

TECHNICAL UNIVERSITY OF MOLDOVA

With manuscript title
C.Z.U.: 37.01 (043.2)=111

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**CONCEPTUAL AND METHODOLOGICAL FOUNDATIONS OF
PROSPECTIVE EDUCATION**

531.01 General theory of education

SUMMARY

Thesis of Doctoral Habilitatus in Educational Sciences

CHIȘINĂU, 2024

The thesis was developed at the Department of Social and Human Sciences within the Technical University of Moldova

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The Doctoral Thesis and the summary can be consulted at the Scientific Library of the Technical University of Moldova and at the website of ANACEC (www.anacec.md).

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LIST OF ABBREVIATION

In English language:

Abbreviation	Meaning
EBPE	Epistemological Block of Prospective Education
FCIM	Faculty of Computers Informatics and Microelectronics
OBPCF	Operational Block of Prospective Competence Formation
PEP	Psihopedagogie și educație preșcolară
PC	Prospective Competence
PE	Prospective Education
PP	Prospective Pedagogy
PPE	Psychopedagogy and Preschool Education
PV	Prospective Values

În Romanian language:

Abreviere	Semnificație
BGEP	Blocul Gnoseologic al Educației Prospective
BOCP	Blocul Operațional al Competenței Prospective
CP	Competență prospectivă
EP	Educație prospectivă
FCIM	Facultatea Calculatoare, Informatică și Microelectronică
PEP	Psihopedagogie și educație preșcolară
PP	Pedagogia prospectivă
TEP	Teoria Educației Prospective
VCP	Valorile Competenței Prospective
VP	Valori prospective

CONCEPTUAL REFERENCES OF THE RESEARCH

The topicality and importance of the research theme results from the impact of global crises and the world crisis of education. In this sense, the United Nations Educational, Scientific and Cultural Organization highlights sociological, ecological and technological trends that are changing education systems, which must adapt. Noting that education has the greatest transformative potential to shape a just and sustainable future, coming up with the recommendation „to build a new social contract for education that meets the future needs of humanity” [81, p.144].

In order to reduce the education crisis, in 2018, the *Organization for Economic Cooperation and Development* launched the *Future of Education and Skills 2030 project*, to orient the education process towards the formation of advance planning [80, p. 13].

At the same time, it is mentioned that it is necessary to make progress regarding the development, acceptance and attribution of high quality education because, „the increasing diversity of students requires a professional teaching process, pedagogues must be trained to it adapts to students who come from diverse backgrounds and have varied expectations and needs” [119, p. 7; 117].

As a solution, the policy documents, the „Education 2030” Strategy, emphasize that „the cultural and mental component is essential for any change-development process” [125, p. 21]. The document in question stipulates the need to "rethink the role of education, learning and knowledge in the light of challenges and opportunities, of the anticipated, possible and preferred future" [80; 125]. In this sense, highlighting the factors that determine the formation of a strategic vision and the value axes on which this strategy is supported: „quality sustainability, accessibility, adaptability and prospective” [125, p. 25]. At the same time, the Education Code of the Republic of Moldova provides for the promotion of „general human values” [118, art. 4], as a strategy to humanize the human.

The system of ideas related to prospective education are developed by researchers from various geographical areas who mention that „man is forgotten” [34], and his problems are increasing, a fact that affects the future of the entire society, from the perspective of human degradation that „severely reduces the chances future generations to have a good life from all perspectives” [16, p. 160].

It is certain that „today, the category of possible future is the keystone of educational action, therefore, the need to understand the present is as important as the need to project the future” [15, p. 30].

„Education must come before instruction, because we are in an accelerated pace of change” [70, p. 38], a statement that describes the characteristics of education in an unprecedented crisis, and in this context very well thought-out actions are needed from the point of view of theoretical-practical point of view, to reform the educational system and ensure the development of humanity in the near future.

Emphasizing the prospective character of education is important in the formation of students' personality, because the global crisis increasingly highlights the need to make the transition from the analysis of the prospective character of education to the paradigmatic construction of prospective education (prospective character being a component of prospective education), and the risks that appear in various fields, present proof that prospective education is not only a prerogative of the educational system, but warns about the need to combine the efforts of social entities.

In essence, we note the importance of prospective education as a way of „approaching, understanding and positively exploiting the problems of the contemporary world, based on its definition as a social practice, as a process of individual and collective development that facilitates transformation and self-transformation” [47; 48, p. 58].

For these reasons, our research identifies and reveals contributions regarding the connection of prospective education to educational policies, advocating for it to become decisive in the activity of educational institutions in the Republic of Moldova. And, the directed correlation of the evolution of the higher education system with the socio-economic environment at the national and global level claims the need to strengthen the prospective direction of education. Thus, the scientific approach for the theoretical and methodological foundation of prospective education has become one of the key problems of contemporary pedagogy.

Description of the situation in the research field and identification of the research problem. Studies on *prospective education* and the concept of *prospective* have been promoted and developed since the middle of the twentieth century.

Internationally, the prospective term was addressed by G. Berger [10], R. Dottrens [32], R. Singh [64]; prospective dimension in

planning, business - by J. Naisbitt, P. Dixon [99; 76]; thinking of the future -R. Slaughter [103]; anticipation, planning and orientation in education, creating the future – M. Godet [84]; the theory of the future – J. Duran [77]; prediction theory – E. Hideg [89]; technology planning – A. Toffler [102], J. Hertvik [88]; B. Danilchenko [107]; training human resources for the future – J. Dewey [31], R. Dottrens [32]; education for change [21], prospective pedagogy", "prospective education", "the prospective of education", "prospective character of education" – S. Cristea [22; 23; 24], the approach to factors, conditions and agents of educational change – V.-M. Cojocariu [18], I. Jinga and E. Istrate [40], M-D. Bocoş [12], E. Macavei [54], "anticipation" - M. Stanciu [65]; the formation of the predictive skills of the teaching staff from the perspective of the future - I. Sabău, C. Popa, M. Berce, M. Florescu, S. Laurian [61]; 21st century skills – by H. Jaberian, A. Vista, [91]; innovative pedagogy of the future - C. Herodotou; M. Sharples; M. Gaved [90]; prospective education – H. Bordovskaya and A. Rean [108]; risk management – B. Borovkova [109]; prospective evaluation of the quality of education in research – M. Matyushkina [114].

In the Republic of Moldova, the "prospective nature of education", "prospective education" was addressed by N. Silistraru [62], L. Cuzneţov [28; 29; 30], prospective dimension” – V. Lungu [53]; prognostic skills – Vl. Guţu, E. Muraru and O. Dandara [37]; projective competence – V. Goraş-Postică [35; 36]; preparing the institution/organization for crises and transformation – D. Patraşcu, Al. Roman, T. Patrascu [58]; the quality of education - S. Baciu [8], innovative transfer in university education – V. Cojocaru [19], education through values and for values D. Antoci [5]; axiology of education – D. Antoci, M. Borozan [3]; the restructuring of the higher education system – R.V. Turcan, L. Bugaian etc. [72]; continuous training of teaching staff – A. Afanas [1] etc.

The proposed study contributes to updating, developing in a holistic vision the research carried out in 2012, (Doctoral thesis „Conceptualization of prospective education in the university framework” [53]). The aforementioned research was focused on treating and studying Prospective Education as a dimension of education, defining the concept of prospective education and developing the Pedagogical Model for the formation of prospective competence at university students, by analyzing the changes in the university educational system produced until 2012.

In the context of the analysis of the topic of prospective education, the work „Pedagogical values of the development of non-conflictual attitude at students from the perspective of professional integration” researcher E. Țârână [71] promotes a new direction of research: the prospective pedagogy of professional integration. From the perspective of the purpose and the projected objectives, the author approaches the evolutionary research of the facts/phenomena of the future - professional integration through the analysis of current needs, the development of non-conflictual attitude.

Our research is focused on the development of prospective pedagogy through: the conceptualization of the *Paradigm of Prospective Education*, represented by the *Theory of Prospective Education*, the definition of the concepts of prospective pedagogy, prospective competence, the redefinition of the concept of prospective education, etc., the development of models, the epistemological block of prospective education, the operational block of training prospective competence, establishing the principles and legalities that constituted the conceptual and methodological foundations of prospective education.

Analyzing the degree of research on the topic and summarizing the essence of the studies evoked in this context, we find that some studies, although they address the specifics of prospective education, are limited to particular aspects (educational purpose or prospective nature), to structural elements (anticipation, planning, etc.), in prospective education approach and different interpretations (ex, as a type of education, methodical study, global systemic function, principle, etc.).

The problem of education in the 21st century (globalization and the accelerated pace of changes) determines the orientation predominantly towards economic values, informational manipulation being more and more obvious, and moral values seem to be no longer essential (man disappears from the educational process), less is taking into account the anticipation of future education, etc. These are some characteristics of the global education crisis.

