ADULT EDUCATION METHODS AND TOOLS

1. Lifelong learning- definition, concepts, theories

Lifelong learning is one of the most important concepts in modern societies which is necessary not only for private reasons, passions, interests of the individuals, but it is becoming important for social life, citizen activism, public participation and employment as well.

According to the concept of lifelong learning, since birth to the end of life, individuals learn and develop, acquire new knowledge and skills, become more aware of life needs, social relations and public challenges. Lifelong learning is a process of constant renewal, development and improvement of general and professional competences of an individuals, lasting throughout their life, it is the entirety of cognitive activities undertaken during life in order to deepen knowledge, skills or qualifications (for personal, social or professional reasons).

The learning process can be more or less conscious, individuals can learn in a targeted way as well as many skills, knowledge and attitudes can be developed in informal, non-directed learning. Although lifelong learning uses various paths of personal development, formal, non-formal, informal, it emphasizes the importance of the conscious development of individuals, which should be focused on the challenges facing them and the entire societies.

Modern societies and individuals currently facing several important challenges, that not only force individuals to constantly learn and invest in themselves, update knowledge and skills, but also require new social attitudes that are important in the context of challenges and tensions for civil society, range of situations is related to:

- **cyber world**- fast pace of digitization, robotization and automation in public and social services, health care, social care, education focused on programming and e-services,
- **climate change**- needs to protect the climate and local ecosystems,
- **globalization and negative effects of globalization**- such as public health crises, refugee problems, economic crises, undermining democracy and human rights, growing inequalities.

Lifelong learning activities is a demand of every society that faces these challenges and problems on a global scale, which Commission of European Communities writes about:

*"**Lifelong learning** is the **ongoing**, **voluntary**, and **self-motivated** pursuit of knowledge for either **personal** or **professional** reasons. Therefore, it not only enhances **social inclusion**, **active citizenship**, and **personal development**, but also self-sustainability, as well as **competitiveness** and **employability**.*

*The term "life-long learners", recognizes that learning is not confined to childhood or the classroom but takes place throughout life and in a **range of situations**"*[1]

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[1] *"Adult learning: It is never too late to learn".* COM(2006) 614 final. Brussels,

One of the most influential work for lifelong learning concept was presented in Jacques Delors's UNESCO report *"Learning: The treasure within"* published at 1996 where four pillars for lifelong learning concept ware defined:

- **Learning to know** – a broad general knowledge with the opportunity to work in depth on a small number of subjects,
- **Learning to do** – to acquire not only occupational skills but also the competence to deal with many situations and to work in teams,
- **Learning to be** – to develop one's personality and to be able to act with growing autonomy, judgment and personal responsibility,
- **Learning to live together** – by developing an understanding of other people and an appreciation of interdependence[1]

After many years, the new UNESCO report *"Rethinking education. Towards a global common good?"* published in 2015 underlines the value and the need to protect these 4 pillars, further emphasizing their importance, especially in the context of challenges related to climate protection and the relationship between humans and nature.

*"These four pillars of learning remain relevant to an **integrated approach to education**. Their generic nature allows for interpretation of the type of integrated learning required in response to different contexts and times. The pillars themselves might need fresh interpretation, given growing concern for sustainability. Learning to live together, for example, must go beyond the social and cultural dimensions of human interaction to include a concern for **the relationship of human society with the natural environment**"[2]*

The range of human life situations changes and "lifelong" learners recognize them, analyze them and through their educational activity try to understand the new meaning of the changing life and its conditions. Without lifelong learning activities and continual becoming better individuals, societies are unable to meet the challenges that keep occurring all over again.

Learning is seen as an active process that takes place on an **ongoing basis** from our **daily interactions with others** and with the world around us, which is mandatory to create a new paradigm of human development in the nature environment. This process uses **formal learning** as a basis for human development and uses **non-formal learning**, **self-directed learning**, **informal learning** to develop his/her personality and capacity to react and involve in social interest and conscious career decisions.

To better understand the nature of the lifelong learning concept, let us now move on to its levels and goals.

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[1] *Learning: The treasure within. Delors, J. 1996, Paris, UNESCO.*

[2] *Rethinking education. Towards a global common good? 2015, Paris, UNESCO*

Levels and goals of lifelong learning
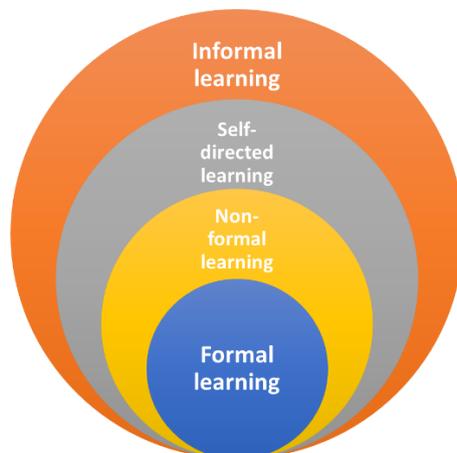
Formal learning- provided by schools, universities, vocational schools, is recognised by relevant national authorities and leads to diplomas and qualifications. Formal learning is structured according to educational arrangements such as curricula, qualifications and teaching learning requirements;

Non formal learning- is learning that has been acquired in addition or alternatively to formal learning. In some case it is also structured according to educational and training arrangements, but more flexible. It can be provided in workplace, NGOs, other civil society organizations, learning institutions;

Self-directed learning- self initiated, self-organized, self-determinate learning; also it can be self- learning;

Informal learning- it is learning that occurs in daily life in the family, in the workplace, in communities, by thinking, chatting, meeting others, taking actions, sightseeing, etc.

