach an evidence-based decision or conclusion.

Competence includes an attitude of critical appreciation and curiosity, a concern for ethical issues and support for both safety and environmental sustainability, in particular as regards scientific and technological progress in relation to oneself, family, community, and global issues.

Individuals should also be able to recognize the essential characteristics of scientific inquiry and be able to communicate the conclusions and insights that led to them. Competence includes an attitude of critical respect and curiosity, concern for ethical issues and support for both safety and environmental sustainability, especially in terms of scientific and technological advances regarding self, family, community and global issues.

### **Goals for pre-school education**

Mathematical competence and competence in science, technology, engineering in preschool age is developed through:

* Encouraging curiosity about the world around you
* Asking questions and research through play and fun
* Recognition of geometric shapes in the environment
* Developing the child's ability to classify and sort objects according to a certain criterion (shape, size, colour, etc.)

### **Outcomes for ISCED 1**

At the end of the ISCED 1 elementary school learning process (grades first to fifth), the student:

* Uses basic arithmetic operations with natural numbers, mathematical procedures and measures to solve problems in everyday life situations
* Recognizes that many natural phenomena and processes can be described by scientific laws, models, and theories
* Recognizes the role of scientific knowledge for the construction of all machines and devices, as well as the role of human curiosity and the need to explain the world in driving science and innovation
* Connects the application of scientific achievements and technological solutions with the well-being of humanity, recognizing the possibility of their abuse
* Evaluates and measures basic physical quantities by selecting appropriate units of measurement and instruments for their measurement
* Recognizes the logic of mathematical procedures and uses logic to argue own ideas and explanations
* Reads, compares and displays data in tables and graphs using digital tools as needed
* Performs independent experiments independently, describing and interpreting the results of the performed experiment and drawing conclusions
* Recognizes and uses simple tools and machines
* Accepts mathematical statements noting that they can describe natural phenomena and natural laws
* Demonstrates systematicity, precision and perseverance in work and learns from mistakes
* Distinguishes what is a natural given and what is a convention, an agreement in science
* Recognizes the need for moderate, rational and purposeful use of natural resources in its environment

### **Outcomes for ISCED 2**

At the end of the ISCED level 2 learning process in primary school (grades sixth to ninth), the student:

* + Uses mathematical operations with real numbers, basic mathematical concepts and concepts by presenting objects, ideas and procedures with words, drawings, diagrams, graphs, numbers and symbols
  + Uses basic principles of maintenance and mathematical equality to describe processes and laws in the real world by recognizing the application of science in technology
  + Compares explanations of natural phenomena throughout owntory, assessing the importance of scientific discoveries on the development of technology, medicine and society
  + Analyses the structure and properties of living and non-living nature and their connection
  + Evaluates the advantages and disadvantages of generally accepted technologies recognizing the importance of moral issues for their application and development
  + Applies proportionality, scale and percentage calculation in everyday life situations
  + Analyses the essential properties of objects, phenomena and processes and presents them as variables, to which it assigns numerical values ​​and monitors the interdependence of relevant variables
  + Checks simple mathematical statements and conclusions by evaluating the logical statements on which they are based
  + Collects, classifies and organizes empirical data according to the required criteria
  + Distinguishes scientific knowledge from lay belief
  + Performs simple experiments and reports on flow, results and conclusions using and adjusting measuring instruments and taking care that measurements always have errors
  + Explains the characteristics of technological processes and the development of medicine that have significantly influenced the development of mankind
  + Adopts scientific truth by presenting evidence of natural laws
  + Understands the need for observations and experiments to be performed under controlled conditions that allow the method of work and results to be verified
  + Compares the possible benefits and harms of using different machines and natural resources by contributing to the activities of human safety and environmental protection

### **Outcomes for secondary education (ISCED 3)**

At the end of the ISCED 3 (secondary education) learning process, the student:

* + Presents and describes objects and phenomena with abstract mathematical structures and relations, recognizing which questions mathematics can answer
  + Checks data and claims aware that science and technology are evolving through impartial data collection and continuous testing of theoretical assumptions
  + Recognizes that the development of technology and medicine owes its success to the consistent application of scientific results
  + Evaluates the motives that lead to innovation and development of technology by analyzing the profit that would be achieved by their use, general well-being and their essential impact on raising the quality of life of all people
  + Interpret the relationship between phenomena in nature or society using simple mathematical modelling techniques
  + Analyses a complex problem, divides it into steps and solves it through an algorithm
  + Uses a series of logical arguments to conclude, prove, generalize, and identify special cases
  + Uses the methodology of data collection, processing and analysis (observes, measures, experimentally records, analyses and verifies results, presents data using descriptive statistics, tables and graphs)
  + Critically uses all elements of the scientific method for research of unknown phenomena and independent learning, deriving reliable and evidence-based research conclusions
  + Interprets, applies and creates technical instructions and technical documentation for everyday use
  + Makes technical drawings and uses tools, appropriate materials and techniques to make models, models and prototypes
  + Affirms the scientific truth, significance and relevance of scientific research
  + Writes and discusses essays through research work, using scientific concepts and verifiable sources of information
  + Recognizes the importance of ethical issues related to health, safety and environmental sustainability in terms of scientific and technological progress

### **Outcomes for higher education**

At the end of the higher education learning process, the student:

* + Adequately applies the methodology of scientific research
  + Applies complex mathematical and statistical techniques within a quantitative research methodology
  + Applies scientific methods to review and control data and decisions
  + Uses existing scientific knowledge to encourage innovative solutions
  + Uses research for self-directed learning
  + Applies the rules of academic integrity
  + Applies a value system according to which they treats themselves, others and the environment responsibly in science and research

## **Digital competence**

Digital competence involves the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity), intellectual property related questions, problem solving and critical thinking.

Individuals should understand how digital technologies can support communication, creativity and innovation, and be aware of their opportunities, limitations, effects and risks. They should understand the general principles, mechanisms and logic underlying evolving digital technologies and know the basic function and use of different devices, software, and networks. Individuals should take a critical approach to the validity, reliability and impact of information and data made available by digital means and be aware of the legal and ethical principles involved in engaging with digital technologies.

Individuals should be able to use digital technologies to support their active citizenship and social inclusion, collaboration with others, and creativity towards personal, social or commercial goals. Skills include the ability to use, access, filter, evaluate, create, program and share digital content. Individuals should be able to manage and protect information, content, data, and digital identities, as well as recognise and effectively engage with software, devices, artificial intelligence or robots.

Engagement with digital technologies and content requires a reflective and critical, yet curious, open-minded and forward-looking attitude to their evolution. It also requires an ethical, safe and responsible approach to the use of these tools.

