

3 CHAPTER



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EU KEY

# COMPETENCIES IN THE 21<sup>ST</sup> CENTURY



# EU document about lifelong learning competencies

The concept of lifelong learning competencies emerged from the European Union's recognition that education and training are central to social cohesion, employability, and personal development in a rapidly changing world. In the early 2000s, the EU focused on creating a framework to define the knowledge, skills, and attitudes necessary for citizens to thrive in modern societies. This effort culminated in the 2006 Recommendation of the European Parliament and the Council on Key Competences for Lifelong Learning, which identified eight core competencies essential for all individuals, regardless of age or background. The document was developed through extensive consultation with member states, educational experts, and social partners, reflecting a shared vision for inclusive, high-quality education across Europe.

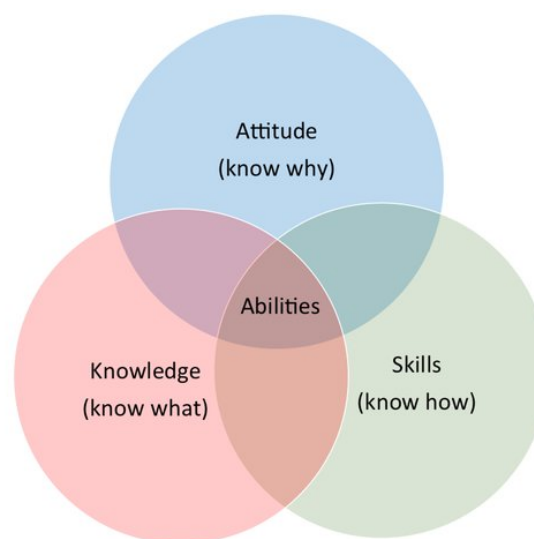


The document is important because it provides a clear and comprehensive framework for education and training systems throughout the EU. By defining key competencies, it helps policymakers, educators, and institutions ensure that learning is relevant, holistic, and adaptable to lifelong needs. The framework emphasizes not only knowledge but also skills, attitudes, and values, supporting personal development, social inclusion, active citizenship, and employability. In addition, it promotes equity by encouraging all learners to acquire competencies that allow them to participate fully in society and the labor market. The document thus serves as a reference point for aligning national curricula, training programs, and educational initiatives across member states.

The EU framework on lifelong learning competencies is designed to be flexible and practical, guiding both policy and classroom practice. Member states use it to shape national education strategies, define curriculum standards, and design assessment tools that reflect the holistic development of learners. Educators employ the framework to plan learning experiences that nurture knowledge, skills, and attitudes in an integrated manner, while training institutions and workplaces can use it to develop professional competencies and lifelong learning opportunities. The document also serves as a benchmark for monitoring and evaluating learning outcomes across Europe, ensuring that individuals are equipped to meet social, economic, and personal challenges throughout their lives.

# Competence based learning

The development of key competences in elementary-aged children is a gradual and holistic process that combines **knowledge, skills, and attitudes**. These three components work together, allowing children to understand, apply, and interact with the world in meaningful ways.



**Knowledge** provides the foundation for competence. For elementary children, knowledge includes the concepts, facts, ideas, and theories that are already established in a subject area. At this age, children are naturally curious and eager to understand “why” and “how,” so knowledge is not just memorized—it is explored, questioned, and connected to real-life experiences. For example, learning about ecosystems in science or historical events in social studies is most effective when children can see relationships, patterns, and consequences, rather than only recalling isolated facts. Knowledge acts as the raw material that children use to think critically and creatively about the world around them.

**Skills** are the abilities children develop to use knowledge effectively. In the elementary years, skills include logical reasoning, problem-solving, research, communication, collaboration, and self-management. Skills allow children to take what they know and turn it into action—whether conducting a science experiment, completing a group project, or presenting their ideas to peers. Montessori classrooms support skill development by providing hands-on materials, open-ended projects, and opportunities for exploration, where children can practice decision-making, planning, and reflection in authentic contexts. By actively engaging with their learning, children strengthen their capacity to apply knowledge in practical and creative ways.

**Attitudes** refer to the dispositions and mindsets that guide how children act and respond to ideas, people, and situations. Attitudes such as curiosity, perseverance, empathy, responsibility, and openness to new ideas are essential for building competences. In elementary children, attitudes are shaped through both individual experiences and social interactions. A child who approaches a project with curiosity and persistence, or who collaborates respectfully with peers during group work, is developing the mindset necessary to use knowledge and skills effectively in diverse situations. Montessori education emphasizes cultivating positive attitudes through real-life practice, moral discussions, and opportunities for reflection, allowing children to internalize values that support lifelong learning.

