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## CONCEPTUAL COORDINATES OF THE NATIONAL SYSTEM FOR TRAINING DRIVERS

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#### **CONCEPTUAL BENCHMARKS OF THE RESEARCH**

The relevance and importance of the researched issue. Road safety is a major societal issue. The first link in the road safety chain is the participants in traffic and their behavior. Therefore, improving the education and training of road participants has become the number one goal at EU and national levels [29; 59]. The consolidated vision of the central public authorities responsible in the field of road traffic safety [30], substantiated by the Action Plan on the implementation of the National Road Safety Strategy, recognizes that road traffic safety is *a complex issue*, the solution of which requires *a system approach*, collaboration and optimal coordination between all components of the system: regulated by synchronized regulations, vehicles with advanced safety systems, roads and infrastructure developed, *well-trained traffic participants*. One of the directions of insurance, guaranteeing road safety is *the behavior of drivers* as participants in traffic, *resulting from their professional training*, correlated with the particularities, quality, transport efficiency and with the particularities, training / professional development needs.

The system of professional training of vehicle drivers, *in the complexity of the issue* it represents as a system: road safety, the normative and legislative framework in the field, including road transport, labor market, educational policy documents, teachers, provides an integrative, efficient and safe–oriented sense. However, the efficient functioning of the national system of professional training of vehicle drivers is conditioned by the specifics of their structures, whose components are interdependent, complement each other and must ensure the unity, flexibility, continuity and sustainability of the entire road safety system [12].

The normative and legislative framework in the field of road transport highlights the conjuncture of the internal and foreign policy of the Republic of Moldova, in terms of European integration, sustainable development, which seeks and tries to find a stable theoretical framework for decision-making in any situation where there is *the human / environmental relationship*, whether it is the environment, economic or social [1]. "The transport and infrastructure sector is the field with the most economic connotations able to contribute to the visible economic growth of the country and to facilitate the development of other areas." It is recognized that citizens and goods are transported by all means of transport, but with the prevalence of road transport [45]. The development of the road transport market requires drivers to receive *qualified professional training*, which will allow them access and performance in their driving activity, aimed at improving road safety, of equal concurentional conditions, and mobility between different states. Quality vocational training can be promoted through interdependent, coordinated and functional measures between employers, employees and providers of education and training, so that the programs offered to train graduates who have competencies on a level with employers' expectations [31].

The professional training of vehicle drivers in the Republic of Moldova is specific through diversifying the ways and training components *categories / subcategories* AM, A1, A2, A, B1, B, C1, C, D1, D, BE, C1E, CE, D1E, DE, F, H [43], through the opening to the labor market and its requirements, by the possibility of re(returning) to the system, by building an individualized vocational training way depending on the possibilities / life opportunities and the needs of socio-professional integration.

The training context of drivers in the Republic of Moldova needs *to be conceptualized as a system*, as contradictory or out-of-sync regulations are developed, the activities overlap in some aspects, and in others such as teacher training, remain without attention.

## Description of the situation in the field of research and identification of the research issue.

The system of professional training of vehicle drivers is multidimensional, complex, one differentiated on vehicle categories / subcategories and driving licenses [43], motor vehicles for road transportation of goods (specialized vehicles), motor vehicles for road transportation of persons, which functions in national and international traffic. The general characteristics of certain categories of vehicles, aspects of road signs are set out in the *Convention on Road Traffic* 

(1968) [50], the categories of driving licenses, minimum knowledge for vocational training are set out in the *Directives of the European Parliament and of the EU Council* (2002) [23], (2003) [22], (2006) [51], *Decision of the European Union on the equivalences between categories of driving licenses* (2016) [21]. Based on these policy documents, a normative and legislative framework specific to the field was elaborated in the Republic of Moldova [28], analyzed through the prism of research, which highlights contradictions and desynchronizations.

In the aspect of organization, management, audit of road traffic safety, driver behavior, driving, road traffic accidents, the researches of several local authors are included: Onceanu V. [36; 38], D. Novorojdin, A. Daicu, P. Voleac, V. Ceban, D. Ceban [7], A. Antoci, V. Plămădeală, Ig. Beşleaga, E. Banari, V. Jeman, I. Ignatiuc, E. Lungu, M. Roșcovan, M. V. Lungu, V. Bodrug, authors from abroad F. A. Burlacu [5], V. Lomakin [57], etc.

Driving is influenced by the *psychological peculiarities of drivers*, externalized by traffic behavior, researched by: *A. Potâng* [53], *I. Botnari* [49], *V. Mîsliţchi* [52], *C. Havârneanu* [27], *A. Agapov* [54], *S. Borisova* [55], *A. Romanov* [58], etc.

Some authors consider the professional training of vehicle drivers is a component of road transport: *S. Armaşu* [37], *V. Bulmaga, Gh. Botnariuc* [3] etc., others reduce the training just to the training program or to some components of the program: *M. Hasan, I. Cozari, C. Beresteanu, Gh. Ermurache, D. Ududovici, C. Aizenştadt, N. Korolyov, B. Ivanov, C. Zelenin* [56], *V. Pavlov, E. Zaytseva, etc.* 

The aspect of teacher training remains uncertain, highlighting the diversity of driver training programs, relevant to the normative and legislative framework specific to the field, in the context of lifelong learning.

The analytical-synthetic study of scientific research, of policy documents in the field of education and of road transport, as well as the current practice of professional training of vehicle drivers has allowed us to elucidate some *contradictions* in the issue:

• The pressure on the quality of road transport services in the context of EU association policies, the promotion of quality assurance tools at all levels of vocational training, impose on the vocational training of drivers different *theoretically unfounded, unadapted, experimentally invalidated concepts* that unilaterally address the particularities of professional training of vehicle drivers and makes it impossible to achieve good results at the level of the training unit, at the system level, at the social level.

• The implementation of different provisions of the policy documents, systemic, coherent, integrated, in order to train drivers at the required / expected level of qualification is blocked by: 1) the unspecified nature of the concepts / components dealing with professional training, specific to the current issue of vocational training in the context of learning and adult training, as a component of lifelong learning; 2) *the limited contribution of teachers* in the professional training of vehicle drivers; 3) lack of methodologies, training programs, scientifically based and experimentally validated.

However, the unspecified character of the concepts, theoretical-methodological approaches of the professional training of vehicle drivers at the system level, but also at training module-level affects the functionality of the system and outlines **the research problem**: What the conceptual and methodological coordinates of the national system of professional training of vehicle drivers, in the context of lifelong learning are, to facilitate the efficiency of education services / training offers specific to the system, aimed at promoting road safety.

The object of the research is the national system of professional training of vehicle drivers.

The purpose of the research consists in the *theoretical and methodological substantiation* of the conceptual coordinates of the national system of professional training of vehicle drivers, *conceptualization* of the national system of professional training of vehicle drivers, development and validation of the *Pedagogical Model* for professional training of teaching staff in the national system of professional training of drivers.

#### **Research objectives:**

1) substantiation conceptual benchmarks of the national training system for drivers from the perspective of lifelong learning;

2) analysis of the connection of the national legislative framework for the training of vehicle drivers with the European legislative framework;

3) conceptualization of the national system of professional training of vehicle drivers and the elaboration of the *Theoretical Model* of the national system of professional training of drivers;

4) elaboration of the *Methodology of professional training of teaching staff* from the national system of professional training of drivers;

5) elaboration and validation of the *Pedagogical Model* for professional training of teaching staff.

**Research hypothesis:** The conceptualization and methodological assurance of the national driver training system will facilitate the efficiency of educational services / training offers, aimed at promoting road traffic safety, if:

- ✓ it will be based on epistemic, psycho-pedagogical dimensions relevant in the professional training of vehicle drivers;
- ✓ the national system of professional training of vehicle drivers with trained teachers will be ensured.

