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TEACHING STRATEGIES FOR DEVELOPING LEARNING TO LEARN COMPETENCE IN SECONDARY SCHOOL

Specialty 531.01 - General Theory of Education

SUMMARY
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The thesis was developed within the Doctoral School "Education Sciences", State Pedagogical University "Ion Creangă",from Chişinău

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The thesis presentation will take place on **March 17th, 2025 at 10:00 AM,** at State Pedagogical University "Ion Creangă", Study Block no. 2, Senate Hall, Ion Creangă Street 1, MD-2069.

The PhD thesis and the abstract can be consulted on the webpage of the State Pedagogical University "Ion Creangă" (www.upsc.md) and on the ANACEC webpage (www.anacec.md).
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LIST OF ABBREVIATIONS

English language

UNESCO - United Nations Educational, Scientific and Cultural Organization

MCI2P- Theoretical model of learning to learn competence in a pedagogical context

EG - experimental group

CG - control group

EQ2 - Learning how to Learn Competence

NDS - National Development Strategy "European Moldova 2030"

 SRL- Self-regulated learning and performance

CONCEPTUAL LANDMARKS OF THE RESEARCH

The relevance and the importance of the research topic stems from the developments over the last decades in the field of educational philosophy and policy, launched by UNESCO from the 1970s to the present days, in relation to the economical and cultural model of the computerized, knowledge-based society and the political model of democracy, which requires the acquisition of the key competences, necessary for each member of society as a professional specialist and proactive citizen, constantly adaptable to the requirements of the future, in the medium and long term.

The development of the general competence to learn how to learn through teaching strategies is concretized at the level of *specific competences* for each *curricular area* and *subject*, which define the ability to: to identify and carry out effectively different didactic and extra-didactic tasks; to program the learning action integrated in the instructional activity, conceived curricularly as *teaching-learning-assessment*; to solve problems and problem-situations through appropriate, interactive teaching strategies; to improve learning through research (documentation, deductive and analogical demonstration, in-depth reading, self-reflection); to realize thematic or intradisciplinary, interdisciplinary, multidisciplinary and transdisciplinary modular syntheses; to qualitatively assess the results obtained, in strategic conditions of continuous, formative and self-training evaluation.

At the level of educational philosophy and policy, the idea of *teaching the student to learn* is cultivated through *sustainable*, *effective self-instruction*.Activities, that have as their general aim *autonomous learning*, are achieved through *interactive teaching strategies, special teaching techniques* (for the development of critical thinking), context-appropriate *learning styles* (the study of English in secondary education). They enhance the (psychological) autonomy and (social) responsibility of the learner, who assumes the role of leader of his or her own learning and self-learning process.

The importance of studying the topic is justified by the current pedagogical issues, with reference to the intradisciplinary, interdisciplinary, multidisciplinary and transdisciplinary development of key competences in general, and of the key competence of learning to learn in particular, formed and developed in high school students in a constructivist-structuralist-genetic spirit by Piaget [16] and socio-culturally oriented towards the "zone of proximal development" by Vîgotski, which support integrated learning, as stated by Bruner through appropriate teaching strategies. The formation and development of the competence to learn how to learn calls for making the most of the previous experience in terms of the general and

specific objectives of each educational level and subject. For secondary school students, it is important to define, deepen and consolidate self-awareness, with a major medium and long term impact, with a perspective to integrate into university and socio-professional life.

Description of the Situation in the Research field and Identification of the Research Problem. *Learning to learn* competence developed as a transversal, transdisciplinary key competence is a higher qualitative state of knowledge, skills and attitudes acquired and internalized by the high school student, reflected and focused at the level of philosophy and education policy in the Recommendation of the U.E. of 2006 [20], renewed in 2018 [21,33]. At this level, it constitutes the transversal, transdisciplinary competence of *learning how to learn efficiently* (*managerially*), *autonomously* (*psychologically*), *responsibly* (*socially*) throughout life.

The placement of the theme within international, national, inter- and transdisciplinary context is a matter of principle and remains in the attention of researchers at national and global level. The issue of developing the learn how to learn competence is reflected in several studies and analyses   carried out by reprezentative **Romanian** authors**:** Cristea S. (2000) [5, 6]; Ionescu M. (2003, 2007) (continuous personality development);   Ionescu M., Chiș V. (1992) [10], (competency-based learning); Bocoș M. (2002,2013), (student-centered learning) [1,2]; Velea S. (2020) [27], (autonomy and self-evaluation in secondary education); Țarălungă G. (2023) **(**interactive didactic strategies to stimulate metacognition) [26],; Stan C. (2021) **(**reflection, self-evaluation and adaptation of learning strategies) [24]; Potolea D. (2019) (training of competences in education) [17]; **Republic of Moldova:** Sclifos L. (2010) [25], Goraș-Postică V. et.al., (2012) (to learn how to learn competence) [9]; Paladi O. (2013)(adolescent value system) [14],; Franțuzan L. (coord., 2021.) (to learn how to learn competence [8], Franțuzan L. et. al (2024.) (competence of learning to learn in STEM/ STEAM education); Papuc L., et. al (2021) (developing the competence to learn how to learn) [15]; Orehovschi S. (2023)(developing the competence to learn how to learn through independent activities of text valuing) [13].

The theoretical-methodological support has been designed against the background of a content of ideas represented by the foundations of pedagogy, approached from the perspective of philosophy and politics of education argued by Piaget J. (1972) [16], Faure E. (1974) [7]; Boekaerts M. and Corno L. (2021) [28]; De Corte E., Verschaffel L.(2021) [29]; Dinsmore D. L. Alexander P. A. (2020) [30]; Haitte J., Zierer K. (2021) [31]; Peerry N.E., Rahim A. (2020) [32]; Schurik D.H.,

Greene J. A. .(2017) [34]; Cristea S. (2018) [5,6]; promoted by the E.U. Council Recommendations of 2006 [20,], and updated in 2018 [21,33],; the UNESCO (coord. Delors) report (1996, 2000) [4]; the value guidelines promoted by the "Education 2030 Agenda for Sustainable Development" [1].

The scientific research problem refers to the contradictions observed in schools regarding disagreements that arise during the process of implementing teaching strategies aimed at developing the learn to learn competence. This is in the context of integrating high school students into the university environment and social life (community, professional, cultural, etc.).

Solving the research problem involves identifying the theoretical and praxeological foundations of teaching strategies that can contribute to the development of the learning-to-learn competence in high school classes, guided by the following questions:

-What are the theoretical foundations that serve as landmarks in conceptualising the development of the learning-to-learn competence in high school students?

-How can we identify the theoretical foundations necessary to improve teaching strategies in the process of developing students' learning-to-learn competence at secondary level?

-What kind of experimental approaches have been implemented to support the development of the learning-to-learn competence of the students in the secondary school?

The aim of the research is the conceptualisation of teaching strategies for the development of *learning to learn competence* and the experimental validation of the implementation Programme of teaching strategies, established for the development of learning to learn competence in secondary education.

The research hypothesis: The effectiveness of the teaching strategies used to develop learning to learn competence will be demonstrated under the conditions of curriculum design centred on the optimal use of the socio-educational environment and students' psychological resources (cognitive, metacognitive), in accordance with theoretically based and empirically validated pedagogical models.

The research objectives are as follows:
- To determine the evolving theoretical landmarks of the concepts of competence and competence to learn to learn through the new prospective paradigm of education, which anticipates social development;
- To examine the key competence of *learning to learn* in the *multilingual* and *culturally expressive* perspective of the knowledge base and value orientations promoted by the 2030 Agenda for Development,as reflected in the strategies of different countries;

- To elaborate and describe *the theoretical model of the competence of learning to learn in a pedagogical context*, using the "pillars" of inclusive education, principles and value orientations, and experimental research methodology established in educational sciences;
- To identify teaching strategies which develop secondary students'learning to learn competence in a stimulating, autonomous and personalised learning environment;
- To elaborate and experimental validate the *Programme which implements the teaching strategies designed for the development of learning to learn competence in secondary education;*

The synthesis and justification of the research methods. *The* following methods were used in the research approach: *theoretical* - scientific documentation, recourse to history, pedagogical modelling method, inventory of value reflections, analytical-synthetic and *experimental* methods - pedagogical experiment, conversation, testing, case study, mathematical processing methods and qualitative analysis of experimental data.

The theoretical-methodological framework of the research is grounded in approaches to teaching strategies aimed at developing the 'learning to learn' competence in *Anglo-Saxon* literature. These strategies promote pedagogical interventions based on self-regulation, supported by formative feedback, reflection, flexibility, and adaptability in diverse learning environments, fostering a continuous learning mindset. According to the vision of Boekaerts M. and Corno L. (2021) [28], self-regulation is considered an indispensable element in the development of learning to learn competence, and is valued as a support for learners in managing thoughts, emotions and actions in the learning process.According to E .De Corte and L. Verschaffel, this is achieved through *strategies of self-reflection and control over one's own goals*, which facilitate independent learning [29]. The theoretical framework on the activity of the mind proposed by Hattie J. and Zierer K. (2021) emphasises *reflection, feedback and active involvement, as* key elements in the development of the learning-to-learn competence [31]. According to authors Schurik D.and Greene J., students' learning is stimulated by the use of mental frameworks that help them become aware of the process, reflect on progress and seek feedback, thus promoting autonomy and responsibility in their own educational journey [34].

The analysis of the study by Perry N. and Ranim A., (2020) reveals the importance of educational leaders' interventions and strategies, guided by self-regulatory and supportive practices, in developing students' abilities to adapt and evolve in the dynamic digital learning environment of learning [32]. The authors

Dinsmore D. and Alexander P. (2020) emphasise the role of metacognition in learning and performance, highlighting its contribution to the development of learning-to- learn competence through self-reflection and control of one's own learning process [30].

The methodology of scientific research is constructed on the basis of the types of research (fundamental, methodological and operational) and is carried out using the following research methods: a) historical-hermeneutic, which involves the analysis of fundamental texts ofeducational policy, combining synchronic and diachronic study and interpretation; b) theoretical: analysis and comparison, systematisation, and generalisation; c) empirical and experimental: pedagogical experiment, surveys, interviews, and psychodiagnostic techniques; d) mathematical analysis for data processing.

The scientific novelty and originality is confrmed by the pedagogical conceptualisation of the theoretical Model of learning to learn competence in a pedagogical context, based on the evolving CI2 definition, the philosophical perspective of lifelong education and self-education and the current educational policies of the modern educational paradigm, the principles and value orientations of CI2, integrated intra/inter/ples/transdisciplinary in the reference curriculum area; the development and experimental validation of the Programme for the implementation of teaching strategies for the development of learning to learn competence in secondary education, with the aim of creating a stimulating and autonomous learning environment in which secondary school students can develop social awareness and practice learning to learn competence in a continuous and personalised way.