In 2017, the Joint Research Center (JRC), the European Commission's Science and Knowledge Service, published the **Digital Competence Framework for Citizens (DigComp 2.1)[[8]](#footnote-8)**, to encourage the further development of this competence and its integration into education, training and lifelong learning systems in European countries. , and served as a basis for the development of educational programs and for the purpose of encouraging entrepreneurship as a competence. The DigComp framework has established a total of 21 competencies in five areas:

1. Information and data literacy (1.1 Review, search and filter data, information and digital content; 1.2 Evaluation of data, information and digital content 1.3 Data, information and digital content management)
2. Communication and cooperation (2.1 Interaction through digital technologies; 2.2 Exchange through digital technologies; 2.3 Involvement in civic life through digital technologies2.4 Cooperation through digital technologies; 2.5 Netiquette; 2.6 Digital identity management)
3. Creation of digital content (3.1 Development of digital content; 3.2 Integration and re-elaboration of digital content; 3.3 Copyright and licenses; 3.4 Programming)
4. Security (4.1 Protection of devices; 4.2 Protection of personal data and privacy; 4.3 Protection of health and well-being; 4.4 Protection of the environment)
5. Problem solving (5.1 Solving technical problems; 5.2 Identifying needs and technical responses; 5.3 Creative use of digital technologies; 5.4 Identifying cavities when it comes to digital competencies)

### **Goals for pre-school education**

Digital competence in pre-school age is developed by bringing information and communication technology closer to each other, and its use in various activities, to enhance the child's overall development. That includes:

* + Understanding the need for information, explaining what the Internet is, what it is for, the limited use of the Internet, under supervision, and highlighting the differences between fun and educational applications
  + By getting acquainted with information and communication devices and rules of conduct in communication and on the Internet
  + By designing simple digital content (e.g. photos) in a secure environment
  + Application of appropriate security measures on the Internet
  + By identifying simple technical problems in working with digital devices

### **Outcomes for ISCED 1**

At the end of the ISCED 1 elementary school learning process (grades first through fifth), the student:

* + Explores the different possibilities of using digital technologies in everyday life, noticing the effects and limitations of their application
  + Distinguishes the purpose of different digital devices and applications by connecting their connectivity and operating principles
  + Uses a variety of information and data sources in the digital environment
  + Recognizes the dangers and ways to react in cases of cyber violence, ways to protect personal data and privacy in the digital environment, as well as the protection of devices, digital content, and the impact of digital technologies and their use on the environment
  + Uses digital technologies to communicate in an appropriate context
  + Creates and edits simple digital content using a variety of digital tools
  + Searches, stores and uses information and content in digital form
  + Uses digital devices and simple applications to communicate, store and process text, photos and videos
  + Demonstrates openness and curiosity towards the use of digital communication technologies and innovations
  + Takes care of the proper use of digital and communication technologies in relation to behaviour in the digital environment, data and device protection

### **Outcomes for ISCED 2**

At the end of the ISCED level 2 learning process in primary school (grades sixth to ninth), the student:

* Connects the application of digital technologies with the development of communications, creativity and innovation by analysing the possibilities, limitations, effects and risks of digital technologies
* Selects digital devices, tools and software applying the general principles, mechanisms and logic of their functions
* Analyses and compares the validity and reliability of defined data sources, information and digital content
* Apply different ways to protect and share their personal data and privacy in the digital environment, protecting themselves and others from danger
* Uses various forms of digital communication, including social networks, in order to achieve personal and social goals
* Creates and shares digital content and materials (eg text, tables, graphics, images, presentations, audio and video material ...) using services and applications and digital data storage technology
* Advanced searches, stores and uses information and content in digital form using simple protection
* Uses digital devices, applications and simple software to create, process, adapt and save text, images, videos and other digital content
* Accepts digital communication technologies and innovations and their use in a constructive and thoughtful way
* Conducts in accordance with the rules of desirable behaviour in the Internet community (netiquette), rules relating to the use and security of digital devices, applications and software

### **Outcomes for secondary education (ISCED 3)**

At the end of the ISCED 3 (secondary education) learning process, the student:

* + Applies digital technologies to communicate, create knowledge and innovate processes and products taking into account the possibilities, limitations, effects and risks of using digital tools and technologies
  + Uses various digital devices, software and networks by connecting them into logical units to perform everyday tasks, and especially to create knowledge and innovate processes and products
  + Critically assesses the credibility, reliability and impact of different sources of information and data by adapting a search strategy to find the most relevant data, information and content in the digital environment
  + Respects the concept of copyright in the digital environment and selects the most appropriate ways to protect and share personal data and privacy in the digital environment, while protecting yourself and others from harm
  + Develops a communication strategy and establishes interactions through digital technologies to empower oneself and to participate in society as a citizen, sharing information and content and engaging in social activities using digital technology
  + Creates, edits and shares digital content in various formats, executes algorithm instructions and writes the appropriate program
  + Manages digital data, information, content and digital identity
  + Uses advanced software, various digital devices, and simple robots and digital tools that include artificial intelligence
  + Affirms the use of digital communication technologies and innovations in a thoughtful, critical and appropriate manner
  + Adopts a value system of ethical, safe and responsible approach in the digital environment

### **Outcomes for higher education**

At the end of the higher education learning process, the student:

* + Uses complex digital content and works with data to solve problems and create adequate technological responses
  + Applies specialized applications and software for its field, and programming.
  + Actively communicates using a variety of digital and communication technologies, routinely applying net etiquette and digital identity rules
  + Respects ethical principles, copyrights and licenses in the digital environment (acts in accordance with the principles of academic integrity)
  + Respects the principles of personal data protection, health and well-being, and environmental protection in the digital environment

## **Personal, social and learning to learn competence**

Personal, social and learning to learn competence is the ability to reflect upon oneself, effectively manage time and information, work with others in a constructive way, remain resilient (to stress caused by constant life changes, pressures and risks) and manage one’s own learning and career. Personal competence includes the initiative to recognize the need for change and introduce change as well as to consider oneself, one's skills, attitudes and values.

Personal, social and learning to learn competence includes: the ability to cope with and learn from personal mistakes, responsibility and real self-assessment of what you do, the ability cope with uncertainty and complexity, learning to learn (developing cognitive skills), support one’s physical and emotional wellbeing, to maintain physical and mental health, and to be able to lead a health-conscious, future-oriented life, empathize and manage conflict in an inclusive and supportive context, discovering one's own strengths and weaknesses, affinities and interests and taking responsibility for personal and professional growth, professional careers and personal realization.

