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DUAL MEDICAL EDUCATION IN THE REPUBLIC OF MOLDOVA: NORMATIVE FRAMEWORK AND PSYCHOPEDAGOGICAL TRAINING OF NURSE-INSTRUCTORS

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This article addresses the implementation of dual medical education in the Republic of Moldova from the perspective of the normative and legislative framework and the need for psychopedagogical training of nurse-instructors. It highlights the role of legal regulations in organizing and conducting dual training programs, as well as the importance of partnership between professional medical education institutions and healthcare service providers. Furthermore, it analyzes the core competencies – scientific, psychosocial, managerial, and psychopedagogical – that ensure the quality of the educational process and the continuous professional development of staff. The study emphasizes the relevance of aligning with European and national standards for teacher training and outlines theoretical and practical premises for human resource development in the medical field through dual education.

Keywords: *nurse-instructor, dual education, teaching methodology, professional competencies.*

ÎNVĂȚĂMÂNTUL MEDICAL DUAL ÎN REPUBLICA MOLDOVA: CADRUL NORMATIV ȘI FORMAREA COMPETENȚELOR PSIHOPEDAGOGICE ALE ASISTENȚILOR MEDICALI-INSTRUCTORI

Articolul abordează problematica implementării învățământului medical dual în Republica Moldova din perspectiva cadrului normativ-legislativ și a necesității formării competențelor psihopedagogice ale asistenților medicali-instructori. Se evidențiază rolul cadrului legal în organizarea și desfășurarea programelor duale de formare, precum și importanța parteneriatului dintre instituțiile de învățământ profesional medical și prestatorii de servicii medicale. Totodată, sunt analizate categoriile de competențe fundamentale - științifică, psihosocială, managerială, și psihopedagogică - care asigură calitatea procesului educațional și profesionalizarea continuă a cadrelor implicate. Studiul subliniază relevanța alinierii la standardele europene și naționale privind formarea personalului didactic și conturează premisele teoretice și practice pentru dezvoltarea resurselor umane în domeniul medical prin intermediul învățământului dual.

Cuvinte cheie: *asistent medical-instructor, învățământ dual, metodologia didactică, competențe profesionale.*

Introduction

Dual education represents a fundamental component of European educational systems, aimed at the seamless integration of theoretical and practical training. In Europe, this form of education supports the acquisition of relevant skills tailored to labor market demands and promotes the social and professional inclusion of young people. By aligning dual programs with European standards, the Republic of Moldova strengthens its capacity to train competent and adaptable specialists, capable of responding to the dynamic needs of the economy and society.

The educational policies of the Republic of Moldova aim to support the sustainable development of the national education system and to cultivate well-rounded, proactive individuals with civic awareness and creativity—essential factors for the country's socio-economic progress [5,7]. The entire education system is oriented toward harmonizing national educational values with European and international standards, ensuring that young citizens acquire a comprehensive set of knowledge and skills accumulated by contemporary humanity throughout its development.

In an educational context, the notion of "value" is essential for understanding and applying the principles of education. In the specialized literature, a value is defined as a concept that reflects the importance and

significance of an object, behavior, or ideal in relation to the individual or society. According to T. Vianu, a value represents a human construct, arising from the subjective evaluation of the individual in relation to the surrounding objects or ideas.

In education, values are integrated into the learning and development process, influencing both the educational content and the pedagogical methods employed. Thus, education not only imparts knowledge but also cultivates and promotes values that contribute to personal development and the individual's integration into society.

The values promoted by the national education system represent a fundamental component of the system's response to the challenges of modern society and reflect both national cultural and spiritual values, as well as those promoted by European and global society. Understanding and applying these values in education is crucial for shaping a fair and developed society, where the younger generation is prepared to contribute actively and responsibly to community life [8].