The results obtained which have contributed to the achievement of the proposed objectives have been specified and operationalised in the curricular design model of CI2 development activities in secondary schools; the creation of a scientific frame of reference based on the principle of focusing education on the development of intra- and inter-disciplinary key competences, linked to transdisciplinary key competences, as developed in the Theoretical Model of the Competence of Learning to Learn in a Pedagogical Context and experimentally validated in the Implementation Programme of Teaching Strategies, formulate scientific conclusions and recommendations on the integration of teaching strategies needed in the process of developing competence of learning to learn in secondary education, against the background of paradigmatic developments supported by curriculum and instructional theory and confirmed in pedagogical, psychological and social contexts.

The theoretical significance of the research is marked at the level of a new paradigm that emphasises the proactive function of education, based on the " four pillars" (knowing, doing, living together, being and becoming) and supporting key

competences, with transversal competence as the superior product, transdisciplinary *competence* for *learning to learn efficiently* (managerial, entrepreneurial), *autonomously* (psychological) and *responsibly* (social*), throughout life*, developed in secondary school through teaching strategies for the holistic and full achievement of *personal and social competence for learning to learn*;to formulate scientific conclusions on the development of secondary school students' *learning to learn competence*.

The praxiological value of the research is revealed by the pedagogical models applied at the level of *curricular design of* high school instruction for deepening *the self-awareness of* adolescents; *specific objectives* defined in terms of key competences in the perspective of lifelong learning; *teaching strategies* designed and implemented within the Programme for the Implementation of Teaching Strategies for the Development of Learning to Learn Competence in High School Education by the Coordinators: the *training of teachers for the development of students' learning to learn competence* at formal (through the school subject English) and non-formal (through school and extracurricular educational projects and programmes) levels.

The implementation of the scientific results was carried out through theoretical and experimental research, conducted with teachers of English language in the Pedagogical Circle of the North Bacău area, who participated in The training Programme for the Implementation of Teaching Strategies for the Development of Learning to Learn competence in Secondary Education, and with students of the 9th, 10th and 11th grades of the National Pedagogical College "Stefan cel Mare" Bacău, Romania.

Approval of research results through the publication of the research values in: *(a) scientific journals (3):* Competence to learn to learn as a pedagogical model based on psychological and social, Didactica Pro Magazine, Chisinau, 2024; Self-assessment: Tool for the development of the competence to learn to learn of high school students, Univers Pedagogic Magazine, Chisinau, 2024; Key competences, a new philosophy and policy of education. Revista Didactica Pro, Chisinau, 2024; *(b) Materials from international scientific conferences (2): Promoting critical thinking strategies in foreign language learning in secondary schools. International Scientific Conference*, Performances, Personalities, Chisinau, 2021; *Development of "learning to learn" competence in secondary school. International Scientific Conference: Pedagogical Research Culture: Challenges and Contemporary Trends*, Chisinau: 2021*; (c) Collections of national scientific conferences with international participation (1): Portfolio of the high school student as a tool for developing the competence to learn to learn.*in *National Scientific Conference with international*

participation "Problems of Socio-humanistic Sciences and Modernisation of Education". Chişinău,2021; **(d) Methodological guide for teachers:** *Teaching strategies for the development of learning to learn competence.* Bacău, 2024.

Publications on the subject of the thesis: 10 scientific papers [p. 35].

Volume and structure of the thesis: introduction, 3 chapters, general conclusions and recommendations, bibliographical references and appendices.

Key concepts: learning to learn competence, key competences, transversal competence, transdisciplinary competence, lifelong learning competence, teaching strategies, values of learning to learn competence .

CONTENTS OF THE THESIS

The Introduction argues the topicality of the research topic , sets the general aim and specific objectives, formulates the research problem and elaborates the research hypothesis in relation to the *stage of research* on the problem of training and development of *the competence to learn how to learn* effectively, autonomously and responsibly in the context of secondary school education.

Chapter 1 - **Retrospective and analytical approach to learning to learn competence** - the pedagogical concept of *competence* is defined as a *product of* the learner's abilities to: *to know* (declarative knowledge), *to know how to do* (procedural skills/knowledge), *to know how to be* (psychological/positive *attitude* towards learning and social/collaborative work) (Dulamă, 2010, 2011). *This product* supported by *general pedagogical values* (moral good, scientific truth, applicability of scientific truth, beauty in art, nature and society; mental and physical health), *specifically* reflected in each *subject* and *educational level* (English, High School). The analysis of the concept, subject to theoretical interpretations from a historical perspective, is carried out on the basis of the fundamental documents of philosophy and policy of education, developed by UNESCO (*Learning to be, 1972*; *Education an Inner Treasure*, 1997) E.U. Council (*Recommendations* 2of 006, 2018), with implications also in secondary education.

The theoretical value of the **competence of learning to learn** (**IC2**) is reaffirmed in the historical context of the curricular paradigm, open to lifelong learning and self-education and theoretically defined in relation to the aims and contents of education and training, initiated, established and developed pedagogically and socially, methodologically and praxeologically, recognised and emphasised in modern and contemporary history at the level of educational policy through reference works coordinated by Edgar Faure - learning to be [7]. In UNESCO's research, the operationalised capacities (to know, to do, to be) -
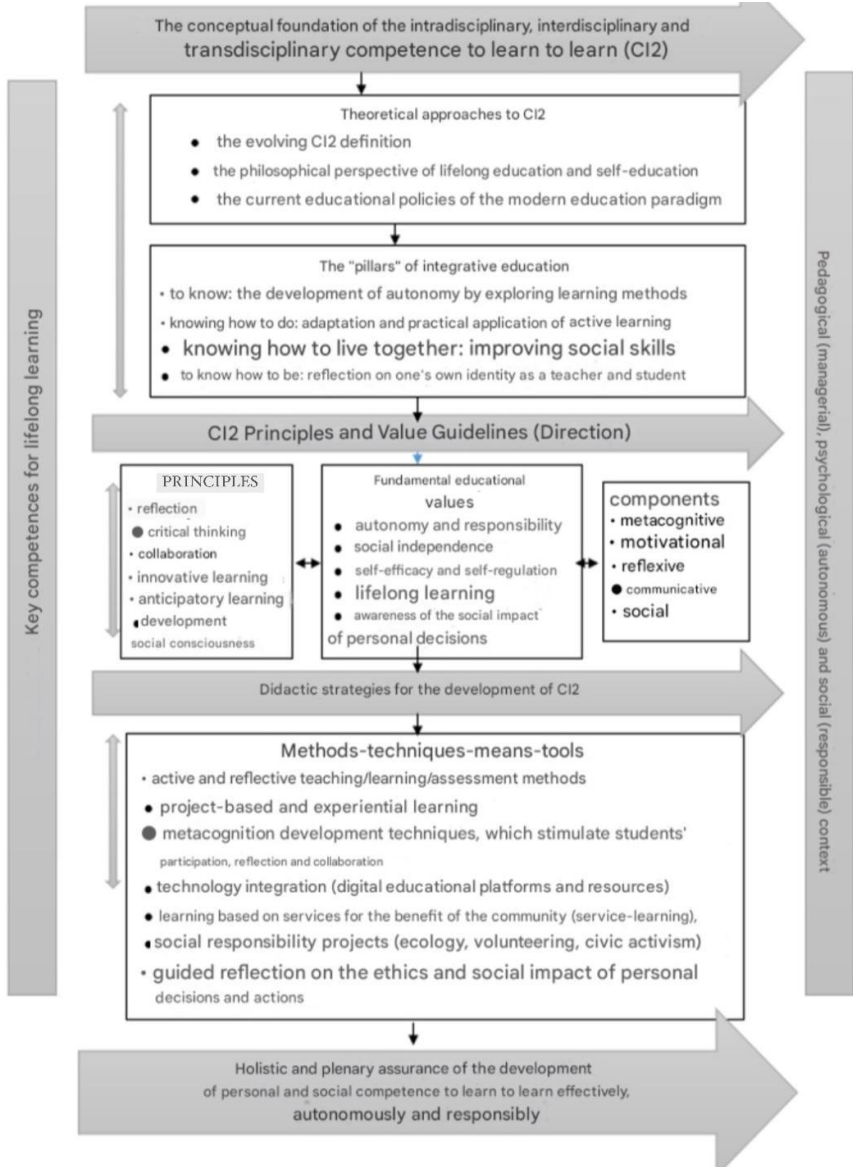
anticipate the competence to know how to learn, for development and continuous improvement, in the perspective of lifelong learning.

The scientific approach is determined by the qualitative evolution of modern and contemporary education, which, on the one hand, "precedes and foresees", and, on the other hand, must constantly adapt to the demands of society, through all its forms of realisation (formal, non-formal, informal) and focuses on the development of *the competence of learning to learn*, *as a value of transversal*, *transdisciplinary competence*. **The theoretical arguments** presented have highlighted the complex reality traced at the level of *conceptualisation of the concept,* the student's *competence to learn to learn* is operationalised in terms of value criteria, the student becomes *effective* (managerial) *autonomous* (*psychological*) and *responsible* (*social*) in the perspective of lifelong learning. At a **practical** level, the students' *competence to learn to learn* involved the analysis of the *multilingual* key competence (intra-disciplinary type), trained in a given pedagogical context (the study of English in secondary school) through innovative teaching strategies of individual and group learning and management of teaching time in formal and non-formal educational environments.The synthesis of the scientific researches approved in the paper, determines towards certain reconsiderations of the scientific content of the competence of learning to learn by identifying the structural elements and the coordinates of the development of the competence through didactic strategies.

Chapter 2 - **Methodological Coordinates of the Development of the "Competence to Learn to Learn" –** capitalises on the *value guidelines* promoted by the "Education 2030 Agenda for Sustainable Development", which continue at a higher qualitative level, the strategic objectives developed in a long *historical cycle* (UNESCO, 1972, 1997; *U.E.* 2006, 2018). At this level, the consequences of the new paradigm of educational philosophy and policy are analyzed, which marks and reinforces the educational leap from *conservative*, reproductive *learning* (characteristic of traditional education) to *innovative*, *anticipatory* and *participatory learning*.In the context of curriculum design, the paradigmatic model ensures that the student and the future student learn *autonomously* through the *integration of* the basic knowledge, skills and attitudes in an *intra/inter/plantar/ cross/third subject* sense and their effectiveness in a longitudinal, horizontal and transversal sense, under conditions of maximum social responsibility.

Based on the information gathered and processed under the conditions of methodologically oriented basic research (on the specific problems of secondary education), **the Theoretical Model of Learning to Learn Competence** (LT2) **in a Pedagogical Context** is developed**.** This is a *pedagogical model of lifelong*

competence development, adapted to the general psychological objective of secondary education - the completion of the *self-awareness of* the adolescent student.