"Lifelong" learners benefit from all levels of learning, they know that personal development is not only the result of formal, certified education, but that it also occurs as a result of all informal activities, such as voluntary work, neighborhood cooperation, charity activities, local and further travels, reading, listening and watching, critical thinking and conceptualizing. A conscious learner appreciates each of the existing situations on the one hand, and on the other hand, consciously uses social resources, libraries, multimedia to consciously develop and become a better individual. Non-governmental organizations play an important role in lifelong learning, as they are spaces for continuous learning.

2. Role of NGOs in non- formal society learning

Non-governmental organizations play a key role in the structure of civil society, in building its capacity, and thus play an important role in promoting and conducting active forms of lifelong

learning. NGOs are an emanation of the abilities and motivation of people who, by joining together around common goals, can change the world around them. All four pillars of lifelong learning are reflected in the activities of non-governmental organizations: knowledge (to know), teamwork (to do), conscious action (to be), cooperation (to live together). NGO can have significant impact in lifelong learning of society, as evidenced by the following premises:

- **Dissemination-** NGOs have the ability to reach large groups of people, engage people, recognize their needs, focus them around important social goals, thanks to which they can promote the essence of lifelong learning among their target groups, encourage active lifelong learning and disseminate the results related to lifelong learning;

- **Educational social services-** NGOs can organize and implement various forms of lifelong learning for adult learners, like workshops, courses, seminars, webinars, etc., can build an educational offer, develop it, take care of its quality and reach out through all society and especially to people and places excluded;

- **Mission activities-** NGOs, involving people in their activities, professional, voluntary and social work, by implementing projects and campaigns, contribute to building the personal potential of their members, employees, volunteers, target groups, to continuous, active learning and developing competences;

- **Impact-** by engaging the community in lifelong learning processes, NGOs directly influence the development of the potential of civil society that has to face such challenges as the cyber world, climate change or the negative effects of globalization.

Without the active participation of NGOs in building the quality of lifelong learning and engaging people and communities for continuous learning, current civil society may not be able to meet the challenges they face. Therefore, the dissemination of lifelong learning and continuous improvement of the quality of lifelong learning is one of the most important tasks for the NGO sector.

Therefore, the manual is aimed at trainers, educators related to NGOs, who by conducting trainings, seminars and workshops with various target and social groups have a significant impact on the quality of lifelong learning in Serbia.

The purpose of the manual is to provide teaching forms, methods and tools that improve the quality of education and lifelong learning in Serbia. The toolkit contains a practical description of the lifelong learning education forms, methods and tools based on David Kolb's theory, a description of key competences necessary in the life of the current open and civil society, the labor market and activity, examples of training programs and a description of good practices in educational activities.

3. Kolb's experiential learning

Lifelong learning concept has developed since the eighties last century. One of the most well-known and used until today lifelong learning theory is David Kolb's theory called the experimental learning or alternating learning.

Kolb's experiential learning theory is today acknowledged by academics, teachers, managers and trainers as truly seminal works which explain fundamental concepts towards our understanding and explaining human learning behavior, and towards helping others to learn. Kolb's experiential learning theory (ELT) was published in 1984, in work *"Experiential Learning: Experience as the Source of Learning and Development"*, Prentice-Hall, Englewood Cliffs, New Jersey. Kolb was inspired by the work of Kurt Lewin who was a gestalt psychologist in Berlin and experiential learning model he based on two levels:

➢ 4- stage cycle of learning
➢ 4 separate learning styles

Experimental learning, what is it about?

David Kolb defined and described the 4 stage cycle of learning and adapted 4 different styles of learning to each stage of learning. His theory was derived from studies of adults' learning methods, the results of which confirmed that adults learn differently, and that each person has a strong tendency to one style of learning. The rest of the styles of learning can be complementary.[3]

One of Kolb's most important observations was that in the process of learning, adults strongly relate to their own experiences and, therefore, he adapted the ways of teaching adults to actively use their experience.

Observations and conclusions of adult learning process:

How adults learn	Conclusions
Adults compare the provided information with their **experiences** before accepting them. Adult learners have extensive experience, knowledge and attitudes.	1. In adult education learning process, conditions should be created in which we relate to the participants' experience 2. We examine the level of participants' knowledge 3. We rely on the participants' experience 4. If the participants do not have experience in a given area, we create learning conditions in which they acquire such experience.