The Council of Europe's Recommendation of 24 November 2020 on education and vocational training aims to ensure "sustainable competitiveness, social equity, and resilience" [1], establishing a series of objectives designed to guarantee equal access for women and men to quality vocational training programs and to increase the number of young people and adults acquiring relevant skills - including technical and professional competencies—necessary for employment, decent work, and entrepreneurial development. In this context, vocational training must meet the following essential characteristics:

1. to be sufficiently flexible to quickly adapt to labor market changes, integrating workplace learning components and continuously developing apprenticeship programs across different economic sectors;
2. to provide personalized and accessible pathways for apprentices, through flexible modules, face-to-face, digital, or blended learning, and recognition of non-formal and informal learning outcomes, thereby facilitating professional and personal development;
3. to become a key driver of innovation and economic growth, preparing young people for the digital and green transition, as well as for professions with high demand in the labor market.

Dual Education in the Republic of Moldova

According to the Education Code (Art. 59, Para. 5-6) [2], certain trades and professions within the technical vocational education system are carried out through dual education, an alternative form of organizing professional training. This system is regulated by a comprehensive legal framework, including: the Education Code of the Republic of Moldova No. 152 (Art. 59, Para. 5-6; Art. 145, Para. 8), the Labor Code No. 154 (Art. 253-257), the 2018 Fiscal Code (Art. 24, Para. 19), the Regulation on Determining Tax Obligations for Entrepreneurial Activities (Government Decision No. 693 of 11.07.2018), the Regulation on Organizing Technical Vocational Training Programs through Dual Education (Government Decision No. 70 of 22.01.2018), as well as the Methodology for Implementing Dual Training Programs in the Medical Profile (Order of the Ministry of Health, Labor and Social Protection No. 903 of 30.09.2020).

To regulate the organization of professional training programs within the dual education system, the Government of the Republic of Moldova approved the Regulation on Their Organization [11]. This document establishes the general framework for implementation, the rights and responsibilities of all involved parties, as well as the quality standards applicable to the training process. At the same time, the regulation defines the fundamental principles of dual education operation, based on cooperation agreements between technical vocational education institutions and economic agents, which can, where appropriate, be extended through collaboration with other relevant institutions.

The regulation details the pedagogical aspects of dual education, clarifying the obligations of the involved parties, the documentation required for monitoring and guiding the educational process, as well as the procedures for reporting completed activities. For example, the professional training agenda includes practical training activities, stages for evaluating theoretical and practical competencies, and reports on the completion of internships at economic agents. This structure ensures transparency, coherence, and alignment with the real requirements of the labor market.

The organization and monitoring of practical training are carried out by the master-instructor appointed

by the educational institution, in collaboration with the master-instructor from the economic agent. They coordinate the development of the curriculum and training plan, ensure the availability of didactic and technical resources, guide students in completing the professional training agenda, monitor activities conducted at the economic agent, and participate directly in the final assessment of professional competencies.

In dual education programs, the master-instructor plays a crucial role in ensuring the quality of training and in developing the professional competencies of student-apprentices. They coordinate practical activities conducted both within the educational institution and at the economic agent, ensuring compliance with occupational standards and correct implementation of the curriculum. The master-instructor's role is essential not only in managing technical activities but also in supporting the personal and social development of students. By providing guidance, motivation, and constructive feedback, they facilitate the integration of young people into the team and professional environment, contributing to the formation of *a proactive and responsible attitude.*

Dual education is characterized by a systematic alternation between theoretical training and practical instruction, conducted simultaneously within educational institutions and enterprises or, for medical programs, within public healthcare institutions. This approach requires close collaboration between technical vocational education institutions and economic agents, integrating theoretical instruction with direct practical experience. Student-apprentices follow programs tailored to their field of study, learning theoretical concepts at educational institutions and applying them concretely within the workplace.

Active partnerships between educational institutions and the economic sector ensure continuous alignment of the curriculum with the real demands of the labor market. Economic agents not only provide internship placements but also contribute to the development and updating of *training plans*, the definition of key competencies, direct involvement in the training of student-apprentices, and, in some cases, co-financing of the educational process. Dual education stands out for its balance between theory and practice, creating a dynamic learning environment focused on performance and competitiveness. It supports the development of professional competencies and facilitates the transition of students from educational institutions to the labor market. This collaboration ensures that the learning process is relevant, adapted to labor market requirements, and oriented toward the skills that employers truly need.