The conceptual foundation of the intradisciplinary, interdisciplinary and transdisciplinary competence to learn to learn (CI2)

Theoretical approaches to CI2

- the evolving CI2 definition
- the philosophical perspective of lifelong education and self-education
- the current educational policies of the modern education paradigm

The "pillars" of integrative education

- to know: the development of autonomy by exploring learning methods
- knowing how to do: adaptation and practical application of active learning
- knowing how to live together: improving social skills
- to know how to be: reflection on one's own identity as a teacher and student

CI2 Principles and Value Guidelines (Direction)

PRINCIPLES

- reflection
- critical thinking
- collaboration
- innovative learning
- anticipatory learning
- development
social consciousness

Fundamental educational values

- autonomy and responsibility
- social independence
- self-efficacy and self-regulation
- lifelong learning
- awareness of the social impact of personal decisions

components

- metacognitive
- motivational
- reflexive
- communicative
- social

Didactic strategies for the development of CI2

Methods-techniques-means-tools

- active and reflective teaching/learning/assessment methods
- project-based and experiential learning
- metacognition development techniques, which stimulate students' participation, reflection and collaboration
- technology integration (digital educational platforms and resources)
- learning based on services for the benefit of the community (service-learning),
- social responsibility projects (ecology, volunteering, civic activism)
- guided reflection on the ethics and social impact of personal decisions and actions

Holistic and plenary assurance of the development of personal and social competence to learn to learn effectively, autonomously and responsibly

Key competences for lifelong learning

Pedagogical (managerial), psychological (autonomous) and social (responsible) context

Figure 1. Theoretical model of the learn to learn competence (IC2 **in a pedagogical context**

The theoretical model highlights the links between the elements of the theoretical approaches of IC2, the principles and value orientations of IC2 (orientation), the didactic strategies for the development of IC2 to ensure a holistic and comprehensive development of *personal and social competences to learn to learn* intradisciplinary, interdisciplinary and transdisciplinary in the educational (leadership), psychological (autonomous) and social (responsible) contexts. The axiological (value-based) foundation is confirmed by the *"pillars" of integrative education.*These contribute to the formation and development of the *transdisciplinary* competence of *learning to become*, and the *transversal competence of learning to learn throughout life*, in the perspective of the *values of lifelong learning.*

The sub-chapter on teaching strategies explores innovative and interactive methods used in an educational context to develop learning to learn competence in secondary education.From the perspective of providing an empirical, experimental research approach to the *transversal competence of learning to learn*, valued "for the purpose of the permanent *development of* the adolescent personality, *of lifelong learning",* **the teaching strategies** provide the "roadmap of an explicit teaching approach". The aim is a complex teaching approach involving a set of 'teaching-learning-assessment strategies and methods' which 'have specific objectives - to inform, initiate, motivate, ensure receptivity, arouse interest in the subject being studied, accumulate information available to the learning community, update acquired knowledge, self-assess students and determine their level of competence-and are part of traditional and modern pedagogical tools (problem-based, programmed instruction, case studies, etc.).)" [24, p.43, 44].

Teaching strategies for the development of learning to learn competence in secondary education involve both a "holistic holistic comprehensive didactic assurance" (focused on basic methods related to different forms of instructional organization and pedagogical, managerial and socio-affective styles of teaching-learning and assessment) and continuous teacher development [24, p.4]. The main role in the development of secondary school students' learning to learn competence is presented in subchapter 2.3. of the paper. The existing relationshipbetween the *general objectives* defined in terms of *key competences*, *the curricular areas,* which integrate different *school subjects that* are significant in *secondary education*, and the *teaching strategies* that are based on some *basic methods*, which make use of several teaching procedures and some special teaching techniques (which stimulate creativity and critical thinking), realized within *forms of organization of instruction against* the background of training adaptable *teaching styles* in open *pedagogical* and *social contexts* and *different learning situations*.

Table 1. Links between key competences and curricular areas in definition of teaching strategies developed in accordance with a basic teaching method

Key competence for *lifelong learning*	Curriculum Areas (integrates teaching disciplines grouped inter, transdisciplinarily)	Teaching strategies (developed according to a *basic teaching method*)
Language and *multilingual* skills	*Language and communication* (Romanian Language and Literature, Foreign Language: I, II)	Interactive instructional strategy based on heuristic conversation / debate / brainstorming / verbal demonstration
Skills in *science, technology, engineering, mathematics and engineering* (STEM)	*Mathematics and Natural Sciences* (Physics, Chemistry, Biology)	*Interactive training strategy, based on direct* (experiment, project) and *indirect* (demonstration, modeling, problematization) *reality research.*
Digital skills applied science and *technology*	*Technologies and Informatics* (Information and Communication Technology, Computer Science)	*Computer-assisted instruction strategy*, based on *methods* involving learning *rationalization, algorithmization*, etc.
Personal and social skills - *learning to learn* (based on general pedagogical values)	*Transdisciplinary curricular area* (*Education*: moral, scientific, aesthetic, technological, physical)	*Training strategy* based on *self-structured* learning *through self-reflection*, *self-communication*
Civic skills (social, ethical, economic, psychological, etc.)	*Man and society* History, Geography, Economics, Psychology, Sociology, Epistemology Philosophy, Logic, Ethics, etc.	*Interrogative communication strategy* based on heuristic conversation methods and constructive, innovative debate
Entrepreneurial skills (needed in problem solving through *critical thinking and*	*Advice and guidance* (Education: social, managerial, financial, vocational)	*Socio-constructivist learning strategy*, based on the *project* method - "*research* with *real purpose*"
Cultural awareness and expression skills (arts and physical education)	*Arts* (Education: music, art) *Physical Education and Sport* (Physical Education)	Interactive instructional strategies based on communication, inquiry and rationalization of learning (hands-on and simulated)

In this context, the *basic pedagogical methods* support meaningful teaching strategies that go beyond "the limits of a binary opposition - traditional methods, modern, innovative methods".This is an argument for the valorization of the formal and informal context of education in the process of developing the competence of learning to learn in high school students.

Chapter 3 of the paper- The experimental validation of the theoretical model regarding the development of the competence to learn how to learn in high school- presents the experimental contributions from the assessment of the developmental level of learning to learn competence of high school students to the *experimental use of the Theoretical Model of the Development of Learning to Learn Competence in a Pedagogical Context.*

The construction of the design of the experimental research on the evaluation of the level of learning to learn competence of high school students is a stage that follows the theoretical foundation of the researched concept and includes aspects of sample selection by establishing the criteria for the selection of subjects and monitored variables, and the determination of tools and techniques for data collection and interpretation,in order to confirm the research hypotheses.The planning of the interventions and the duration of the experiment are part of the research design at this stage and aim to determine the effectiveness of the teaching strategies used in developing the competence of "learning to learn" in secondary school students and to evaluate the impact of these strategies on students' academic performance [22].

Teachers from the National Pedagogical College "Stefan cel Mare" Bacău were part of the pedagogical experiment. A total of 173 teachers from Bacău County, Romania, participated in the training programme.The aim of the training was to implement effective teaching strategies for developing the competence of learning to learn in secondary education. From the National Pedagogical College "Stefan cel Mare" Bacău, 24 teachers with teaching and educational activity in the 9th, 10th and 11th grades participated. 6 of them are English teachers, with the status of experimental group. As a result of participating in the Training Programme on the Effectiveness of Teaching Strategies for Developing Learning to Learn Competence in Secondary Education, 173 teachers explicitly demonstrate the use of strategies according to students' competences.

The questionnaire for the evaluation of teaching strategies for the development of the competence "learning to learn" in secondary school was selected from the group of quantitative research methods.It is an instrument that was realized at the beginning of the observation phase of the pedagogical experiment. The questionnaire is made up of two parts,with 8 questions in total, to evaluate the type, extend of use and impact of the teaching strategies used on the formal and informal coordinates for the development of "learning to learn" competence in secondary school.The measurements have been applied to the entire sample of participants (teachers and students), in the form of comparisons between those included in the study and in the form of experiments (before and after the intervention, through the implementation of pedagogical strategies for the development of learning to learn competence in secondary school).

Table 2. Comparative opinion of students and teachers on the degree of effectiveness of teaching strategies used in high school for the development of the competence "learning to learn"

Types of strategies	pupils	teachers
1. Project-based learning	19	33
2. Collaborative learning	28	38
3. Discovery learning	9	29
4. Use of educational technologies	75	23
5. Individualized learning	12	35
6. Other strategies (please specify):	2	17
Total no.	145	173

The data show a generally optimistic trend among teachers about the effectiveness of teaching strategies. However, there are also indications that the perceived impact of these strategies is not uniform, ranging from very high to low, with a minority believing that they have no benefit. This diversity of perceptions may reflect differences in the concrete application of the teaching strategies or their adaptation to the pupils' specific context.

We find a significant difference between how students and teachers perceive the use of *other teaching strategies* to develop the"learning to learn"competence. Only 1.3% of students (2 individuals) identified such strategies, suggesting that students are less aware of, or less engaged with, the different teaching methods that can support this competence. This lack of awareness on the part of the students can be explained by the fact that they focus on the main methods promoted in the educational process or that the teachers fail to explain the purpose and benefits of each teaching strategy.
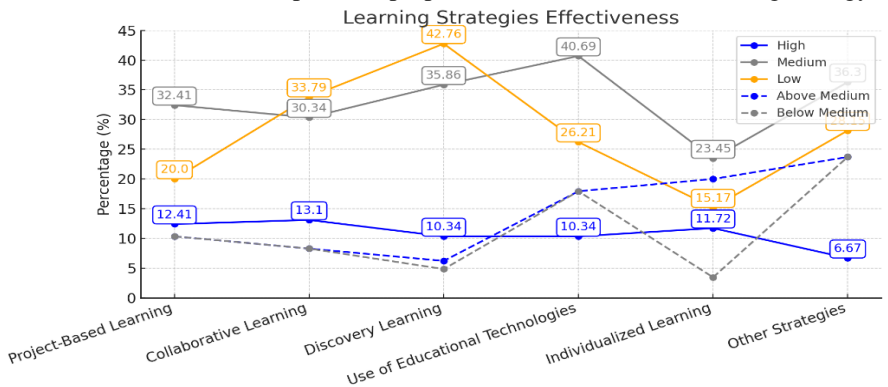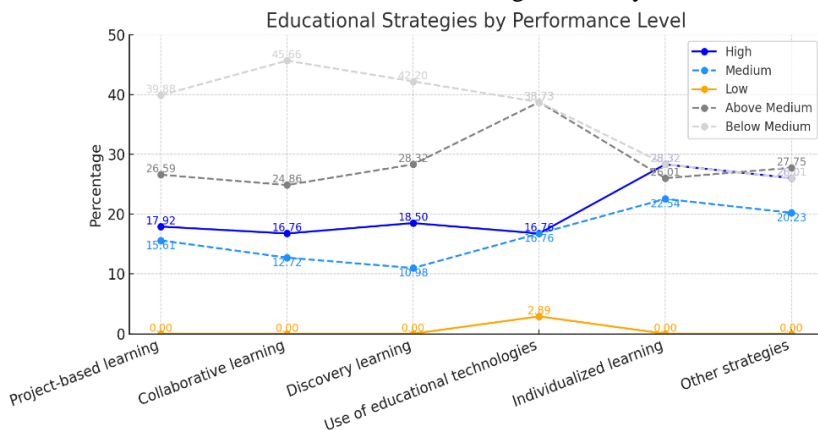

Figure 2. Degree of implementation of strategies for developing "learning to learn" competence in secondary education, from the students'point of view

Compared to students, 9.7% of teachers (17 individuals) identified various *other strategies*, suggesting a greater openness on their part to explore and implement a variety of teaching methods to support the development of learning to learn. Teachers are more aware of the existence of these strategies and are likely to have a better appreciation of their effectiveness.