**Scientific research methodology.** To carry out the investigation, a set of *theoretical methods* were applied: scientific documentation, scientific analysis and synthesis, generalization and systematization, abstraction and theoretical modeling; *empirical methods*: observation, analysis and synthesis of the products of the teachers' activity: engineers, driving instructors, analysis of the documents of the units providing training programs for drivers; *experimental methods*: pedagogical experiment, questionnaire (used at the stage of the finding and validation experiment); *methods for interpreting the results*: theoretical interpretation, interpretation of data by diagrams, tables.

**The scientific novelty and originality of the research** consist in: 1. Elaboration of the *Theoretical Model* of the national system of professional training of drivers; 2. Elaboration of the *Concept* of professional training of drivers in the Republic of Moldova; 3. Elaboration of the *Methodology of professional training* of teaching staff in the national system of professional training of drivers; 4. Elaboration of the *Pedagogical model for teacher training* in the national system of professional training of drivers.

**The scientific problem solved in this research** is *theoretical and methodological substantiation* of the conceptual coordinates of the driver training system and the functionality of the *Pedagogical Model* of professional training of teaching staff in the national driver training system, in order to streamline educational services / training offers within the system.

The theoretical value of the research consists in: the investigation of the national system of professional training of vehicle drivers and the elaboration of *the theoretical model* of the national system of professional training of vehicle drivers; elaboration of *the Concept of professional training of drivers in the Republic of Moldova*; elaboration of the *methodology and pedagogical model* of teaching staff training for the national system of professional training of drivers.

**The applicative value of the research** is justified by: *the configuration of the national system* of professional training of drivers as a support in the efficiency of educational services / training offers within the system (curriculum model), aimed at promoting road traffic safety; elaboration and implementation of the *Methodology for teacher training* in the national system of professional training of vehicle drivers; elaboration and implementation of *the Professional Retraining Program, specialty Psychopedagogy* of teachers in the national system of professional training of vehicle drivers, as a component part of the Pedagogical Model.

The implementation of scientific results was achieved by disseminating the results of theoretical research at communications at national and international scientific conferences and

scientific publications in specialized journals, by developing the concept of driver training in the Republic of Moldova which was approved and implemented by MECC (Ministry of Education, Culture and Research) order no. 1542 of 18.10.2018, elaboration of the Professional Retraining Program, specialty Psychopedagogy, approved by the CSD of IŞE (Scientific-Didactic Council of Institute of Educational Sciences), coordinated with MECC and implemented within the Department of Psychopedagogy and Educational Management IŞE during 2019 – 2020.

The approval of the scientific results is ensured by the theoretical and experiential investigations on the research topic. The results of the investigation were presented in articles in specialized scientific journals: Univers Pedagogic Journal, Nr. 3 (55), 2017; Acta Et Commentationes Journal; Education Sciences Series, Nr. 2 (11), 2017; Univers Pedagogic Journal, Nr. 3 (59), 2018; Studia Universitatis Moldaviae Journal. Education Sciences Series, Nr. 9 (119), 2018; Univers Pedagogic Journal, Nr. 4 (64), 2019; in scientific articles held during scientific conferences: National scientific-practical conference with international participation, "Managing knowledge focused on achieving performance", Tiraspol State University, Chisinau, April 22-23, 2016; National Scientific-Practical Conference "Transport: engineering, economics and management", Technical University of Moldova, Chisinau, November 17-18, 2017; National scientific-practical conference with international participation, "Reconceptualizing the initial and continuous training of teachers from the perspective of the interconnection of modern general and university education", Tiraspol State University, Chisinau, October 27-28, 2017; International scientific conference "The structure and dynamics of the human personality in the era of globalization: psycho-socio-pedagogical perspectives", "Alecu Russo" State University, Bălți, May 26, 2017; National Symposium "Creaticon: creativity-training-performance", Iasi, Romania, March 24, 2017; International Scientific Conference "Perspectives and problems of integration in the European space of research and education", Cahul State University "B. P. Hasdeu", June 7, 2017; Scientific-practical conference with international participation "Theory and practice of public administration", Academy of Public Administration, Chisinau, May 19, 2017; International Scientific Conference "School Curriculum: Challenges and Development Opportunities", Institute of Educational Sciences, Chisinau, December 7-8, 2018; International Conference "Education from the perspective of values", "December 1, 1918" University, Alba Iulia, Romania, October 10-11, 2018; International scientific-practical conference "Educational management: achievements and development perspectives", "Alecu Russo" State University, Bălți, April 27, 2018; International Scientific Conference "Teacher – the promoter of educational policies", Institute of Educational Sciences, Chisinau, October 11-12, 2019; International scientific-practical conference "Educational management: achievements and development perspectives", "Alecu Russo" State University, Balti, May 8, 2020.

**Publications on the topic of the thesis:** The research results were presented in 3 scientific journals of category B and C (5); in participation at national and international scientific conferences (12), teacher guide (1); methodological guide (1) etc.

**Volume and structure of the thesis:** The thesis includes: introduction, three chapters, general conclusions and recommendations, basic text - 148 pages, bibliography - 238 titles, 29 tables, 36 figures, 7 annexes.

**Keywords** - lifelong learning, vehicle driver, vocational training, retraining program, curriculum, psycho-pedagogical competence.

#### **CONTENT OF THE THESIS**

In the **Introduction**, there is presented the relevance and importance of the researched topic, the description of the situation in the research field and the identification of the research problem, the object of research, the purpose and objectives, the research hypothesis, the synthesis of research methodology. It describes the scientific validity and originality of the

research, the theoretical significance and the applicative value, as well as the public approval of the results.

**Chapter 1, Conceptual benchmarks of driver training** describes the national system of driver training from the perspective of lifelong learning, which valorizes different theories of learning and their conversion into different models of training / learning. The analysis of the conceptual context highlights the learning peculiarities of the driver, as an adult, with an approach on various variables: basic characteristics, previous experience, psychological assembly, the relevance of knowledge, curriculum, planning, determination of needs, lesson design, basic activity, evaluation (*M. Knowles*). We have translated these into a distinctive plan of ideas for the training of drivers, which takes place within a system with interconnected and interrelated activities and relationships, with extended responsibilities [18, p. 8]. Considering that the training of drivers is dependent on the categories / subcategories of vehicles, we highlighted different goals and objectives for learning drivers, individually and situationally adapted, correlated with different age categories, with the need to know, with the concept of self, with previous experience, with the learning preparation, with the orientation towards learning and the motivation to learn [39, p. 109].

In the research logic, the training of drivers in the context of the European and national legislative framework is analyzed argumentatively and problematically [10; 11; apud 21; apud 22; apud 23; apud 43; 44; in 45]. As a result of the theoretical synthesis undertaken, concepts, characteristics and indicators regarding the professional training in order to obtain the driving license of different categories / subcategories A1, A2, A, B1, B, C1, C, D1, D, BE, C1E, CE, D1E, DE, F, H are highlighted and vocational training in order to obtain *the certificate of professional competence* in goods transportation and transportation of passengers, as components indicating the opportunities to enhance their interaction and continuity to ensure the quality and efficiency of the national system of road transport, also driver training, and road safety.

We found that the training of drivers can be included *in the continuing professional development of adults, as a component of lifelong learning*, that this training takes place within a system of interconnected and interrelated activities and relationships [18], as a result, if it is expressed in terms of knowledge, skills, habits, habits, adaptation, etc.; as a process, if it refers to the training components and their succession, expressed in terms of driving license of category / subcategory A1, A2, A, B1, B, C1, C, D1, D, BE, C1E, CE, D1E, DE, H, F; *as an action, directed pedagogically*, collectively or individually, expressed in terms of teaching, learning, practice, assessment associated with the particularities of learning (drivers), techniques and methods appropriate to the learning content of the learning subject, *valorized by teaching staff*.

We have proved that the legislative, normative framework used in the Republic of Moldova, concerning driver training is aimed at harmonizing with EU regulations in the field, as commitments, but highlights inconsistency, discrepancy, confusion and requires changes, updates and additions.

The professional training of vehicle drivers, in pedagogical aspect, highlights the procedural character of theoretical and practical training for driving in different categories / subcategories and subsequent integration in road traffic, determined by the training / development of professional skills as the purpose of training programs.