Key competences are not developed in isolation—they grow through **formal, non-formal, and informal learning experiences**, all of which are abundant in the elementary years. The classroom environment, community projects, outdoor explorations, and interactions with peers all provide rich opportunities for children to integrate knowledge, practice skills, and develop constructive attitudes. For example, a collaborative research project on local history engages children in factual learning (knowledge), teamwork and presentation skills (skills), and responsibility and respect for others' ideas (attitudes). In this way, competences are built dynamically and interdependently, preparing children not only for academic success but for active, responsible participation in society.

In Montessori classrooms, the carefully prepared environment, combined with the child's natural curiosity and desire for exploration, creates ideal conditions for this holistic development. By encouraging children to investigate, collaborate, and reflect, Montessori education ensures that knowledge, skills, and attitudes grow together, forming the foundation of the eight EU key competences for lifelong learning.

# Eight Key Competencies for Lifelong Learning

## 1. Literacy Competence

The ability to express and interpret concepts, thoughts, feelings, facts, and opinions in both oral and written forms in a variety of contexts. This competence encompasses reading, writing, speaking, and listening skills, enabling individuals to understand and produce texts effectively.

## 2. Multilingual Competence

The capacity to communicate effectively in more than one language, encompassing comprehension, speaking, reading, and writing skills. This competence supports intercultural understanding and facilitates communication in diverse linguistic contexts.

## 3. Mathematical Competence and Competence in Science, Technology, and Engineering (STEM)

The ability to apply mathematical concepts and reasoning to solve problems, as well as to understand and engage with scientific, technological, and engineering concepts. This competence is crucial for innovation and addressing complex challenges in various fields.

## 4. Digital Competence

The confident, critical, and responsible use of digital technologies for learning, work, and participation in society. It includes the ability to use digital tools to access, manage, and create information, as well as to communicate and collaborate online.

## **5. Personal, Social, and Learning to Learn Competence**

The ability to reflect on one's own learning processes, set goals, and manage one's learning effectively. It also involves interpersonal skills, empathy, and the ability to work collaboratively with others.

## **6. Citizenship Competence**

The knowledge and skills required to engage actively and responsibly in civic life, understanding democratic principles, human rights, and the importance of social cohesion. This competence fosters active participation in community and societal development.