The data obtained suggests that there is variability in the perception of the implementation of collaborative learning both among the students and among the teachers.Some students and teachers recognise the effectiveness and applicability of the method.However, the majority feel that it has not been suffiiently implemented. The dissonance may indicate the need to adapt pedagogical strategies or to inform and train teachers to facilitate collaborative learning effectively.

Figure 3. Degree of implementation of strategies for the development of "learning to learn" competence in secondary schools, according to *teachers*

It can be seen that 15 students (20%) consider that project-based learning is implemented "very much", while 47 students (62.6%) say that it is implemented "a little" and 29 students (38.6%) say that it is not implemented at all. At the other end of the scale, 27 teachers (36%) considered that this strategy was used 'a great deal', 31 teachers (48%) considered that it was used 'a lot' and no teachers felt that it was not used at all. Although teachers feel that the policy has been implemented relatively well,pupils are more sceptical and many feel that the policy has been little used.This discrepancy may be the result of a lack of clarity in communicating the aims and benefits of project-based learning to students. Looking at data about collaborative learning in secondary schools, both students' and teachers' perceptions vary.

The Self-Regulated Learning Strategies Questionnaire is a tool offered to students to better understand how they manage their learning. Consisting of 10 multiple-choice questions, the questionnaire highlights some of the values of learning to learn competence as determined by self-regulated learning strategies: *strategies used in organising learning time, monitoring progress, maintaining motivation, adjusting learning strategies according to the results obtained, managing moments of frustration or difficulty in learning, learning resources and materials for efficiency, preferred learning styles according to the type of subject, planning assessments, challenges encountered in applying self-regulated learning strategies, elements of continuous improvement of self-regulated learning competence.* A graph illustrating the predominant options for managing one's learning through self-regulatory strategies is presented below, highlighting the results with the most responses from the 3 variants for each variable.
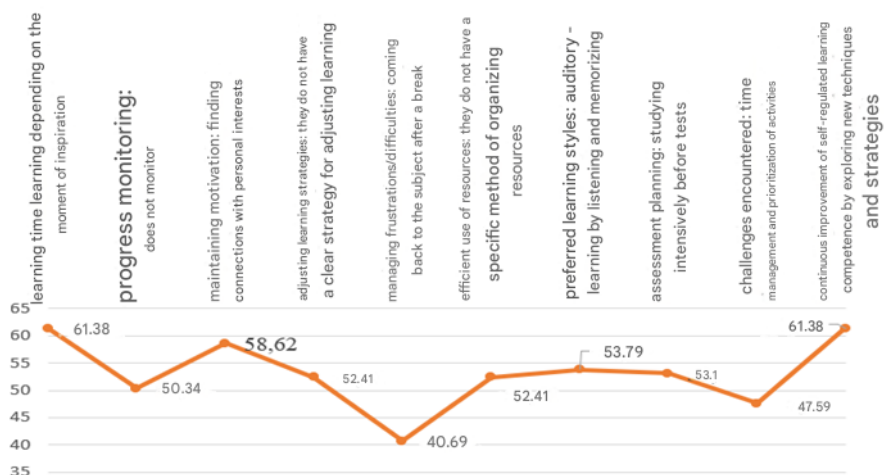

Figure 4. Options with the highest percentage value in the management of one's own learning through self-regulatory strategies

The conclusions that should be noted are, firstly, that the highest number of respondents chose the strategy used to organise learning time "according to inspiration" and, among the elements of continuous improvement of self-regulated learning competence, preferred "exploring new learning techniques and strategies", these data registering a value of 61.38% of the 145 students interviewed.

The Scholastic Achievement Assessment Test is an assessment test that is carried out at different times during the school year and is used in the initial assessment and in the final assessment. The subject of English was chosen to

determine the effectiveness of teaching strategies for developing learning-to-learn competence in secondary education. *The initial assessment test* was administered to the 10th and 11th grade students participating in the research on teaching strategies for the development of learning to learn competence in secondary education through the experimental (GE - 73 subjects) and control (GC - 72 subjects) groups.
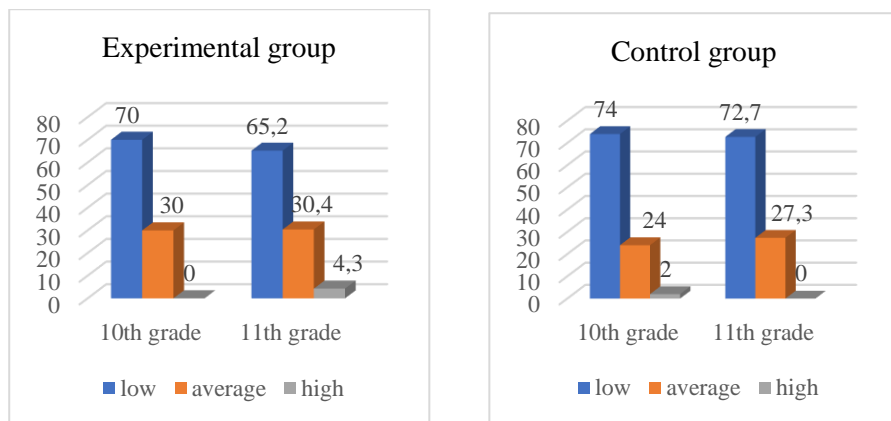
Figure 5. The level of academic achievement of the pupils in the English language test *(observation phase, comparison between GE and GC)*

In the ascertainment phase, the English language performance levels of the experimental group (EG) showed a distribution that reflected a significant variation in the students' level of proficiency. Approximately 35% of the students were at the 'minimum' (A1) level, indicating considerable difficulty in mastering basic language skills. This category indicates the need for pedagogical interventions focused on the development of basic communication skills. At the'intermediate' level (B1), 60% of students were at this level.This indicates that most students have a functional level of knowledge and skills, but still need further consolidation to reach a higher level. Only 5% of students reached the 'high' level (C1), demonstrating an advanced level of English, highlighting that a small number of students are able to use the language very effectively. This distribution of performance points to a clear need for differentiated teaching interventions, with a focus on supporting students at lower levels of performance.

The results of the pedagogical experiment carried out during the school years 2022-2023 and 2023-2024, highlight a significant impact of the learning to learn development programme on students' performance in English. The experimental
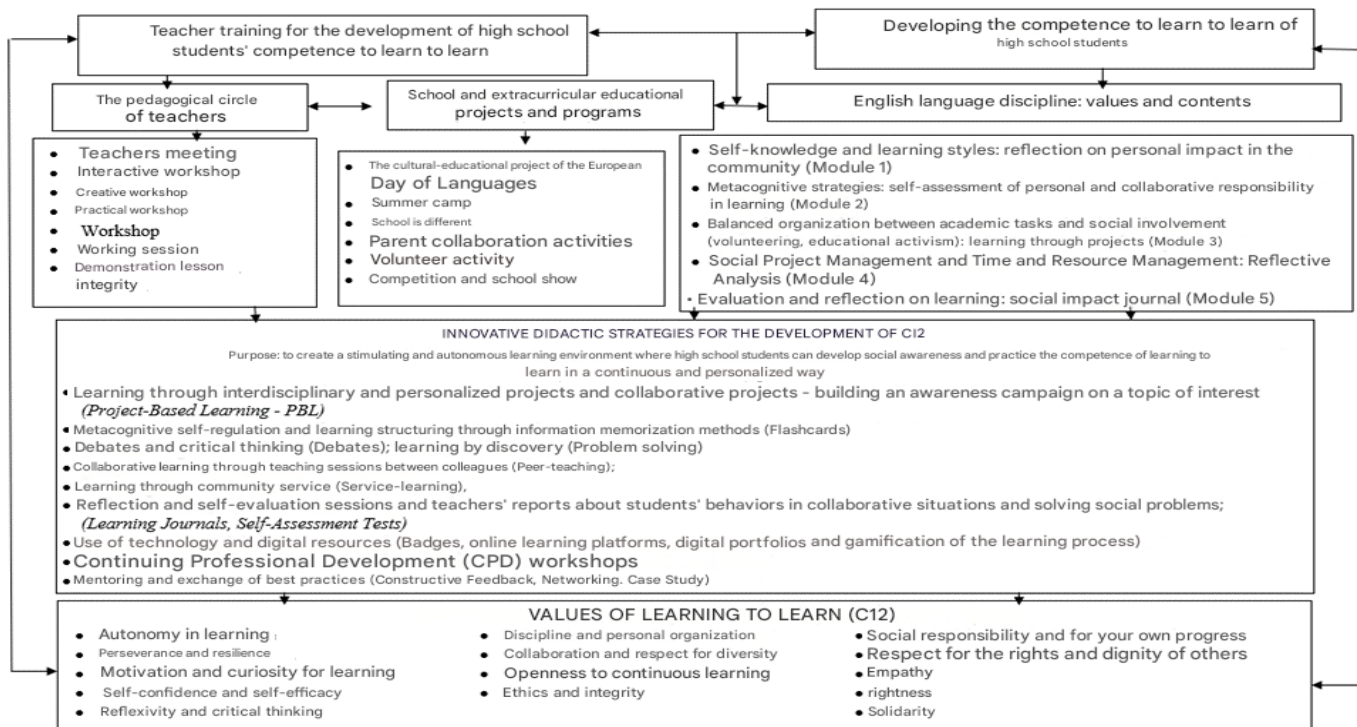
group (EG) showed a remarkable improvement, with an increase from 5% to 25% of students reaching C1 level, compared to the control group (CG), whose results stagnated.. These data underline the effectiveness of the teaching strategies implemented. They suggest that interventions focused on developing autonomy in learning and using innovative methods contribute significantly to the improvement of students' language skills. Thus, the research hypothesis is confirmed, indicating the need to continue and extend these pedagogical approaches in *formal education, but also by extending the development of this skill to the non-formal education coordinate.*

The programme for the implementation of teaching strategies for the development of learning to learn competence in secondary education, presented in Figure 6, is developed through two complementary coordinates and aims at:

1. training teachers to develop secondary students' learning to learn competence; 2. developing secondary school students' learning to learn skills as a result of teacher training. The structure of the program included a range of activities carried out in a variety of forms, aimed at developing *learning to learn competence in secondary school students.* The programme is designed to support students in developing the fundamental competency for academic and personal success: *the ability to learn effectively and adaptively.* In an environment where the volume of information is increasing and academic demands are becoming more complex, this competency is essential to ensure a sound educational pathway and preparation for future challenges, whether academic or professional.