Psychologically subordinated, the learning / training of drivers is the way of assimilating knowledge and intellectual, emotional training, the development of driving skills, consciousness and social behavior, respect in road traffic, and modality of expressing their personality.

Institutions offering driver training programs *need teaching staff* with a training level connected to the requirements and changes of the education and training system. It requires professional psycho-pedagogical teacher training focused on professional performance, able to design, implement, guide, evaluate learning activities, aimed at the individual needs of beneficiaries, the performance of the national road transport of goods and people, but also to promote road traffic safety.

The detailed analysis of the concepts: lifelong learning, continuing training of adults, adult, occupation, initial and continuing professional development, qualification, improvement, specialization, retraining, professional skills allowed us to attribute to the driver training the term *professional training of vehicle drivers*, with the meaning of *a process of adult training in lifelong learning*, through initial vocational training, continuing professional development, qualification, retraining (depending on the chosen / requested training path) aimed at acquiring / training or development of professional skills, with the following characteristics:

1. Vocational training of drivers [2; 8; 13; 17; 19; 42; 46; 47] signifies the road traffic with its own relations, regulated by legislative and normative acts; with the defining elements: driver - motor vehicle - road - environment (CADM), intended for the people and goods transportation, organized and oriented towards performance, by preventing and reducing the number of road accidents [44; 45].

As for the driving activity, the specialists consider that the driver needs certain attitudes and abilities, which allow driving the vehicle optimally in various situations and conditions, without disturbing the stability of the road / traffic system, and without exposing the driver or other traffic participants to road hazards or road accidents.

2. Road traffic integrates all road transport operations, and requires *the education and training of traffic participants*: drivers, pedestrians, passengers, cyclists.

3. The professional training of drivers constitutes a systemic process [54], consisting of a set of elements, interrelated and interconditioned. The system ensures, integrates training, continuity, mobility of drivers, is subject to the requirements of supply and demand in the labor market / road transport, and learning outcomes / skills acquired in various contexts are certified, recognized and promoted at system / society level.

4. In accordance with the normative international and national acts in force, the professional training of drivers to get a driving license is correlated with a certain category / subcategory of vehicle and a certain age of the driver.

5. The professional training of drivers to get a driving license includes:

- initial professional training of drivers - A (AM, A1, A2, A); B (B1); BC (C1);

- continuing professional development of drivers from one category to another - from B to A2 / A; from B to C1 / C; from B to D1; from BC to D; from B to BE; BC1 / C to C1E / CE; from BD1 to D1E;

- continuing professional development of drivers within the category - from A1 to A2 / A; from A2 to A; from B1 to B; from BC1 to C; from BD1 to D.

6. Subsequent to obtaining a driving license, according to the Transport Code (code no. 150/2014), drivers follow professional training for the people and freight transport in national and international traffic.

7. The quality of professional training of drivers can be ensured by teachers, as a key figure in achieving the educational approach of professional training. Teachers have a strategic role in training competent specialists - drivers. It depends on their level of training how the drivers will be trained, at what level they will be able to apply and integrate the knowledge, how effectively they will demonstrate the professional skills trained in the professional / social environments.

Therefore, the mentioned above allows us to develop the theoretical model (model developed in the Concept of professional training of drivers in the Republic of Moldova, approved by MECC Order no. 1542 of 18.10.2018) of the national system of professional training of drivers, Figure 1.



Figure 1. Theoretical model of the national system of professional training of drivers

The theoretical model valorizes *the conceptual coordinates in the professional training of drivers:* 

a) *Lifelong learning* is a continuous process of integration, in a coherent and convergent system of pedagogical action of all educational influences exerted on the individual, in various and specific ways, throughout his life [26, p. 38].

b) Continuing professional development of adults (adult learning) as a component of lifelong learning; as an important policy concern at European and national level in order to improve the quality and efficiency of vocational education and training at all levels (as part of the strategic framework for European Cooperation in Vocational Education and Training (ET 2020); as the acquisition and practice of methodologies; skills, attitudes and values needed to live in a constantly changing world, as a process of preparation to cope with the dynamics and variety of professional and social situations Adult learning is influenced by the learner, the context in which they learn and in the actual learning process (Dumitru Al. Ion, Iordache M.).

c) The professional training of drivers depends on the *driver's age* [apud 18, apud 43, apud 51], which is characterized by: *physical changes, cognitive development, personality development* and includes the levels: social, manifested by rationality and stability, style of behavior and self-management ability; economic, manifested by professional status, qualification in the field.

d) The professional training of drivers is organized *formally*, separately, on training levels: categories / subcategories of driving license A1, A2, A, B1, B, C1, C, D1, D, BE, C1E, CE, D1E, DE, H, F, I, professions, occupations, trades and specializations: road transport of goods and persons, taking into account general and specific professional skills, the needs of employers / employees, whose requirements deal with the possibilities of promotion or employment, the

demands of the labor market and their own aspirations [apud 12]. Significant *contexts* are: from the training units of the personnel in the field of road transport [apud 30], from the centers of training, improvement and professional attestation of the staff in the field of road transport [apud 11]; from training and individual groups [apud 18].

e) The *process* of professional training of drivers of all categories / subcategories, in essence, mediates the bilateral character between: the driver as a learner / trainee, responsible for learning and the *teacher*, responsible for organizing, driving, guiding, advising trainees and ensuring teaching-learning-assessment. *Teaching staff* achieves a special type of pedagogical communication, which highlights the motivations and attitudes of trainees, contributing to the positive change in behaviors and affirmation of future drivers, as a lifelong investment, oriented towards *professional insertion and social inclusion*.

**Chapter 2,** *Methodology of professional training of drivers*, relates concepts of the *Methodology for the elaboration of qualifications*: qualification standard, occupational profile, sectoral committee, learning outcomes / study objectives, study program / professional training program / continuing training program [apud 31, chap. I, p.6] with the system particularities: the conceptual benchmarks, the configuration, the particularities and the expected results, oriented towards the formation of a system of professional competencies, necessary for the design of the professional career in the lifelong learning trend and *the training curriculum*, which in the normative-conceptual aspect characterizes the relevance of education in the Republic of Moldova, represents the defining sign of its integration in modernity, responds best to the constitutive principle of formative-productive education that governs the education systems of most countries in the world" [41, p. 9].

The curriculum, defined by *Vl. Pâslaru, L. Papuc, I. Negură, M. Morărescu and others.* as *the sum of the educational actions, designed-realized* in the context of the educational ideal and purpose of the people / nation and of its educational practice which occurs in two formulas: designed curriculum and achieved curriculum. The meanings given to the curriculum are: *main normative document*, which establishes the field in which it is achieved, the system of objectives and finalities, contextual values, means of educational action, evaluation of sequential and final products (*Cf. L. D'Hainaut, 1981; Al. Crişan, 1991; G. Văideanu, 1988; M. Ionescu, G. Văideanu, 1982); main didactic tool* for the effective realization of training and education (*Vl. Pâslaru, V. Goraş-Postică et.al., 2000; Vl. Pâslaru, 2003).* The curriculum as a normative document and didactic tool did not replace the school curriculum at a certain moment, but it represents *the normative-instrumental expression of a new educational concept* [ibidem, p.16-22].

The synthesis of the conceptions of the educational curriculum: "the concept of *systemic learning of school subjects*; curriculum conception *focused on development tasks*; concept focused on the *holistic* curriculum; curriculum conception *focused on the taxonomy of pedagogical objectives*; *student-centered* curriculum design; the conception of *focusing on understanding and improving society*; the conception focused on *the process of elaborating the curriculum*; the conception of the curriculum *focused on transdisciplinary approaches*; *competence-centered* curriculum design; the conception of the *integrated curriculum*" [25, p.18-27; 32; 34] directed us towards the elaboration of the curriculum focused on competencies, as a document that in professional training, according to art. 64, 123 of the Education Code, is coordinated with the sectoral committees, as the case, with the relevant central bodies, and is approved by the Ministry of Education, Culture and Research, emphasizing vocational training in accordance with the National Qualifications Framework of the Republic of Moldova [6], Methodology for elaborating qualifications, Nomenclature of professional training areas of specialties, qualifications and trades / professions [35], Classifier of the Occupations from the Republic of Moldova [9].