For successful interpersonal relations and social participation, it is essential to understand the codes of conduct and rules of communication generally accepted in different societies and environments. Personal, social and learning to learn competence requires also knowledge of the components of a healthy mind, body and lifestyle. It involves knowing one’s preferred learning strategies, knowing one’s competence development needs and various ways to develop competences and search for the education, training and career opportunities and guidance or support available.

Skills include the ability to identify one’s capacities, focus, deal with complexity, critically reflect and make decisions. This includes the ability to learn and work both collaboratively and autonomously and to organise and persevere with one’s learning, evaluate and share it, seek support when appropriate and effectively manage one’s career and social interactions. Individuals should be resilient and able to cope with uncertainty and stress. They should be able to communicate constructively in different environments, collaborate in teams and negotiate. This includes showing tolerance, expressing and understanding different viewpoints, as well as the ability to create confidence and feel empathy.

The competence is based on a positive attitude toward one’s personal, social and physical well-being and learning throughout one’s life. It is based on an attitude of collaboration, assertiveness and integrity. This includes respecting diversity of others and their needs and being prepared both to overcome prejudices and to compromise. Individuals should be able to identify and set goals, motivate themselves, and develop resilience and confidence to pursue and succeed at learning throughout their lives. A problem-solving attitude supports both the learning process and the individual’s ability to handle obstacles and change. It includes the desire to apply prior learning and life experiences and the curiosity to look for opportunities to learn and develop in a variety of life contexts.

The Joint Research Center (JRC), the European Commission's Science and Knowledge Service, is in the process of developing a European Framework for Personal, Social and Competence Learning How to Learn (LifEComp)[[9]](#footnote-9) to encourage further development of this competence and its integration into education, training and lifelong learning systems. in European countries. Within four areas, a total of ten skills were identified:

* Key elements: development of mental mindset, self-regulation, empathy
* Personal development: adaptability, resilience, well-being
* Social development: cooperation, communication,
* Learn how to learn: learning management, critical thinking

### **Goals for pre-school education**

Personal, social and learning to learn competence in preschool age is developed through:

* + Developing responsible behaviour and self-esteem and respect for others, regardless of similarities and differences
  + Helping others, seeking and accepting help when needed, and expressing compassion, understanding, and expressing feelings
  + Presenting and explaining one's own point of view
  + Involvement in decision-making related to the activities of children in kindergarten
  + Developing awareness of the importance of learning
  + Participation in planning and organizing the learning process

### **Outcomes for ISCED 1**

At the end of the ISCED 1 elementary school learning process (grades first to fifth), the student:

* + Applies rules of conduct and appropriate communication recognizing the importance of establishing rules and the reasons for their introduction
  + Distinguishes the components of a healthy mind, body and lifestyle from unhealthy habits
  + Manages own own supported learning process, choosing the learning approach and learning strategies that are most appropriate for him
  + Recognizes different ways to develop competencies
  + Recognizes own abilities and interests and uses them for learning, personal growth and support with support
  + Focuses on simple problems in learning, personal and social development, with support
  + Finds evidence for own claims
  + Adapts to independent learning, learning with others and learning with support
  + Shows curiosity, desire and perseverance in learning by monitoring their results and their progress during learning while reviewing the progress made
  + Presents a map of personal development
  + Adapts to changed learning and living conditions without significant effort, with support
  + Communicates with others while expressing and understanding different points of view
  + Supports personal, social and physical well-being and cooperation
  + Acts in accordance with the principles of fairness and equal opportunities, showing readiness to overcome prejudices
  + Respects the diversity of others and their needs by building their own integrity and relationships with others on the principle of respect and empathy
  + Builds motivation to achieve goals in learning and life, builds self-confidence, shows readiness to solve problems and openness to change
  + Builds a relationship towards overcoming problems and finding answers to challenges
  + Shows curiosity to learn

### **Outcomes for ISCED 2**

At the end of the ISCED 2 learning process in primary school (grades sixth to ninth), the student:

* + Applies a code of conduct and rules of effective communication adapted to the situation, expressing a positive value system that directs their own decisions and behaviour in a consistent manner
  + Take care of your own physical and mental health and the health of others
  + Manages own own learning process with occasional support, improving own learning by changing own plan or approach to learning
  + Recognizes the importance of competencies for progress in learning and personal growth
  + Analyses available opportunities for education, training and career
  + Uses self-knowledge for learning, personal growth and development with support
  + Focuses on learning, personal and social development
  + Argues the expressed opinion and attitudes
  + Plan for self-directed learning, learning with others, and seeking support when appropriate and effective
  + Demonstrates a willingness to make an effort to achieve learning outcomes
  + Evaluates the learning process and the results achieved and assesses the progress made
  + Share knowledge and personal experience with others
  + Selects the first steps of the career path - analysis different occupations and opportunities of one's own career path by planning the choice of profession and continuing education
  + Assess and adapt to changed learning and living conditions, with reflection and counselling
  + Communicates constructively and cooperates with others, expressing flexibility in communication, the ability to find compromises, self-confidence and a sense of empathy
  + Adopt positive values ​​about personal, social and physical well-being and cooperation
  + Promotes physical and emotional well-being by showing a positive attitude towards cooperation, assertiveness and integrity
  + Motivates and develops resilience and self-confidence for their success in learning
  + Promotes the values ​​of overcoming problems and finding answers to challenges and openness to change
  + Develops a desire to apply prior learning and life experiences

### **Outcomes for secondary education (ISCED 3)**

At the end of the ISCED 3 (secondary education) learning process, the student:

* + Creates and implements a code of ethics and a framework for constructive communication for successful interpersonal relationships and social participation
  + Applies healthy lifestyles, develops mind and body and treats the future responsibly
  + Manages independently and proactively learning processes using effectively different learning strategies
  + Finds ways of lifelong skills acquisition, career management and further education (formal, non-formal, informal)
  + Takes responsibility for own decisions, learning, results achieved and personal and professional development
  + Focuses on solving complex problems in learning, personal and social development
  + Critically reviews decisions taking into account different pieces of evidence
  + Assess the effects of self-directed learning, learning with others, and learning support
  + Self-evaluates the effectiveness of learning and its progress during learning
  + Shares knowledge, experiences and ideas and motivates others to action
  + Takes responsibility for personal and professional growth, develops your CV, writes a cover letter and develops techniques for appearing for a job interview or admission to an organization
  + Develops resilience and the ability to cope with insecurity and stress
  + Communicates assertively using different techniques of verbal and nonverbal communication and successfully resolving communication problems and conflicts in different situations
  + Uses negotiation techniques in communication to achieve goals by building positive interdependence and interaction with others
  + Promotes a positive value system about personal, social and physical well-being and cooperation
  + Adopts a system of values ​​of cooperation, assertiveness, integrity, respect for the diversity of others and their needs and a willingness to overcome prejudices and make compromises
  + Adopts a value system of a positive attitude towards learning and applying one's own life experiences and the experiences of others
  + Supports yourself and others in developing and overcoming obstacles by affirming change and curiosity to learn
  + Forms decision-making criteria and develops its own integrity

