

## INTRODUCTION OF DUAL EDUCATION IN HIGHER EDUCATION INSTITUTIONS OF MOLDOVA: ULIM'S CASE

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**Abstract.** *The dual system of higher education, a form of study that links academic studies at higher education institutions with practical training in enterprises, has become steadily more important in recent years. Knowledge based relevant education is strategically important for the economic growth and social development of any country or region. Universities offering cooperative and work-integrated education have a comparative advantage in providing their graduates with capabilities needed on the labor market. They face the challenge to develop an internationalization strategy that reflects the practice-orientation of their study programs. This paper analyzes the approach of Free International University of Moldova (ULIM) as one of the first Moldova's universities to integrate academic studies and work experience, under the Erasmus + COOPERA project "Integrating Dual Higher Education in Moldova and Ukraine" (ref. no. 617490-EPP-1-2020-1-MD-EPPKA2-CBHE-SP). The aim of the project is to integrate dual higher education in partner countries in general, and to improve work capacity and individual development, to increase compatibility and continuity between the requirements of the business environment and the initial training of university students and to achieve a better high economic efficiency and social integration, in particular. This paper outlines the key features of the Dual Higher Education Model (DHEM) that was developed and which will be used to pilot DHE within ULIM in the 2022 academic year.*

**Key-words:** *dual system, dual higher education model, training, employability, labor market, company, student, university.*

## ЗАПРОВАДЖЕННЯ ДУАЛЬНОЇ ОСВІТИ У ВНЗ МОЛДОВИ: КЕЙС УЛІМА

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**Анотація.** *Дуальна система вищої освіти – форма навчання, яка поєднує академічне навчання у вищих навчальних закладах з виробничою практикою на підприємствах – останнім часом набуває дедалі більшого значення. Відповідна освіта, що базується на знаннях, є стратегічно важливою для економічного зростання та соціального розвитку будь-якої країни чи регіону. Університети, які пропонують кооперативну та інтегровану освіту, мають порівняльну перевагу у забезпеченні своїх випускників здібностями, необхідними на ринку праці. Вони стикаються з проблемою розробки стратегії інтернаціоналізації, яка відображає практичну орієнтацію їхніх навчальних програм. У цій статті аналізується підхід Вільного міжнародного університету Молдови (ULIM) як одного з перших університетів Молдови, який об'єднав академічне навчання та досвід роботи в рамках проекту Erasmus + COOPERA «Інтеграція дуальної вищої освіти в Молдові та Україні» (посил. №. 617490-EPP-1-2020-1-MD-EPPKA2-CBHE-SP). Метою проекту є інтеграція дуальної вищої освіти в країнах-партнерах загалом, а також покращення працездатності та індивідуального розвитку, підвищення сумісності та спадкоємності між вимогами бізнес-середовища та початкової підготовки студентів університету та досягнення кращого висока економічна ефективність і соціальна інтеграція, зокрема. У цьому документі описано ключові особливості моделі подвійної вищої освіти (DHEM), яка була розроблена та яка буде використана для пілотування DHE в рамках ULIM у 2022 навчальному році.*

**Ключові слова:** *дуальна система, дуальна модель вищої освіти, навчання, працевлаштування, ринок праці, компанія, студент, університет.*

**JEL Classification:** I230, I250, L260.

**Introduction.** In a study on the role of higher education in the knowledge society, the authors Krüger and Jiménez have formulated the thesis that the essence of higher education is to provide scientific rationality to the general system of action including the labour market [1]. This does not mean that higher education is naturally linked to research, but that it is based on the same rational principles and that it is oriented towards the transmission of this scientific rationality as a form of social behaviour. This has been and is the essential contribution of the university and higher education to the knowledge society. And this essence of university higher education must also be preserved in dual studies based on learning in work processes. Losing this essence, universities

have the risk of becoming an educational institution substitutable for any other type of training centre.

**What do we consider dual studies?** The term 'dual studies' comes from the vocational training of German-speaking countries and it was introduced later into higher education. One of the pioneering initiatives was the model developed in the German region Baden-Württemberg at the beginning of the 1970s, which became a higher education institution, the Duale Hochschule Baden Württemberg (DHBW), with around 33,000 students.