Another aspect of the problem that generated our research is that just as the values of education change from one era to another, the mismatch is the consequence of the lack of an innovative mindset focused on solving problems. Due to new technologies and innovations in various fields, some skills become obsolete over time and new ones are in demand. In this sense, there is an increasingly acute need for the

formation of the prospective competence values of students within the initial training program.

In this sense, the actuality of the research topic derives from the need for an overall analysis of the university study program in the pedagogical and technological fields (both with an impact on the future and the existential crisis from the perspective of responsibility, security, the socio-human viable). The analysis of these university documents led us to find that, for the most part, they are oriented towards the future through professional training, but they focus less on education through the values of prospective competence, we highlight the insufficient nature of research on the theoretical and methodological foundation of prospective education in the field of university pedagogy

Analyzing the requirements for contemporary education, theory, practice and existing educational systems, the **following contradictions were identified**: on the one hand we have the presence of global crises, including educational ones, insufficient initial training of students compared to the accelerated pace of changes, scientific uncertainty regarding the formation of values, the need for prospective personality training focused on skills for the future, indicated in the normative framework and existing regulations with the lack of clear epistemological benchmarks of prospective education, and on the other hand, education requires an approach through the prism of anticipatory character.

In this order of ideas, the socio-educational context interpreted from the perspective of the investigation area, outlines **the research problem**: *What are the premises and theoretical-practical benchmarks of prospective education in the institutions of higher education in the formation of the prospective personality?*

The purpose of the research consists in the development of prospective pedagogy through the conceptualization and practical valorization of the Paradigm of Prospective Education oriented towards the formation of student's prospective personality in higher education.

Research hypothesis: the theoretical and methodological foundation of the prospective education of students will become effective if: the investigative approach will focus on: the development of prospective pedagogy through the conceptualization of the *Paradigm of Prospective Education*, represented by the *Theory of Prospective Education*, the definition of the concept of prospective pedagogy and prospective competence, the redefinition of prospective education, on establishing the dimensions of prospective education, developing the

principles of prospective education, identifying the legitimacy of the formation of prospective competence, recording prospective values, determining the conditions and mechanisms for the formation of prospective personality in higher education.

To achieve the goal, we proposed the following **research objectives**:

1. Establishing the conceptual benchmarks of prospective education under the conditions of the accelerated pace of changes and innovation in the university educational process;

2. The preliminary experimental study to identify prospective personality values of students;

3. The development of scientific knowledge of prospective pedagogy through the conceptualization of the Paradigm of prospective education, represented by the dual Base (Gnoseological Block of prospective education and Operational Block of prospective competence training), focused on the subsequent Resort in order to form the prospective personality.

4. The reconceptualization and development of the terms prospective pedagogy, prospective education, prospective personality values, prospective competence in the context of Prospective Education Theory.

5. The elaboration and capitalization of the methodological base of prospective education in higher education represented by the laws, principles, conditions and mechanisms of prospective personality formation.

6. Recording the values of the prospective personality in a university context;

7. Elaboration of scientific conclusions and methodological recommendations regarding the theory and methodology of prospective education.

The theoretical support of the research is provided by laws, paradigms, theories, principles, concepts, ideas from the field of pedagogy, social philosophy, philosophy of education, psychology, pedagogical anthropology, ethics and sociology of education; the scientific revolution approach and the paradigmatic approach (T. Kuhn) [91], the relationship between education and society (E. Faure) [79]. A special role, in this sense, belongs to the theories of social change (C. Geertz, V. Turner) [apud 47], the theory of perspective (D. Kahneman and A. Tversky) [92], the theory of anticipation

(E. Hideg) [89], the theories of preparing human resources for the future (J. Dewey, A. Tofler, Dm. Todoran) [31, 70, 102], the prospective triangle (M. Godet) [84; 85], the prospective character and values of modern education (N. Silistraru) [62; 63], concerns for Opera omnia (L. Şoitu) [67], theories of change (V.-M. Cojocariu) [18], the theory of innovative transfer (V. Cojocaru) [19], theory of emotional culture (M. Cojocaru-Borozan) [20; 106], philosophy of contemporary education (I. Gagim) [34], social philosophy (V. Capcelea) [17], vector theory (P. Jelescu) [39], the theory of integration value orientations (D. Antoci) [4], the theory of teacher professionalization (A. Afanas) [1] etc.

The synthesis and justification of the research.

Theoretical research methods: historical – involves the analysis of the evolution of events, theories, etc.; *comparative* – at the national and international level, regarding the level of implementation of the prospective education elements, the past-present-future correlation and the analysis of education compared to the prospective education elements; *epistemological reflection* – aims at the relationship between the theoretical prediction and the current educational reality, but also the need to modernize educational policies in order to form the prospective personality; *the prospective method* - involves the anticipatory, proactive analysis of some concepts, activities, contexts, situations, pedagogical works, etc. from the perspective of the future implications of the past and *the present*; *theoretical modeling* - the development of the prospective education Paradigm that provides conceptual frameworks and analytical tools in the development of prospective personality formation mechanisms; *retrospective method* – cumulative analysis of facts, concepts, problems, theories, principles, etc.; *methods of analysis and synthesis* – focused on the investigation of educational phenomena from a holistic perspective, establishing the principles, conditions and factors of prospective education and penetrating the theoretical and practical essence of prospective education; *inductive and deductive methods* - based on obtaining conclusions. At the same time, *experimental investigation methods* were also used: the pedagogical experiment, including observation, questionnaire; *statistical methods* – data collection, mathematical statistics, graphic representation. Their use ensured the disclosure of the essence of prospective education and allowed the description of the positive dynamics of prospective competence values.

The scientific novelty and originality of the research consists

in the development of scientific knowledge of prospective pedagogy through determining the theoretical-methodological foundations of prospective education in terms of prospective personality values; through the conceptualization of the *Paradigm of Prospective Education*, represented by the Epistemological Block of Prospective Education and the Operational Block of Prospective Competence Formation, through the *Theory of Prospective Education*; the methodology of prospective education capitalized on by elaborating the laws, principles, conditions and mechanisms for the formation of the prospective personality. By developing the *Theory of Prospective Education*, premises were created in order to reconceptualize prospective education, to define the notion of prospective pedagogy, prospective values and prospective competence. The preliminary experimental study of the identification of students' prospective values allowed the development of the methodology of prospective education, the development of tools for evaluating prospective values, the establishment of the mechanisms for the formation of prospective competence, the identification of prospective values of students and the strengthening of the axiological referential of the prospective personality in the university environment.

Fundamentally new scientific results: the development of prospective pedagogy, the conceptualization and valorization of the *Paradigm of Prospective Education* through the epistemological foundation of prospective education; reconceptualizing prospective education; defining the term prospective pedagogy and prospective competence; recording and strengthening the axiological referential of the students' prospective personality; determining the dimensions of prospective education; establishing the legitimacy of change, the legitimacy of prospective pragmatism, the legitimacy of the prospective orientation of education; determining the principles and conditions for the formation of prospective competence in the university setting; the scientific foundation of the *Theory of Prospective Education*; the development of the university curriculum by developing the curriculum Prospective Education and the design of prospective education in the disciplines: Professional Ethics, Academic Communication and Writing and Functional Didactics; the development and application of the instruments for assessing students' prospective competence; the formulation of scientific conclusions regarding the development of prospective personality, which contributes to the development of contemporary pedagogical thinking.

The new research direction, „Theory and methodology of prospective personality development” is reflected in: the development of prospective pedagogy by the theoretical and methodological conceptualization of prospective education, the definition of prospective competence under the conditions of the accelerated pace of changes and the crisis of education, which created objective premises for the development of prospective competence in students through the new knowledge produced in research (*Paradigm of Prospective Education with Epistemological Block of Prospective Education, Operational Block of Training Prospective Competence, Theory of Prospective Education*), a fact that theoretically and practically ensures the methodology of prospective education, generating the personal and professional value system of students according to the demands of society of the future.

The theoretical significance results from the development of prospective pedagogy, the conceptualization of the *Paradigm of Prospective Education*, in the context of which the *Theory of Prospective Education* was elaborated, the dimensions of prospective education were established (temporal, anticipatory and vectorial), the principles (of temporal perspective, of social stringency and the principle of anticipation) and legalities of prospective education were determined (anticipation, orientation of education towards the future, change and prospective pragmatism). Interpretation and description of theoretical approaches and experimental study allowed the completion of the theoretical-methodological notional apparatus with the terms „prospective education”, „prospective pedagogy”, „prospective competence”. The axiological referential of the prospective personality was consolidated, and indicators of prospective competence were formulated.