### **Outcomes for higher education**

At the end of the higher education learning process, the student:

* + Develops authentic learning strategies for the chosen field of study
  + Uses learning methods and styles that underpin your own lifelong learning (formal, non-formal, informal), including the use of appropriate e-tools.
  + Design and create, individually or in a team, an idea / product that can create new value for the individual and the community
  + Communicates effectively and responsibly in a variety of contexts, including the intercultural context and media environment
  + Applies knowledge and skills to maintain one's own physical and mental health, including caring for the well-being of others and the community.
  + Demonstrates, in own decisions and behaviour, highly ethical and moral personal and professional integrity
  + Faces insecurity and complexity in everyday life by building resilience to stresses caused by constant life changes, pressures and risks

## **Civic competence**

Citizenship competence is the ability to act as responsible citizens and to fully participate in civic and social life, based on understanding of social, economic, legal and political concepts and structures, as well as global developments and sustainability.

Citizenship competence is based on knowledge of basic concepts and phenomena relating to individuals, groups, work organisations, society, economy and culture. This involves an understanding of the European common values, as expressed in Article 2 of the Treaty on European Union and the Charter of Fundamental Rights of the European Union. It includes knowledge of contemporary events, as well as a critical understanding of the main developments in national, European and world history. In addition, it includes an awareness of the aims, values and policies of social and political movements, as well as of sustainable systems, in particular climate and demographic change at the global level and their underlying causes. Knowledge of European integration as well as an awareness of diversity and cultural identities in Europe and the world is essential. This includes an understanding of the multi-cultural and socioeconomic dimensions of European societies, and how national cultural identity contributes to the European identity.

Skills for citizenship competence relate to the ability to engage effectively with others in common or public interest, including the sustainable development of society. This involves critical thinking and integrated problem-solving skills, as well as skills to develop arguments and constructive participation in community activities, as well as in decision-making at all levels, from local and national to the European and international level. This also involves the ability to access, have a critical understanding of, and interact with both traditional and new forms of media and understand the role and functions of media in democratic societies.

Respect for human rights as a basis for democracy lays the foundations for a responsible and constructive attitude. Constructive participation involves willingness to participate in democratic decision-making at all levels and civic activities. It includes support for social and cultural diversity, gender equality and social cohesion, sustainable lifestyles, promotion of culture of peace and non-violence, a readiness to respect the privacy of others, and to take responsibility for the environment. Interest in political and socioeconomic developments, humanities and intercultural communication is needed to be prepared both to overcome prejudices and to compromise where necessary and to ensure social justice and fairness.

Since 2013, the Council of Europe has been developing a **Competence Framework for Democratic Culture[[10]](#footnote-10)**, which has identified 20 competences divided into four areas:

* **Knowledge and critical understanding**: Knowledge and critical understanding of self; Knowledge and critical understanding of language and communication; Knowledge and critical understanding of the world: politics, law, human rights, culture, religion, owntory, media, economy, environment, sustainability
* **Skills**: Autonomous learning skills; Analytical and critical thinking skills; Learning and observation skills; Empathy; Flexibility and adaptability; Language, communication and multilingual skills; Cooperation skills; Conflict resolution skills
* **Attitudes**: Openness to cultural diversity and other beliefs, world views and practices; Respect; Civic orientation; Responsibility; Own efficiency; Uncertainty tolerance
* **Values**: Valuation of human dignity and human rights; Evaluation of cultural diversity; Valuing democracy, justice, fairness, equality and the rule of law

### **Goals for pre-school education**

Civic competence in preschool age is developed through:

* + Developing responsibility within the community (e.g. in one's family, peer group, etc.)
  + Gaining confidence for free expresses ideas, suggestions and initiatives
  + Developing the ability to control one's emotions and empathy
  + Discerning and respecting diversity (recognizing similarities and differences compared to peers in a group, without discrimination)
  + Developing and adopting healthy lifestyles
  + Developing simple habits that contribute to preserving the environment

### **Outcomes for ISCED 1**

At the end of the ISCED 1 elementary school learning process (grades first to fifth), the student:

* + Distinguishes basic concepts, phenomena and roles related to the individual, family, social groups, school, organizations and institutions
  + Recognizes basic values ​​in the family, school and society related to self-respect and justice, fairness, solidarity, non-discrimination and respect for children's rights
  + Identifies significant contemporary and past events that have affected society
  + Recognizes the values ​​of social groups from their environment (e.g. family, class, school, children's union, environmentalists, scouts, etc.)
  + Recognizes the importance of natural resources and environmental protection in preserving the quality of life
  + Recognizes individual and cultural differences among people
  + Recognizes the importance of nurturing the tradition of one's own cultural and national identity by recognizing and supporting similarities and differences between people
  + Observes socioeconomic differences in stories and environment advocating for social justice
  + Participates in socially useful activities at the class and school level
  + Expresses own opinion and views on problem solving, taking into account the opinions of others
  + Participates in the work of class and school bodies
  + Uses available media in an age-appropriate way and compares media content with teachers, parents, relatives and peers
  + Demonstrates a positive attitude towards the child's rights to growth, learning, development of their own abilities and talents, growing up in a family, safety and protection
  + Demonstrates a willingness to participate in democratic decision-making at the family, school, and peer groups
  + Accepts cultural and gender differences by building respectful and nonviolent behaviour
  + Emphasizes the importance of a responsible attitude towards the environment
  + Shows interest in events in own environment by supporting diversity.