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[3] *Experiential Learning: Experience as the Source of Learning and Development*, 1984, Prentice-Hall, Englewood Cliffs, New Jersey

Adult participants of the learning process expect that the acquired knowledge will be **immediately useful** and **put into practice**. It **motivates** the learning process.	In the learning process, we create conditions for practice and putting new knowledge into practice.
The knowledge and experience of adult participants in the learning process may be **useful for other learners** as well as for the trainer.	The trainer is a moderator, not a lecturer. It relates to the knowledge of the participants. Utilizing from various teaching methods, arranges, names and completes this knowledge, depending on the level knowledge of the participants.
In the learning process of adults, **new ideas** and knowledge are formed based on reflection and drawing conclusions from the **knowledge already possessed. Knowledge already acquired may be undermined.**	New knowledge, idea, concept should come from an active process of reflection and / or observation, only "delivery methods" such as lecture or educator's presentation may be less effective.

LEARNING STAGES

Based on those assumptions Kolb described learning cycle involves four stages namely: concrete learning, reflective observation, abstract conceptualization and active experimentation[4]:

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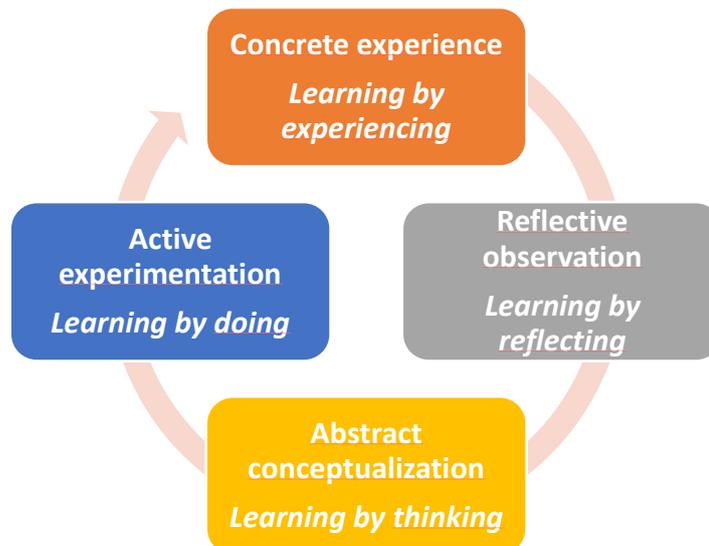
[4] *Experiential Learning: Experience as the Source of Learning and Development*, 1984, Prentice-Hall, Englewood Cliffs, New Jersey

Concrete experience (CE) *Learning by experiencing*	Reflective observation (RO) *Learning by reflecting*
Concrete experience, it begins with doing something, experiencing something. Individuals, team or organisation are assigned a task to do in the learning process. Active involvement of the participants is a key in this stage. In Kolb's model one cannot learn only by simply watching or reading, to learn effectively the individual, team or organisation must actually do the task.	Reflective observation is about reviewing what has been done and experienced. At this stage lots of questions are asked and communication channels are opened to other members of the learning process.
Active experimentation (AE) *Learning by doing*	**Abstract conceptualization (AC)** *Learning by thinking*
Active experimentation is when the learner considers how they are going to put what they have learnt into practice. Planning enables taking the new understanding and translates it into predictions as to what will happen next or what actions should be taken to refine or revise the way a task is to be handled. For learning to be useful most people need to place it in a context that is relevant to them.	Abstract Conceptualisation is the process of making sense of what has happened and involves interpreting the events and understanding the relationships between them. At this stage the learner makes comparisons between what they have done, reflect upon and what they already know. They may draw upon theory from textbooks for framing and explaining events, models they are familiar with, ideas from colleagues, previous observations, or any other knowledge that they have developed.

Kolb emphasized that the learning cycle and learning stages are an open formula that can be flexibly used in the learning process, but it is important not to skip any stages of the educational process. The practical application of this theory is associated with the following recommendations:

➢ effective learning can be seen when the learner progresses through all the cycle,

➢ the learner can enter the cycle at any stage of the cycle with logical sequence, it means that educators can plan educational activities in four different way:

  a) Group of learners start with CE, than reviewing what has been done and experienced (RO), next based on the RO conclusions, make sense and build new models, concepts, assumptions (AC), and then during the workshop, new

knowledge or/and skills they try to put in practice in the form of plans, projects etc. (AE);

b) Group of learners start with RO try to reviewing experiences already possess, compare them with experiences of the others, then based on reviving conclusions learners make new abstract conceptualization (AC), new knowledge, idea, concepts are define, new knowledge, abstract, concepts then are putting in practice (AE) in making plans, planning projects, than plans or projects will be experimented (CE);

