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ON MODERN ACHIEVEMENTS
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В НАУЦІ ТА ОСВІТІ**

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Розглянуті актуальні проблеми освіти та інформаційних технологій, матеріалознавства, механіки, дизайну, архітектури і будівництва, а також низка економічних питань.

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тодології оцінювання соціального виміру безпеки, соціальної політики зі передбачення та усунення соціальних загроз і створення механізмів саморегуляції соцбезпеки (здоров'язберігаюча, демографічна, харчова, за сферами працевлаштування, релігійна духовно-моральна, етнічна); *національна безпека* держави полягає у забезпеченні Національного суверенітету, державної цілісності та ідентичності транскордонного представлення державного реноме, міжнародній взаємодії діаспор та національно-природовідповідній дипломатії.

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NON-FORMAL AND INFORMAL ONLINE LEARNING AS NEW WAYS OF LIFELONG LEARNING

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In recent years, Lifelong Learning has become one of the most widely discussed issues in the field of education and social life. The term “lifelong learning” refers to all learning activities formally, non-formally and informally undertaken throughout life with the aim of improving knowledge, skills and competences in a personal, civic, social and/or employment-related perspective” [5].

The COVID-19 pandemic has affected the overall system of education transferring traditional education methods and tools to various online activities, thus, boosting the development of non-formal and informal online learning.

Non-formal learning, an intentionally chosen learning that takes place outside the formal education and training system, has been seen by a new generation of students as a key to their own customized learning path.

Taking place in any organisation with educational and training purposes or in voluntary bodies, organisations of the private social sector or enterprises both online and offline, it arises from the learner's conscious decision to master a particular activity, skill or area of knowledge and is, thus, the result of intentional effort. The absence of the need to follow a formal syllabus or be governed by external accreditation and assessment has given students a lot of opportunities in making their own way of studying and time management.

Though with time some non-formal learning arrangements become increasingly formal as learners become more proficient; one thinks, for example, of graded exams after taking some online course or getting a certificate that can be shown to a potential employer. Adults engage in non-formal learning when they are motivated in the acquisition of a particular skill or complex of knowledge to succeed in their career or, even more often, to acquire interdisciplinary knowledge and skills.

As a result, non-formal education has an adopted strategy where the student attendance is not fully required. The educative progress in non-formal education has a more flexible curricula and methodology. The activities or lessons of the non-formal education take place outside the institutions or schools. Here the needs and interest of the students are taken into consideration. There are 2 features in the non-formal education that need to be constant:

- Fully student-centered and customized learning, as to his/her previously identified needs and possibilities;
- The immediate usefulness of the education for the student's personal and professional growth.

One of the best examples of non-formal online education is the spread of Massive Open Online Courses (MOOCs), free online courses available for anyone to enroll, that provide an affordable and flexible way to acquire new skills, advance one's career and deliver quality educational experiences at scale. Millions of people around the world use MOOCs to learn for career advancement, changing jobs, university preparations, extra learning and lifelong learning.

As for informal learning, it refers to activities carried out in every-day life, at work, at home and in leisure time, even without an intentional choice. Informal education can be seen as "learning projects that we undertake for ourselves". It is also defined as "learning that goes on in daily life and can be received from daily experience, such as from family, peer groups, the media and other influences in a person's environment" [4].

To give more insights into the peculiarities of both types of learning, the following table has been made:

Table 1

Strengths and weaknesses of non-formal and informal online learning

Education	Advantages	Disadvantages
Non-formal education	<ul style="list-style-type: none"> – Accesibility; – Flexibility in organization and methods; – Variety; – Extra-curricular activities; – Interdisciplinary; – Low fees 	<ul style="list-style-type: none"> – Possibility of poor attendance/performance; – It often doesn't result in a licensed degree/diploma; – Teachers can be not officially certified
Informal education	<ul style="list-style-type: none"> – Anywhere and anytime; – A variety of methods; – Free of charge 	<ul style="list-style-type: none"> – Unpredictable; – Conversations or internet may have wrong information; – No consistency or methodology

Informal learning takes place outside educational establishments as well as online and arises from the learner's involvement in activities that are not undertaken with a learning purpose in mind. Informal learning is involuntary and an inescapable part of daily life; for that reason, it is sometimes called *experiential learning*. Learning that is formal or non-formal is partly intentional and partly incidental: when we consciously pursue any learning target we cannot help learning things that are not part of that target. Informal learning, however, is exclusively incidental. Social Media offers today a limitless number of video tutorials, etc. that attracts people in unbelievable ways to follow and constantly continue their informal learning. Moreover, informal learning outcomes may be validated and certified.