The applied value of the research the validation in the practice of university education of the *Paradigm of Prospective Education*, focused on the Epistemological Block and the Operational Block, integrated through the subsequent Resort with the aim of forming the prospective personality; identifying the conditions of prospective education at the level of the development, application of the prospective education university curriculum and the integration of prospective personality values in the disciplines: Professional Ethics, Academic Communication and Writing and Functional Didactics, oriented to the formation of prospective competence in students. For the estimating of the prospective competence of students, the prospective competence

assessment matrix was proposed, prospective competence assessment tools were developed and applied, methodological recommendations regarding the formation of prospective personality were formulated.

The approval and validation of the obtained scientific results is ensured by the theoretical and experimental studies carried out within the Department of Psychopedagogy and Preschool Education (Faculty of Pedagogy, Tiraspol State University, which in the summer of 2022 was absorbed by the State Pedagogical University „Ion Creangă” from Chişinău, following the reorganization of the institutions of higher education) and within the Department of Social and Human Sciences (Technical University of Moldova) and abroad within the Scientific Council of the same institution. The results of the scientific research were approved and validated through participation with communications at national and international scientific events: International Scientific and Practical Conference „Advancing in research, practice and education”, 10-13 May 2022, Florence, Italy; The XII International Scientific and Practical Conference „Actual priorities of modern science, education and practice” March 29- April 01, 2022, Paris, France; IASTEM International Conference Krakow, Poland, 04th – 05th July, 2021; Innovations in education: essence, problems, perspectives. All-Ukrainian scientific-practical conference. Odesa, 27-28 October, 2022; International Symposium: Creativity-Training-Performance. Iasi: Kreatikon, 2017; International Scientific Conference. Higher Education: Traditions, Values, Perspectives. Volume 2. October 1-2, 2022. Chisinau, 2022; In: Electronics, Communications and Computing Conference. 10th edition, October 23-26, 2019, Chisinau; Scientific conference with international participation. Higher Education: Traditions, Values, Perspectives. October 1-2. Vol. 2. UST. Chisinau, 2021; National Scientific Conference with International Participation: Higher Education: Traditions, Values, Perspectives. September 27-28, 2019; Jean Monnet Conference. Moldova towards EU's regional and cross-border development. Chisinau, 2019, on 22-23rd of August, 2019; Research, Development and Innovation from the perspective of Global Ethics. International Scientific Conference April 15, 2022. Chisinau: UTM, 2022 etc.; communications presented in the plenary sessions: within the International Scientific Conference Contemporary concerns of the social and human sciences. December 2-3, 2021, (ULIM) and at the Congress „Polish-Moldovan Intercultural Dialogue” April 11-13, 2022 (UST).

Publications on the topic of the thesis: The obtained results were published in 64 scientific works: 2 monographs; 1 article in an international journal included in the SCOPUS database; 6 articles in international journals, 9 articles in journals included in databases accepted by ANACEC (Repec, Road, DOAJ, Index Copernicus); 9 articles in magazines from the National Register of professional magazines; 9 articles in the collections of international conferences abroad; 28 articles in the collections of international and national conferences in the country, including other works.

The volume and structure of the work includes: annotation (Romanian, English), introduction, five chapters, general conclusions and recommendations, bibliography of 428 titles, key concepts in Romanian, English, list of abbreviations, 22 appendices, 278 basic text pages, 54 figures, 37 tables).

Key words: prospective, anticipation, design, value, curriculum, prospective education, prospective pedagogy, prospective education, prospective character, prospective competence, paradigm.

THE THESIS CONTENT

In the **Introduction**, the actuality of the research is argued, the description of the situation in the research field by presenting the most relevant and significant researches and reference authors, the elucidation of the socio-educational conditions that generate the investigation problem, the purpose and objectives of the research are presented, the theoretical-methodological bases of the thesis are described, the way in which the investigative results were approved, as well as the volume and structure of the thesis.

Chapter 1. Epistemological foundations of prospective education the conceptual benchmarks of prospective education were elucidated, under the conditions of the accelerated pace of changes and innovation in the university educational process. Based on the exploration of various works from the specialized literature [1; 16] the role of education over time, of the educational dimensions, was presented and the prospective orientation of the personality is noted by *the orientation both towards creativity or the building of the new society*, as well as towards a variety of spiritual activity [47, p. 45]. We find insufficient clarity regarding the professional and scientific terminology of the „prospective” concept, which is correlated with various notions: „perspective”, „futurology”, „proactive”, „strategic”, which can create terminological confusions. We find it less valued of the essence of the training stages of the future

specialist, a fact that led to the attempt *to explain the prospective term* as a thinking in the sense of elucidating and realizing a strategic action, by analyzing the past-present-future relationship.

To trace the evolution of the prospective term, we have integrated researchers' reflections in Table 1.

Table 1. The types of prospective studies

Futurology (the study of the future)	H. G. Wells, in the book „ <i>The Discovery of the Future</i> ” (1902) argued that <i>the future could be known scientifically</i> , and as a result, in 1932, he called for the establishment of „Departments and Professors of Foresight”. Thus, the foundations were laid for the development of modernity and academic future studies approximately 40 years ago [105].
Studies about the future through technologies	Existing social relations are present as data; provides unconscious support for the status quo; <i>building the future through science and technology</i> . An example is A. Toffler's book „ <i>Future Shock</i> ” [102].
Prospective studies focused on problem solving	Identifying problems and exploring solutions at a surface level. An example is the book „ <i>Limits to Growth</i> ” by D. Meadows [98].
Critical study of the future	Comparative analysis of hypotheses, presuppositions, paradigms; actively considers the influence of different cultural orientations and research traditions. As an example, is the book „ <i>Politics of the Solar Era</i> ” by E. Henderson" [87].
Epistemological study	Locates and problematizes the sources of „problems” and ways of knowing; it presents „solutions” as coming from unpredictable and deeply rooted changes in this sense. Works: „ <i>Reinchantment of the World</i> ” (Remodelarea lumii, M. Berman); „ <i>Creating desired futures, positive visions of the future</i> ” („Creating desired futures, positive visions over the future” (E. Masini, 1993); " <i>Creating future</i> " (M. Godet, 2006); „ <i>Futures Beyond Dystopia: Creating Social Forces</i> ” ("Futures beyond dystopia: creating social forces" (R. Slaughter, 2004); „ <i>Prospectiva: explorar el future</i> ” („Prospective: exploring the future" (R.T. Duran, 2001); " <i>A new theory of the future - the theory of foresight</i> ” (E. Hideg, 2002); „ <i>Education for change and creativity</i> ”(V.-M. Cojocariu, 2003); „ <i>The Anticipation Method</i> ” (S. Inayatullah, 2006); „ <i>Prospecting in education</i> ” (M-D. Bocoș, 2018).

Research in the Republic of Moldova	„ <i>Prospective nature of education</i> ” (2002) and „ <i>Values of modern education</i> ” (2006) elaborated by N. Silistraru; „ <i>Education through axiological optimum</i> ” L. Cuznetov (2010); „ <i>Innovative transfer in university education</i> ” (Vict. Cojocaru, 2010); „ <i>Education through values and for values</i> ” (D. Antoci, 2014); „ <i>Resultant theory</i> ” (P. Jelescu, 2022); „ <i>Theory and methodology of prospective education</i> ” (V. Lungu, 2019) etc.
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From the data presented in Table 1, it can be seen that D. Meadows identified various social problems and explores their solutions, and H.G. Wells argued *that the future could be known scientifically* and laid the foundation for academic futurism, which stands for prospective education. Later A. Toffler refers to *the construction of the future through science and technology* [102], and E. Hideo lays the foundations of the theory of anticipation [89].

The studies analyzed by us reveal the importance of prospective aspects in various fields: planning, business, environmental research, economy, etc., initiated in 1950 retrospectively, until the 1960s studies were concerned with prediction. From the 1970s to the 1980s, various system perspectives were used and alternative scenarios and futures emerged. Later, between the 1980s and 1990s, interpretative and critical perspectives emerged in which change is associated with discursive power. From the 1990s to the present, participatory approaches address change through an emphasis on action-oriented research [104].

An analysis of the present situation of the prospective, from these fields mentioned above and, an attempt to anticipate the future consequences, we opt „for an education focused on *the prospective and continuous availability* for knowledge and action, for reflection, creative adaptation to the social context in permanent change” [29, p. 21].

If education emphasizes the prospective character and retrospective and hypothetical predictions, focusing on the formation of the personality to adapt to change, either through innovations that appear in the technical or economic field, or through reforms; then prospective education focuses on real prospective developments, trying to establish their credibility or probability through anticipation. The anticipation of new facts, of risks, depends on the innovative character, but also on planning, on scientific prediction.

The presentation of *the prospective nature of education* as a way that contributes to the perception of the future, to aspirations and ideals

that essentially change from one stage to another, proves that education is continuously in crisis. Therefore, we cannot equate *the character of education* (as a particularity) with *Prospective Education*, the latter being oriented towards the needs of the future, analyzing the consequences of the past and solving the present problems, but also anticipating their consequences in the future, a fact that proves the direction perspective of education.