From the methodological perspective, in vocational training, curriculum design needs to be directed on certain distinct guidelines (according to *the Practical Guide for curriculum* 

*development for post-secondary and post-secondary non-tertiary technical education*, approved by Order of the Ministry of Education of the Republic of Moldova no. 296 of April 21, 2016) :

 $\succ$  academic rationalism, which aims at the aspect of knowing the field of professional training, of the general culture necessary to become a specialist in the field and personality;

> *cognitive processes*, which reflect the skills formed and developed following the logical rationalization of information depending on the level of required training / qualification;

 $\succ$  personal relevance, which will focus on the psychological conditions of training, dominated by individuality and personal expression, transforming the beneficiary into an active subject of his own training;

 $\succ$  social reconstruction, which should emphasize the social conditions, the socio-economic reality, influencing the dimensions of the skills system;

*▶ the primacy of applied approaches*, which will focus on the formation and development of functional skills, performance and efficiency.

Subordinated to the Methodology for elaborating the programs and curriculum within the lifelong learning we offer *the model* of the National Curriculum for professional training of drivers, category B (initial training), as a draft normative document, oriented towards the formation of professional competencies in order to obtain the driving license for category B vehicles.

The basic element of the Curriculum is the competencies [33] that must be trained in the process of professional training of drivers. They are classified into:

 $\succ$  Key competencies, which represent a multifunctional, transferable set of knowledge, skills and attitudes necessary for society members for fulfillment and professional development, social inclusion and finding a job, according to art. 11 *Educational purposes*, from the Education Code of the Republic of Moldova;

 $\succ$  Professional competencies, which represent the confirmed ability to apply personal and social knowledge, skills and attitudes in various road traffic situations and in various road conditions. Two categories of professional skills are established: general and specific, according to *the reference framework of the curriculum for technical vocational education*.

General professional skills are specific to the training of all categories / subcategories drivers, as well as in transport (road) services. They ensure professional success / success in all situations, influencing their quality through a systemic correlation.

Specific professional competencies represent a system of knowledge, skills and attitudes, which, by valorizing resources, contribute to the individual accomplishment of the tasks set by the context of driving category B vehicles, to get / hold a driving license and to subsequently integrate into work field / in road traffic.

In the process of curriculum design, the expected learning outcomes associated with learning units are formulated in terms of *competence units*, which represent a system of knowledge, practical skills and / or attitudes needed to perform certain cognitive and / or functional-actional attributions and tasks, according to *the Practical Guide for the elaboration of the curriculum for post-secondary and non-tertiary post-secondary technical vocational education*.

The complete completion of the professional training curriculum for drivers, in order to get a B category driving license, offers the possibility to develop general and specific professional skills for the beneficiaries, ensuring the functionality as:

 $\triangleright$  normative act of the process of teaching, learning, evaluation and certification in the context of pedagogy focused on competencies;

 $\succ$  benchmark for didactic design and development of the educational process oriented towards the formation of competencies;

➤ basic component for the elaboration of the evaluation and certification methodology;

 $\succ$  essential component for the elaboration of didactic supports, methodological guides, evaluation tests.

The professional training curriculum for drivers, in order to get a category B driving license, is elaborated on the basis of the following principles:

1. The principle of completeness - reflects the conceptual essence of the modular approach and is the basic rule, used in establishing the structural components of the curriculum and their functional interdependence.

2. *Functional principle* - establishes the system of functional competencies and content selection from the perspective of the value of the educational approach.

3. The principle of receptivity and flexibility to the requirements of the labor market - implies both relative stability of curricular provisions and openness to news and innovations that occur in specific segments of transport services and technologies in the field.

The curriculum from the professional training curriculum for drivers, in order to get the category B driving license, includes the defining components: time, which represents the time planning of the training process, the main unit of measurement of the training process being the study credit ECVET (European Credit System for Vocational Education and Training aimed at optimizing the compatibility of national qualifications systems); *formative*, which represents the way of distributing the course units: the module / (content units) /; *accumulation*, which reflects the allocation of ECTS study credits (European Credit Transfer and Accumulation System); *evaluation*, which represents the current and final evaluation modalities of the learning outcomes and the competencies obtained by the beneficiary at the course unit / module.

The curriculum from the professional training curriculum for drivers, in order to get a category B driving license, is in agreement with the Classifier of Occupations in the Republic of Moldova, through which drivers fall into the "major group 8: Plant and machine operators; car and equipment assemblers, qualification level 2 - driving of the means of transport, subgroup 83, minor group 832, basic group 8321 - motorcycle drivers, 8322 - drivers of cars and trucks [9].

The curriculum from the professional training curriculum for drivers, in order to get the category B driving license, includes five modules, the number of hours of direct contact and the individual guided study, the evaluation form and the number of credits allocated to each module, table 1.

		Numărul de ore						
ord Modules					Direct contact		Form	nr. of
nr.		Total	Direct contact	Guided individual study	Theoretical	Practical/ Seminars	of assessment	credits
1	Basics of road traffic legislation	240	60	180	20	40	Test	8
2	Behavior and safety in driving	120	30	90	10	20	Test	4
3	Construction and operation of motor vehicles	60	15	45	10	5	Test	2
4	Drug education and first aid providing	60	15	45	5	10	Test	2
5	Driving training	240	60	180	-	60	Exam	8
	Total:	720	180	540	45	135		24

Table 1. Curriculum in the professional training of drivers, category B

Based on the above, we consider it appropriate to set out the following considerations:

1. the professional training of drivers is carried out in the context of European integration: as content and purpose;

2. the professional training of drivers outlines a planned systemic process, organized on the basis of official documents;

3. the dominant engineering contents need to be exposed / taught exactly scientifically, related to the particularities of the category / subcategory of vehicles and to the learning particularities of the beneficiaries:

 $\checkmark$  learning the technical language by the beneficiaries;

✓ training and development of technical thinking;

 $\checkmark$  learning the component parts of the technical systems;

 $\checkmark$  understanding the functional dependencies between the elements of a technical system;

✓ formation and development of perspective view (space) of technical elements and systems;

✓ making schematic representations;

 $\checkmark$  training the skills and abilities to handle actuators on the vehicle of different categories / subcategories;

 $\checkmark$  formation of skills and abilities to appreciate road situations and contexts, etc.

The learning process becomes a necessary condition for training and adaptation to the professional, social, economic and informational requirements demanded by the domain of road transport, and at the same time, there is a set of activities to implement the training offer, activities performed by a teacher to ensure the quality of results. We refer to:

 $\checkmark$  selection from the specialty, as a science, of scientific ideas, notions and important problems that must be learned by students;

 $\checkmark$  coordination of the content of road legislation, road safety, mechanics, vehicle driving for unitary presentation;

✓ organization of teaching - learning - evaluation process and obtaining a driving license;

✓ finding ways to increase the accessibility of training activities by categories / subcategories of vehicles, to activate the student thinking, to develop the critical spirit and their ability to appreciate the diversity of road traffic; admission and support of different learning rhythms; encouraging initiative and creativity in learning; reporting students' performance to their possibilities and aspiration level; completing the theoretical knowledge with the practical experiences realized in a real context; ensuring psycho-emotional comfort by respecting different ergonomic criteria;

 $\checkmark$  valorizing the scientific content in the intellectual, moral development and practical skills necessary for future drivers for professional and social integration.

Thus, *the preparation of teachers* becomes an important aspect, *as a key element* in the implementation of the Concept of professional training of drivers, figure 2.



Figure 2. Professional training of teachers in the national system of professional training of drivers

We considered it appropriate to develop and implement a *Methodology of professional training of teachers in the national training system for drivers*, with the following structure:

1. General arrangements.

2. Vocational training of teachers in the national system of vocational training of drivers.

3. Organizing the professional training of teachers in the national system of professional training of drivers.

4. Evaluation and certification of professional training of teachers in the national system of professional training of drivers.