c) Group of learners start with AC, theories, models, figures and facts are presented on the beginning of learning process, than learners try to put presented knowledge into the practice, plans, projects (AE), plans and projects then are experimented (CE) and in the final stage RO is implemented, when learners reviewing all the process and draw conclusions and make an feedback;
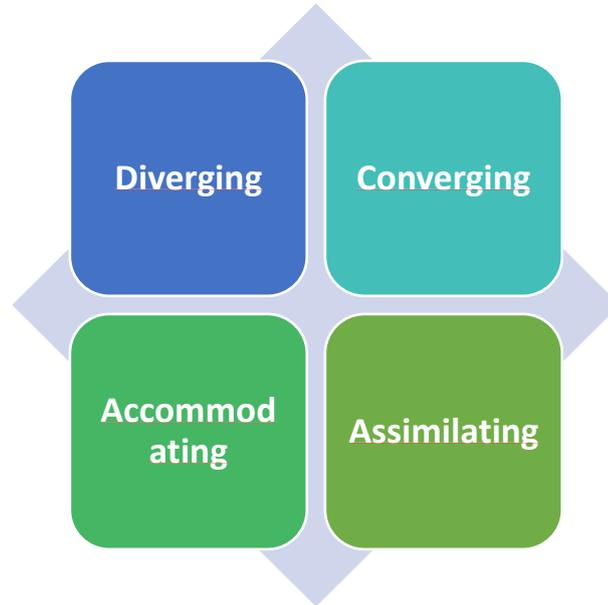
d) Group of learners start with making plans, projects (AE), which then they experiment with (CE). After the CE stage, learners make RO and take an conclusions from plans, experiments with plans and reviving previous arrangements, conclusions from RO are used in the final stage when learners make sense of them building concepts, and making abstract conceptualization (AC).

➢ the learning cycle can be started at any stage depending on the preferences of the learners or the purpose of the learning process,

➢ educators must consciously adapt methods for the set goals and use the activity of the participants. The result is not only greater motivation to learn, but also that participants use developed solutions more often in practice, because they have reached it themselves. Remember it is crucial for the learning process to go through all 4 stages of learning during the training, workshop or seminar! This is important because most people clearly exhibit clear strong preferences for a given learning style, so thanks to the use of all learning stages, the whole group will have **equal opportunities in effective education.**

LEARNING STYLES

Kolb's learning theory sets out four distinct learning styles/preferences, which are based on a four-stage learning cycle. In this respect, Kolb's model offers a way to understand individual people's different learning styles, and also an explanation of a cycle of experiential learning that applies to all people.

Four-type definition of learning styles, where each representing the combination of two preferred styles, rather like a two-by-two matrix of the four-stage cycle styles, as illustrated below[5], for which Kolb used the terms:

Diverging (CE/RO)	Converging (AC/AE)
Individuals of this kind of learning style prefer watching than doing, also they have strong imagination capacity, emotional, strong in arts, prefer to work in groups, open minded to take feedback and they have broad interests in different cultures and people. The learning characteristic is of concrete experience and reflective observation.	This type of learners solve problems, and put their learning into practical issues. Also they prefer technical tasks, experiment with new ideas. Is unemotional. The learning characteristics are abstract conceptualization and active experimentation.

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[5] *Experiential Learning: Experience as the Source of Learning and Development*, 1984, Prentice-Hall, Englewood Cliffs, New Jersey

Accommodating (CE/AE)	Assimilating (AC/RO)
Individuals with this kind of learning style prefer to do things practically, they are attracted to new challenges and solve problems intuitively. The learning characteristics concrete experience and active experimentation	People of this kind of learning style prefer clear information, they can logically format the given information and explore analytic models. They are more interested in concepts and abstracts than in people. Characteristics include abstract conceptualization and reflective observation

Recognizing that each group of learners will have participants who exhibit the 4 learning styles described above, directs educators to remember the following assumptions:

➢ Educators must consciously choose teaching methods in order to plan a process that takes into account all 4 learning styles, because learners who have a clear learning style preference, will tend to learn more effectively if learning is orientated according to their preference. For instance - learners who prefer the 'assimilating' learning style will not be comfortable without notes and instructions, learners who like prefer to use an 'accommodating' learning style are likely to become frustrated if they are forced to read lots of instructions and rules, and are unable to experiencing,

➢ The use of ELT in teaching practice helps the educators to develop a more appropriate learning conditions for students,

➢ Educator should design activities that will give opportunities to all the learners to learn in the best way which suit them,

➢ The activities carried out should make the learner to go through the whole process of the experiential learning cycle.

Effective planning of the learning process is one of the most important tasks of educators to improve the quality of lifelong learning activities.

LEARNING METHODS AND TOOLS

Once the learning stages and styles have been established, the next step is to identify and map of selected learning methods and tools.

Learning stage	Learning style	Methods and tools recommended
Concrete experience (CE)	**Diverging, Accommodating**	• debates • team games, simulations • problem solving, problem sets • discussion • practical exercises, e.g. making a presentation, puns • fieldwork • study visits • trigger films • text reading, document analysis • examples, case studies analysing • laboratories, experiment • ice breakers & energisers
Reflective observation (RO)	**Diverging, Assimilating**	• discussions, moderating discussion, panel discussion • brainstorming, mind mapping • thought questions • rhetorical questions • write a short report on what took place • give feedback to other participants • quiet thinking time • tea & coffee breaks • completing learning logs or diaries
Abstract conceptualisation (AC)	**Assimilating, Converging**	• present models • give theories • give facts and figures • model building • analogies

Active experimentation (AE)	**Converging, Accommodating**	• give learners time to plan • use case studies • use role play • ask learners to use real problems • projects building • fieldwork • homework • laboratory • simulations • working groups • SWOT analysis • portfolio

Kolb's experiential learning, or alternating learning, is based on the assumption that every educational form will be implemented on the basis of 4 stages of learning and that selected teaching methods will be consciously applied at each stage. The recommended teaching methods have already been presented, the next step is to describe the forms of education and tools which can support the learning process.