The prospective education approach from a multidisciplinary perspective - *philosophical, social, psychological and pedagogical* - allows us to identify the way in which existing theories have an impact at the level of institutional practices in the educational system, an important fact for the conceptualization of prospective education.

Through the ***philosophical approach***, which is related to more and more extensive areas of reality, *the formation and development of the personality* is established, which is based on the active role of human consciousness, including prospective thinking. It is also referred to the future model of education. Kant who affirmed that the educational process must be prefigured not according to the current state, but according to the ideal state of humanity, so that each of the future generations is one step ahead towards the perfection of humanity [apud 1, p.88], A. Tofler, when he refers to „convergent crises” of the system of cultural values and human civilization [102]. On the same issue, D. Roşca warns that overturning the traditional scale of values is a danger for the man for whom economic values are in the first place [apud 29, p.219]. W. Boyer, which suggests that in today's society there should be a change from a non-sustainable present to a sustainable future, in which social and ecological needs will be at higher hierarchical levels [apud 47, p.22]. J. Dewey argues the concept of education for the future, and learning by solving problems is proposed as a method [31].

Through ***the social approach***, we analyzed the educational process as an activity, which leaves traces on the individual's behavior in social life. Essentially analyzing the approaches of sociologists, various perspectives of education were found. For example: P. Berger and Th. Luckmann (experience accumulated through social norms and transmitted from generation to generation, explaining the reality of changes to provide chances of success, anticipated socialization) [9]; T. Parsons (determinism of the past and the future) [apud 47]; G. Belyaev (systemic changes in socio-cultural practices of a civilization undergoing globalization, cultural conditions and forms of adaptation of

educational theory and practice in a changing society) [110, p.26]. We considered that precisely these ideas are current, they also determine the need for prospective education research. At the same time, by *highlighting the role of anticipation* in the accelerated pace of change, we formulated a *legitimacy of prospective education - anticipation, based on forecasting and predicting the expected goals and development trends of society and education, respectively, on a national and international level, ensuring the analysis of all dimensions social and educational important and having an impact, and the actions, decisions, will contribute to the implementation of the strategic objectives and the achievement of the assumed results.*

The psychological approach refers to the development of the personality from a psychological point of view [60], as a process of modifying the intellectual structures of the personality. The formation of a personality conforming to the prospective educational ideal, involves the conscious engagement of the theories of personality development depending on the trends in the development of education - changing conditions both in the school and social environment. Thus, D. Sălăvăstru synthesizes several paradigms dependent on: present and past; the future of psychology influenced by the future of society [apud 47, pp.49-51].

As an argument, in this sense, come the ideas of the researcher M. Sleahțiți who explains about „the capacity of the human being to be oriented and, respectively, *to be prepared to face an uncertain future*, where the awareness of the embryonic-archaic character of our current behavior it is reflected as an *embryo of future civilizations*” [68, p.15]. We agree with the explanation of the researchers A. Tarnovschi and J. Racu who state that „the anticipated experience of thinking also refers to the subject's orientations, to his action plans. With the help of thinking we plan our future and organize our existence” [69, p. 98]. Through reflection the student gains a sense of power over his future action. Transformative competencies are developed and deepened through reflection.

Through **the pedagogical approach**, the process of training and development of the student's personality focused on Prospective Education was ascertained, by relating it to the current and perspective requirements of society through innovation [19; 90] design [36; 80], change [18], anticipation [65; 78; 85; 89] and adaptation [84], by modeling the future [79], risk management [109] etc.

Following the analysis of scientific approaches, we found the need to highlight the opinions of the authors in order to define the concept of *prospective* correlated with that of *prospective education*. In the specialized literature [7; 21; 32; 65] we identify various reference related to prospective education, which we present in Table 2.

Table 2. Scientific approaches in the conceptualization of Prospective Education

R. Dottrens, 1971	<i>Prospective education</i> is characterized by its orientation towards the future, having as its object of study the probabilities of the evolution of communities, in order to establish the foundations of an education adapted to the situations and requirements of tomorrow.
P. Apostol, 1970	<i>Prospective education</i> refers to a particular global systemic function of social complexes: that of „production and/or reproduction”, more precisely, the formation of personality types suitable for a certain society, in a certain stage of its history.
S. Cristea, 1979	<i>Prospective education</i> is „the education carried out in the perspective of the future, which aims at the formation in the school activity of some cognitive, affective, psychomotor qualities, skills or structures that are expected to be absolutely necessary in the future activity”. <i>Prospective education</i> involves the study of the future evolution of society through the analysis of current factors and trends. This aims at the formation of cognitive, affective, psychomotor qualities, skills or structures that are expected to be absolutely necessary in the future activity [24, p. 154].
M. Godet, 1994	<i>Prospective education</i> is about anticipation, strategic action and its future orientation, creating the desired future.
M. Stanciu, 1999	<i>Prospective education</i> is a <i>methodical investigation of the future</i> , using an approach that privileges changes and renewals.
Dm. Todoran, 1982	<i>Prospective education</i> refers to a sui-generis sector of the social complex: human training for the future and in the future. <i>Prospective education</i> in a broad sense includes any future study and construction, and - in a narrow sense, refers to research on the possible future in this field.
M.-D. Bocos, 2016	<i>Prospective education</i> is a type of education through which prospecting the evolution of society, anticipating the future from various scientific perspectives and complex studying,

today represent an objective necessity manifested in education, in the fields of human activity.

Genealogically analyzing the prospective education definitions of the authors presented in Table 2, we found that R. Dottrens presents Prospective education as *a study of the probability of the future*, P. Apostol as *a global systemic function*, M. Stanciu as *a methodical study*, M.-D. Bocoş as *a type of education where anticipating the future from scientific perspectives represents an objective necessity manifested in education*, which allows us to analyze the perspectives of interpretation of prospective education from several points of view.

In the context of the analysis of studies carried out by scholars at national and international level, theoretical uncertainties were highlighted with reference to the prospective character of education, of the term Prospective Education which is presented not only as a form of education (e.g. formal, non-formal or informal) and not as a new type of education (e.g., ecological, for peace, democracy, etc.), but it is more *a principle of orientation and prospective design of education*, as a function, as a method, etc., - findings that it causes dissonance, creates confusion, but also confirms the need and actuality of the study carried out.

Chapter 2. Theoretical-practical guidelines for the knowledge of prospective values identified in the initial training of students

Aspects of the educational crisis from the perspective of re-ranking and changing values are elucidated, where ethical and moral values give way to economic ones. In this sense, „the problems that appear in the field of axiology, such as those that concern the process of reevaluation of values, are explained by the transformations that society knows, transformations determined by economic and political causes...” idea also supported by researchers M. Borozan and A. Beţivu [14, p.231].

The reflections are generated in situation as „we are witnessing an ever wider and deeper loss of identity because we have ignored the need for an education system based on values - whether it is the fundamental ones or the identity ones, which are equally important” [67, p.3]. It is recognized that „the education system in Moldova is transforming too slowly, not being able to respond to the dynamics and requirements of the private sector” [73, p.16]. Aware of the premise that the future is not a space we walk through, but one we create, by promoting fundamental, moral, ethical values for the benefit of society

and in reducing the education crisis, the development of prospective values is needed.

One of the objectives of the research aimed at *preliminary experimental study to identify prospective personality values of students.*

Prospective values mean the estimation of the future benefits offered by a project, action, decisions, reflected by the current expectations and awareness of the person based on the available data, specific to the context, based on the referential of future requirements, manifested by the cognitive, affective and psychomotor field of the person, oriented towards the evaluation of their long-term consequences.

The conducted study allowed us to determine the level of planning and development of prospective values within the university. In this experiment, 336 students and 105 faculty members were involved. We set out to determine the level of design and formation of prospective competence values, thus, we compared the curriculum in the specialty of *Psychopedagogy, Educational Management* – 30 programs within the Tiraspol State University and in the specialty of *Information Technologies* within the Technical University of Moldova, according to the following criteria: - the activity represented by a verb; - the frequency of designing purposes focused on the formation of prospective values (anticipation, directional planning, etc.) - the frequency of designing prospective competence values; - the presence of indicators of the type of finality (knowledge, application, integration). Figure 1 represents the comparative analysis of the Psychopedagogy and Information Technologies curricula.