Through this approach, the learning process becomes more relevant and better adapted to the realities of the labor market. The collaboration entails clearly defining mutual responsibilities and organizing practical training, including internships, so that student-apprentices acquire solid professional competencies and valuable practical experience, while economic agents are able to train specialists who meet actual market requirements.

The dual model brings multiple benefits:

- for students: acquisition of solid professional competencies and practical experience, rapid integration into the labor market, and preparation that makes them competitive.
- for educational institutions: the opportunity to update programs in line with technological and economic developments, and access to resources and expertise from partners.
- for economic agents: identification and training of talented youth, reduction of future training costs, and efficient integration of employees into long-term professional activity.

The entire process is regulated through tripartite apprenticeship contracts concluded between the student, the educational institution, and the economic agent. These contracts clearly establish the rights, obligations, and responsibilities of each party, ensuring the quality of training and the relevance of the acquired competencies. Student involvement in practical training, along with remuneration for their work, enhances the attractiveness of dual education and motivates future specialists.

Therefore, a well-structured collaboration between educational institutions and economic agents contributes to the formation of better-prepared specialists, reduces the gap between graduates' competencies and employers' requirements, and increases the attractiveness of technical professions among young people, providing a modern educational model adapted to the current demands of the labor market.

Medical Dual Education

Post-secondary and non-tertiary professional medical education represents an emerging component of the medical education system in the Republic of Moldova, still in its early stages of development. Through the implementation of dual education programs, this educational segment seeks to progressively integrate theoretical instruction with practical experience, preparing professional-technical specialists capable of meeting the real needs of the healthcare system. Currently, in Moldova, the training of these specialists within the medical dual education framework is carried out exclusively with the involvement of the MedPark institution, recognized for its high-performance standards.

Although the model is still in its early stages, it aims to train future professionals capable of providing comprehensive, patient-centered medical services in the preventive, curative, rehabilitative, and palliative fields [9]. They are trained to work in high-performance hospital units, adhering to the principles of professional autonomy, delegated responsibility, interdependence, and interdisciplinary collaboration, in accordance with international standards.

This initiative represents an important first step in establishing a dual medical education system that meets the practical demands of the labor market and ensures the rapid integration of graduates into the professional environment, preparing them to deliver high-quality medical services and contribute to the sustainable development of the country’s healthcare system.

To ensure the coherent application of the legal framework and the effective implementation of dual vocational training programs with a medical profile, the Ministry of Health, in collaboration with the Ministry of Education and Research, has developed and approved the *Methodology for implementing vocational training programs through dual education with a medical profile* [5].

This document serves as a key operational tool for institutions involved in medical vocational training, contributing to the standardization of practices for organizing and monitoring the educational process.

The methodology establishes the general conditions for planning, conducting, and evaluating dual education programs, explicitly defining the responsibilities and rights of all parties involved – the educational institution, the economic agent, and the student-apprentice. It clearly specifies the requirements for concluding partnership and apprenticeship agreements, the organization of theoretical and practical training, as well as the mechanisms for monitoring and reporting educational progress.

At the same time, the document regulates the role of the medical instructor, who ensures the coherence of the training process between the educational and professional environments. The instructor coordinates practical activities, provides methodological support to student-apprentices, monitors compliance with educational and occupational standards, and contributes to the final assessment of competencies.

Another important aspect addressed by the methodology is the organization of the educational process in accordance with the Study Plan, specific curriculum, and professional training pathway. Emphasis is placed on ensuring the quality of training through continuous alignment between the training objectives, targeted professional competencies, and the actual requirements of the healthcare system.

Additionally, the methodology establishes the financial regulatory framework for dual programs, specifying the methods of remuneration for student-apprentices, the contributions of the involved parties, and aspects of co-financing. In this way, equitable conditions are created for the implementation of the educational process and for motivating all stakeholders involved in the training of future medical professionals.

Through its structure and provisions, the *Methodology for implementing professional training programs via dual education with a medical profile* contributes to strengthening the institutional framework of this type of training, providing the necessary foundations for the sustainable development of medical dual education in the Republic of Moldova.