LEARNING FORMS

If you work as an educator like e.g. trainer, teacher, mentor, remember that in your work you can use various forms of education, not only training or seminars. Choosing the right form or forms increases the quality of education, gives dynamics to education, which strengthens the effects of learning. The best-known learning forms we recognize:

- Action learning
- Blended learning
- E-learning
- Coaching
- Mentoring
- Course
- Lesson
- Seminar
- Webinar
- Training
- Training on the job
- Conference
- Outdoor session
- Workshop

- Internship

ELT assumes that each of these forms should be carried out in the four stages described above, and educators should select the appropriate teaching methods for each stage. The learning process at each stage, using the selected method, can be supported by learning tools.

LEARNING TOOLS

We can complement the selection of the appropriate form and methods of education by selecting tools that will support the learning process:

- Multimedia presentation
- Slideshow
- PowerPoint presentation
- Questionnaire
- Competence test
- Knowledge test
- Instruction
- Movie
- Reportage
- Text
- Audio material
- Photo material
- Cartoons, drawings
- On-line programs
- On-line platforms
- IT programs, software, hardware

We already know that adults learn through their experience and that they have a strongly focused learning style. Taking these variables into account, an effective learning process should take into account 4 different stages of education, which are related to 4 different learning styles. Therefore, the learning methods should be consciously selected for each of the learning stages and styles. Remember that methods are not forms or tools of learning. The form of learning is a type of educational undertaking that we implement on the basis of different, alternating learning methods, and the learning process can be supported and enriched with various tools or materials. In shaping competences of individuals or social groups, it is important to consciously determine what form is most appropriate for educational purposes, what methods should be used to achieve these purposes and what tools and materials will support the learning process at each of the 4 stages of learning.

We have already presented all these issues. In the next part of the manual we will focus on learning objectives. The learning objectives of the modern world are closely related to the challenges that societies face. Taking into account the social, economic and political challenges, the European Union has defined key competences, important for modern people

in the context of their social, professional and public activity. The next chapter presents a description of the key competences according to the European Union, which should be the entry point for creating lifelong learning programs in Europe and in the world and goals to be implemented in the learning process.

4. Key competences in modern life

Key competences is an adult education concept emphasizes the need for people's personal and professional development in the area of **transversal competences**, which are **transferable between jobs** and they are as important as specific competences acquired for specific jobs context. Professional preparation and specific competences are most often developed by a person as part of formal education, which is characterized by formal confirmation of the acquired qualifications. Transversal competences are characterized by the fact that learners can develop them at all levels of learning, i.e. by participating in formal education, informal education, self-directed learning, informal learning. Key competences are transversal, **universal competences**, regardless of the profession or sector in which one works, they are competences needed by every person in contemporary social, economic and political life.

In a rapidly changing and interconnected world, each person will need a broad spectrum of skills and competences and will need to continuously develop them throughout their lives. The purpose of key competences is to provide people with knowledge, skills and attitudes that are used in social, public and professional life in which there is **greater equality**. They respond to the need for inclusive and sustainable growth, social cohesion and the **further development of a democratic culture.**

The goals of key competences are related not only to personal satisfaction, personal and professional development, but they are an integral part of building and **strengthening a democratic, open, equal and solidarity society.**

This means that all forms of adult education, especially offered by the civic sector, are an important element in building social cohesion, strengthening the economy and realizing human rights, hence the important role of non-governmental organizations in providing the best quality educational services as part of lifelong learning and the implementation of educational programs based on a set of key competences.

The importance of key competences has been particularly emphasized in the European Pillar of Social Rights, which emphasize people's access to education as a human and civil right:

"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"[6]

Key Competences for Lifelong Learning developed by Council of the European Union[7], the model is based on combination of knowledge, skills and attitudes.

> **KNOWLEDGE-** concepts, ideas, facts and figures, which already existing and help to understanding specified area of subject;

> **SKILLS-** ability to use existing knowledge in the process to achieve indicated goals and results;

> **ATTITUDES-** disposition and mind sets to act/ react to ideas, persons or situations;

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[6] Council Recommendation of 22 May 2018 on key competences for lifelong learning ST/9009/2018/INIT
[7] Council Recommendation of 22 May 2018 on key competences for lifelong learning ST/9009/2018/INIT

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In reference to this combination model of competencies indicate 8 key competences, which are presented in detailed below:

KEY COMPETENCES FOR LIFELONG LEARNING PROGRAMS

LITERACY COMPETENCES	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.
	EXPECTED LEARNING EFFECTS
KNOWLEDGE	

	• knowledge of reading and writing • understanding of written information • knowledge of vocabulary, functional grammar and the functions of language • 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
SKILLS	• skills of communicate orally and in writing • skills of adapt communication to the requirements of the different situation • abilities to distinguish and use different types of sources, to search for, collect and process information, • skills of formulate and express oral and written arguments in a convincing way appropriate to the context • critical thinking and ability to assess and work with information
ATTIDUDES	• disposition to critical and constructive dialogue • interest in interaction with others • an awareness of the impact of own language on others • usage language in a positive and socially responsible manner
RECOMMENDED LIFE LONG LEARNING METHODS	• reading literature/materials • watching educative movies, reportage, materials • listening educative materials • discussion, moderating discussion • trainings, coaching • panel discussion • case study analysis • debate • study visits • experiment • lecture • role playing

