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| From: | Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director |
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| To: | Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union |
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Delegations will find attached document COM(2018) 24 final ANNEX.

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ANNEX

**ANNEX**

**to the**

**Proposal for a Council Recommendation**

**on Key Competences for Lifelong Learning**

{SWD(2018) 14 final}

**ANNEX**
**KEY COMPETENCES FOR LIFELONG LEARNING**
**A EUROPEAN REFERENCE FRAMEWORK**

**Background and aims**

> *Everyone has the right to quality and inclusive education, training and life-long learning in order to maintain and acquire skills that enable them to participate fully in society and manage successfully transitions in the labour market.*
>
> *Everyone has the right to timely and tailor-made assistance to improve employment or self-employment prospects. This includes the right to receive support for job search, training and re-qualification.*

These principles are defined in the European 'Pillar of Social Rights'.

In a rapidly changing and highly interconnected world, each person will need a wide range of skills and competences and to develop them continually throughout life. The key competences as defined in this Reference Framework aim to lay the foundation for achieving more equal and more democratic societies. They respond to the need for inclusive and sustainable growth, social cohesion and further development of the democratic culture.

The main aims of the Reference Framework are to:

a) identify and define the key competences necessary for employability, personal fulfilment, active citizenship and social inclusion;
b) provide a European reference tool for policy makers, education and training providers, educational staff, employers, and learners themselves;
c) support efforts at European, national, regional and local level to foster competence development in a lifelong learning perspective.

**Key Competences**

For the purposes of this Recommendation, competences are defined as a combination of knowledge, skills and attitudes, where:

a) knowledge is composed of the facts and figures, concepts, ideas and theories which are already established and support the understanding of a certain area or subject;

b) skills are defined as the ability and capacity to carry out processes and use the existing knowledge to achieve results;

c) attitudes describe the disposition and mind-sets to act or react to ideas, persons or situations.

Key competences are those which all individuals need for personal fulfilment and development, employability, social inclusion and active citizenship. They are developed in a lifelong learning perspective, from early childhood throughout adult life, and through formal, non-formal and informal learning.

The key competences are all considered equally important; each of them contributes to a successful life in society. Competences can be applied in many different contexts and in a variety of combinations. They overlap and interlock; aspects essential to one domain will support competence in another. Skills such as critical thinking, problem solving, team work, communication and negotiation skills, analytical skills, creativity, and intercultural skills are embedded throughout the key competences.

- The Reference Framework sets out eight key competences:

- Literacy competence;
- Languages competence;
- Mathematical competence and competence in science, technology and engineering and;
- Digital competence;
- Personal, social and learning competence;
- Civic competence;
- Entrepreneurship competence;
- Cultural awareness and expression competence.

**1. 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.

*Essential knowledge, skills and attitudes related to this competence*

Literacy involves the knowledge of reading and writing and a sound understanding of written information. Literacy 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.

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.

**2. Languages 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. As appropriate, it can include maintaining and further developing mother tongue competences.

*Essential knowledge, skills and attitudes related to this competence*

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 respect for the mother tongue of persons belonging to minorities and/ or with a migrant background.

**3. Mathematical competence and competence in science, technology, engineering**

A. Mathematical competence is the ability to develop and apply mathematical thinking in order to solve a range of problems in everyday situations. Building on a sound mastery of numeracy, the emphasis is on process and activity, as well as knowledge. Mathematical competence involves, to different degrees, the ability and willingness to use mathematical modes of thought (logical and spatial thinking) and presentation (formulas, models, constructs, graphs, charts).

B. Competence in science refers to the ability and willingness to use the body of knowledge and methodology employed to explain the natural world, 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.

*Essential knowledge, skills and attitudes related to this competence*

A. 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.

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

B. 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 of nature through controlled experiments, 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, and

the readiness to discard one's own convictions when they contradict new experimental findings. Individuals should also be able to recognise the essential features of scientific inquiry and have the ability to communicate the conclusions and reasoning that led to them.

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.

**4. 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, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity), and problem solving.

*Essential knowledge, skills and attitudes related to this competence*

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.

**5. Personal, social and learning competence**

Personal, social and learning competence is the ability to reflect upon oneself, effectively manage time and information, work with others in a constructive way, remain resilient and manage one's own learning and career. It includes the ability to cope with uncertainty and complexity, learn to learn, support one's physical and emotional well-being, empathize and manage conflict.

*Essential knowledge, skills and attitudes related to this competence*

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 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 others 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.

**6. Civic competence**

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

*Essential knowledge, skills and attitudes related to this competence*

Civic competence is based on knowledge of basic concepts 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 the 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 socio-economic dimensions of European societies, and how national cultural identity contributes to the European identity.

Skills for civic 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 skills 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.

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, a readiness to respect the privacy of others, and to take responsibility for the environment. Interest in political and socio-economic developments and intercultural communication is needed to be prepared both to overcome prejudices and to compromise where necessary and to ensure social justice and fairness.