5. Financing the professional training of teachers in the national system of professional training of drivers.

6. Special arrangements.

Confronting the opinions expressed in the policy documents, in the specialized literature regarding the training of teachers, we found a general consensus - *the need for training* for the teaching career, figure 3.



**Figure 3. Teacher training models** 

Approaching the concept of competence in the didactic aspect as a synthetic one, open vocational and largely educational, to the field of activity of teachers, their competencies fall within *a field of interference* between the educational / training process and the occupational position.

Based on the synthesis of the opinions of several researchers with reference to teachers' competencies, teachers' pedagogical competencies, teachers' status and roles, [15; 16; 20; 25] we use the concept of *psycho-pedagogical competence of the teacher in the national system of professional training of drivers* - as the ability to decide on a pedagogical problem, based on indepth knowledge of the laws and determinations of education and to achieve a level of performance, totality didactic tasks specific to the professional training of drivers (after *S. Panţuru*) [40].

At the same time, the connection between learning / educational psychology, pedagogy and private didactics: road traffic legislation; road traffic safety; driving; road transport of goods; road transport of persons / passengers.

The distinctive note of the research, directed towards the didactic career within the professional training system for drivers, supposes the components and characteristics of the *Pedagogical model for teacher training*, Figure 4.



national system of professional training of drivers

The constructive conception of the Pedagogical Model valorizes:

1. Methodology of professional training of teachers in the national system of professional training of drivers.

2. The conceptual and methodological dimensions, which are interdependent and ensure its unity through the way of structuring and organization, through the specific, particular background of the professional training system of drivers.

The analysis of several theoretical approaches directed us to the elaboration of the *Professional Retraining Programme*, psycho-pedagogical specialty for engineers from the national system of professional training of drivers, as a component part of the pedagogical model, table 2:

✓ *professional training in psychopedagogy: necessity* (model of training and transfer in the practice of training drivers of pedagogical theories);

✓ *professional training in psychopedagogy: individual responsibility* (respecting the responsibility to be aware of all changes; adapting to the particularities of the automotive field; commitment to personal / professional development);

 $\checkmark$  professional training in psychopedagogy: collective responsibility (commitment of the automotive field to comply with policy and educational practice documents) [48].

ruble 2. i rolessionar retraining program					
General field of study	011 Sciences of Education				
The field of professional training	0111 Sciences of Education				
Speciality	0111.3 Psychopedagogy				
Total number of hours / credits	1800/60				
Admission requarements	Level 6 ISCED				
Form of organization	Full time				

Table 2	Professional	retraining program
I able 2.	1101055101141	i cu annig pi ogi ani

The duration of professional retraining, full-time studies, is one year. The year is divided into semesters, the latter into sessions. Each session includes direct contact teaching activities and individual study.

The total number of study hours is 1800, which is equivalent to 60 credits, distributed on the fundamental (F), specialized (S), which are compulsory and optional (O) components. The number of direct contact hours is 300, the number of individual study hours is 1500, with the

following share, adapted to annex no. 1 to the Methodology for elaborating the continuous professional training programs and the curriculum within the lifelong learning, table 3.

Components	Courses	ECTS credits
The fundamental component (F)	Pedagogy Educational psychology Functional didactics	16
The specialty component (S)	Didactics of Road Traffic Legislation Didactics of Road Traffic Safety Didactics of driving Didactics of people / passengers transportation Didactics of road freight transportation	20
The free choice component (L)	Information and communication technologies in education Professional branding	4
The internship of pedagogical pract	12	
Elaboration and defense of the thes	is	8

 Table 3. Relationship: Components - Courses - ECTS credits

In the context of the research [24] we opted for the curriculum *with a subordinate thematic structure on two perspectives: scientific (object of study) and psycho-pedagogical (transposing the contents into a structure appropriate to psycho-pedagogical requirements, degree of student training, relevance, coherence, consistency).* The curriculum describes the didactic course of the disciplines within the Professional Retraining Program, Psychopedagogical specialty. From a normative and regulatory perspective, the curriculum aims to create favorable conditions for the engineer to assimilate the recommended contents for his psycho-pedagogical training at an appropriate pace, to form integrative skills of receiving, expressing, interpreting teaching messages, learning methods and techniques. working with future drivers of different categories / subcategories and with future drivers, carriers of goods and people.

The curriculum aims to:

 $\checkmark$  valorize the educational policies, applicable within the national system of professional training of drivers;

 $\checkmark$  interrelate the fundamental notions of education sciences with those of engineering sciences during the professional training of drivers;

 $\checkmark$  valorize educational strategies and technologies from the perspective of competence pedagogy;

 $\checkmark$  integrate the last results of the pedagogical practice in the didactic activity;

 $\checkmark$  creatively integrate the theories and legitimacies of functional didactics in the training activity;

 $\checkmark$  identify and apply strategies, forms, assessment tools in order to increase learning performance;

 $\checkmark$  promote educational and communication technologies in teaching.

From the perspective of the curriculum interpreting; procedural, structural and product, we highlight the following curricular documents: *main* (curriculum, textbooks), *auxiliary* (teaching aids, methodological guides, multimedia sets, educational software), *curricular products for teachers* (different types of didactic design).

We opted for curricular products, as a component of the pedagogical model, *teaching support* Traffic rules and *methodological guide* Safe driving, because it embodies the curriculum

in different teaching units or learning experiences, operationalizable in the teacher-student relationship, performing several functions:

 $\checkmark$  of information (selection of knowledge in accordance with the curriculum requirements and accessibility);

 $\checkmark$  of structuring and organizing learning (from practice to theory, from theory to practical exercises, from practical exercises to the elaboration of theory, theory - illustrations, illustrations - observation and analysis);

 $\checkmark$  of learning guidance (memorization, imitation of models; open and creative activity of learners)

*The arguments that support the usefulness of teaching aids are:* 

1. *ensure the formation of competencies* (fixing the notions along with the acquisition and extension of key competencies as well as specific ones);

2. *can be used both in the classroom and for individual study* (teacher's guide: in the classroom, in additional work sessions, for individual study - at home);

3. *are in sync with the curriculum* (material perfectly adapted to the needs of learning and assessment of driving);

4. *stimulate interdisciplinary thinking and active learning* (dynamic and varied, creative approach that stimulates the relationship with other areas of knowledge (car mechanics) and the surrounding reality (road traffic));

5. *complete a formal approach for a specific context* (adaptation specific to the automotive field);

6. stimulate collaboration (necessary in road traffic);

7. *propose a personalized learning approach* (self-organization of the learning process for each driver);

8. *ensure the long-term assimilation of notions* (applies various notions in various contexts and different complexity of road traffic);

9. *encourages the transposition of what has been learned into reality* (by migrating to more complex contexts of road traffic and reporting on one's own experiences);

10. are designed for different learning styles (valorize the premises of the student's internal resources).

**Chapter 3,** *The experimental approach in the teacher training from the system of professional training of drivers*, includes the experimental approach of the investigation, by analyzing, comparing and evaluating the data obtained from the pedagogical experiment.

In accordance with the research purpose, the following objectives of the pedagogical experiment were established:

1. Determining the level of psycho-pedagogical competence required of teachers in the system of professional training of drivers (the diagnosis stage of the experiment).

2. Training of the psycho-pedagogical competence of the teachers necessary for the professional training system for drivers (Professional retraining program, psycho-pedagogical specialty).

3. Establishing the level of psycho-pedagogical competence of teachers in the system of professional training of drivers at the control / post-formation stage.

The time of experiential research included the period 2018 - 2020 in the following stages: diagnosis experiment (2018); formation experiment (2019-2020); control experiment (2020).

The experimental group consisted of 52 teachers, divided into two groups: the experimental group with training (EGT) and the experimental control group (ECG).

In order to ascertain the level of psycho-pedagogical competence of teachers (integrated system of knowledge, skills, attitudes and values), we applied a *Questionnaire*, which highlighted the following:

1) knowledge of the psycho-pedagogical language correlated with the specialized one (engineering), certain criteria were assigned to it and evaluated based on the performance descriptors according to levels, table 4.