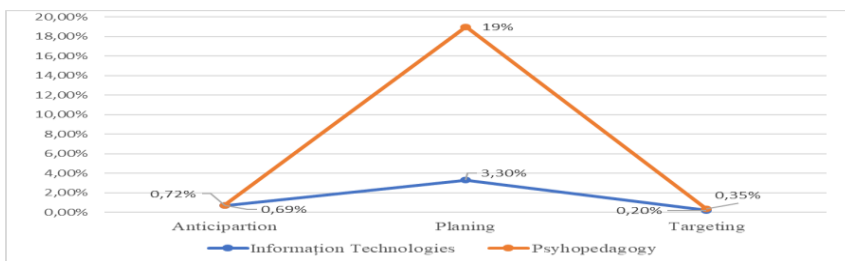


Figure 1. Comparative frequency of projected prospective competency values in university curricula (Information Technologies, Psychopedagogy)

As a result of the analysis of the curricula in *Psychopedagogy and Information Technologies*, at the level of design and formation of the

prospective competence values, the following were found: the insufficiency of the goals designed in the curriculum to reflect the orientation towards the formation of prospective values of the genre; to anticipate, to plan.

In the area of these issues, I considered it necessary to highlight the opinion of the teaching staff with reference to the design of the curriculum and the formation of the prospective competence values of the students.

In this sense, the Questionnaire „Prospective competence assessment of teachers” was applied to the 105 pedagogues from both universities. The comparative analysis of the answers provided by the two groups of subjects allowed us to note the focus on detailed explanations and arguments, in the case of respondents from the State University of Tiraspol, and the focus on concrete actions, in the case of those from the Technical University of Moldova.

Thus, to the question: *Do you train students in prospective competence in the discipline you teach?* reflects how this competence is formed.

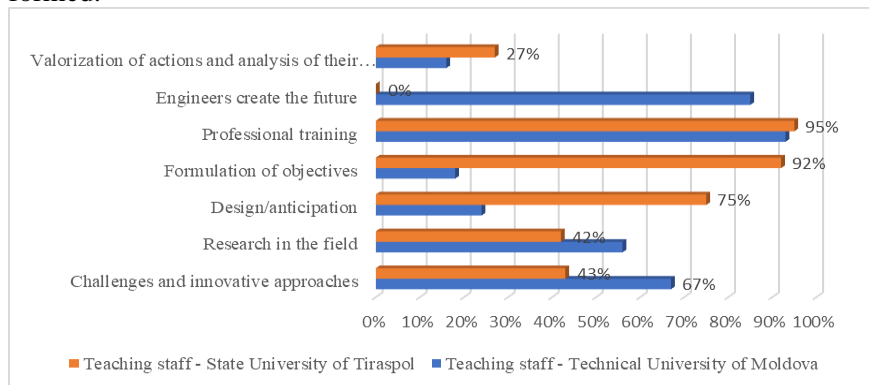


Figure 2. Distribution of teaching staff regarding the training of prospective competence

The analysis of the answers allowed us to identify that within the State University of Tiraspol and the Technical University of Moldova, prospective competence is formed under various formulations. As an argument, teaching staff from both universities see the formation of prospective competence through professional training. These results show the difficulties of perceiving the meaning of prospective competence, but also anticipating the consequences. Thus, the need for curriculum development is confirmed through the design and formation

of prospective competence to students and *the development of the mechanism of forming of prospective personality*. The study allowed us to observe that professional values change with technological development and the emergence of innovations in various fields, leading to professions with a transdisciplinary character (e.g., lawyer in robotics, designer in virtual habitats, game designer, environmental recovery engineer, etc.), but students are insufficiently prepared to anticipate the consequences of their actions and to direct the efforts required to implement their plans - prerequisites for strengthening the axiological foundation of the prospective education concept.

In achieving *the goal of recording the values of the prospective personality in a university context* from studies by researchers in the field, as well as in national and international educational policies, the following prospective value framework has been established Table 3.

Table 3. Prospective value context

Fields	Authors	Values
Politics at international level	EU Comission, 1999	anticipation, adaptation to change and decision – important in perspective.
	OECD, 2018	anticipation, planification, reflection, action;
Politics at national level	National Qualification Context, 2017	Decision making, planification, anticipation preparing of future personalities
	Employment Strategy 2017-2021	anticipation and adaptability as a necessity in qualification
Pedagogic	J. Dator, 2002	anticipation;
	V. M. Cojocariu	change;
	I. Antonesei, 2005	planification, provision, adaptation to change;
	N. Silistraru, 2006	change, planification, creativity;
	E. Hideg, 2007	anticipation;
	D. Antoci, 2018	planification;
	M. Bocoș, 2016	anticipation, adaptation to change;
	S. Cristea, 2017	adaptation, innovation- creation;
	L. Cuznețov, 2010	time;
	Vict. Cojocaru	Innovation for future education;
Psychologic	V. Ojovanu	information;
	D. Gilbert și T. Wilson, 2007	anticipation;

	J. Racu și A. Tarnovschi, 2017	
	D. Kahneman și A. Tversky	Risk management and decision making
Economics	M. Godet, 1994	anticipation, planification, strategic orientation or direction to future;
	Gh. Cuciureanu, 2013	innovation.

Our attempt to constitute a prospective value reference was based on the analysis of normative documents and the opinions of various researchers in the field, which led to the identification of the following prospective education values: *information management, time management, value for change, innovation, anticipation, design, direction, risk management, decision making*.

To this end we analyzed the National Framework of Qualifications [117] presenting the ranking of general skills which essentially highlight the prospective values. As a synthesis of this document analysis, the presence of prospective values focused on *planning/design, problem solving, adaptation to change, decision making, information selection* in several specialties were identified. In a few specialties (International Relations) *anticipation/forecasting* and (Physics, Chemical Technology, Environmental Protection) *creativity and innovation* were identified, but *the value of time management, risk management* was not identified in any specialty.

The analysis of the National Qualifications Framework shows that only the economic specialties are primarily oriented towards some values (design, innovation, information management, decision-making), and those from the technical field towards others (design, creation and innovation). It is important that several specialties focus on the formation value *setting*, formulated under various aspects (planning, project development, etc.), an aspect appreciated by us.

Finding some prospective values in the analyzed document, but also the lack of others, equally important, highlights and confirms only the focus and ensuring the prospective character focused on professional training (skills that will be applied in the future), but the anticipation of risks is less ensured, of consequences and effects of prospective education. The training of students must be carried out in such a way that the graduates are able to integrate quickly in a changing world, to be able to respond adequately to unpredictable situations. In order to satisfy these conditions, we consider it necessary to configure the prospective

competence in accordance with the requirements of society in constant change.

For the development of the conceptual framework, we propose the introduction as a necessary functional category *Prospective Competence*, in the following definition: *Prospective Competence* represents a completed structure, generated by mobilizing a quantity of internal resources of the subject, in a framework delimited by significant situations (pedagogically intentional or spontaneous, with a disciplinary or inter-transdisciplinary character) *that manifests itself through knowledge, attitude and aptitude in the perspective of the values of anticipation, design, as well as attributions of meaning and direction of the action.*

Chapter 3. Prospective education: theoretical-methodological configurations

As a result of achieving the objective *the reconceptualization and development of the terms prospective pedagogy, prospective education in the context of Prospective Education Theory*, conceptual benchmarks were developed starting from the scientific approaches analyzed and the results of the experimental study presented in chapter 2, which theoretically and experimentally founded *the Theory of Prospective Education*.

In the foundation of *the theory of prospective education*, an important aspect belongs to the theories of preparing human resources for the future (J. Dewey, A. Tofler, R. Dottrens) [31, 102, 32], the prospective triangle (M. Godet) [84], the theories of change (V.-M. Cojocariu) [18], perspective theory (D. Kahneman and A. Tversky) [92], the dimensions of prospective education were determined: the *temporal* one involves the identification of the hypostases of education related to the past-present-future relationship, the *anticipatory dimension* anticipating changes in perspective, their risks and the consequences of current actions, *the vector dimension* provides for directing the personality towards development, adaptability and creativity [47].

With the intention of explaining what and how change is achieved, we argue that it involves three major approaches: people-focused approaches, task- and technology-focused approaches, and structure- and strategy-focused approaches. Thus, in the perspective of the research needs of the Theory of Prospective Education, it is the result of theoretical analyzes and syntheses, scientific reflections on the

development of systemic-holistic and action-strategic approaches to the VCP formation process.

The *Theory of Prospective Education* consists of the key concepts: prospective, prospective education, prospective pedagogy, prospective competence, focused on theories and models, principles, dimensions, prospective values based on moral values and ethical values presented in the following figure.