Depending on the level of professional qualification, medical dual education training programs are structured as follows:

- **Level III** – qualification: nurse;
- **Level IV** – qualifications such as medical assistant, dental technician, laboratory diagnostic assistant, rehabilitation medical assistant, pharmacy assistant, etc.;
- **Level V** – qualification: midwife, according to the National Qualifications Framework [5, p. 5].

By adopting this methodology, a unified working tool has been created for medical vocational education institutions and economic partners in the medical field, facilitating the gradual implementation of the dual model in the training of mid-level specialists. At the same time, this document provides the foundation for the further development of quality standards adapted to the specifics of medical services (e.g., training pharmacy assistants through dual education) and alignment with international standards for health sector training.

Medical dual education harmoniously integrates theoretical training with practical instruction, providing students-apprentices the opportunity to develop and consolidate professional competencies within a real work environment, capable of responding to the dynamic needs of the healthcare system.

To ensure coherent organization and compliance with the normative framework, the Methodology for implementing professional training programs through dual education with a medical profile establishes the general framework for planning and conducting these programs, including:

1. The procedure for implementing dual education programs;
2. The conduct of theoretical and practical training;
3. The rights and obligations of all participants involved;
4. The methods for establishing and maintaining partnerships between educational institutions and healthcare service providers;
5. The regulation of relationships between the student-apprentice, the healthcare service provider, and the technical vocational education institution (TVEI).

According to the provisions of the methodology, the involvement of medical vocational education institutions and medical colleges ensures:

- didactic and methodological guidance of medical instructor-nurses throughout the educational process;
- theoretical and practical training of students-apprentices, in accordance with the Study Plan and curriculum for the qualifications established by the National Qualifications Framework of the Republic of Moldova [5, 6];
- the development, in collaboration with healthcare service providers, of the study plan and corresponding curriculum for qualification levels III–V, according to the Framework Plan for dual technical vocational education (ISCED-2011);
- creation of thematic plans for each module, in accordance with the approved curricular documents;
- professional, curricular, and extracurricular counseling and guidance of students-apprentices, supporting their comprehensive development and gradual integration into the professional environment [5, p. 34].

Within the implementation of the methodology for dual education programs with a medical profile, the educational process takes place simultaneously in medical vocational education institutions or colleges and in public and private medical institutions. Practical training, accounting for approximately half of the total program volume, is coordinated by medical instructor-nurses, who are employees of the medical institutions and are responsible for organizing, conducting, and monitoring the professional training activities of future nurses.

Technical vocational education institutions (TVET) ensure didactic and methodological supervision of the entire educational process and coordinate continuing education programs for medical instructor-nurses. This supports the development of the pedagogical and professional competencies necessary for the effective implementation of dual training, strengthening the link between theoretical preparation and practical experience for student-apprentices [5, p.33, e)].

Development of Psychopedagogical Competencies of Medical Instructor-Nurses

The development of psychopedagogical competencies in medical instructor-nurses is both a necessity and a requirement, according to national regulatory frameworks and professional standards in the field. The Education Code of the Republic of Moldova (2014) stipulates that specialists in both economic and medical domains must complete a "psychopedagogical training" module in order to obtain the right to practice as teaching staff. Furthermore, Law no. 110/2022 "On Dual Education" explicitly mandates that medical instructor-nurses must acquire at least 20 credits of psychopedagogical training within provisionally autho-

rized or accredited institutions (art. 16 (2)). These provisions provide the legal and methodological foundation necessary for the development of psychopedagogical competencies, which are essential for guiding and training future medical professionals within dual education programs.

The development of psychopedagogical competencies also aligns with the recommendations of the Council of the European Union, which state that every individual has the right “to education, vocational training, and lifelong learning that are inclusive and of high quality, in order to acquire and maintain” knowledge, skills, and competences relevant to their professional activity, enabling them “to participate fully in society and successfully manage transitions in the labor market[1].

Continuing professional education for medical instructors [1], within the framework of dual medical education, can be carried out through a variety of programs designed to strengthen both professional competencies in the medical field and psychopedagogical and methodological skills. These include:

- *retraining* – professional preparation for obtaining a new qualification or profession;
- *supplementary qualification* – deepening knowledge and skills in a specific area of the occupation;
- *specialization* – acquiring knowledge and skills in a narrow domain of the profession;
- *multi-qualification* – developing the ability to perform multiple types of professional activities;
- *professional development* – completing or enhancing the professional competencies of already qualified individuals;
- *micro-qualification (partial qualifications)* – short modules and certificates that can be combined or later integrated into a full qualification, offering flexibility and rapid adaptation to the changing requirements of the medical field.