The DHBW is the first university in Germany to integrate academic studies and practical experience. Almost 40 years ago, the model of the University was initiated by large German companies – among others Robert Bosch and Daimler-Benz. Its unique characteristics are the result of participation of training companies in the university and the integration of work experience in all study programs.

The key feature of the dual, practice-oriented degree program was the alternation of 3-month phases with students studying theoretical concepts at the university and receiving practical training from an enterprise or social institution. The students have an employment contract and throughout the entire period, they earn a monthly salary and have an insurance status of employees. The curricula combine practical training with more than 9,000 cooperating companies, with the university education aiming to provide both practice-oriented and academic-based theoretical knowledge.

This model has subsequently been expanded to other German HEIs, generally universities of applied sciences or academies of higher education. Research universities also participate, but to a much lesser degree.

In CEDEFOP's glossary (2014), dual training is referred to as a form of alternating training that combines teaching periods in an educational or training centre with other periods of work stages in a workplace [2, p. 27]. This alternation may take place in daily, weekly, monthly or annual intervals, depending on the country and the applicable statute, and the participants may have a contractual relationship with the employer and/or receive remuneration. CEDEFOP (2016) highlights that dual learning, in the strict sense of the term, implies that the apprentice has the status of employee and receives remuneration for this work, which generally implies a contractual relationship [3, p. 9].

Dual studies must be clearly distinguished from practices; the latter can be classified in two types:

- Internships associated with educational programs that are an optional or mandatory part of a curriculum, traditionally in initial vocational training. During decades, internships have been an integral part of the academic curriculum at the university level.

- Internships associated with active measures to improve the labour market, focused at the unemployed with the explicit aim of facilitating their transition from unemployment to the labour market by helping them to acquire work experience.

According to a 2014 study, 'dual studies' in higher education is defined as follows: "Dual study programmes combine elements of the vocational education and training system and the higher education system - especially in terms of curricula, teaching staff, and funding - thereby connecting the learning environments of the firm and the higher education institution or vocational academy (Berufsakademie) in coordinated and systematic ways" [4, p. 11]. Specifically, it means that HEIs and companies develop curricula within the legal framework in such a way that, additionally to education and training at HEIs, the students receive training by professionals in the companies and that the company assumes the costs of the training during the period of the internship and guarantees the salary of the students/workers.

Based on this analysis, together with the review of higher education strategies in cooperation between universities and companies from countries such as Austria, Spain, Estonia, Finland, France, Italy and Portugal, the Erasmus+ ApprEnt project (Apprenticeships/Work-based learning, ref. no. 585163-EPP-1-2017-1-BE-EPPKA3-VET APPREN) developed an operational definition based on CEDEFOP's proposals in order to be able to analyse strategies in all participating countries that could lead to dual study schemes in the future. This operational definition includes five points:

1. Apprenticeship alternates between two places: the company and the HEI.
2. The formative modality of learning includes an employment contract or other type of formal agreement that links the student and the company, and that, in some cases, also includes the HEIs.
3. Students receive remuneration in the form of a salary, allowance or similar for their work, as they have a contractual link with the company.
4. It is either a form of formal training or continuous training.

5. Successful completion of the program involves obtaining a qualification, part of a qualification, and the student receives an official certificate.

To these 5 points, the ApprEnt project adds an additional point that they consider essential for the quality of the programmes:

6. Programs must have an academic tutor and professional mentor that cover both aspects of the learning process: academic and practical. In this way HEIs and companies assume their respective responsibilities to provide meaningful learning opportunities for the training process both in the training centres and in the workplace. The student is offered the opportunity to acquire knowledge, skills and aptitudes in order to exercise the professions associated with the program [5].

**The dual system in the Republic of Moldova.** It should be noted that in the Republic of Moldova, currently, no legislative framework exists to regulate dual university studies. The reference is the legislation on dual vocational training studies.

Two references can be taken, on the one hand, the regulation of internships in university education and, on the other hand, the regulation of dual studies in the framework of vocational training.

In the Republic of Moldova, dual education has been implemented at the technical vocational level since 2014, at the initiative of the Ministry of Education and Research of the Republic of Moldova, with the involvement of the Chamber of Commerce and Industry of the Republic of Moldova.