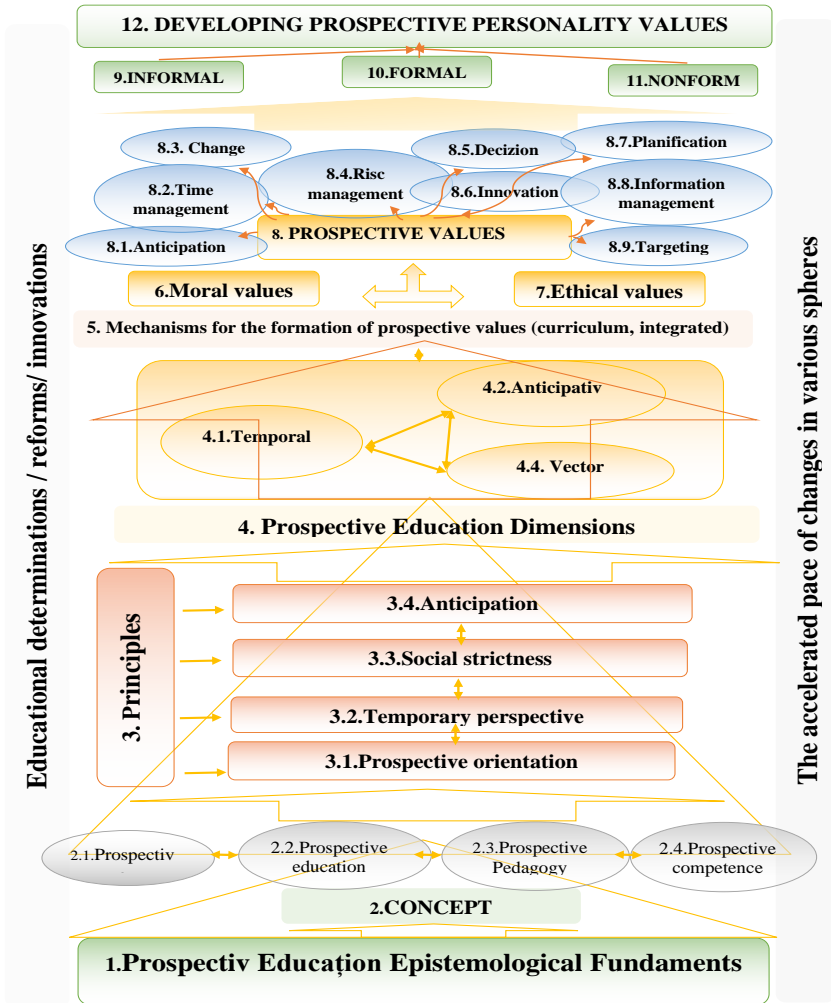


Figure 3. Theory of prospective education [personal contribution]

The process of modeling the prospective personality is carried out based on a system of **prospective principles**: *the principle of global approach, the principle of temporal perspective, the principle of social stringency, prospective orientation*. Thus, analyzing the essence of *prospective education*, we propose the redefinition of prospective education in a *broad sense* and in a *narrow sense* [47; 48; 50].

In a *broad sense*, *prospective education* foresees a value organization of personality expectations, through the valuable and significant re-ranking of values, *based on prospecting the evolution of society and anticipating the future in scientific perspectives*, contributing to the achievement of the educational ideal.

In a narrow sense, *prospective education* represents an organized and designed process of development of the prospective personality from the bio-psycho and social point of view, of formation of consciousness and proactive behavior of active integration in the constantly changing social life, anticipation and participation.

At the theoretical level, *prospective education* represents a fundamental pedagogical concept, which directs all aspects of the educational act towards preparing the student for the future through conscious change.

At a general level, *prospective education* proposes studies on the effects of society's knowledge regarding the structure and process of education, it relies on anticipations of technological, economic, social innovations, as well as on the synergy between education and research.

In conclusion, the fundamental pedagogical concept of *prospective education* defines *a general direction of education development*, which engages from a pedagogical point of view all the resources of the student's personality, with a view to his initial training within the university educational process.

Relating prospective education to Prospective pedagogy we understand it as an object of study that depends on the general purpose of the prospective study, effectively contributing to the understanding of the contemporary world, through the interdisciplinary, transdisciplinary and holistic exploration of current problems, as well as by approaching the possible future, taking into account policies and strategies present.

It is necessary to realize that the innovation and efficiency of the prospective approach to the educational process is highlighted by specifying its essence.

In a broad sense, Prospective pedagogy represents a fundamental field of educational sciences with a theoretical, practical and prospective character, which studies and directs the process of value change and adaptation and has as its purpose the formation of a fully developed and forward-looking personality, capable of managing social transformations, capitalizing on and fully potential and skills, contributing to the achievement of the educational ideal.

In the narrow sense, Prospective pedagogy studies the educational process organized and designed in order to develop the personality for the future, to form the consciousness and the proactive behavior of active integration in the constantly changing social life.

Functionally, Prospective pedagogy constitutes the totality of strategies, aimed at ensuring a psychosocial comfort, sensitive to change and orienting the personality towards anticipating and planning the future.

In managerial terms, Prospective pedagogy represents directing the process of orientation, anticipation and planning through prospective education, whose statement contributes to diminishing the influence of chaotic changes in favor of capitalizing and developing the individual's personal vocations for adaptation and transformation [47, 51, 93].

All social transformations have also determined "paradigm changes" in education, or „the change to a new paradigm is determined by the new challenges of contemporary society, by European policy documents, but also by educational realities at the national level” [2, p. 291].

In order to achieve *the objective of developing scientific knowledge of prospective pedagogy through the conceptualization of the Paradigm of prospective education, represented by the configuration of the dual base (the Epistemological Block of prospective education and the Operational Block of prospective competence formation), focused on the subsequent Resort in order to form the prospective personality*, we started from the explanation of the term of paradigm.

In essence, when one uses the notion of paradigm, one considers a systematized complex of principles, techniques and methods applied at the level of the educational system and process [47, p. 176].

The value validation of the ideas presented led to theoretical-applicative considerations, signifying the conceptual and methodological foundations of EP that will be relevant if it is constituted as an educational paradigm with a theoretical-applicative character by: valuing

anticipation and planning, as fundamental elements of EP; determining and structuring prospective values in the context of fundamental human values; approaching the educational institution from a prospective perspective; - the elaboration of the structural components of the EP paradigm: the application of the Epistemological Block of EP in the formal-nonformal-informal plan, of the transdisciplinary dimension of EP in the context of new educations; application of the Operational Block of CP formation; application of the prospective value formation approach; application of the technological field of EP.

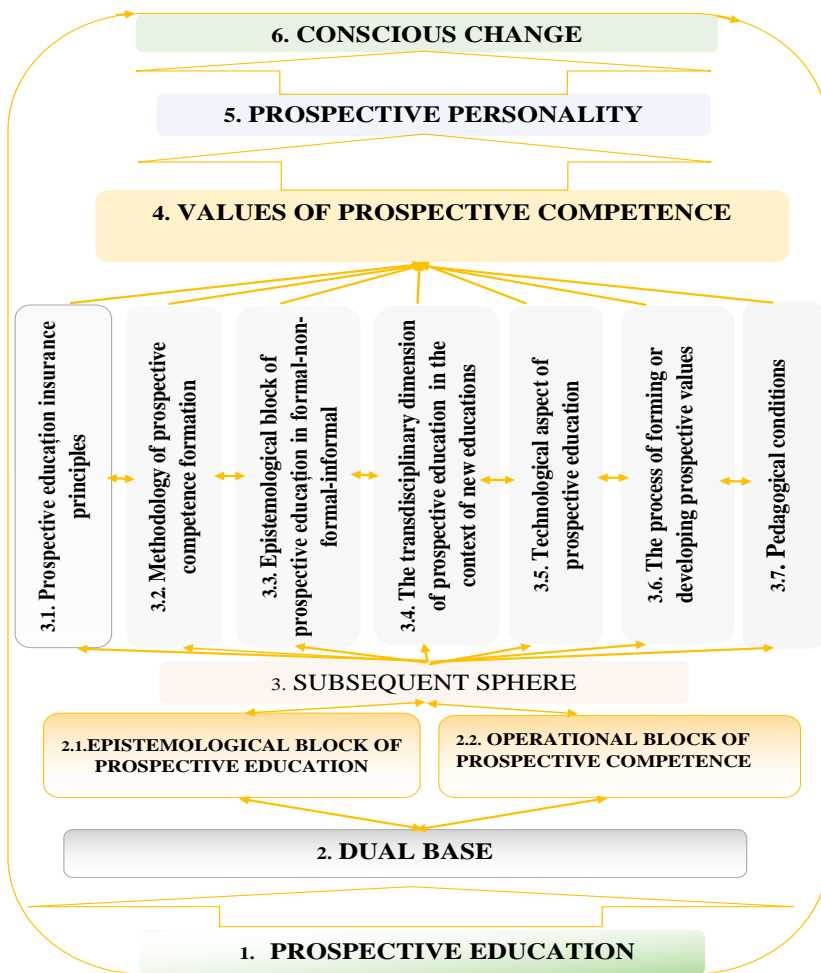


Figure 4. Prospective Education Paradigm [93]

Necessary premises are created for the promotion of the Paradigm of prospective education in the postmodern and knowledge-based society. Prospective education is dependent on the Pandanta Base (symmetrical pair) of *the Epistemological Block* presented in Figure 5 and *the Operational Block* presented in Figure 6, by subsequent resort (domains) as a response to the social order, conditioned politically, economically, psycho-socially and pedagogically in formal-nonformal-informal plan, transdisciplinary dimension of prospective education in the context of new educations; the technological field of prospective education; the process of formation/development of prospective values; principles of prospective education assurance; pedagogical condition.