Criterion Level-based performan		l-based performance descri	ptors
	Low	Medium	High
defining /	- can't explain or	- defines / explains	- defines / explains
the exact,	explains vaguely	with certain	the notions correctly
detailed	- has comprehension	inaccuracies	- explains the subject
explanation	confusions	- explains with some	in a clear and
of notions	- can't formulate	deviations from the	accessible way
	messages	subject	- establishes precisely
	scientifically	- formulates messages	the scientific message
		partly scientifically	
adapting the	- adapts to	- partially adapts to	- eloquently adapts to
notions to the	difficulties	difficulties	difficulties
particularities	- fails to keep the	- manages partially to	- keeps students'
of the	students' attention	keep the students'	attention and interest
categories /	- confuses the	attention	- guides and supports
subcategories	student	- encounters difficulties	the student in any
of drivers		in unexpected	situation
		situations	

Table 4. Criteria and performance descriptors of the notional-terminological dimension

The findings are included in Table 5.

Terminological	Group/	Findi	ng according to leve	ls
dimension	nr. of	Low	Medium	High
	persons	(Nr/%)	(Nr/%)	(Nr/%)
Learning	GEF/28	14 (50,00)	10 (35,71)	4 (14,29)
	GEC/24	16 (66,67)	6 (25,00)	2 (8,33)
Professional training	GEF/28	10 (35,71)	12 (42,86)	6 (21,43)
	GEC/24	10 (41,67)	8 (33,33)	6 (25,00)
Curriculum	GEF/28	16 (57,14)	8 (28,57)	4 (14,29)
	GEC/24	16 (66,67)	5 (20,83)	3 (12,50)
Professional skills	GEF/28	14 (50,00)	10 (35,71)	4 (14,29)
	GEC/24	14 (58,33)	6 (25,00)	4 (16,67)
Units of competence	GEF/28	16 (57,14)	6 (21,43)	6 (21,43)
	GEC/24	16 (66,67)	6 (25,00)	2 (8,33)
Didactic technology	GEF/28	20 (71,43)	6 (21,43)	2 (7,14)
	GEC/24	18 (75,00)	4 (16,67)	2 (8,33)
Assessement	GEF/28	22 (78,57)	4 (14,29)	2 (7,14)
	GEC/24	18 (75,00)	4 (16,67)	2 (8,33)

Table 5. Terminological d	dimension: finding
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2) 8 persons (28.57%) from EGT; 6 (25.00%) persons from ECG consider that they are competent to design the teaching activities, 16 (57,14%) persons from EGT; 14 (58,33%) persons from GEC consider that they are not competent to design the didactic activities, the other persons offered other answers, from EGT - 4 (14,29%) persons, from GEC - 4 (16,67%) persons. For example: didactic design is necessary only for young specialists; we take certain models from other colleagues; didactic design subsumes what engineers do not know, etc. 3) Most of the persons answered that they cannot develop teaching aids, from EGT - 20 (71,43%) persons, from ECG - 22 (91,67%) persons, the other persons offered other answers,

from EGT - 8 (28,57%) persons, from ECG - 2 (8,33%) persons. Among other answers, we highlight the following: teaching aids must be developed by specialists in the field; teaching pads take the place of teaching aids; compendious course notes are used instead of guides; only some PowerPoint presentations are elaborated, etc.

4) Adapts the contents to the learning styles of the students, to the perception particularities, to the types of abilities and intelligence (kinesthetic, logical-mathematical, spatial, interpersonal, intrapersonal), to the particularities of the categories / subcategories, from EGT - 4 (14,29 %) persons, from ECG - 4 (8.33%) persons; cannot adapt, from EGT - 20 (71.43%) persons, from ECG - 18 (75.00%) persons; another answer was given by EGT - 4 (14.29%) persons, by ECG - 4 (16.67%) persons. There are some answers of interest: the teacher is responsible for teaching knowledge; the training of drivers valorizes traditional content (the same program for everyone); all students are recipients of knowledge; the individual learning peculiarities are manifested in the individual learning activity of car driving.

5) Continuing education is rightly considered one of the ways of personal and professional development. However, in any field, it is necessary to know the new things, to apply innovative methods, to use new technologies, to soften the quality of work and results. In this context, the persons acknowledged that in their institutions no psycho-pedagogical training activities / programs are organized: from EGT - 26 (92.86%) persons, from ECG - 22 (91.67%) persons; this is desired: from EGT - 26 (92.86%) persons, from ECG - 15 (62.50%) persons; other answers were given from EGT - 2 (7.14%) persons, from ECG - 2 (8.3%) persons. Moreover, the policy documents in the field [91] provide compulsory continuous training in psycho-pedagogy of teachers in the system of professional training of drivers. Thus, each teacher graduates a continuing education course once every 5 years in institutions specializing in continuing vocational training. However, the extension of the areas of activity (professional training of drivers of all categories / subcategories A1, A2, A, B1, B, C1, C, D1, D, BE, C1E, CE, D1E, DE, H, F require a deeper psycho-pedagogical training, as a contribution and promotion of the educational culture, as a performance in this system.

Based on the theoretical benchmarks, the results of the diagnosis experiment were developed, approved, implemented, in the stage of formation of the pedagogical experiment, the *Professional Retraining Program, psycho-pedagogical specialty*.

The training experiment involved 28 persons - engineers.

The professional retraining program, psycho-pedagogical specialty was implemented between 2019 and 2020, within the Institute of Educational Sciences, Department of Psychopedagogy and Educational Management, during several sessions, exams, internships, elaboration and defense of professional retraining theses (duet o objective factors, 5 persons were forced to abandon the program).

For the control stage of the pedagogical experiment, we set the *objective to validate the experimental results: training the psycho-pedagogical competence of teachers, engineers* (integrated system of knowledge, skills, attitudes and values) by applying a questionnaire in the two groups: the experimental group with professional training (EGT) and the experimental control group (ECG).

We used the scale for assessing the level of achievement of items by assigning the numerical value between 1-10 points, 1p - for each correct answer, distributed on levels:

- low 1-5 p.,

- medium 6-8 p.,

- high 9-10 p.

According to the results recorded among the 23 persons in EGT: 19 (82.61%) persons demonstrate high-level psycho-pedagogical competence; 4 (17.39%) - medium level; 0 - low level, table 6, figure 5.

Table 6. Experimental results:	control stage / EGT
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Figure 5. Experimental results: control stage / EGT

Of the 24 subjects from the ECG: 1 (4.17%) demonstrate high-level psycho-pedagogical competence; 14 (58.33%) - medium level; 9 (37,50) - low level, table 7, figure 6.



Figure 6. Experimental results: control stage / ECG

level

The comparative analysis of the data from the stage of the pedagogical experiment of finding and the stage of post-training pedagogical experiment highlighted significant differences between GEF and GEC groups of subjects, which confirms that the *Professional Retraining Program*, *psycho-pedagogical specialty*, effectively develops *the psycho-pedagogical competence* of engineering teaching staff:

> *in psychological aspect* - ability to produce certain behaviors of drivers;

> *in pedagogical aspect* - valorifying the psychological meanings in the context of their employment at level of education / training of drivers;

 $\succ$  in operational aspect - set of cognitive, affective, action capacities, supported informally by basic knowledge (engineering and pedagogical) and methodological by skills, cognitive strategies, attitudes, engaged in achieving concrete performances, expressed behaviorally, observable at driver training course during teaching process (after S. Cristea) [14].

Moreover, the graduates (EGT subjects) of the *Professional retraining program, psychopedagogical specialty,* based on the obtained results, were issued *Diplomas of professional retraining,* psychopedagogical specialty.

In the group of ECG persons, based on the fact that they were not involved in the pedagogical training experiment, the situation regarding the results are approximately at the same level, compared to the situation at the diagnosis stage. Therefore, in the group of GEC subjects there is no development of psycho-pedagogical competence.