General objectives: to increase students' autonomy in the learning process; to develop metacognitive skills for self-regulated learning; to develop skills for planning, organising and evaluating one's own learning process.

Specific objectives: to identify individual learning styles; to use metacognitive strategies to improve academic performance; to promote collaborative learning through group projects; to learn time and resource management techniques.

Teacher training for the development of high school students' competence to learn to learn

Developing the competence to learn to learn of high school students

The pedagogical circle of teachers

School and extracurricular educational projects and programs

English language discipline: values and contents

- Teachers meeting
- Interactive workshop
- Creative workshop
- Practical workshop
- **Workshop**
- Working session
- Demonstration lesson integrity

- The cultural-educational project of the European **Day of Languages**
- Summer camp
- School is different
- **Parent collaboration activities**
- Volunteer activity
- Competition and school show

- Self-knowledge and learning styles: reflection on personal impact in the community (Module 1)
- Metacognitive strategies: self-assessment of personal and collaborative responsibility in learning (Module 2)
- Balanced organization between academic tasks and social involvement (volunteering, educational activism): learning through projects (Module 3)
- Social Project Management and Time and Resource Management: Reflective Analysis (Module 4)
- Evaluation and reflection on learning: social impact journal (Module 5)

INNOVATIVE DIDACTIC STRATEGIES FOR THE DEVELOPMENT OF CI2

Purpose: to create a stimulating and autonomous learning environment where high school students can develop social awareness and practice the competence of learning to learn in a continuous and personalized way

- Learning through interdisciplinary and personalized projects and collaborative projects - building an awareness campaign on a topic of interest *(Project-Based Learning - PBL)*
- Metacognitive self-regulation and learning structuring through information memorization methods (Flashcards)
- Debates and critical thinking (Debates); learning by discovery (Problem solving)
- Collaborative learning through teaching sessions between colleagues (Peer-teaching);
- Learning through community service (Service-learning),
- Reflection and self-evaluation sessions and teachers' reports about students' behaviors in collaborative situations and solving social problems; *(Learning Journals, Self-Assessment Tests)*
- Use of technology and digital resources (Badges, online learning platforms, digital portfolios and gamification of the learning process)
- Continuing Professional Development (CPD) workshops
- Mentoring and exchange of best practices (Constructive Feedback, Networking. Case Study)

VALUES OF LEARNING TO LEARN (C12)

- Autonomy in learning
- Perseverance and resilience
- Motivation and curiosity for learning
- Self-confidence and self-efficacy
- Reflexivity and critical thinking

- Discipline and personal organization
- Collaboration and respect for diversity
- Openness to continuous learning
- Ethics and integrity

- Social responsibility and for your own progress
- Respect for the rights and dignity of others
- Empathy
- rightness
- Solidarity

Figure 6. Programme for the Implementation of Teaching Strategies to Develop the Competence of Learning to Learn in Secondary Education

21

The conceptual landmarks of the initiated Programme are:

- the focus on key competences, which has as a curricular implication the advantages of the integrated perspective in the approach to content through "relevance to the needs and interests of contemporary man; fostering transfer, creative thinking and problem solving; providing a holistic perspective on reality";

- student-centered, with a focus on learning outcomes,which "requires the promotion of a flexible curriculum, allowing for the diversification and adaptation of learning situations for students, according to their age/developmental level, their interests, respecting diversity (ethno-cultural, linguistic, religious, etc.); the construction of differentiated learning pathways; the use of a variety of learning resources, accessed through new technologies [11, p.32];

- using the educational profile of the 10th and 12th grade graduate, as a benchmark for reorganizing the structures and ways of assessing the specific competences of the subject, defined by the key competences [ibidem, p. 32].

1 Coordination "Teacher Training for the Development of Students' learning to learn competence"

The teacher training activities within "Learning to Learn" the Competence Development Programme were designed with the following objectives:

- to develop the competence to design and implement the methodology of training secondary school students to learn to learn through different didactic and extracurricular formative activities;
- to make communication and the teacher-student-parent relationship more effective through activities that stimulate the development of learning-to-learn skills in students;
- to increase the ability to adapt to different learning styles;
- to integrate formative assessment through various alternative methods outside the classroom;
- to encourage lifelong learning and professional development.

The content has been designed to ensure the development of the competence to learn to learn through the modules: 1: Self-awareness and Learning Styles; 2: Metacognitive Strategies; 3: Project-based learning; 4: Time and Resource Management; 5: Evaluation and Reflection on Learning .

Teachers' participation in the *training programme for the development of students' learning to learn competence* will have a positive impact in terms of developing skills and attitudes to encourage students to be autonomous in their learning; using project-based and self-reflective methods that encourage students to be active participants in their learning process. Through the training, teachers will

improve their empathic communication skills, create a supportive environment in which pupils feel comfortable expressing their needs and challenges in the learning process, better plan their time and monitor their progress, enable pupils to learn at their own pace and in the way that suits them best, and reflect on their learning.

2 Coordination „Developing the learning to learn competence of secondary school students as a result of teacher training"

Through the activities included in the programme, students will explore active learning techniques, time management strategies and methods to improve concentration and motivation. The programme provides them with opportunities for self-assessment and identification of their own learning styles, thus contributing to increased autonomy and self-confidence; it includes a range of practical and interactive activities such as planning exercises, project management simulations and reflection sessions. These activities help students to discover their own preferences and strengths, understand the importance of self-discipline and improve their lifelong learning skills.

The participation of teachers in the *training* programme *for the development of learning to learn competence of secondary school students* is defined by creating the conditions for teachers to develop skills and attitudes in terms of encouraging students to be autonomous in their learning; using project-based and self-reflective methods that encourage students to actively participate in the learning process. Through the training activities listed in Figure 3.1, teachers are trained in activities to develop empathic communication skills in order to create a supportive environment in which pupils feel comfortable expressing their learning needs and challenges,to better plan their time and monitor their progress, to enable pupils to learn at their own pace and in the way that suits them best, and to reflect on their learning. *The analytical-descriptive presentation of the coordinated components is reflected in detail in the core content and appendices of the paper.*

The questionnaire on the evaluation of teaching strategies for the development of the competence "learning to learn" was repeatedly administered *to high school students* during the control phase of the pedagogical experiment. *R*esults were collected and interpreted separately for each group to compare data. In order to highlight the impact of the programme on the implementation of the teaching strategies established for the development of learning to learn competence in secondary education, the results of the teachers are presented in the control phase in a comparative way, separating the group of 24 teachers who were trained in the training activities of the programme from the 149 teachers of the control group, in the ascertainment phase, the results are presented on the whole sample of teachers (174), considering the similarity of the measured data.

Figure 7 shows teachers' perceptions of the impact of teaching strategies on the development of students' learning to learn competence in a comparative approach. Teachers observe an increase in the impact of the strategies in the control phase compared to the observation phase, which shows that the teaching interventions applied have contributed to the development of the 'learning to learn' competence. There is an increase in the percentage of teachers who rate the impact of the strategies as 'very high' or 'high' at the control stage, indicating that the teaching strategies were perceived as effective after implementation.

The number of teachers who rated the impact as 'moderate' or 'low' decreased. From the teachers'point of view, the didactic strategies applied had a positive and significant impact on the pupils 'learning to learn' competence in the control phase, which confirms the positive effects of the educational intervention.
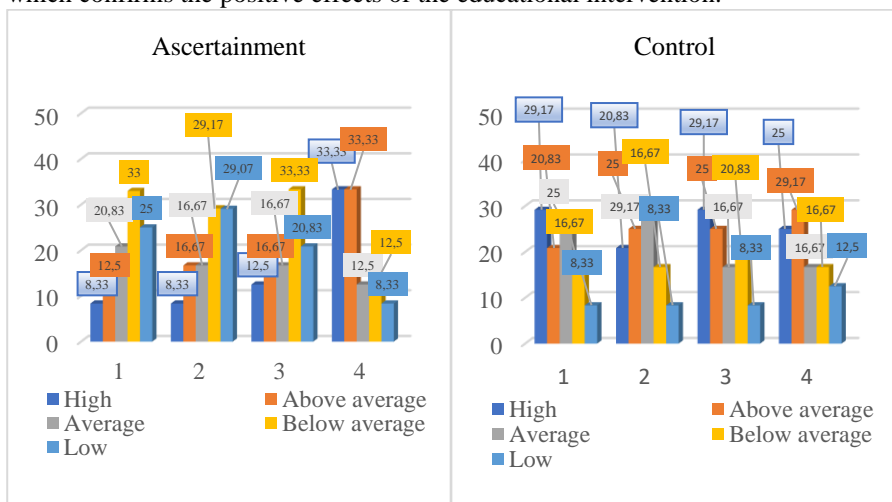
| 1. The motivation to learn | 2.Time management | 3.The environment favorable for learning | 4. Emotional intelligence |

Figure 7. The impact of teaching strategies on the development of learning to learn competence from the teachers'point of view
(Comparative plan, stages of the assessment-control, GE)

Compared to the observation phase, the results of the control phase show a significant development in the self-regulatated learning abilities of the secondary school students and provide experimental evidence of the effectiveness of the educational interventions applied in the experimental group. The main **difficulties in the self-regulated learning** remain time management and motivation, but time management is mentioned slightly less in the control phase, indicating a modest improvement.
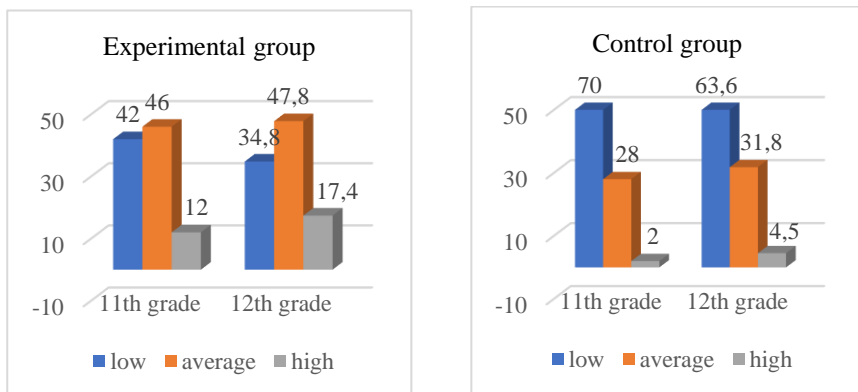
Figure 8. Students' comparative levels of academic achievement in English language tests *(control phase)*