Aware of the theoretical considerations presented, in order to optimize the educational action, we developed the Epistemological Block that combines all the epistemological and praxeological aspects addressed in the research (Figure 5).

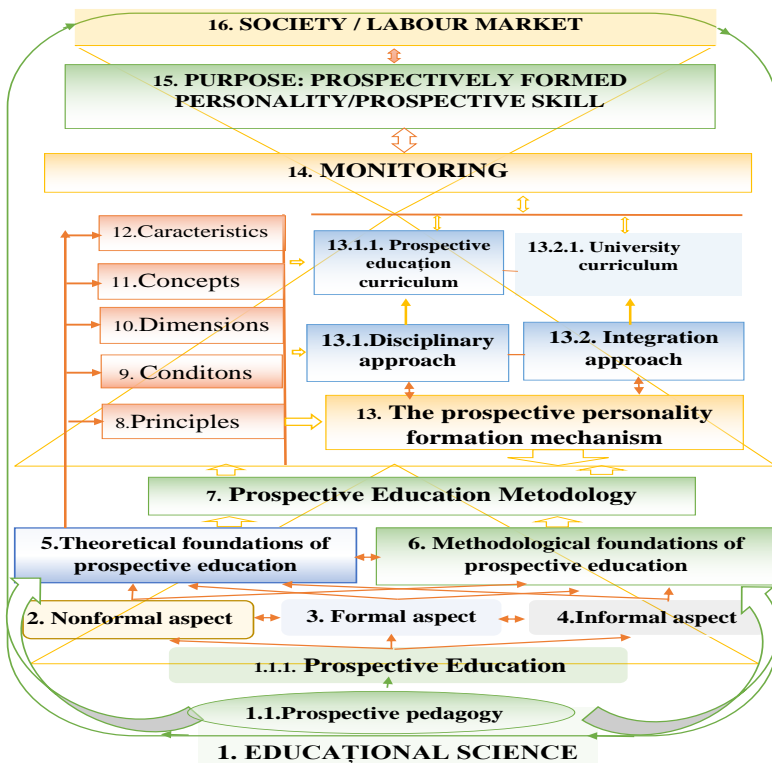


Figure 5. Epistemological Block of Prospective Education [47]

The theory of change (O. Dafinoiu), the theories of social change (C. Geertz, V. Turner), the philosophy of experience and pragmatic instrumentalism (J. Dewey), the theory of globalization (R. Robertson), were the basis for the development of the Epistemological Block of EP, proposed by us and represents a fundamental, guiding pedagogical concept, which directs all aspects of the educational act to prepare students for the future.

The Epistemological Block of the Prospective Education represents a theoretical construct, which demonstrates through all the components the character of the system and indicates the appropriate approach to the formation of the prospective personality, in accordance with the aspirations, competences but also with the personal and social needs.

Prospective education as a study object of Prospective Pedagogy, designed in terms of purposes, contents and technologies of teaching-learning-evaluation is produced in the context of prospective education by capitalizing on the contents in *the formal, non-formal and informal framework*.

The dynamics of changes in the training of the prospective personality, determined by the need to solve global problems, by the social transformations that occur at a fast pace and by the challenges in the professional field, conditions the formation of prospective competence. In our opinion, prospective competence, as the finality of EP, emphasizes the orientation of education policy on the needs of the present and the future. When we refer to the *prospective personality*, we have in mind a personality that is based on moral values, with critical thinking and with success in actions, efficient, that tends towards progress, with a clarity of thought, creating a viable social, professional and social future, which perceives the importance of lifelong learning for one's own development, adaptation to change, participation in the progress of society. Thus, what is today conceived as an effective personality, capable of integrating directly into social life without difficulties, a multidimensional personality will be ensured. *The prospectively formed personality* involves the formation of prospective competence achieved through the methodology of prospective education, the mechanisms of forming of prospective personality, compliance with the principles, conditions, dimensions, concepts and characteristics and a monitoring interdependence, the goal of forming the prospective personality is achieved which in turn will produce conscious change.

Approaching prospective competence in a pedagogical situation, led to the development of the Operational Block of Prospective Competence Formation (Figure 6).

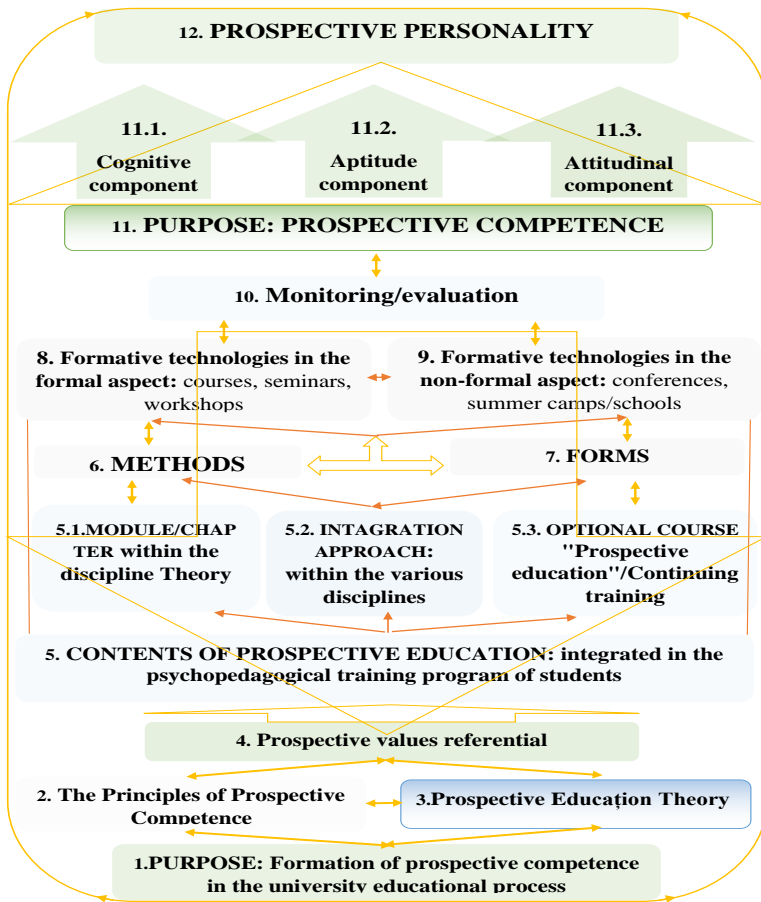


Figure 6. Operational Block of Prospective Competence formation [47]

Figure 6 elucidates structural components of the operational Block of prospective competence formation and their interaction, aiming at the formation of prospective competence, which are included as a component of the *Prospective Education Paradigm*.

In the context of the analysis of the purpose-values interrelationship, we find that the professional training activity is determined by the referential values at: - subjective level as an individual

dimension of the human being; - objective level as a dimension of socio-professional rationality.

In achieving the objective of *elaboration and capitalization of the methodological base of prospective education in higher education represented by the legalities, principles and conditions for the formation of the prospective personality*, the characteristic principles of Prospective Education were determined in particular.

Table. 4 Prospective Education Principles [47, p.14]

Principle	Description
<i>The principle of temporal perspective</i>	The need for the rational management of time as a new resource arising from the consequence of speed, causes the accelerated wear and tear of knowledge, a fact that justifies the need for prospective education and the preparation of the student for a series of tasks that they cannot predict with accuracy, but which influence their decisions over time. At the same time, it is required to analyze the problem from the past-present-future perspective.
<i>The principle of social stringency</i>	It expresses the requirement that didactic activities offer sufficient strategies to support diversity and the rapid dynamics of social life. The educational process needs to be centered on solving situations - real problems, with immediate solution and which reduce the weight of social failure and the consequent frustrations of this failure.
<i>Anticipation Principle</i>	It starts from the assumption that the (mental) map anticipates reality. Anticipation is directly responsible for influencing and possibly controlling future events. Anticipation involves some specific elements, such as <i>forecasting changes</i> and <i>prediction</i> , aimed at ensuring knowledge of the evolution of events, as well as forecasting the evolution of an event depending on the elements that determine it.
<i>Prospective orientation principle</i>	It ensures the orientation of the goals in the direction of social and pedagogical innovation, a firm, permanent orientation, achievable in any context.

The principles described in Table 4 serve as a theoretical and normative foundation in achieving the intended effect in accordance with

the prospective education objectives and represent the core of the prospective education paradigm.