### **Outcomes for ISCED 2**

At the end of the ISCED level 2 learning process in primary school (grades sixth to ninth), the student:

* + Assess the concepts, phenomena, role and importance of individuals, social groups, organizations and institutions on social processes
  + Compares the values ​​in the society in which he lives with the values ​​of the European Union related to democracy, equality, respect for the prescribed rules in society, the rights of persons belonging to minorities and more
  + Evaluates current events in relation to key events in national, European and world history
  + Examines the development of social and political movements, their goals and values
  + Distinguishes the causes and consequences of climate change, biodiversity change and demographic change at the local and global levels
  + Recognizes the importance of European integration and accession to the European Union, respecting the diversity and cultural identities of others
  + Compares the basic characteristics of its own and other cultures, respecting the multicultural dimension of European societies
  + Critically assesses the socio-economic dimensions of society at the national and regional levels
  + Engages voluntarily in activities of public and common interest at the school and community level
  + Explains own views and solves problems by establishing criteria for evaluating different opinions
  + Participates actively in the work of class and school bodies and student associations
  + Evaluates various media as sources of information and critically and responsibly expresses its views on available traditional media and social networks
  + Affirms human rights respecting different identities, equality and freedom
  + Expresses a positive attitude towards democratic decision-making at the school and community level by freely expressing their opinions
  + Expresses the right attitude towards cultural, social and gender differences by accepting a culture of respect and non-violence
  + Expresses an attitude about a responsible attitude towards the environment by adapting to changes in it
  + Shows interest in social events, humanities and intercultural communication, excluding prejudices and affirming compromise and social justice

### **Outcomes for secondary education (ISCED 3)**

At the end of the ISCED 3 (secondary education) learning process, the student:

* + Assess the role, importance, and impact of the individual, different social groups, schools, economics, culture, and different organizations locally and globally
  + Promotes the common European values ​​of respect for human dignity, freedom, democracy, equality, the rule of law, human rights, the rights of persons belonging to minorities, as well as dignity, freedom, equality, citizens' rights and justice
  + Critical of current events, linking them to key events in national, European and world history
  + Critically treats the goals, values ​​and policies of social and political movements, comparing their historical development and impact on processes in society
  + Judges the importance of a responsible attitude towards environmental and demographic problems of modern society by promoting the principles of sustainable development
  + Evaluates the idea of ​​European integration by positively valuing the differences and cultural identities in Europe and the world
  + Analyses the multicultural dimensions of European societies and the contribution of national cultural identity to European identity
  + Assess the socio-economic dimensions of European societies
  + Initiates and actively participates in humanitarian, artistic, entrepreneurial, environmental and other activities at the local, regional and international level
  + Think critically and solve problems constructively, giving one's own and accepting the arguments of others
  + Involves in the work of youth and other non-governmental organizations, and publicly advocates for positive changes in school, community and society
  + Critically evaluates information from different media, recognizing their importance in democratic societies and creates simple media content in which he responsibly expresses own opinions and views
  + Expresses a responsible and constructive attitude towards respect for human rights as the basis of democracy
  + Affirms the principles of democratic decision-making at all levels, public advocacy and social justice
  + Evaluates positively social and cultural diversity, gender equality, respecting the privacy of others and affirming social cohesion, peace and non-violence
  + Advocates the values ​​of preserving the environment and sustainable living
  + Demonstrates an affinity for politics and social movements by affirming the values ​​of compromise, rejection of prejudice, social justice and fairness

### **Outcomes for higher education**

At the end of the higher education learning process, the student:

* + Analyses current social phenomena (poverty, migration, class division, civic activism and democracy) in the context of contemporary social movements
  + Participates in collective activities on issues important to the community, at national and or global level (e.g. through campaigns, civic organizations and other forms of activism)
  + Compares different cultural patterns and respects the principles of multiculturalism and tolerance
  + Reacts critically to discriminatory or antisocial behaviour in interpersonal and social processes
  + Evaluates the ideas of European integration and critically analyses Montenegro's accession to the European Union
  + Promotes healthy lifestyles and treats quality of life and resources responsibly
  + Critically assesses the relationship between available resources and the economic development of society at the global and local levels
  + Critically interprets the role of the media in creating social reality

## **Entrepreneurial competence**

Entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for others. It is founded upon creativity, critical thinking and problem solving, taking initiative and perseverance and the ability to work collaboratively in order to plan and manage projects that are of cultural, social or financial value.

Entrepreneurship competence requires knowing that there are different contexts and opportunities for turning ideas into action in personal, social and professional activities, and an understanding of how these arise. Individuals should know and understand approaches to planning and management of projects, which include both processes and resources. They should have an understanding of economics and the social and economic opportunities and challenges facing an employer, organisation or society. They should also be aware of ethical principles and challenges of sustainable development and have self-awareness of their own strengths and weaknesses.

Entrepreneurial skills are founded on creativity which includes imagination, strategic thinking and problem-solving, and critical and constructive reflection within evolving creative processes and innovation. They include the ability to work both as an individual and collaboratively in teams, to mobilize resources (people and things) and to sustain activity. This includes the ability to make financial decisions relating to cost and value. The ability to effectively communicate and negotiate with others, and to cope with uncertainty, ambiguity and risk as part of making informed decisions is essential.

An entrepreneurial attitude is characterised by a sense of initiative and agency, pro-activity, being forward-looking, courage and perseverance in achieving objectives. It includes a desire to motivate others and value their ideas, empathy and taking care of people and the world, and accepting responsibility taking ethical approaches throughout the process.

In 2016, the Joint Research Center (JRC), the Science and Knowledge Service of the European Commission, published EntreComp: Entrepreneurship Competence Framework[[11]](#footnote-11), to encourage the further development of this competence and its integration into education, training and lifelong learning systems in European countries. as a basis for the development of educational programs and for the purpose of encouraging entrepreneurship as a competence. EnteComp consists of 3 interconnected areas of competencies, and each of the areas consists of 5 competencies that together build the basis for building entrepreneurship as a competency. The framework further develops 15 competencies through a progress model at 8 levels and proposes a comprehensive list of 442 learning outcomes, by level. Areas and competencies are:

1. **Ideas and opportunities**: 1.1. Opportunity recognition; 1.2. Creativity; 1.3. Vision; 1.4. Evaluation of ideas; 1.5. Ethics and sustainable development
2. **Resources**: 2.1. Self-awareness and personal efficiency; 2.2. Motivation and perseverance; 2.3. Launching resources; 2.4. Financial and economic literacy; 2.5. Engaging other participants)
3. **Action**: 3.1. Taking the initiative; 3.2 Planning and management; 3.3. Resolving unclear and risky situations; 3.4. Working with others; 3.5. Learning through experience)

### **Goals for pre-school education**

Entrepreneurial competence in preschool age is developed through:

* + Empowering initiative, creativity and innovation
  + Planning own activities
  + Testing and rethinking own ideas and those of others
  + Acquiring skills for independent and teamwork, learning and play

### **Outcomes for ISCED 1**

At the end of the ISCED 1 elementary school learning process (grades first to fifth), the student:

* + Turns a problem / opportunity from one's own immediate environment into an idea / activity, with support, predicting the outcome of the action taken
  + Makes a simple project proposal effectively, using available resources
  + Understands (explains) simple economic and financial concepts (e.g. money, supply and demand, market price, trade, bank, etc.)
  + Makes a simple home budget
  + Recognize the impact of their choices and behaviours on the community and the environment
  + Identifies problems relevant to themselves and their environment and develops ideas that solve them logically, creatively and critically defining the goals of simple activities, with the support
  + Collaborates with others to translate ideas into activities
  + Calculates the cost of turning an idea into an activity
  + Communicates own ideas clearly with others
  + Overcomes simple adverse circumstances and is not afraid of mistakes while trying new things
  + Demonstrates commitment, perseverance, and initiative to address issues affecting the community
  + Expresses empathy for others, initiative and expressed interest in the well-being of people and the environment, and convinces others by referring to certain arguments