The educational interventions applied in the experimental group led to a significant improvement in the students' academic performance, as evidenced by the increase in English language test scores from the observation to the control period. Pupils demonstrated more frequent use of self-regulation strategies, which contributed to more efficient organisation of study time, constant monitoring of progress, increased motivation and greater ability to adapt to difficulties. The progress reflects the positive impact of the teaching strategies on the "learning to learn" competence.
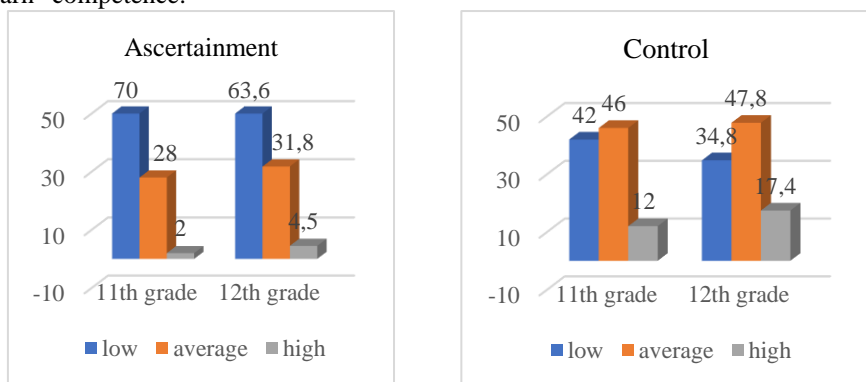
Figure 9. Comparative levels of academic achievement of the *experimental group* in the language test

The analysis of Figure 9,which shows the comparative levels of academic achievement of the *control group students* on the English language test and their distribution across the different performance ranges, reveals a significant diversity of results, highlighting the presence of lower performing students, but also of higher

performing students. The diversity suggests that the control group had a balanced performance, with no expressive clustering around a particular level.This may reflect individual differences in their language skills and learning strategies.
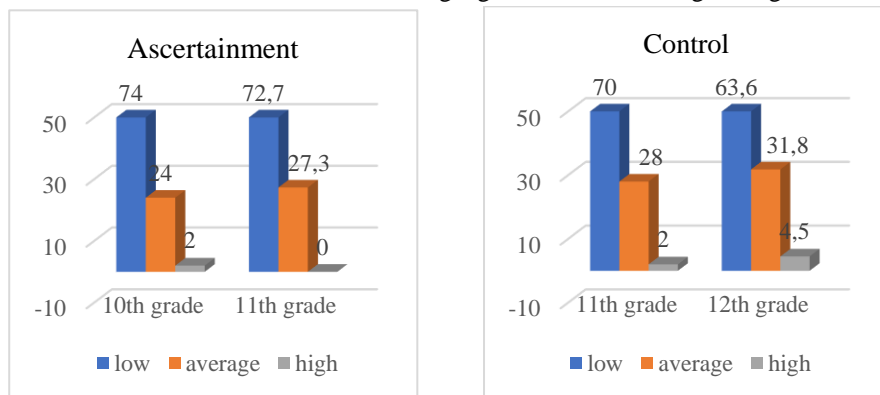
Figure 10. Comparative levels of academic achievement of the *control group in* the English language test

The distribution of English language performance at the *assessment stage* for the experimental group (EG) showed significant variation and reflecting not only the diversity of language skills, but also the level of development of learning to learn competence. Approximately 35% of the students were at the 'minimum' level (A1), indicating considerable difficulties in mastering basic language skills, but also a low level of autonomy in learning, which revealed the need for pedagogical interventions aimed at developing basic skills of self-assessment and learning organisation. The majority of students (60%) reached the 'intermediate' level (B1), which shows a functional level of knowledge and skills, but also a limited capacity for self-regulation and adaptation in learning, with further reinforcement needed to progress. On the other hand, only 5% of the students who reached the 'high' level (C1) demonstrated advanced competences in both language and self-management of learning, characteristics that define a high level of 'learning to learn' competence, but which require further reinforcement to progress to more advanced levels. In contrast, only 5% of students reached the 'high' level (C1), which underlines the advanced competences recorded of a small number of students.

The analysis of *students' and teachers' perceptions* reveals a striking difference in the effectiveness of the teaching strategies used to develop the 'learning to learn' competence. While teachers tend to be optimistic about the impact of these strategies, pupils are more cautious, with moderate or negative ratings, suggesting

that current strategies are either not sufficiently adapted to the specific needs of pupils or that their implementation is arbitrary.

The Program for the Implementation of Teaching Strategies for the Development of Learning to Learn Competences in Secondary Education has been developed to strengthen their ability to learn effectively and to adapt this complex process to the ever-changing and ever-evolving education. Based on an integrated approach to key competences, the programme includes activities aimed at developing students' autonomy, metacognitive skills and organisational skills through flexible and varied strategies. Together with teacher training to support the development of this competence, the programme promotes a collaborative and personalised learning environment to prepare students for the academic and professional challenges of the future.

The implemented programme had a significant impact on the professional development of the participating teachers from the North Bacău region. Through interactive activities, exchange of experiences and practical exercises, teachers were trained to use innovative and metacognitive teaching strategies to create a learner-centered educational environment, support learners to self-regulate their learning and develop active learning skills. The efforts of this programme have led to a positive change in the approach to the process of education.

The involvement of teachers in both in-school and out-of-school *educational projects and programmes* has helped to facilitate an interdisciplinary, integrated and practical approach to learning. The activities carried out, *cultural projects, camps, "Different School", volunteering and cooperation with parents* have created opportunities for pupils to develop their competence in learning to learn, through experiences of planning, organisation, reflection and self-evaluation. The data analysed showed that the initiatives increased students' autonomy, critical thinking and adaptability while strengthening the link between school, community and family.

The main coordinator of the development of the competence of learning to learn in secondary school students through teacher training emphasised the importance of integrating this competence into the teaching of English, which follows a **synchronized approach with communication skills,** in order to foster effective and responsible learning in a modern and dynamic society.

The implementation of *the Programme for the Implementation of Didactic Strategies for the Development of Learning to Learn Competence in Secondary Education,* according to the Romanian National Curriculum Framework, has demonstrated the effectiveness of the proposed didactic strategies to increase students'autonomy and self-regulation in the learning process. To achieve the objectives of developing metacognitive skills and organising learning, the programme used existing subjects and activities. The activities included in the five modules, based on *self-awareness, metacognitive strategies, collaborative learning*

and resource management, created a coherent structure - to develop the competence of learning to learn, both through practical activities and self-reflective assessments.

In the control phase of the experiment, significant differences were found between the experimental and control groups in the teachers' and students' perceptions of the usefulness of the teaching strategies for developing the "learning to learn" competence. Thus, there was confirmation of the positive impact of the training programme on the application of interactive strategies with a focus on student autonomy .

In conclusion, the data presented in the figures and tables analysed in 3.3 confirm that the teaching strategies used in the experimental group (EG) had a valuable positive impact on the development of the competence of "learning to learn" in secondary school students. A comparison of the opinions of students and teachers shows: there are significant differences between the perceptions of the two groups. This highlighted the importance of interactive and collaborative approaches in education and instruction. In the control phase, students reported a clear improvement in skills such as *time management, motivation for learning and the creation of a learning-friendly environment.* The increase in the number of students who rated the impact as 'very high' or 'high' suggests a positive development of self-confidence and autonomy in learning, which reinforces the relevance of the strategies implemented for the development of the 'learning to learn' competence in high school.

The compared experimental data demonstrated the effectiveness of the didactic strategies applied in the process of developing the competence of learning to learn of high school students, as a result we can note the validation of the effectiveness of the *Programme of* implementation of didactic strategies, established for the development of the competence to learning to learn in high school education. The experimental use of theoretical-practical resources at the stages of the classical pedagogical experiment at the stages of observation, training and control, confirmed *the research hypothesis, the* Programme of implementation of teaching strategies, developed for the purpose of developing the competence of learning to learn in secondary school education can be declared effective and promoter of developed values of CI2.

We note that the research objectives have been achieved, increasing the value of the teaching strategies applied in the context created for the development of learning to learn competence in secondary education.

GENERAL CONCLUSIONS

1. The general pedagogical significance of the *competence of learning to learn*, promoted by UNESCO in the 1970s [7] and historically determined by the objective functions of education, has led to the awareness of the need to ensure implications in the educational process, in the perspective of lifelong learning.

It has been theoretically argued that in modern and contemporary times, as a product of the two abilities (to know - to know how to do), the ability to learn to be (through attitudes and values)) is formed and developed, which is the premise for the initiation of *the competence to learn to learn,* trained in conditions where "education fulfills a *new*, *proactive function of* anticipating social,economic and cultural development" [5, 6]. The pedagogical conceptualisation of the key competence of *learning to learn* in the *multilingual* and *cultural expression* perspective of basic knowledge and the value orientations promoted by the "2030 Agenda [23] for development", reflected in the quality education strategies of various countries*, has highlighted two fundamental theses of value:* 1) *normative -* the elimination of the axiom of the traditional education system ,which considers that an "intellectual or technical baggage" acquired by graduates, is sufficient throughout life; 2) *paradigmatic -* the curricular design of education, centred on a *transversal*, *transdisciplinary competence*, defined in the psychological terms of a *multiple capacity* to "*learn to learn* in such a way as to you acquire *new knowledge throughout life*". The problem of developing the competence to learn to learn, reflected by established authors Cristea S. (2000) [5,6]; Chiș V. (2005), (competence-based learning); Ionescu M. (2007) [10], (continuous personality development); Stan C. (2021) (reflection, self-evaluation and adaptation of learning strategies) [24]) Sclifos L. [25], Goraș-Postică V. et.al., (2010) (competence to learn to learn) [9]; Franțuzan L. et. al (2024.) (competence to learn to learn in STEM/ STEAM education; [8], Papuc L. et. al (2021) (competence to learn to learn) [15];. Orehovschi S., (2023)(developing the competence to learn to learn through independent activities of valuing text) [13] emphasised, that it is a concept promoted in the philosophy and policy of education, in the *perspective of lifelong learning, lifelong learning as key competences,* applied especially as a *foreign language communication competence, in the perspective of lifelong learning, lifelong learning as key competences* [20, 21].