Through these programs, medical instructors develop the psychopedagogical competencies necessary to guide students-apprentices during practical training, facilitate their professional integration, and ensure the quality of the educational process in accordance with national and international standards.

The professional experience of medical instructors involved in training future medical specialists through dual education ensures the formation and development of their professional competencies, enabling a deep understanding of the curricular content and clear explanation of concepts and notions taught. Consequently, these instructors rely on professional values, including ethical and deontological principles, which constitute essential components of the teaching framework involved in shaping future medical assistants [7]. This provides the methodological and normative foundation necessary for the development of the psychopedagogical competencies of medical instructors engaged in training future specialists with postsecondary and postsecondary non-tertiary education through dual education.

The process of developing the psychopedagogical competencies of medical instructors, from the perspective of continuous education, aligns with the European and national professional profiles for teaching staff and involves the simultaneous development of four essential categories of competencies.

Scientific competence enables them to master and integrate relevant theoretical and practical knowledge into the educational process [3, 13]. ***Psychosocial competence*** ensures effective communication skills, empathy, and the ability to manage interpersonal relationships, creating a motivating and supportive learning environment [8, 12]. ***Managerial competence*** provides the ability to organize, coordinate, and evaluate teaching activities and educational resources in accordance with institutional standards and objectives [4]. Finally, ***psychopedagogical competence*** allows them to design and implement methods and strategies tailored to the needs of students-apprentices, promoting their cognitive, motivational, and socio-emotional development [6, 13].

The integrated development of these four categories of competencies forms the foundation for the effective psychopedagogical training of medical instructors, preparing them to provide high-quality instruction for future medical specialists in accordance with national and European standards in dual medical vocational education.

In conclusion, the dual medical education system in the Republic of Moldova offers a structured and integrated framework for training future specialists by effectively combining theoretical education with

1. https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?uri=CELEX:32018H0604(01)&rid=7

practical training in real hospital environments. This form of vocational education aligns with European recommendations on continuous education and vocational training, emphasizing the importance of acquiring knowledge and skills tailored to labor market needs and fostering active participation in society — ensuring European alignment.

The Government of the Republic of Moldova, together with technical vocational education institutions and economic agents, has developed the regulatory framework necessary for the efficient implementation of dual education programs. The coordinated efforts of the state, educational institutions, and economic partners have led to the creation of a functional, transparent, and results-oriented dual system, supporting both the strengthening of the national economy and the alignment of graduates' competencies with the real needs of the labor market - efficient coordination.

Conclusions

In the medical field, dual education offers student-apprentices the opportunity to gain practical training in high-performance hospital units, preparing them to meet the demands of professional and international standards. Active partnerships between educational institutions and medical units allow for the continuous adaptation of the curriculum to the real needs of healthcare services and contribute to the training of specialists capable of responding effectively to the challenges of the healthcare system - applied training. The development of the psychopedagogical competence of nurse-instructors represents an essential element of dual education. It ensures not only the efficient transfer of theoretical and practical knowledge but also the creation of a motivating, supportive, and learner-centered educational environment. Integrated psychopedagogical training contributes to the development of instructors' communication, coordination, assessment, and career guidance skills, thereby supporting the high-quality training of future nurses - instructional competencies.

Through these mechanisms, dual medical education promotes the formation of proactive specialists, capable of rapidly integrating the acquired knowledge into professional practice and of delivering high-quality healthcare services in line with national and European standards. At the same time, the dual model strengthens the connection between education and the labor market, increases the attractiveness of technical medical professions, and fosters the continuous professional development of the teaching staff involved - professional impact.

Thus, dual medical education emerges as a strategic and essential instrument for the modernization and optimization of the vocational training system, promoting educational excellence, the development of professional competencies, and the rapid integration of graduates into professional activity - strategic and sustainable.

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