#### GENERAL CONCLUSIONS AND RECOMMENDATIONS

The professional training of drivers becomes an indispensable component in the development of road transport and in guaranteeing the safety of road traffic. The logic of the investigation in terms of complexity, connectivity of theoretical and methodological concepts of the system, their relevance and interrelation, allowed us *to solve the scientific research problem - conceptualizing the national system of driver training* and providing the system with teaching staff, by implementing the *Pedagogical model of teacher training in the national system of professional training of drivers*.

The obtained results confirm the hypothesis, the theoretical significance and the applicative value of the research.

The research approach led to the following conclusions:

**1.** *It has been shown* that the system of professional training of drivers puts in a conceptualconstructive relationship: various learning theories, learning models, the peculiarities of adult learning - drivers, in the context of lifelong learning subordinated to legislation and regulations in force [94], a relationship that allowed us to develop the conceptual benchmarks that formed the basis of *the theoretical model of the system*, as a whole of organizational structures, procedures, processes and resources, to facilitate the efficiency of educational services / training offers, the required / expected level of the system, aimed at promoting road traffic safety [44].

**2.** The identification of the conceptual benchmarks specific to the professional training of drivers, their relation to the real situation of the system, at the relational level political and educational practice, policy and practice in road transport, allowed the elaboration of the Concept of professional training of drivers in Moldova, as a system overview in the context of the European integration of the Republic of Moldova [12].

**3.** Having as a benchmark the conceptualization of the driver training system, *the pedagogical model for teacher training in the national driver training system was developed*, relevant in relation to the conceptual coordinates: driver training in order to get a driver's license of categories / subcategories A1, A2, A, B1, B, C1, C, D1, D, BE, C1E, CE, D1E, DE, H, F and professional training in order to get the certificate of professional competence.

The model proves:

• *integrative vision* of the system;

• *relevance* in relation to policy documents;

• *prospective character* in relation to the development directions of vocational education and training;

• *flexibility and adaptation* to the particularities of the units with attributions in the field of organizing driver training programs;

• provides a mechanism for promoting training offers.

**4.** *It has been established*, through the analysis of different scientific concepts, training models, that in the context of the continuous flow of changes in education and society, the performance of the training system for drivers depends on the *contribution of teachers* as subjects of their own training, focused on the dimensions: cognitive-axiological, motivational-attitudinal, action-strategic [48], which became a benchmark in *the elaboration of the Professional Retraining Program, psycho-pedagogical specialty.* 

**5.** *The curriculum was elaborated* for the subjects from *the curriculum* of the Professional Retraining Program, as an educational paradigm, as the capitalization of the conceptual coordinates of the driver training system; as a praxiological and unitary offer for teacher training; as an approach focused on *the formation of psycho-pedagogical competence* [4].

**6.** The methodological framework of the research, achieved through the synthesis of different approaches, *created the context of the implementation of the Methodology of professional training of teachers in the driver training system in the Republic of Moldova* through *the Professional Retraining Program* in the experimental approach, which provided sufficient evidence to validate the psycho-pedagogical competence.

On this basis, the research outlines the *scientific identity* by:

- Validation and elaboration of the *Theoretical Model* of the national system of professional training of drivers.
- Conceptualization of the national system of professional training of drivers, praxiologically configured of the type produced in *the Concept of professional training of drivers in the Republic of Moldova*.
- Validation and elaboration of the *Pedagogical Model for teacher training in the national* system of professional training of drivers.
- Elaboration and implementation of *the Professional Retraining Program in the psychopedagogy specialty*, as a component of the pedagogical model.
- Elaboration of disciplinary curricula within the Curriculum of *the Professional requalification program*, of curricular products: *Didactic support Traffic rules; Methodological guide The safe driving of the vehicle*, as the components of the pedagogical model.

## Recommendations

1. For curriculum designers:

Conceptualization, elaboration, updating:

- Curriculum *Professional training of drivers /* categories MA; A1; A2; A; C1; C; D1; D; BE; C1E; WHAT THE; D1E; OF; H; F;
- Curriculum Professional training of drivers / road carriers of goods and persons.

2. For researchers in the field of educational sciences:

Elaboration of methodological supports and guides on:

- professional training of drivers of different categories / subcategories;
- professional training of drivers / road carriers of goods and persons;

3. For institutions of continuing professional training for teaching staff: Implementation of the Professional Retraining Program, psychopedagogy specialty.

4. *For managers and teachers in the Driver training educational institutions:* Implementation:

- Methodological guide on *Safe driving*;
- Teaching support *Traffic rules*.

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#### ADNOTARE

#### Lilia Buimestru, *Cordonatele conceptuale ale sistemului național de formare a conducătorilor de autovehicule.* Teză de doctor în științe ale educației, Universitatea de Stat din Tiraspol, Chișinău, 2021

**Volumul și structura tezei:** Teza include: introducere, trei capitole, concluzii generale și recomandări, text de bază – 122 pagini, bibliografie – 238 titluri, 22 tabele, 36 de figuri, 7 anexe. Rezultatele obținute sunt publicate în peste 22 lucrări științifice.

**Cuvinte cheie** – învățare pe tot parcursul vieții, conducător de autovehicul, formare profesională, program de recalificare, curriculum, competență psihopedagogică.

**Scopul lucrării** constă stabilirea coordonatelor conceptuale și metodologice ale sistemului național de formare profesională a conducătorilor de autovehicule, conceptualizarea sistemului și validarea experimentală a modelului pedagogic de formare profesională a cadrelor didactice pentru acest sistem.

**Obiectivele cercetării** vizează: 1) elucidarea reperelor conceptuale ale sistemului național de formare a conducătorilor de autovehicule din perspectiva învățării pe tot parcursul vieții; 2) analiza racordării cadrului legislativ național de formare a conducătorilor de autovehicule la cadrul legislativ european; 3) conceptualizarea sistemului național de formare profesională a conducătorilor de autovehicule și elaborarea *Modelului teoretic* al sistemului național de formare profesională a cadrelor didactice din sistemul național de formare profesională a cadrelor didactice din sistemul național de formare profesională a cadrelor didactice profesională a conducătorilor de autovehicule; 4) elaborarea *Metodologiei* de formare profesională a cadrelor didactice din sistemul național de formare profesională a cadrelor didactice din sistemul național de formare profesională a cadrelor didactice din sistemul național de formare profesională a conducătorilor de autovehicule; 5) elaborarea și validarea *Modelului pedagogic* de formare profesională a cadrelor didactice din sistemul național de formare profesională a conducătorilor de autovehicule.

**Noutatea și originalitatea științifică** constă în: 1) *fundamentarea coordonatelor conceptuale* ale sistemului de formare a conducătorilor de autovehicule din perspectiva învățării pe tot parcursul vieții și elaborarea *Modelului teoretic* al sistemului național de formare profesională a conducătorilor de autovehicule; 2) elaborarea *Concepției* formării profesionale a conducătorilor de autovehicule în Republica Moldova; 3) elaborarea *Metodologiei* de formare profesională a cadrelor didactice din sistemul național de formare profesională a cadrelor didactice din sistemul național de formare profesională a conducătorilor de autovehicule; 4) elaborarea *Modelului pedagogic* de formare profesională a cadrelor didactice din sistemul național de formare profesională a conducătorilor de autovehicule; 5) elaborarea și validarea prin experiment a *Programului de recalificare profesională*, specialitatea Psihopedagogie, ca parte componentă a modelului.

**Problema științifică soluționată în cercetare** este *fundamentarea teoretică și metodologică* a coordonatelor conceptuale ale sistemului de formare a conducătorilor de autovehicule și funcționalitatea *Modelului pedagogic* de formare profesională a cadrelor didactice din sistemul național de formare profesională a conducătorilor de autovehicule, în vederea eficientizării serviciilor educaționale/ofertelor de formare în cadul sistemului.

Semnificația teoretică a cercetării este susținută de: 1) *Modelul teoretic* al sistemului național de formare profesională a conducătorilor de autovehicule, în viziune postmodernă, integralist, bazat pe dimensiuni epistemice, legislative, psihopedagogice relevante domeniului de referință; 2) Concepția formăriii profesionale a conducătorilor de autovehicule în Republica Moldova; 3) *Metodologia* și *Modelul pedagogic* de formare profesională a cadrelor didactice din sistemul național de formare profesională a conducătorilor de autovehicule.