Since 2016 and until now, the Ministry of Education and Research of the Republic of Moldova in the implementation of dual technical vocational education is supported, including financially, by the German Federal Ministry for Economic Cooperation and Development and the Swiss Agency for Development and Cooperation through the project "Promoting VET for a Green Economy". The main purpose of this support is to facilitate the training of skilled labour in the Republic of Moldova, according to the needs of local employers and foreign investors through dual education, which is an alternative form of technical vocational education. The Education Code of the Republic of Moldova specifies that in technical vocational education for certain trades / professions dual education may be applied, under the conditions established by the Ministry of Education and Research through coordination with other relevant central bodies and interested economic agents. Dual education takes place in parallel in technical vocational education institutions and in enterprises or other economic units [6].

Regarding the higher education institutions in the Republic of Moldova, the use of the dual system in the training of future specialists is not attested.

Thus, it becomes necessary to identify a viable DHE (DHEM) model, adapted to the specific socio-economic context of the Republic of Moldova, which would ensure a viable dual higher education implementation process.

At the same time, DHEM, implemented in the Republic of Moldova, must meet the following requirements:

- The main objective of DHEM is to contribute to the organization of a training process for future specialists, to ensure the national economy with highly qualified staff, who possess not only theoretical knowledge but also practical skills;

- DHEM must correspond to the specifics of the existing economic and cultural context in the Republic of Moldova. It should be kept in mind that until today there have been no examples of close collaboration between universities and companies in the training of future specialists, each working in this direction independently. Thus, the second major objective of DHEM is to reflect the needs of all stakeholders and motivate them to be actively involved. Only through the joint effort of economic units and higher education institutions will it be possible to implement viable dual higher education in the Republic of Moldova;

- DHEM needs to take into account the interests of students, who will have more tasks to do compare to those who traditionally study at universities. Ongoing mentoring by both institutions and companies should be ensured for appropriate guidance at each stage of the study process;

- DHEM must comply with the requirements of the National Qualifications Framework and the Higher Bachelor's Degree Framework Plan (Cycle I) from 2020, which sets out the basic requirements for the development, revision and modification of the Curricula developed by higher education institutions in Republic of Moldova [7].

**Key features of the ULIM model.** To identify the current needs of employers and their attitude towards cooperation with academia and to analyse the prospects for the development of dual education in higher education institutions in the Republic of Moldova and Ukraine, an empirical research has been conducted through a questionnaire sent to respondents from both countries [7].

The study was carried out within the Erasmus + COOPERA project "Integration of dual higher education in Moldova and Ukraine", ref. no. 617490-EPP-1-2020-1-MD-EPPKA2-CBHE-SP (project webpage <https://coopera-project.ase.md/>).

The selection of the respondents-organizations was made by the higher education institutions participating in the COOPERA project. From the Republic of Moldova: Academy of Economic

Studies of Moldova (ASEM), Technical University of Moldova (TUM) and Free International University of Moldova (ULIM), and from Ukraine: State Univeraity "Uzhhorod National University" (UzhNU), KROK University (KROK), V.N. Karazin Kharkiv National University (KhNU) and Odessa National University of Economics (ONEU).

The choice of companies was made from the perspective of further cooperation and the existence of a link with the study programs, in which DHE is to be implemented. Also, as the important criterion in choosing the entities participating in the survey was their membership in various fields of activity, to be located in different areas of the Republic of Moldova and Ukraine, as well as the diversity of the size of enterprises.

Based on the study, we can conclude that companies are ready to get involved in the integration of dual higher education in the Republic of Moldova and Ukraine. The organizations participating in the survey expressed their willingness to contribute in various ways to the training of future specialists with higher education.

The results of the study conducted allowed us to develop a model of DHE, adapted to the existing context in the Republic of Moldova. Namely this DHEM will be used for piloting the dual higher education within Free International University of Moldova in the academic year 2022-2023.

In the case of ULIM, it has been decided to redesign and pilot as Dual the existing master program in Diplomacy, Security, Business and Communication provided by the Faculty of International Relations, Political Sciences and Journalism.

The main objective of the master program in Diplomacy, Security, Business and Communication is to train specialists capable of understanding and managing areas such as foreign and security policy, combined with elements of international business and communication, giving students the opportunity to practice in one of the sectors related to the complex fields of international relations and / or international business. At the same time the study program aims at helping students to increase professional and social skills, including interpersonal communication, flexibility, and emotional intelligence, and also abilities to engage in critical thinking and problem-solving and work in interdisciplinary, cross-functional teams.