## 7. Entrepreneurship 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 commercial value.

*Essential knowledge, skills and attitudes related to this competence*

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 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.

## 8. 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.

*Essential knowledge, skills and attitudes related to this competence*

This competence requires knowledge of local, national, 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 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.

## 9. Supporting the development of key competences

Key competences are a dynamic combination of the knowledge, skills and attitudes a learner needs to develop throughout life, starting from early age onwards. High quality and inclusive education, training and lifelong learning provides opportunites for all to develop key competences, therefore competence-oriented approaches can be used in all education, training and learning settings throughout life.

In support of competence-oriented education, training and learning in lifelong learning context, three challenges have been identified: the use of a variety of learning approaches and contexts; support for teachers and other educational staff; and assessment and validation of competence development. In order to address those challenges, certain good practices can be recognized.

*a. A variety of learning approaches and contexts*

(a) Cross-discipline learning, partnerships between different education levels, training and learning actors, including from the labour market, as well as concepts such as whole school approaches with its emphasis on collaborative teaching and learning and active participation and decision-making of learners can enrich learning. Cross-sectoral cooperation between education and training institutions and external actors from business, arts, sport and youth community, higher education or research institutes, can be key to effective competence development.

(b) Acquisition of basic skills as well as broader competence development can be fostered by systematically complementing academic learning with social and emotional learning, arts and sports. Strengthening personal, social and learning competences from early age can provide a foundation for development of basic skills.

(c) Learning methodologies such as inquiry-based, project-based, blended, arts- and games-based learning can increase learning motivation and engagement. Equally, experimental learning, work-based learning and scientific methods in science, technology, engineering and mathematics (STEM) can foster development of a range of competences.

(d) Learners, educational staff and learning providers could be encouraged to use digital technologies to improve learning and to support the development of digital competences. For example, by participating in Union initiatives such as "The EU Code Week"[1]. The use of self-assessment tools, such as the SELFIE tool[2], could improve the digital capacity of education, training and learning providers.

[1] The Code Week, http://codeweek.eu/

[2] Self-assessment tool on digital capacity (SELFIE), https://ec.europa.eu/jrc/en/digcomporg/selfie-tool, or HEInnovate, https://heinnovate.eu/

(e) Specific opportunities for entrepreneurial experiences, such as mini companies, traineeships in companies or entrepreneurs visiting education and training institutions could be particulary beneficial for young people, but also for adults and for teachers. Young people could be given the opportunity to have at least one entrepreneurial experience during primary or secondary education. School and business partnerships and platforms at local level, notably in rural areas, can be key players in spreading entrepreneurial education. Appropriate training and support for teachers and principals could be crucial to create sustained progress and leadership.

(f) Languages competence can be developed by close cooperation with education, training and learning settings abroad, the mobility of educational staff and learners or the use of eTwinning, EPALE and or similar on-line portals.

(g) Young people and adults who are disadvantaged, either due to their socio-economic background or to their migrant background, or have special educational needs could be given adequate support in inclusive settings to fulfil their educational potential. Such support could consist of language, academic or emotional support, peer coaching, extra-curricular activity, career guidance or material support.

(h) The collaboration between education, training and learning settings at all levels can be key to improve the continuity of learner competence development throughout life and for developing innovative learning approaches.

(i) Cooperation between education and training and non-educational partners in local communities and employers in combination with formal and non-formal learning support competence development and can ease the transition from education to work.

*b. Support for educational staff*

(a) Embedding competence-oriented approaches to education, training and learning in initial education and continuing professional development can help educational staff in changing teaching and learning in their settings and to be competent in implementing the approach.

(b) Educational staff could be supported in developing competence-oriented approaches in their specific contexts by staff exchanges and peer learning allowing for flexibility and autonomy in organising learning, through networks, collaboration and communities of practice.

(c) Educational staff could be provided assistance in creating innovative practices, taking part in research and make appropriate use of new technologies for competence-oriented approaches in teaching and learning.

(d) Guidance could be provided for educational staff, access to centres of expertise, appropriate tools and materials can enhance teaching and learning methods and practice.

*c. Assessment and validation of competence development*

(a) Key competence descriptions could translate into frameworks of learning outcomes that could be complemented with suitable tools for diagnostic, formative and summative assessment and validation at appropriate levels[3].

(b) Digital technologies, in particular, could contribute to capturing the multiple dimensions of learner progression, including entrepreneurial learning.

(c) Different approaches to assessment of key competences in non-formal and informal learning settings could be developed, including related activities of employers, guidance practitioners and social partners. These should be available to everyone, and especially to low skilled individuals to support their progression to further learning.

(d) Validation of learning outcomes acquired through non-formal and informal learning could expand and become more robust, in line with the Council Recommendation on the Validation of prior non-formal and informal learning, including different validation processes and the use of tools such as Europass and Youthpass.

[3] E.g. the Common European Framework of References for Languages, the Digital Competence Framework, the Entrepreneurship Competence Framework as well as PISA competence descriptions provide supporting material for assessment of competences.