### **Outcomes for ISCED 2**

At the end of the ISCED level 2 learning process in primary school (grades sixth to ninth), the student:

* + Understands (explains) the concept of tax (how taxes finance the activities of the state and its participation in the provision of public goods and services), the concept of cost-benefit analysis, and the concept of credit and indebtedness, and distinguishes different forms of value-creating activities, business, public enterprise, non-profit organization, etc.)
  + Draws up a budget for value-creating activities
  + Adapts its activities to ethical aspects and principles of sustainable development
  + Improves value-creating ideas by experimenting with your skills and competencies and different techniques of gathering alternative options to solve the problem critically and constructively, and in the best way
  + Works independently and with different teams to mobilize human and other resources to sustain planned activities
  + Plans spending by assessing the advantages and disadvantages of basic financial services
  + Communicates effectively one's own values ​​or team ideas and ideas with stakeholders from different spheres creating stories and scenarios that will motivate, inspire and guide people
  + Actively seeks and compares different sources of information to reduce ambiguities, uncertainties and risks in the decision-making process
  + Faces challenges and problems actively, courageously and persistently, recognizing opportunities and accepting risk
  + Motivates others by own examples and actively treats the emotions of others by developing responsibility, ethics and care for people and the world

### **Outcomes for secondary education (ISCED 3)**

At the end of the learning process at the level ISCED 3 (secondary education), the student:

* Turns ideas from real life into action, in different contexts, creatively and innovatively, with predictions of consequences, results and deadlines of undertaken activities
* Develops a project implementation plan based on the assessment of strengths and weaknesses, research results and analysis of resources and risks, participating individually or as a team in the project implementation phases
* Prepares simple financial statements (balance sheets) and financial plans assessing the available sources of funding for starting or expanding value-added activities, and tax aspects
* Affirms an approach in which value creation ideas are based on ethical values ​​relating to gender equality, equity, social justice and environmental sustainability.
* Initiates new solutions during the implementation of the plan by reshaping open problems to suit their own skills
* Forms a team of people who can work together by establishing new relationships to gain emotional support to turn an idea into action
* Manages finances so that value-creating activity can last longer
* Defines a communication strategy to mobilize people when it comes to their own or team activity and negotiates support for value creation ideas
* Resolves conflicts and faces competition in a positive way
* Designs strategies to overcome standard adverse circumstances by redefining priorities and plans to adapt to changed circumstances and assessing risk to make a decision
* Acts proactively, motivated and decisively on new ideas and opportunities, maintaining effort and interest, despite obstacles
* Inspires others by demonstrating the skill of empathy (to put oneself emotionally in the position of another), accepting responsibility for one's own actions, caring for people and the world, and promoting an ethical relationship in the process of turning ideas into action.

### **Outcomes for higher education**

At the end of the higher education learning process, the student:

* + Transforms a problem / opportunity from real life into an idea / activity independently and with arguments, predicting the consequences and results of the undertaken activities
  + Participates in the team implementation of projects while taking risks, recognizing their own strengths and weaknesses
  + Analyses the influence of personal and social factors on the realization of the idea / project

Independently or in a team plans and implements projects that improve the quality of life in the community (in the field of culture, education, economy, security, etc.)

* + Efficiently manages resources (human, natural, technical, material, financial, time management, ideas, information, etc.) and adheres to the principles of energy efficiency and safety at work
  + Anticipates risks in business and work and plans how to prevent and / or eliminate them, if it happens that the planned activities do not go in the expected direction, turns them into a new value
  + Improves own leadership skills and supports the professional development of own team members (including the use of modern technologies and multilingualism)
  + Adheres to the principles of professional ethics and participates in activities to combat negative phenomena in society (grey economy, corruption, nepotism, mobbing, disruption of the healthy environment, etc.)
  + Ready to deal with crisis situations, with continuous learning, learning from mistakes and working in a created network with the sharing of knowledge and experience

## **Cultural awareness and expression competence**

Competence in cultural awareness and expression involves having an understanding of and respect for how ideas and meaning are creatively expressed and communicated in different cultures and through a range of arts and other cultural forms. It involves being engaged in understanding, developing and expressing one’s own ideas and sense of place or role in society in a variety of ways and contexts.

This competence requires knowledge of local, national, regional, European and global cultures and expressions, including their languages, heritage and traditions, and cultural products, and an understanding of how these expressions can influence each other as well as the ideas of the individual. It includes understanding the different ways of communicating ideas between creator, participant and audience within written, printed and digital texts, theatre, film, dance, games, art and design, music, rituals, and architecture, as well as hybrid forms. It requires an understanding of one’s own developing identity and cultural heritage within a world of cultural diversity and how arts and other cultural forms can be a way to both view and shape the world.

Skills include the ability to express and interpret figurative and abstract ideas, experiences and emotions with empathy, and the ability to do so in a range of arts and other cultural forms. Skills also include the ability to identify and realise opportunities for personal, social or commercial value through the arts and other cultural forms and the ability to engage in creative processes, both as an individual and collectively.

It is important to have an open attitude towards, and respect for, diversity of cultural expression together with an ethical and responsible approach to intellectual and cultural ownership. A positive attitude also includes a curiosity about the world, an openness to imagine new possibilities, and a willingness to participate in cultural experiences.