2. ***It has been scientifically demonstrated that the increase in the level of competence to learn to learn is determined by the implementation of strategies adapted to the*** "*core competences curriculum*", which is at the basis of the *curricular* construction of the curriculum/school programmes based on the values "set" the "four pillars" of *quality education* (*to know, knowing how to do, knowing how to live and work together, and knowing how to be*), which support the

treatment of 'lifelong learning' as a 'learning period' in which the ability to *know how to learn to* becomes the premise of the competence **to learn to learn**, the Delors Report (1997) and the *U.E Recommendations* on *Key Competences for Lifelong Learning - A European Framework (*2006) [20, 21, 33].

3. *From a pedagogical perspective* the Theoretical Model of the **Competence to Learn to Learn (TL2)** *has been conceptualised,* adapted to the general objective of secondary education in order to *ensure the holistic and full development of the personal and social competence of learning to learn in order to learn effectively, autonomously and responsibly.* The new approach promoted at the level of educational philosophy and policy, articulated with the constructivist perspective of learning, the *conceptualisation of CI2 is carried out* "with implications for the design, implementation and evaluation of training programmes" , *with methodological and praxeological implications,* explored in the conditions of fundamental and operational pedagogical research. **The scientific novelty and originality** is confirmed by the pedagogical conceptualisation of the Theoretical Model of the competence of learning to learn in a pedagogical context, based on the evolving definition of CI2, the philosophical perspective of lifelong learning and self-education and the current educational policies of the modern educational paradigm, the principles and value orientations of CI2, integrated intra/inter/plan/transdisciplinary in the curricular reference area; the elaboration and experimental validation of the Programme for the implementation of teaching strategies for the development of learning to learn competence in secondary education with the aim of creating a stimulating and autonomous learning environment in which secondary school students can develop social awareness and practice learning to learn competence in a continuous and personalised way.

4. The implementation programme of teaching strategies established for the development of learning to learn competencies in secondary education ***has been designed and experimentally applied*** to support students in developing the fundamental competency for academic and personal success: *the ability to learn effectively and adaptively. Developing the competence to learn to learn in high school students has become a main objective of research,* starting from curriculum design, which requires "the promotion of a flexible curriculum, that allows for the diversification and adaptation of learning situations for students according to their age characteristics/development level, their interests, respecting diversity (ethno-cultural, linguistic, religious, etc.); the construction of differentiated learning pathways; the use of diverse learning resources accessed through new technologies [22, 24, 25, 26]. The effectiveness of the Programme is determined by the *link between* the coordinates of

teacher training and the development of the competence of high school students to learn to learn from the outcome of teacher training. **Praxiological value of the research** is justified by specific objectives defined in terms of key competences in the perspective of lifelong learning and teaching strategies designed and implemented within the Program of Implementation of Teaching Strategies for the Development of Learning to Learn Competence in Secondary Education on the coordinates of teacher training and development of CI2 of high school students at formal (through the discipline of English language) and non-formal (through school and out-of-school educational projects and programs). ***The scientific problem solved in the research*** refers to the conceptualisation of teaching strategies for the development of learning to learn competence and experimental validation of the Programme of implementation of teaching strategies, established for the development of learning to learn competence in secondary school education, in order to *ensure holistic and full development of personal and social competence of learning to learn to learn effectively, autonomously and responsibly.*

5. *The effectiveness of* the implementation of specific teaching strategies for the development of CI2, part of the *Programme for the Implementation of Teaching Strategies for the Development of the Competence of Learning to Learn in Secondary Education, has been established,* as evidenced by the positive progress in students'competence values after adequate training of teachers and active involvement of students in this approach. The positive dynamics of competence is reflected in students' ability to effectively manage resources, plan and evaluate their own learning processes, and demonstrate increased autonomy in taking academic responsibility, providing an updated perspective on the links between knowledge, skills and attitudes in education for lifelong learning [15, pp. 212-225].

The results of the experiment confirm that in-service teacher training and the structured implementation of the programme for the development of this competence, focusing on basic methods related to different forms of classroom organisation and pedagogical, managerial and socio-affective styles,as well as teaching-learning and assessment) [10, p. 45] contribute to increased academic performance and intrinsic motivation of students in different learning contexts.

6. The relevance of **the Programme for the implementation of teaching strategies for the development of learning to learn competence in secondary education has been demonstrated by increase of the level of** autonomy of students in the learning process; development of metacognitive skills for self-regulated learning; training of skills for planning, organising and evaluating one's own learning process [27, p. 93]. In an environment where the volume of information is constantly increasing and academic demands are becoming more and more complex, this

competence is essential to ensure a sound educational path and preparation for future academic or professional challenges; *for teachers, it is essential to:* identify of individual learning styles; apply of metacognitive strategies to improve academic performance; promote of collaborative learning through group projects; learn time and resource management techniques; *for students - the values of the competence of learning to learn:* autonomy in learning, perseverance and resilience, motivation and curiosity for learning, self-confidence and self-efficacy, reflexivity and critical thinking, discipline and personal organisation, cooperation and respect for diversity, openness to lifelong learning, ethics and integrity, social responsibility and responsibility for one's own progress, respect for the rights and dignity of others, fairness, solidarity.

Summarising the research findings we formulate **methodological recommendations:**

(a) Researchers:
- researching the competence to learn to learn in order to provide data and theoretical models applicable to its development;
- longitudinal study of the impact of metacognitive strategies on students' learning.
- developing assessment tools for CI2 to measure the effectiveness of educational interventions;

(b)Teacher trainers:
- integration of content specific to the development of learning to learn competence;
- integrating examples of good practice and application strategies to facilitate implementation in the classroom;
- organisation of practical workshops, case studies and exchanges of experience between teachers.

(c) Teachers:
- teachers' development of CI2 competences, using interactive and metacognitive teaching strategies.
- integrating reflection on learning into the teaching process.
- using methods that encourage critical thinking, self-regulated learning and student autonomy.

(d) Parents
- Parental support for the development of this competence by creating an environment conducive to learning at home and promoting effective study habits.
- constant communication with teachers and active involvement in the child's progress at school
- guiding students towards self-organisation and effective time management.

BIBLIOGRAPHY

1. Agenda 2030 pentru Dezvoltare Durabilă https://dezvoltaredurabila.gov.ro/ transformarea-lumii-noastre-agenda-2030-pentru-dezvoltare-durabila .

2. BOCOŞ M. *Teoria şi metodologia instruirii. Teoria şi metodologia evaluării 2019*, Editura Polirom 978-973-46-7027-6.

3. CERGHIT I. *Sisteme de instruire alternative şi complementare. Structuri, stiluri şi strategii*. Coord. NEACȘU, I., Iași: Editura Polirom, 2008, 395 p. ISBN: 978-973-46-1916-7.

4. CRISTEA S. *Concepte pedagogice fundamentale*. vol. 10: *Metodologia instruirii în cadrul procesului de învățământ. Metode şi tehnici didactice*. București: Didactica Publishing House, 2018, 172 p.ISBN:5948489359521.

5. CRISTEA S. *Teoria generală a educației*. București: Didactica Publishing House, 2022. ISBN: 978-606-048-487-5.

6. DELORS J. Comoara lăuntrică. Raportul către UNESCO al Comisiei Internaționale pentru Educație în secolul XXI. Iași: Polirom, 2000.

7. FAURE E. (coord.) *A învăța să fii. Un Raport UNESCO.,* București: trad. Editura Didactică și Pedagogică. 1974, 380 p.

8. FRANȚUZAN L., *Formarea competenţei - cheie de a învăţa să înveţi în contextul noilor provocări societale: Studiu de politici educaţionale*,2021,45 p., Chişinău: LexonPrim. ISBN: 978-9975-3274-8-0.

9. GORAȘ-POSTICĂ V.. Dezvoltarea gândirii ştiinţifice la cadrele didactice în procesul de formare inițială şi continuă. In: *Revista Didactica Pro…, revistă de teorie şi practică educaţională*, 2024, nr. 5(147), ISSN 1810-6455.

10. IONESCU M., CHIŞ, V. *Strategii de predare-învăţare*. București: Editura Științifică. 1992. ISBN 973-44-0101-7.

11. NEACȘU I. Educația pentru competențe și performanță. București. 2020. Editura Universitară. ISBN:978-606-28-0376-2.

12. OPREA C-L. *Strategii didactice interactive*. București: Editura Didactică și Pedagogică R.A. 2006 . 318p., ISBN: 978-973-30-1695-3.

13. OREHOVSCHI S. Dezvoltarea competenței elevului de a învăța să înveți prin activități integratoare independente de valorizare a textului. Rezumatul tezei de doctor. Chișinău, 2023. 40 p.

14. PALADI O. *Conștiința de sine și sistemul de valori ale adolescentului.* 223 p.,2013 Chișinău: AȘM. ISBN: 978-9975-48-061-1.

15. PAPUC L., **BALABAN, L.M.** *Dezvoltarea competenţei,,a învăţa să înveţi" la treapta de liceu.* În: *Conferinţa Ştiinţifică Internaţională: Cultura Cercetării Pedagogice: Provocări şi Tendinţe Contemporane*, ediţia I-a, 5-6 iunie, vol. 4. Chişinău: 2021, ISBN: 978-9975-76-345-5.

16. PIAGET J. *Psihologie şi pedagogie. Răspunsurile marelui psiholog la problemele învăţământului.* , 1972. 161 p. București: trad. Editura Didactică și Pedagogică.

17. POTOLEA D., TOMA, S. Formarea competențelor în educație: De la teorie la practică. 2019. Editura Universitară. ISBN:978-606-28-0377-9.

18. *Proiectul Europa 2030. Provocări şi oportunităţi. Raport către Consiliul European al Grupului de Reflecţie privind viitorul U.E, 2030.*, 2010, Luxemburg: Oficiul pentru publicaţii al U.E.

19. *Proiectul: proces de învățare, produs evaluabil*. 2018, Chișinău: Centrul Educațional PRO DIDACTICA. ISBN:978-9975-3177-2-6.

20. *Recomandarea Consiliului U.E. din 18 decembrie 2006 privind competențele-cheie pentru învățarea pe tot parcursul vieții* https://education.ec.europa.eu/ro/focus-topics/improving-quality/key-competences .

21. *Recomandarea Consiliului U.E. din 22 mai 2018 privind competențele-cheie pentru învățarea pe tot parcursul vieții* https://op.europa.eu/en/publication-detail/-/publication/6fda126a-67c9-11e8-ab9c-01aa75ed71a1/language-ro .