MULTILINGUAL COMPETENCES	Be able to communicate and decode meanings in a foreign language. 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 historical dimension and intercultural competences.
EXPECTED LEARNING EFFECTS	
KNOWLEDGE	- knowledge of vocabulary and functional grammar of different languages - 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
SKILLS	- ability to work in an international group - ability to analyze facts and data in a foreign language and draw conclusions - ability to create reliable information in a foreign language, issue opinions, argue - ability to process information in a foreign language - ability to be inspired by solutions from other countries and transfer them to your own country
ATTIDUDES	- openness to international cooperation - respect for other cultures, patterns of local life - appreciation of cultural diversity - interest and curiosity about different languages and intercultural communication - respect for each person's individual linguistic profile
RECOMMENDED LIFELONG LEARNING METHODS	- foreign language courses - on-line applications support foreign language skills development - international social media interactions - reading literature/materials in foreign language - watching educative movies, reportage, materials in foreign language - listening educative materials in foreign language - discussion, moderating discussion in foreign language - international study visits - international webinars

	• international conferences • international presentations

SCIENCE, TECHNOLOGY, ENGENEERING, MATHEMATIC (STEM)	Mathematical competence is the ability to develop and apply mathematical thinking and insight 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 and presentation (formulas, models, constructs, graphs, charts) 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
EXPECTED LEARNING EFFECTS	
KNOWLEDGE	• basic mathematical knowledge- knowledge of weights and measures, numbers, and structures, basic operations and basic mathematical presentations, • understanding of mathematical terms and concepts, and an awareness of the questions to which mathematics can offer answers • basic natural knowledge, especially in the area of climate, climate changes and the effects of climate changes • knowledge of nature in the field of global dependencies • knowledge of local ecosystems • knowledge of new technologies
SKILLS	• skills to apply basic mathematical principles and processes in everyday contexts at work (e.g. financial skills), and to follow and assess chains of arguments • ability 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

	• understanding process of investigation through specific methodologies, including observations and controlled experiments • ability to draw conclusions from observations • critical thinking skills • ability to combine knowledge from various fields • 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 • 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
ATTIDUDES	• willingness to look for reasons and to assess their validity • attitude of critical appreciation and curiosity, a concern for ethical issues and support for both safety and environmental sustainability • respect for nature and the environment • openness to learning and updating your knowledge • be open for innovations and implement changes
RECOMMENDED LIFELONG LEARNING METHODS	• observation • experiment • study visits and draw conclusions • case study analysis • coaching • brainstorm • SWOT analysis • documents analysis, error analysis • internships

DIGITAL COMPETENCES	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. Digital competences contain 5 areas: • Information and data literacy

	• Communication and collaboration • Digital content creation • Safety and data protection • Problem solving
EXPECTED LEARNING EFFECTS	
KNOWLEDGE	• knowledge of basic IT function, use of different devices, software, and networks • social media knowledge • knowledge of digital security rules and regulations • data protection knowledge
SKILLS	• ability to use, access, filter, evaluate, create, program and share digital content • ability to use digital technologies to support active citizenship and social inclusion, collaboration with others, and creativity towards personal, social or commercial goals • ability to manage and protect information, content, data, and digital identities, as well as recognise and effectively engage with software, devices • ability to solve technical problems • ability to create digital content • ability to engage people for social purposes using new technologies • ability to communicate and cooperate using IT tools
ATTIDUDES	• reflective and critical, yet curious, open-minded and forward-looking attitude to digital evolution • ethical, safe and responsible approach to use IT tools
RECOMMENDED LIFELONG LEARNING METHODS	• e-learning • blended learning • simulation and simulation games • case study analysis • coaching • webinars • practices • courses • solving IT problems practices • digital presentations • digital content creation

PERSONAL, SOCIAL AND LEARNING TO LEARN COMPETENCES	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 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, 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
EXPECTED LEARNING EFFECTS	
KNOWLEDGE	- understand the codes of conduct and rules of communication generally accepted in different societies, countries and environments - knowledge of different types of learning and understand which one is personally the best - knowledge about social participation - knowledge of the components of a healthy mind, body and lifestyle
SKILLS	- ability to identify one's capacities - ability to deal with complexity, critically reflect and make decisions - ability to learn and work both collaboratively autonomously and in group as well - ability to learn, evaluate and share knowledge - ability to seek support when appropriate - ability to manage one's career and social interactions - ability to be resilient and able to cope with uncertainty and stress - ability to communicate constructively in different environments, collaborate in teams and negotiate. - ability to understand different viewpoints, - ability to create confidence and feel empathy
ATTIDUDES	- openness and tolerance - attitude of collaboration - respecting diversity of others and their needs - being prepared to compromise - desire to apply prior learning and life experiences
RECOMMENDED LIFELONG LEARNING METHODS	- reading literature/materials - watching educative movies, reportage, materials - listening educative materials - discussion, moderating discussion - trainings, coaching