### **Outcomes for pre-school education**

The competence of cultural awareness and expression in preschool age is developed through:

* + Developing freedom of expression within the game, communication, learning
  + Encouragement to participate in various group forms of creative expression (e.g. exhibitions, events, performances, theatrical performances, etc.)
  + Encouraging participation in various forms of expression of national and international culture and tradition
  + Developing positive feelings for other cultures (e.g. music, folklore, fairy tales, nutrition, theatre for children)
  + Stimulating participation/visits to cultural events

### **Outcomes for ISCED 1**

At the end of the ISCED 1 elementary school learning process (grades first to fifth), the student:

* Recognizes the expressions of own and other cultures in various forms by expressing own thoughts and experiences in an imaginative and spontaneous way
* Connects different roles and experiences in cultural and artistic achievements (writer-reader, composer-performer-listener, actor-audience, painter-audience, architect-builder-environment, etc.)
* Names the heritage of one's own and other cultures
* Expresses own ideas and feelings in the creative process through painting, drawing, composition, sculpture, music and other artistic and cultural forms
* Involves in creative activities in school and community (eg participates in folklore, choir, draws and paints cultural products, plays a role in the play, attends cultural events - exhibitions, theater performances for children, performances, folklore games, events in the virtual / digital space, etc.)
* Respects freedom in cultural and other creative experiences and expressions
* Shows interest in different cultural forms

### **Outcomes for ISCED 2**

At the end of the ISCED level 2 learning process in primary school (grades sixth to ninth), the student:

* + Analyses the products and expressions of national, regional and European cultures (languages, heritage, rituals, traditions), presents the acquired knowledge in different forms examining the influence of culture on the ideas of the individual and the mutual influence of different cultures
  + Transmits own ideas and feelings through the creative process using different media, e.g. textual / written, digital, visual, sculptural modelling, etc.
  + Respects the heritage of its own and other cultures and cultural forms
  + Generates own ideas and feelings on a given topic, e.g. in relation to the poem, the image, the object, the problem situation
  + Creates and participates in organized collective cultural and other processes in the school and community
  + Shows openness to different cultural forms respecting the differences of cultural expression
  + Shows curiosity to explore different cultural and artistic forms and forms

### **Outcomes for secondary education (ISCED 3)**

At the end of the ISCED 3 (secondary education) learning process, the student:

* Evaluates the mutual influences of local, national, regional, European and global cultures and their influences on the ideas of individuals, accepting different influences and interpreting them in different forms and through different media
* Explores ways of communication between creator and audience by presenting a given topic in various creative forms and media: acting, dance, games, art and design, music, rituals and architecture, as well as hybrid forms
* Researches the patterns of origin of one's own and other cultures and cultural forms and interprets their influence on modern man
* Interprets figurative and abstract ideas and transposes / incorporates own ideas, feelings and emotions into the creative work (eg interprets or adapts works of art and other cultural forms, composes an original story, song, composition, poster, painting, dance choreography, etc.) )
* Creates and participates in events of exchange of cultural and other creative experiences in the school, community and wider social framework
* Affirms different cultural experiences, ways of cultural expression and artistic freedom, and respect for intellectual and cultural property
* Demonstrates curiosity and openness to participate in cultural experiences, including innovative cultural and artistic forms

### **Outcomes for higher education**

At the end of the higher education learning process, the student:

* + Analyses work in the area of culture in the context in which they were produced (social, historical, economic, religious)
  + Creates and participates in activities that promote creative exchange (e.g. interactive exhibitions, literary evenings, etc.)
  + Uses available resources to share ideas and solutions with others (e.g. create a website, poster, artwork)
  + Argues the importance of culture at the individual and general social level
  + Uses new, original ideas for interpreting different cultural forms
  + Analyses the impact of the development of cultural awareness on lifelong learning and social integration

# Integration of key competences in teaching and learning

The outcomes of key competences need to be integrated into teaching and learning at all levels. All policy makers should take action to achieve integration. At the level of the education system, support should be provided to educational institutions and teachers through the further development of this framework programme (curricula, methodological instructions, manuals, teaching materials), and the organization of teacher training (initial education and continuous professional development) and school administrations. At the level of educational institutions, activities need to be planned through regular annual and operational planning to achieve the outcomes of key competences for pupils and students.

Key competences need to be further promoted among the educational community as well as with education partners - parents, the local community and society. As key competences are aimed at increasing the quality of education, the achievement of relevant skills and functional knowledge, wider support from the professional and general public will contribute to faster integration into teaching and learning.

In order to make the outcomes of key competences part of the teaching process, consistently and on a regular basis in all educational institutions, the framework needs to be developed through guidance to teachers on possible activities, methods, forms of work and approaches to learning. This can be done by developing **a manual or other document (guidelines, manual, etc.) for each of the competences**, taking into account the specificities of each of the key competences **or for each of the educational levels**, taking into account the specificities of the learning process according to the age of the child, student or student.

**This framework programme should also be used in the design of each pre-school educational programme, curriculum in general education (primary and secondary), vocational education programme and higher education study programme.** These programmes should ensure that, in addition to subject or modular (professional) outcomes, all key competences are achieved.

Achieving the outcomes of key competences does not contradict the achievement of the outcomes of the subject programmes, on the contrary - paired with or combined with the outcomes and objectives of the subject programmes, they indicate a possible commitment to the content, learning context and possible evaluation. The outcomes of key competences do not relate to new teaching content; the focus is on teaching methodology.

For the choice of forms and methods of teaching, the teacher's autonomy is not of a declarative nature. She emphasizes the need to adapt access to teaching in order to achieve the intended learning goals, objectives and learning outcomes without departing from the educational programme. The key is the teacher's willingness to focus on group processes and interactions in working with students, to base learning on research, student experience, experiments and projects, and to organize learning in teams. Competence as a dynamic organization of knowledge, skills and attitudes applicable in different life and work contexts determines learning related to life reality and applicability. Learning to memorize and reproduce without relating to situational experience is not an incentive to develop competencies and does not inspire students to truly engage with the content they are learning.

**A learner-centred approach** and an active role of students are the backbone of lifelong competency development. The basic feature of a learning-cantered approach implicates the student as the subject of their own learning process, not the object of instruction. This means that the teacher organizes and realizes the teaching according to the student's measure, and not vice versa, when the students follow the teacher's work, regardless of whether they understand it. This approach is referred to in the literature as constructivist one, because learning is understood as an independent, self-building of students' knowledge (construction) as the teacher creates situations and environment that encourage learning.

Key competences are not only developed in the classroom, cabinet and educational setting. It is about learning processes as well as applying what has been learned in a wide range of authentic contexts - at school, at home and in the wider community. Educational institutions need to establish a system and culture in which lecturers, teachers and other educators recognize how learning takes place in all these contexts and create powerful educational connections with family, reference groups and the community. The educational practices of Montenegro show the existence of **extracurricular activities, projects, partnerships** between schools and community representatives, the economy, opening schools for guest lecturers, events, competitions, civil society organizations and more. These valuable social activities can be more closely linked to learning content as an application context or as a potential for lifelong learning.

Lifelong learning needs to encompass a range of **educational environments** that are supportive of learning - formal, informal and non-formal. It is desirable to provide a common understanding of the competences and transitions between these different environments, at different levels of education, and cooperation between them. This applies both to educational institutions, to the practices and roles of teaching staff, and to social partners, labour market participants and civil society organizations working to direct and support the development of key competences from an early age and throughout life.