Recognition, Validation and Accreditation (RVA) of non-formal and informal learning is one of the pillars of any lifelong learning policy. Consequently, many countries have developed a national system for RVA. UIL considers it of the utmost importance to use RVA for integration of outcomes of non-formal and informal learning into national, regional and global qualifications frameworks.

An important part of the work of the UNESCO Institute for Lifelong Learning (UIL) on national qualifications framework developments in education and training is the Global Inventory of National and Regional Qualifications Frameworks that is a joint venture between UIL, the Section of Youth, Literacy and Skills Development at UNESCO Headquarters, and the European Training Foundation (ETF) and the European Centre for the Development of Vocational Training (Cedefop). Currently, a research into national qualifications framework developments in education and training is being conducted worldwide, particularly in developing countries.

In some countries, a new National system for competences certification is being made operational that aims at increasing the professional

competences acquired at work, as well as those acquired in leisure time in order to promote mobility, to foster the meeting together of demand and supply in the labour market, to increase learning transparency and the relevance of certifications at national and European level. 'Certifiable competences' are a structured combination of knowledge and skills recognizable also as formative credits through a special procedure for the validation of non-formal and informal learning. The certification of competences is defined as a public deed that ensures learning transparency and acknowledgment, consistently with the objectives set by the European Union. A certification, diploma or qualification formally attests that assessment and validation have been carried out by a public institution or an authorised subject.

An innovative aspect of the new adult education system, that contributes to promote the national lifelong learning policies, is the promotion of the cultural heritage and the professional experience of the individual. The introduction of the Individual formative agreement allows for the acknowledgement of the adult's knowledge, formal, informal and non-formal competences. The agreement is signed by the adult, the specific relevant board and the head of CPIA and – for learners of the second level pathways – also by the school head of the upper secondary school. The Individual formative agreement formalizes the personalized study pathway related to the teaching term of the path chosen by the adult at the time of enrolment. The Certificate for the recognition of credits is annexed to the Agreement for the personalization of the pathway.

It is important to point out such important issues in non-formal and informal learning as personal learning abilities, age and the human limits of productivity. If a university student can study 6–7 hours a day and still be effective, an average young employee will have much less time and energy to do an extra online course. Research suggests that in an eight-hour day, the average worker is only productive for two hours and 53 minutes [1]. According to the Bureau of Labor Statistics, the average American works 8.8 hours every day. Yet a study of nearly 2,000 full-time office workers revealed that most people aren't working for most of the time they're at work. Moreover, on average, the level of concentration, memory and other physiological abilities worsen with time. All that means, that an ability to study effectively depends on many factors that, in case they are ignored in non-formal online learning, may lead to the decrease in the level and quality of education. It also requires great time management skills, self-determination, good personal learning abilities and motivation.

Therefore, full transformation of formal traditional education to non-formal online education can have negative consequences as well. Though young people have a great potential for study, they can under

evaluate it in their age that can lead to a drastic fall in the level of education in the whole nation in the long-run.

In conclusion, the transition from traditional learning to non-formal and informal online learning is a rapid inevitable process that changes the paradigm of learning, destroys the authority of higher educational establishments, giving a chance to micro-credentials and certificates issued by a new generation of companies and businesses in order to make customized learning open for everyone, everywhere and anytime.

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КОМПЕТЕНТІСНИЙ ПІДХІД В ОСВІТНІЙ ДЕЯЛЬНОСТІ

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Сучасний світ характеризується протиріччям ролі знань в науково-технічному і суспільному процесі. Основна причина, що впливає на це, – доступність до інформації. Зміна ціннісної основи освіти робить необхідною введення нового поняття, яке відображало б здатність індивіда вирішувати завдання, що вимагають наявності багажу знань, досвіду і їх трансформації відповідно до умінь і індивідуальних