	• panel discussion • case study analysis • debate • study visits • experiment • lecture • role playing • work in groups

CITIZENSHIP COMPETENCES	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
EXPECTED LEARNING EFFECTS	
KNOWLEDGE	• knowledge and understanding democratic values, rights and responsibilities of citizen in democratic system • knowledge and understanding human rights system • knowledge about global dependencies • knowledge of contemporary events, as well as a critical understanding of the main developments in national, European and world history • knowledge about climate changes and its impact for democratic system and human rights all over the world
SKILLS	• ability to engage effectively with others in public interest • critical thinking and problem-solving skills • skills to develop arguments and constructive participation in community activities • ability to decision-making at all levels, from local and national to the European and international level • ability to critical understanding of, and interact with both traditional and new forms of media • ability to understand the role and functions of media in democratic societies
ATTIDUDES	• respect for human rights • willingness to participate in democratic decision-making process • support for social and cultural diversity, gender equality and social cohesion, sustainable lifestyles, promotion of culture of peace and non-violence, and responsibility for the environment
RECOMMENDED LIFELONG	• reading literature/materials • watching educative movies, reportage, materials

LEARNING METHODS	- listening educative materials - discussion, moderating discussion - Oxford discussion - trainings, coaching - panel discussion - case study analysis - debate - study visits - experiment - lecture - role playing - work in groups

ENTREPRENEURSHIP COMPETENCES	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.
EXPECTED LEARNING EFFECTS	
KNOWLEDGE	- knowledge of project cycle management, project thinking and implementation principles - knowledge of local and international entrepreneurship law - knowledge of principles of economy and business plan creation - knowledge of labour law, employees' rights and responsibilities - awareness of ethical principles and challenges of sustainable development and have self-awareness of their own strengths and weaknesses - knowledge of responsible consumption and shopping rules
SKILLS	- ability to project thinking - ability to strategic thinking - creativity - problem solving thinking - ability to teamwork and autonomous work as well - ability to mobilize resources (people and things) and to sustain activity - ability to make financial decisions relating to cost and value

	• ability to effectively communicate and negotiate with others • ability to cope with uncertainty and risk as part of making informed decisions is essential
ATTIDUDES	• sense of initiative and agency, pro-activity • being forward-looking • courage and perseverance in achieving objectives • desire to motivate others and value their ideas, • empathy and taking care of people and the world, • accepting responsibility • ethical approach
RECOMMENDED LIFELONG LEARNING METHODS	• project workshops • strategic workshops • study visits • SWOT analysis • games, strategic games • case study analysis • creativity workshops • reading literature/materials • watching educative movies, reportage, materials • listening educative materials • trainings, coaching • work in groups • business simulations

CULTURAL AWERNESS AND EXPRESION COMPETENCES	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.
EXPECTED LEARNING EFFECTS	
KNOWLEDGE	• knowledge of local, national, regional and global cultures and expressions, including languages, heritage, traditions and cultural products • understanding of one's own identity and cultural heritage within a world of cultural diversity • understand how arts and other cultural forms can be a way to see and shape the world
SKILLS	• ability to express emotions and create experiences due to culture and heritage involvement

	• ability to identify and realise opportunities for personal, social or commercial value through the arts and other cultural forms • ability to engage in creative processes, forms, events • ability to inspiring from indigenous culture • ability to intercultural communication, making decisions in cooperation while respecting local cultures • ability to learn on cultural resources, use the achievements of culture and heritage to create new ideas, innovations, and develop their own creativity
ATTIDUDES	• respect for culture diversity, local culture and patterns • ethical and responsible approach to intellectual and cultural ownership • curiosity about the world, • openness to imagine new possibilities • willingness to participate in cultural experiences
RECOMMENDED LIFELONG LEARNING METHODS	• reading literature/materials • watching educative movies, reportage, materials • listening educative materials • role playing • culture and heritage study visits • intercultural events • participation in culture events • creativity workshop • culture quest • culture trainings, courses • live paintings - a live presentation of a piece of art • list of 7 wonders of the local community- working groups

5. Creating effective training program

This chapter presents step by step the process of building lifelong learning programs so that they are the basis for effective implementation. Remember that the creation of educational programs is not only a formal requirement, necessary for documentation or reporting, an educational program is a real plan for the development of competences necessary for people, local communities to better function in the community, in the labor market, in the public sphere. The creation and implementation of educational programs is a great responsibility and the professionalization of this process is extremely important.

5.1 Educators steps in creating effective training program

Step 1 Target group

The first step is to define the target group of the learning process, Who are the participants? Where do they come from? What are their common features? like e.g. level of knowledge, what are their educational needs? Those are important questions, because we can have a mixed age group, we can have elderly people, and we can have young people. Let us remember that young people also already have their own experiences that can become the basis of lifelong learning. Defining the target group determines the forms of education, teaching tools, and teaching methods. We should remember that while we can offer young people training in the form of e-learning, elderly people may have a problem with participation only in online training, due to the lower level of digital competences.