The decision on piloting as dual the existing accredited master program was based on two main reasons: firstly, there is a need in a closer and intensive connection between university and companies in these fields of study in order to redefine and update university curricula to better respond to labor market requirements and, secondly, students studying in these fields need more in-company training to develop more social and professional skills.

An integrated model in the existing accredited master program was chosen for ULIM. The integrated model will make it possible to facilitate certain advantages: it is not necessary to develop a completely new curriculum and to attract a new academic staff, and it is possible to organize lectures in larger groups. At the same time, it will be necessary to draw more attention to the integration of the in-company training period in the educational process, without affecting the quality of the teaching and learning activities at the university. Students who will choose the dual education will continue their studies according to the curriculum, but will spent more time at the company, where they will have the opportunity to receive practical vocational training and work experience. Since the academic teaching material is supposed to be the same in regular and dual training, students are free to change the form of their education from dual to regular or vice versa.

Following consultations with the potential ULIM dual partners, it was decided to choose the following training model: 60% of the total number of study hours will be spent at the university, 40% at the company, with the alternation of agreed phases with students studying theoretical concepts at the university and receiving training from the enterprise or social institution.

All lectures and seminars will be held on the university campus and taught by tenured professors and experts. Individual hours will be divided between the university and the company.

The distribution of the study / theoretical and practical hours between the university and company will be organized according to a mixed model, combining both daily work hours/weekly and monthly. Each semester has been divided into sections of academic training at the university and practical experience in the partnering companies. The students continuously reflect on their work experience and take that 'know-how' back to university. On the other hand, the academic knowledge can directly be applied at the workplace. Therefore, academic environment and work field are interwoven. In the 1st year of study, students will carry out learning activities (contact hours) at the university, while spending, in parallel, 3 hours per day / 9 weeks per semester at the company. In the 2nd year of study, the 3rd semester will be divided into two parts, the first one (10 weeks) including lectures and seminars at the university and the last one, including the internship (5 weeks) - at the company. As of the 4th semester, students will work mostly at the company (14 weeks, February-April) and only one week (in May) at the university.

ULIM's key stakeholders in establishing a dual partnership are: The Information and Documentation Center on NATO in Moldova, Pro Marshall Center of the Republic of Moldova, Charity Center for Refugees from Chisinau, Moldova-China Chamber of commerce and industry. The collaboration between ULIM and the cooperating company will be carried out at all stages of

the realization of the dual higher education. A close cooperation between professional delegated mentors and academic tutors will be ensured. Tutors and mentors will be provided with additional training to support the students. Representatives of the company will be involved in the curriculum development process, so that the university curricula to correspond to labor market needs. They will be invited to participate in the selection of potential students in the 1st year of study and the training of professional skills in the real work environment. The students have an employment contract and throughout the entire period, they may earn a monthly salary and have an insurance status of employees.

The willingness of companies to support students during the study program crucially depends on an adequate return on this investment in human capital. The latter is given when students upon completion of their studies sign job contracts with their training companies and start their professional career there.

**Conclusion.** The potential for a closer link between vocational training and academic education has been clearly seen in discussions with managers from industry and representatives of various industry organisations. Interest in participating in a dual system of higher education has repeatedly been confirmed, yet at the same time clear limits have been expressed in terms of the organisational and financial involvement. In all their discussions, the enterprises and industry organisations have clearly outlined their desire for change towards a system of higher education incorporating specialist practical work and oriented towards the labour market.

Reference has repeatedly been made here to the preliminary work by government or ministries and a need has been formulated for framework conditions that are both favourable and based on sustainable educational policy. More significantly, recognition of dual higher education by the responsible ministry in the partner country are considered to be prerequisites for the commitment of higher education institutions and enterprises or industrial organisations.

In conclusion, it is also important to point out that efforts are needed to adapt the regulatory framework of the Republic of Moldova for the organization of dual higher education: changes in the Education Code, the adoption of the draft Law on dual education, where dual higher education should be regulated. It is also necessary to disseminate information about dual higher education and to actively promote it in the business environment, in order to involve more local companies to work together for the implementation of dual education.

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Стаття надійшла до редакції 15.08.2022  
Прийнята до публікації 20.08.2022