## **7. Entrepreneurship Competence**

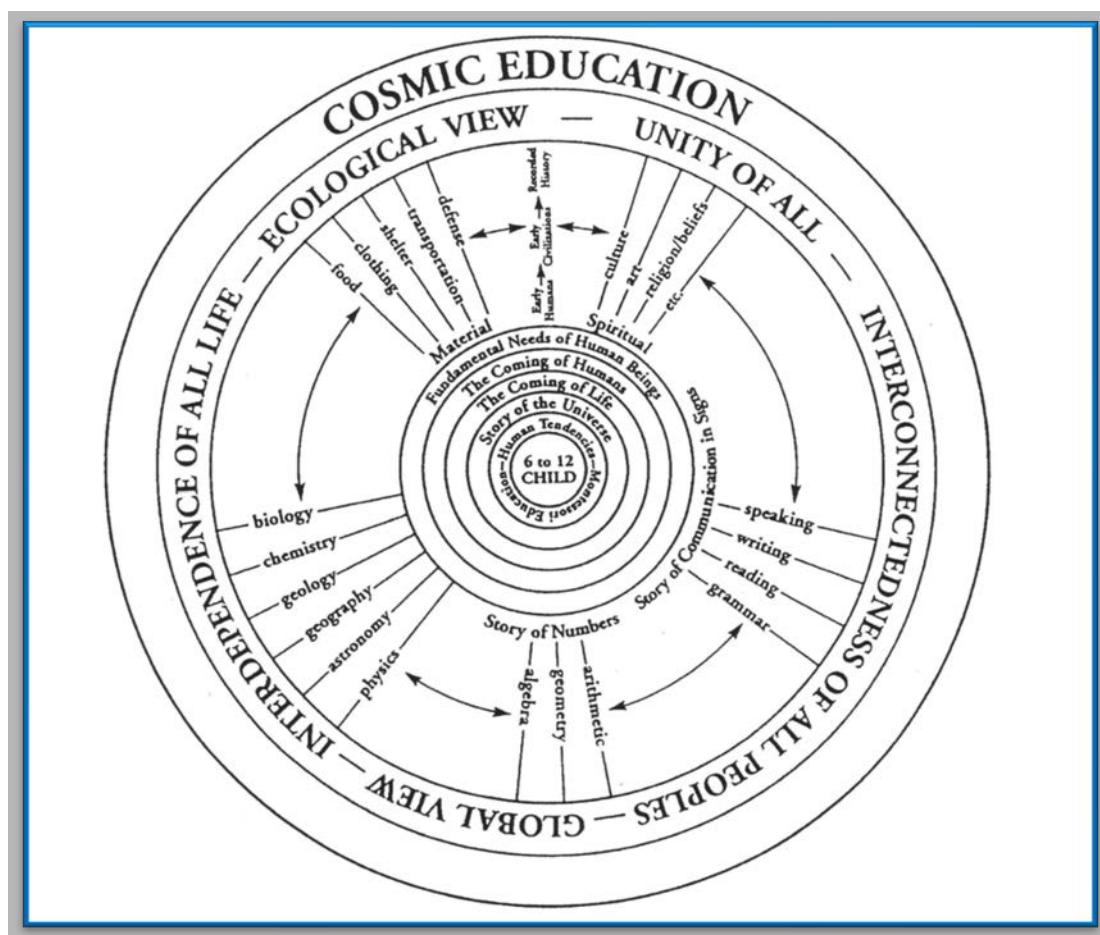
The ability to turn ideas into action, demonstrating creativity, innovation, and risk-taking in the pursuit of opportunities. It includes skills such as planning, managing resources, and evaluating outcomes, applicable in various contexts including business and social initiatives.

## **8. Cultural Awareness and Expression Competence**

The understanding and appreciation of the importance of the creative expression of ideas, experiences, and emotions in a variety of media, including music, performing arts, literature, and the visual arts. This competence promotes cultural diversity and personal expression.

## Link with Montessori Cosmic Education

Montessori education naturally aligns with the EU framework, as both emphasize the holistic development of the individual and the cultivation of lifelong learning skills. In Montessori classrooms, learning is not limited to acquiring knowledge; it is a shared journey where children, teachers, and peers form a supportive community. Through self-directed work, collaborative projects, and practical life experiences, children develop communication skills, critical thinking, creativity, and social competencies in an environment that values curiosity, respect, and responsibility. The prepared Montessori environment acts as a dynamic space where each child can explore at their own pace, guided by observation and mentorship, while also contributing to the life of the classroom community.



This community approach mirrors the intent of the EU key competencies framework: to equip learners not only with knowledge but with the ability to apply it meaningfully in social, cultural, and professional contexts. Montessori classrooms encourage children to take initiative, engage with others, and reflect on their learning, fostering civic awareness, cultural understanding, and moral responsibility. Digital literacy, environmental consciousness, and problem-solving skills are integrated naturally through collaborative exploration, projects, and real-world connections. By nurturing autonomy, imagination, and a sense of purpose within a caring community, Montessori education creates the ideal conditions for developing the eight EU key competencies from early childhood through adolescence.

In the following chapter of these guidelines, we will take a deeper dive into each of the eight competencies, exploring practical strategies and Montessori approaches that help Elementary children build these skills, attitudes, and values in meaningful ways. This next section will bridge theory and practice, showing how the EU framework and Montessori philosophy together provide a roadmap for lifelong learning.

## Alignment Between EU Key Competencies and Montessori Cosmic Education

EU COMPETENCIES	COSMIC EDUCATION
learning through involvement in active, authentic, collaborative tasks	Hands-on experience with Montessori materials
cross-curricular approaches where learners experience contexts that combine a few subject areas	Cosmic education (contextual learning experience)
a combination of individual (autonomous and self-managed) and collaborative learning opportunities	Working in groups, peer to peer and individually
a combination of learner-centred and teacher-led approaches	Individual work of the child, presentations and follow up
learning experiences inside and outside school	Going out experience, dual environment
relevant use of digital resources and virtual learning platforms	Use of various materials, different learning techniques in the classroom
whole school approach to wellbeing supporting learners' social and emotional development	prepared adult, mixed-age classrooms, daily opportunities for meaningful social interaction