22. *Repere metodologice pentru aplicarea curriculumului la clasa a X-a in anul școlar 2022-2023, Limbi moderne,* București 2022 https://www.edu.ro/repere_metodologice_aplicare_curriculum_clasa_X_an_scolar_2022_2023 .

23. *Strategia națională pentru dezvoltarea durabilă a României 2030*, București: Editura Paideia.

24. STAN C. *Evaluarea în educație. Noi perspective și abordări.* Editura Universității din București. 2021. ISBN:978-606-16-1521-0.

25. SCLIFOS L. Formarea competenței de a învăța să înveți. În: O competență-cheie – a învăța să înveți. Chișinău: CE PRO DIDACTICA, 2010, ISBN 978-9975-4125-0.

26. ȚĂRĂLUNGĂ G. Strategii didactice interactive în dezvoltarea competențelor metacognitive. Editura Universității Alexandru Ioan Cuza. 2023, p.250. ISBN:978-606-708-351-4.

27. VELEA S. Autonomia și autoevaluarea în învățământul liceal. Editura Didactică și Pedagogică. 2020. ISBN: 978-606-24-0205-3.

Limba străină

28. BOEKAERTS M., CORNO, L. Self-Regulation in the Classroom: A Perspective on Assessment and Intervention. Cartea: Handbook of Self-Regulation of Learning and Performance. 2021. 482 p. ISBN 978-0367332255.

29. DE CORTE E., VERSCHAFFEL, L. *Fostering Self-Regulated Learning: A European Perspective*. Revista: Educational Psychologis, 2021.

30. DINSMORE D. L., ALEXANDER, P. A. *"The role of metacognition in learning and achievement." Handbook of Research on Learning and Instruction (2nd Edition),* 2020. ISBN: 978-1138600300.

31. HATTIE J., ZIERER, K. 10 Mindframes for Visible Learning: Teaching for Success. 206 p., 2021. ISBN: 9781003430124.

32. PERRY N.E., RAHIM, A. *Studying self-regulated learning in classrooms.* Cartea: Handbook of Self-Regulation of Learning and Performance. 2020. ISBN: 9780367332847.

33. *Schola Europaea / Office of the Secretary-General.* Pedagogical Development Unit. Ref.: 2018-09-D-69-en-2. *Key Competences for Lifelong Learning in the European Schools* Approved by the Joint Teaching Committee by Written Procedure 2018/47.

34. SCHURIK D.H., GREENE, J. A. *Handbook of Self-Regulation of Learning and Performance: New Trends and Innovations*, Revista:Educational Psychology Review. 2017.

LIST OF THE AUTHOR'S PUBLICATIONS ON THE THESIS TOPIC:

1. **BALABAN L. M.** C*ompetenţe-cheie, o nouă filozofie şi politică a educaţiei*. *Didactica Pro*, nr.3(145) pp.15-19. Chişinău, 2024, ISSN 1810-6455.

2. **BALABAN L. M.** *Autoevaluarea ca instrument pentru dezvoltarea competenţei de a învăţa să înveţi în liceu,* Univers Pedagogic, nr.4(48), pp.23-28 Chişinău.2024, ISSN:1811-5470.

3. **BALABAN L. M.** *Competenţa de a învăţa să înveţi ca model pedagogic fundamentat psihologic şi social, Didactica Pro*, nr. 3(147) pp.2-6. Chişinău. 2024. ISSN 1810-6455.

4. **BALABAN L. M** . Strategii didactice de dezvoltare a competenţei de a învăţa sî înveţi. Ghid metodologic pentru profesori debutanţi. Bacău, Romania: Editura Rovimed Publishers, 2024, 129 p, ISBN:978-606-089-047-8.

5. **BALABAN L. M.** Promovarea strategiilor gândirii critice în învăţarea limbii străine în învăţământul liceal. Conferinţa Ştiinţifică Internaţională., Performanţe, Personalităţi, Chişinău,2021. pp.82-85. ISBN 978-9975-56-952-8.

6. **BALABAN L. M.** PAPUC, L. *Dezvoltarea competenţei"a învăţa să înveţi" la treapta de liceu. În: Cultura Cercetării Pedagogice: Provocări şi Tendinţe Contemporane*, vol. 4. pp. 212-225. Chişinău: 2021. ISBN: 978-9975-76-345-5.

7. **BALABAN L. M.** *Portofoliul elevului de liceu ca instrument de dezvoltare a competenţei a învăţa să înveţi. Conferinţa Ştiinţifică Naţională cu Participare Internaţională "Probleme ale Ştiinţelor Socioumaniste şi ale Modernizării Învăţământului"*. CEP UPS „I. Creangă". Chişinău,2021, Vol.19, Partea 1, p. 25-37. ISBN 978-9975-46-296-9. ISSN 1857-0267.

8. **BALABAN L. M.** *Eficientizarea scrierii prin abordarea selective a textului dictării.* În *Analele ştiinţifice ale doctoranzilor şi competitorilor: Probleme Actuale ale Ştiinţelor Umanistice.* vol. XVIII, partea I. Chişinău: 2019, pp.81-88. ISBN 9975-46-421-1.

9. **BALABAN L. M.** *Abordarea stilurilor de învăţare pentru obţinerea succesului. În: Volumul internaţional de studii ştiintifice de specialitate* (1): *Aspecte, orientări şi perspective ale ştiinţelor educaţiei în societatea contemporană*. Bacău: Editura Smart Academic, 2020, pp.172-178. ISBN 78-606-063-003-6.

10. **BALABAN L. M.** *Dezvoltarea cunoaşterii culturale prin cele mai bune practici*. În: *Ghid de bune practici relevate şi relatate prin proiecte iniţiate de cadre didactice din învăţământul preuniversitar,în beneficiul elevilor şi efincietizării activităţii din instituţiile de învăţământ-Modalităţi eficiente de abordare a educaţiei prin derularea proiectelor educaţionale*. Bacău.2019. Editura Smart Academic, 2019, pp.23-28. ISBN 978-606-8947-63-1.

ANNOTATION
BALABAN Luminiţa-Maria
"TEACHING STRATEGIES FOR DEVELOPING THE COMPETENCE TO LEARN HOW TO LEARN IN HIGH SCHOOL",
Chisinau, 2025

The structure of the thesis includes: introduction, three chapters, general conclusions and recommendations, bibliography from 146 sources, annotations (in Romanian and English), key concepts in both Romanian and English, list of abbreviations, 141 pages of main text, 19 tables, 49 figures, and 10 appendices.

Publications on the thesis topic: 10 scientific papers.

Key concepts: the competence to learn how to learn, key competences, transversal competence, transdisciplinary competence, lifelong learning competence, teaching strategies, values of the competence to learn how to learn.

Field of study: General Theory of Education

The purpose of the investigation: conceptualizing teaching strategies for developing the competence to learn how to learn and experimentally validating the Implementation Program of the teaching strategies established for developing the competence to learn how to learn in high school education.

The objectives of the research aim to determine the evolving theoretical frameworks of the concepts of competence and the competence to learn how to learn through the new prospective paradigm of education, which anticipates social development; to examine the key competence of learning how to learn from the perspective of multilingualism and the cultural expression of basic knowledge and value orientations promoted by the "2030 Agenda for Sustainable Development", reflected in strategies for quality education in various countries; to develop and describe the theoretical model of the competence to learn how to learn in a pedagogical context, revaluating the "pillars" of integrative education, the principles, and the value orientations of the methodology of experimental research established in educational sciences; to identify teaching strategies for developing the competence to learn how to learn in high school students within a stimulating, autonomous, and personalized learning environment; to develop and, using experimental data, to validate the Program for the implementation of teaching strategies, established for the development of the competence to learn how to learn in high school education.

The scientific novelty and originality are provided by the pedagogical conceptualization of the theoretical model of the competence to learn how to learn in a pedagogical context, based on the definition of evolving CI2, the philosophical perspective of lifelong education and self-education, as well as the current educational policies of the modern education paradigm, the principles, and value orientations of CI2, intra/inter/pluridisciplinarily integrated in the relevant curricular area; the development and experimental validation of the Program for the implementation of teaching strategies for developing the "learn how to learn" competence in high school education, with the aim of creating a stimulating and autonomous learning environment, in which high school students can develop social awareness and practice the "learn how to learn" competence in a continuous and personalized manner.

The results obtained, which contributed to the achievement of the proposed objectives, were specified and operationalized in the curricular design model for the development of CI2 in high school activities through the creation of a scientific reference framework supported by the principle of centering education on the development of intradisciplinary and interdisciplinary key competences, associated with those of a transdisciplinary type, valued in the theoretical model of the competence to learn how to learn in a pedagogical context and experimentally validated in the Program for the implementation of teaching strategies, established for the development of CI2 competence in high school education, while formulating scientific conclusions and recommendations regarding the integration of the necessary teaching strategies in the process of developing the competence to learn how to learn in high school education, in the context of paradigmatic developments supported by curriculum and instruction theory, within pedagogical, psychological, and social contexts.

The theoretical significance of the research is marked at the level of a new paradigm that highlights the proactive function of education, based on the "four pillars" (knowing, knowing how to do, knowing how to live together, knowing how to be and become) and support key competences, with the superior outcome being the transversal, transdisciplinary competence to learn how to learn effectively (managerially, entrepreneurially), autonomously (psychologically), and responsibly (socially), throughout life, developed in high school through teaching strategies for the holistic and comprehensive assurance of the personal and social competence to learn how to learn; formulating scientific conclusions regarding the development of the competence to learn how to learn in high school students.

The praxiological value of the research is demonstrated through the pedagogical models applied at the level of curricular design for instruction in high school, aimed at deepening the adolescents' self-awareness; the specific objectives defined in terms of key competences in the perspective of lifelong education; teaching strategies designed and implemented within the Program for the implementation of teaching strategies to develop the competence to learn how to learn in high school education, through the following coordinates: training teachers to develop high school students' competence to learn how to learn and developing high school students' competence to learn how to learn, both at the formal level (through the English language subject) and at the nonformal level (through school and extracurricular educational projects and programs).

The implementation of the scientific results was carried out through theoretical and experimental research, conducted with high school English teachers, within the Pedagogical Circle in the North Bacău area, who participated in the training program for the implementation of teaching strategies to develop the competence to learn how to learn in high school education, along with students from the 9th, 10th, and 11th grades of the "Ştefan cel Mare" National Pedagogical College in Bacău, Romania.

BALABAN Luminița Maria

TEACHING STRATEGIES FOR DEVELOPING LEARNING TO LEARN COMPETENCE IN SECONDARY SCHOOL

Specialty 531.01 - General Theory of Education

SUMMARY
PhD thesis in education sciences

Chisinau, 2025