Developing key competencies requires **a school culture** in which competencies are important, valued and integrated into the work of an educational institution. Importance can be recognized through the goals of teaching and learning, through the explicit and implicit values ​​of the school, the tradition and activities of the institution. Practices to date show that the development of key competences was part of the **school's annual and development plans, the work of subject-teams, the annual teacher plans, and the regular preparation of classes**. The experience of countries in the region and Europe has shown that the cooperation of school teachers in **joint planning** of the development of key competences and the **supportive guidance of school principals** are essential for the development of key competences. In addition to the collaboration of teachers in interdisciplinary networking, cross-sectoral collaboration between educational institutions and external actors from the business world, the arts, sports and the youth community, universities or scientific institutions can be key to the successful development of competencies.

The development of key competences through interdisciplinary learning in Montenegro's educational practices began in 2007 with the Sustainable Development Programme. Past practice in **cross-curricular areas/topics** involves the coordinated and simultaneous work of teachers across two or more disciplines when dealing with specific subject areas or topics. This framework programme consolidates good practices and specific areas that already exist and adds new ones in order to connect vertically and establish continuity between educational levels. By reviewing the results of research on teachers' past experiences in this field in Montenegro, cross-curricular integration of learning declines with age and subject separation. Gymnasium education programmes have not yet undergone reform changes to focus on learning outcomes such as vocational and primary schools, and there is potential in future revisions to include the outcomes of key competences.

## **Support to teachers**

The Montenegrin Framework Programme for Key Competences, as a framework document, can only be directly applied in teaching by extremely experienced teachers. For this reason, it is necessary to create inter-documents and teaching materials, but it is also necessary to organize teacher training. In the educational process, teachers are the only people who educate and who have access to learners (pupils, students). Therefore, the role of teachers is thus extremely important for the integration of key competences. Teacher training is an important part of supporting the integration of key competences in teaching and learning. This entails incorporating competency-oriented approaches, training and learning into the initial teacher education and continuing professional development of teachers and other educators.

**Key competences should become part of initial teacher training** at all faculties providing such education. The Teacher Education Strategy of Montenegro (2017-2024) envisages the innovation of methodical and didactic subjects and a measure to determine the minimum representation of key competences in the curricula for teacher education, which has already been systematically recognized.

**With a view to continuous professional development of teachers,** training related to the integration of key competences in teaching and learning needs to be developed and accredited. The provision of support also includes the need for teachers to engage in informal learning opportunities for professional development. Teachers can innovate their knowledge of supportive learning environments and collaborate with the community through staff exchanges, mutual learning, counselling and participation in local and global ideas and experience sharing networks. Support is also reflected in facilitating and sharing innovative practices, participation in research and the use of new technologies, including digital, for competency-based teaching and learning approaches.

## **Analysis of approaches for evaluation and assessment of key competences**

Assessment and evaluation of key competences are linked to the roles of teachers in managing teaching activities and monitoring students' progress and their overall performance. Teachers are challenged to critically evaluate and select tools and resources to easily plan, develop and manage inspirational activities that will foster students' curiosity, creativity and productivity. This domain integrates the creation, innovation and engaging learning experiences that incorporate digital tools and resources and evaluation through a variety of assessment forms.

Descriptions of key competencies formulated through outcomes could be complemented by appropriate diagnostic formative assessment and evaluation tools at appropriate levels. Digital technologies could contribute to recording different dimensions of student progress, including related activities of external actors, i.e. social partners, and approaches to assessing key competences in non-formal and informal learning environments.

The approaches to assessing and evaluating key competences are the biggest challenge This Framework Programme proposes. They require the identification of new potential for monitoring and evaluating the achievement of outcomes of key competences. In order to achieve consistent practice, it is necessary to develop **methodological guidance and guidance on assessment criteria and how they relate to the outcomes of key competences through formative assessment**, and the formative assessment methods related to key competences should become part of teacher training.

## **Monitoring and evaluation**

It is necessary to establish a system for monitoring the integration of key competences into teaching and learning through the existing quality assurance system, following institutional competencies and existing methodologies. The protocol for monitoring the integration of key competences into teaching and learning can serve as a useful tool for This purpose. It would be good to submit annual reports on the progress of integration by educational levels to the National Council for Education.

Looking long-term, In the period of five to 7 years after the start of implementation, an evaluation should be carried out to determine the impact of the Framework Programme on the system. In addition to determining the impact on the system, the evaluation should also identify recommendations relevant to the revision and upgrade of the Framework.

1. Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning (2006/962 / EC). In June 2016, the European Commission launched a Review Recommendation with the aim of revising it and further supporting and improving the development of key competences across Europe. Based on the findings of the Audit, the revised framework was adopted by a new Recommendation of the EU Parliament and Council of 22 May 2018 (2018 / C 189/01), available at:

   <https://eur-lex.europa.eu/legal-content/HR/TXT/?uri=uriserv:OJ.C_.2018.189.01.0001.01.HRV&toc=OJ:C:2018:189:FULL> [↑](#footnote-ref-1)
2. The source of educational reforms is contained in the "Book of Changes in the Education System of the Republic of Montenegro", Ministry of Education and Science, Podgorica, 2001. [↑](#footnote-ref-2)
3. The UNESCO Global Sustainability Education Action Program reaffirms that education for sustainable development is an integral element of quality education and crucial to all other sustainable development goals. [↑](#footnote-ref-3)
4. Methodological guide: National Classification of Education, Statistical Office of Montenegro, Podgorica, 2015. [↑](#footnote-ref-4)
5. Considering that pre-school and upbringing programmes in Montenegro do not contain outcomes but educational goals, given the child's age, the ability to measure learning outcomes and assessment, and this framework programme, for the same reasons, operates with the goals for the preschool age, not with outcomes. [↑](#footnote-ref-5)
6. Available at <https://rm.coe.int/1680459f97> [↑](#footnote-ref-6)
7. Refers to students who attend educational programs of secondary vocational schools that do not have a compulsory second language, the recommendation for students of grammar schools and secondary vocational schools who have a compulsory subject of a second foreign language is to reach level A2. [↑](#footnote-ref-7)
8. Available at: <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/digcomp-21-digital-competence-framework-citizens-eight-proficiency-levels-and-examples-use> [↑](#footnote-ref-8)
9. Available at: <https://ec.europa.eu/jrc/en/publication/developing-european-framework-personal-social-learning-learn-key-competence-lifecomp> [↑](#footnote-ref-9)
10. More information available at: <https://www.coe.int/en/web/reference-framework-of-competences-for-democratic-culture/> [↑](#footnote-ref-10)
11. Available at: <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC101581/lfna27939enn.pdf>, In Montenegrin: <http://www.zzs.gov.me/rubrike/preduzetnicko_ucenje/> [↑](#footnote-ref-11)