Valoarea aplicativă constă în: 1) *configurarea* sistemului național de formare profesională a conducătorilor de autovehicule ca suport în eficientizarea serviciilor educaționale/ofertelor de formare în cadul sistemului; 2) elaborarea și implementarea *Metodologiei* de formare a cadrelor didactice pentru sistemul național de formare profesională a conducătorilor de autovehicule; 3) elaborarea și implementarea *Programului de recalificare profesională, specialitatea Psihopedagogie* a cadrelor didactice din sistemul național de formare profesională a conducătorilor de autovehicule, ca parte componentă a modelului pedagogic.

**Implementarea rezultatelor științifice:** rezultatele cercetării au fost implementate în cadrul Institutului de Științe ale Educației, în cadrul conferințelor internaționale și naționale, prin intermediul publicațiilor științifice în reviste naționale de specialitate.

#### АННОТАЦИЯ

#### Лилия Буйместру, Концептуальные координаты национальной системы подготовки водителей транспортных средств. Докторская диссертация в области педагогических наук,

#### докторская диссертация в области педагогических наук, Тираспольский Государственный Университ, Кишинёв, 2021 г.

**Объём и состав диссертации:** Диссертация включает: введение, три главы, общие выводы и рекомендации, основной текст – 122 страниц, библиография – 238 наименований, 22 таблицы, 36 рисунка и 7 приложений. Полученные результаты опубликованы в более 22 научных работах.

Ключевые слова – обучение на протяжении всей жизни, водитель транспортного средства, профессиональная подготовка, программа переквалификации, учебный план (куррикулум), психо-педагогическая компетентность.

Цель работы состоит в теоретическом и методологическом обосновании концептуальных координат национальной системы профессиональной подготовки водителей транспортных средств, концептуализация национальной системы профессиональной подготовки водителей, разработка и утверждение *Педагогической модели* профессиональной подготовки учителей для национальной системы профессиональной системы.

Цели исследования: 1) обоснование концептуальных координат национальной системы обучения водителей транспортных средств с точки зрения непрерывного обучения; 2) анализ соответствия национальной законодательной базы по обучению водителей европейской законодательной базе; 3) концептуализация национальной системы профессиональной подготовки водителей и разработка *Теоретической модели* национальной системы профессиональной подготовки водителей.; 4) разработка *Методики* профессиональной подготовки учителей для национальной системы профессиональной подготовки водителей.; 5) разработка и утверждение *Педагогической модели* профессиональной подготовки водителей для национальной системы профессиональной подготовки водителей.

Научная новизна и оригинальность состоит из: 1) обоснования концептуальных координат системы подготовки водителей с точки зрения непрерывного обучения; 2) установка соответствия между национальной и европейской законодательной базой в обучении водителей; 3) разработка Концепции профессионального обучения водителей в Республике Молдова; 4) обоснование и разработка Методики профессиональной подготовки учителей в национальной системе профессиональной подготовки водителей; 5) разработка и экспериментальная утверждение Педагогической модели профессиональной подготовки учителей для национальной системе профессиональной подготовки водителей.

Научная проблема, решаемая в исследовании это *теоретическое и методологическое* обоснование концептуальных координат системы подготовки водителей и функциональность Педагогической модели подготовки учителей в национальной системе подготовки водителей с целью оптимизации образовательных услуг / предложений по обучению в рамках системы.

**Теоретическая значимость исследования** подтверждена: 1) *моделью исследования и развития* национальной системы профессиональной подготовки водителей с эпистемологическим, законодательным и психолого-педагогическим аспектами, интегрированными в *теоретическую модель* национальной системы профессиональной подготовки водителей; 2) *Концепция* профессионального обучения водителей в Республике Молдова; 3) теоретико-экспериментальным моделированием *Педагогической модели* профессиональной подготовки учителей в национальной системе профессиональной подготовки водителей.

**Прикладная** значимость состоит из: 1) конфигурации национальной системы профессионального обучения водителей в качестве поддержки в оптимизации образовательных услуг/предложений по обучению в рамках системы; 2) разработка и внедрение *Методики* подготовки учителей национальной системы профессиональной подготовки водителей.; 3) разработка и реализация *Программы профессиональной переподготовки* учителей национальной системы профессиональной подготовки образовательных системы профессиональной подготовки водителей.

**Внедрение научных результатов:** результаты исследований были внедрены в рамках Института Педагогических Наук, в рамках международных и национальных конференций, посредством научных публикаций, в национальных специализированных журналах.

#### ANNOTATION

# Lilia Buimestru, *Conceptual coordinates of the national system for training drivers*. Doctoral thesis in educational sciences, Tiraspol State University, Chisinau, 2021

**Thesis volume and structure**: The thesis includes: introduction, three chapters, general conclusions and recommendations, basic text - 122 pages, bibliography - 238 titles, 22 tables, 36 figures and 7 annexes. The obtained results are published in 22 scientific works.

**Keywords** - lifelong learning, vehicle driver, vocational training, retraining program, curriculum, psycho-pedagogical competence.

The purpose of the work consists in the *theoretical and methodological substantiation* of the conceptual coordinates of the national system of professional training of vehicle drivers, *conceptualization* of the national system of professional training of vehicle drivers, development and validation of the *Pedagogical Model* for professional training of teaching staff in the national system of professional training of drivers.

**Research objectives** are about: 1) substantiation conceptual coordinates of the national training system for drivers from the perspective of lifelong learning; 2) analysis of the relevance of the national legislative framework for the training of vehicle drivers with the European legislative framework; 3) conceptualization of the national system of professional training of vehicle drivers and the elaboration of the *Theoretical Model* of the national system of professional training of drivers; 4) elaboration of the *Methodology* of professional training of teaching staff from the national system of professional training of a drivers; 5) development and validation of the *Pedagogical Model* for professional training of teaching staff in the national system of professional training of drivers.

**The scientific novelty and originality** consist in: 1) the *substantiation of the conceptual coordinates* of the driver training system from the perspective of lifelong learning; 2) establishment of the relevance between the national and European legislative framework in the training of vehicle drivers; 3) elaboration of the *Concept* of professional training of drivers in the Republic of Moldova; 4) substantiation and elaboration of the *Methodology* of professional training of teaching staff in the national system of professional training of drivers; 5) elaboration and experimental validation of the *Pedagogical Model* of professional training of teaching staff in the national system of professional training of drivers.

**The scientific problem solved in this research** is the *theoretical and methodological substantiation* of the conceptual coordinates of the driver training system and the functionality of the *Pedagogical Model* of professional training of teaching staff in the national driver training system, in order to streamline educational services / training offers within the system.

**The theoretical value of the research** is supported by: 1) the *model of investigation and development* of the national system of professional training of vehicle drivers, with epistemic, legislative, psycho-pedagogical approaches integrated into the *theoretical model* of the national system of professional training of drivers; 2) *Concept* of professional training of drivers in the Republic of Moldova; 3) the theoretical and experimental modeling of the *methodology and pedagogical model* of teaching staff training for the national system of professional training of drivers.

**The applicative value** consists in: 1) the configuration of the national system of professional training of drivers as a support in the efficiency of educational services / training offers within the system; 2) elaboration and implementation of the *Methodology* of professional training of teaching staff from the national system of professional training of drivers; 3) development and implementation of the *Professional Retraining Program* in teaching staff training for the national system of professional training of drivers; as a component part of the *Pedagogical Model*.

**The implementation of the scientific results**: the research results were implemented within the Institute of Educational Sciences, during international and national conferences, through scientific publications, in national specialized journals.

#### **BUIMESTRU LILIA**

# CONCEPTUAL COORDINATES OF THE NATIONAL TRAINING SYSTEM FOR VEHICLE DRIVERS

# Speciality 531.01. - General theory of education Thesis abstract in educational sciences

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