> *EXAMPLE:*
> *Young people between 18- 25 years old, who already have knowledge and skills about basic IT function, use of different IT devices, software, and networks*

Step 2 Learning goal

The next step is to establish the learning goal. We have to answer this important question, why are we going to implement the educational program? for what purpose? What kind of competences do we want to develop with our participants? Describing the educational goal, we can refer to the description of key competences necessary on the labor market in social and public life (see Chapter 3). Remember that the goal must be SMART:

> **S –** specific (that is defined for a given group of participants)
> **M -** measurable (specifying the methods of measure that the goal has been achieved during the training)
> **A -** accepted (accepted by the participants, which is one of the basic conditions for the proper teaching process)
> **R -** realistic (with logistic assumptions, goal should be achievable taking into account owned resources)
> **T -** timely (possible to implement in the time available)

> *EXAMPLE:*
> *Development of digital competences of young people aged 18-25 in the area of conscious and responsible use of social media*

Step 3 Learning effects/outcomes

The next step is to define the desired learning outcomes. We won't achieve the goal when there is no change in the level of knowledge and / or skills and / or attitudes of participants in the learning process (see chapter 3). Without educational effects, the goal is impossible to achieve, so the next step is to work on describing the educational effects we want to achieve by implementing a specific program. Learning effects/outcomes is worthy to describe base on the model:

- **Knowledge**- What will people know after completing the educational program? What knowledge will they acquire? What will they develop?
- **Skills**- What will people be able to do after completing the educational program? What skills will they develop?
- **Attitudes**- How people will behave after completing an educational program, what will their attitude be?

EXAMPLE:
Learning outcomes of digital youth seminar:

Knowledge: knowledge of digital security rules, basic data protection knowledge
Skills: ability to evaluate social media content in terms of data protection
Attitudes: be more reflective and critical about social media content, safe and responsible approach to use social media

Step 4 Learning output

The next step is to define the educational form, i.e. if it has not been assumed or imposed in advance, we are thinking what is the best form of education for the learning goal of the target group (see Chapter 2, Methods, Learning forms). After determining the form of education, the stages of education are defined and the educational program is described. At this point, we plan the entire educational program with a breakdown into 4 stages of education and select adequate education methods. The output is an educational process program. 4 learning stages according to Kolb's experimental method are:

- Concrete experience, *Learning by experiencing*
- Reflective observation, *Learning by reflecting*
- Active experimentation, *Learning by doing*
- Abstract conceptualization, *Learning by thinking*

EXAMPLE:
Learning form- Active learning – seminar

Program content:

Part I 15 minutes
Subject: Social media content
*Learning method: working in pairs, case study analysis- the participants search each other's name on the Internet, then find out where it appears, in what social media, in what context, what photos are displayed and what content **(Concrete experience, Learning by experiencing)***

Part II 1 hour
Subject: Social media content evaluation

Learning method: thought questions and give feedback- The participants present the search results and reflect on the content evaluation. Was the access to the user's profile easy, if so, why? Was it conscious? Are participants' photos data available in the open Internet resources? Are they aware of this? **(Reflective observation, Learning by reflecting)**

Part III 1 hour
Subject: *Data protection, digital security and responsibility*
Learning method:
Trainer's presentation- figures and facts about Internet threats, data and identity theft
Open discussion- Data protection, digital security and responsibility rules and recommendations **(Abstract conceptualization, Learning by thinking)**

Part IV 1 hour
Subject: *Safe and responsible in social media*
Learning method: *Learner's plan- participants develop a plan for securing their data on the Internet, as well as responsible use of social media* **(Active experimentation, Learning by doing)**

Part V Evaluation 15 minutes
Active questions: *What have I learned and what will I change in my social media profile?*

Step 5 Learning input

The next step is to identify the resources necessary to implement the educational program, that is educational tools (see chapter 2 learning tools) and other resources.

> **EXAMPLE:**
> *Learning tools for digital youth seminar:*
> - *IT equipment like: smartphones or laptops or tablets or Pc for each participant*
> - *Internet access*
> - *Trainers digital presentation*
> - *Flipchart*
> - *Classroom*
> - *4 hours didactic seminar time*

The quality of lifelong learning activities, provided by various organizations, institutions, including NGOs, is directly proportional to the conceptual work and planning of educational events. A lesson, training, workshop, webinar is not only a presentation of selected content or topics, it is a learning process that requires teamwork focused on each participant, it is a process that is to motivate learning and development, it is a process that is to facilitate the development of new concepts, solutions, plans, projects. Conceptual work on the educational program facilitates its implementation in practice for both educators and learners. Below is an example of an educational program that includes all elements derived from the ELT.

5.2 Templates of trainings program

Form and title of educational event	
Target group, number of the participants	
The goal of the educational event	

Learning effects/outcomes	**KNOWLEDGE** 1 2 3 ..
	SKILLS 1 2 3 ...
	ATTITUDES 1 2 3 ...

Program content	Time duration	The learning method	The learning stage

Learning tools			