The formulated analytical deductions contributed to the elaboration and scientific description of prospective education laws.

The **legitimacy of anticipation** ensures the orientation of the ends in the direction of pedagogical and social innovation - a firm, permanent, realizable orientation in the direction of the continuous development of the human personality by anticipating needs.

The **legitimacy of the orientation of education towards the future** is like a map, like a plan that helps the person to make decisions about the future. The developmental value of future-oriented education is not in predicting the future, but in engaging in the future, in building a life course. The factors influencing this legitimacy are dependent on setting goals and objectives, for building plans and acting to achieve them, for creating a commitment to the planned life course. When we think about the future, we trigger a process of change in the present, whether such thinking is personal or social, realistic, idealistic or fantastical.

The **legitimacy of change** is based on continuous development and innovations, valuing the social and educational future. Successful educational theories have survived precisely by changing the theory in the current light, a trend that will continue in the future. The factors that act this legitimacy are: cultural, technological, sociological innovations, reforms.

The **legitimacy of prospective pragmatism** is based on variables of the relationship in the university environment with an emphasis on intervention or action in real environments, involvement in solving real problems in the field of professional training and in life.

The factors that condition this legitimacy are: the formation of responsible professional and personal behavior for the future; formation of prospective competence [93, p.101-104].

In achieving the objective *of developing and validating the prospective education Paradigm by the dual Base with the component elements (Gnoseological and Operational Block)* focused on the subsequent Resort focused on prospective competence formation, we started by highlighting the fact that the prospective education Paradigm is *conditioned* by the influence of several primary factors:

General conditions: adaptation of the university to the present and future needs of society; organizing and orienting students towards

the future; adjusting the professional training objectives of students to the demands of society and the labor market; facilitating emotions, adaptive behaviors to the environment/change, being the result of evolution.

Particular conditions: strengthening the theoretical and praxeological basis for the formation of prospective values; development of the capacity for foresight-creation-innovation; the formation of prospective competence in students.

Specific conditions: ensuring the effective interaction between past-present-future; taking into account the links between existing goals and objectives, but also establishing priorities according to societal changes/challenges; effective application of methods, prospective techniques in the teaching-learning-evaluation process.

Methodical conditions: correlation of university curricula in different specialties with the current and future problems of society; the application of prospective methods in the formation of the student's personality; focusing on prospective education principles. The mentioned conditions are associated with both the content, the structure of the competence and *the prospective values*.

The theoretical and methodological grounding of prospective education requires the awareness that prospective direction matters for all areas of professional training. Thus, the introduction of *prospective education* as a new scientific direction in the university educational system creates conditions for the development of prospective personality and possibilities for the development of the prospective potential of the student and society, in accordance with current and future requirements.

Chapter 4. The experimental exploitation of the prospective education paradigm

Resulting from the conceptual and operational nature of the previously exposed paradigm, the formative experiment was carried out in the university setting, based on the strategy presented in Table 5 through the experimental design for the formation of prospective competence values.

Table 5. Design of pedagogical experiment

Experimental stage/ experimental subjects	Objectives	Tools	Methodology
Stage I. Determining the level of prospective competence formation Total subjects: 336 Technical University	The research of a set of aspects that	- „Prospective Competence assessment” questionnaire (technical profile);	Analysis and synthesis; The deduction; Interpretation.

<p>of Moldova – 215 students - 135 experimental group - 80 control group Tiraspol State University – 111 <i>studenți</i>: - 82 experimental groups - 29 controlling groups</p>	<p>converge towards the level at which the students' prospective competence was formed.</p>	<p>- „Prospective Competence assessment” questionnaire (pedagogical profile).</p>	
<p>Stage II. Formation of prospective competence values: - anticipatory; - planning; - targeting; - risk management -management of change; -information management; -time management; - decision-making; - innovative. Total subjects: 217 Technical University of Moldova – 135; Tiraspol State University – 82.</p>	<p>Carrying out the formative experiment in order to raise the level of prospective competence training of students.</p>	<p>„Professional Ethics” course. "Communication and Academic Writing” course. Integrated approach at Technical University of Moldova. The „Functional didactics” course. Integrated approach at Tiraspol State University. „Prospective Education” course. Special (disciplinary) action.</p>	<p>The case study; Problem Elaboration of scenarios; The debate; Strategic forecasting; Forecasting; Modeling alternatives; Prospective analysis; The research project; AAR: anticipation/ action /reflection;</p>
<p>Stage III. Validation the prospective competence formation level. Total subjects: 336 Technical University of Moldova– 215 students. Tiraspol State University – 111 students.</p>	<p>Establishing the percentage increase in the level of PC training of students.</p>	<p>Evaluation matrix of prospective competency values. Chestionare, „Evaluation of prospective competence level”; Special (disciplinary) action; The integrated approach.</p>	<p>Analyze; Data comparison; Contrasting data; Interpretation; Statistics; The synthesis.</p>

The formative experiment was designed based on the prospective education paradigm, by using objective components of the learning process – the educational program/module. The supporting materials regarding the educational programs/modules were developed including through activities carried out in the non-formal-informal framework. Based on the curricular paradigm, of the conception centered on the one who learns and on the socioeconomic conception aimed at preparing students for social insertion, we propose the following evaluation benchmark: prospective competence with its values; the competence indicator; product evaluation criteria.

The initial stage had a confirmative character, with *the aim of establishing the existing level of prospective competence values at the time of the initiation of the psycho-pedagogical experiment*, both in the experimental and control groups. In the confirmatory phase of the experiment, equivalence was ensured between the experimental and control groups, the application to both the questionnaire *Adapting to change and innovation of the university education institution*, as well as the questionnaire the *Prospective Competency Assessment of Students* questionnaire, developed with *the aim of determining the level of prospective competence formation in students* [47, p.248-253], through which gaps were highlighted between the expectations of students in relation to the current university system and the workplace, but also the real situation they face, especially with reference to the valorization of education and university training. Therefore, we aimed to assess the following values: *anticipate, planning, creativity and innovation, time management, openness to new opportunities/ adaptation to change, direction/future orientation, decision making, risk management, information management* - (identified following the scientific analysis carried out in chapters 1 and 2). *The prospective competence assessment process* was carried out intrinsically at each stage of training, through the levels that are described- knowledge, application, integration. Each of the prospective competence values were interpreted according to the level of development and manifestation: *low, medium, high*.

The docimological tests [47, p.266-268] were developed in accordance with the curricular referential of the courses: *Professional Ethics, Communication and Academic Writing and Functional Didactics*, being respected the prospective competence values training components, integrated in the curriculum of the mentioned subjects. In the development of the prospective competence values measuring

instruments, we focused on the construction requirements of the docimological tests, therefore the analysis of the results is a qualitative, that is presented and interpreted statistically descriptively

The second stage assumed the curricular conceptualization in terms of purposes, contents and technologies, oriented towards *the formation-development of students' prospective competence values*, but also through the integration of prospective competence values in various university disciplines. *The scientific values (Prospective Education Theory, Epistemological Block of prospective education, Operational Block of prospective competence, Prospective education Paradigm, but also theories related to prospective education, identified in the scientific literature), produced within the new research direction Theory and methodology of prospective personality formation*, were integrated in curricular resources developed for the needs of research and capitalized in the context of the completeness, consecutiveness and continuity of prospective competence values training for students, by developing the curriculum for the discipline Prospective Education and by integrating prospective competence values within the curriculum for the discipline *Functional Didactics, Professional Ethics and Communication and Academic Writing*. As a result of the formative experiment, the same assessment samples and didactic tests were repeatedly applied, respecting the same conditions with *the aim of validating the prospective education Paradigm in the perspective of forming the prospective competence values of the students*. Implementation of the *Prospective Education* course, certain changes occurred in the training of prospective competence, presented in Table 7.

Tabel 6. Level of prospective competence formation (test/retest)

<i>Prospective Competence Values</i>	<i>Psihopedagogical, test</i>			<i>Psihopedagogical, retest</i>		
	High	Medium	Low	High	Medium	Low
Level of formation	High	Medium	Low	High	Medium	Low
Provision/anticipation	20%	55%	25%	35%	50%	17%
Planification	38,5%	62,5%	7,5%	60%	40%	0%
Creativity	25%	35%	40%	38%	35%	36%
Time management	14%	22,5%	9,5%	31%	35%	35%
Adaptation to change	15%	57,5%	17,5%	45%	50%	5%
Targeting	22%	30%	58,5%	31%	38%	32%
Making decisions	9,5%	70%	17%	19%	76%	5%
Risks management	5%	0%	0%	9,5%	12%	5%
Information management	9,5%	72,5%	21%	31%	57%	9,5%

Comparing the results recorded in the case of the dependent variable (prospective competence) from the test and retest stage, we find that there were statistically significant changes, where the planning value increased from 28.5% high level pretest to 40% high level retest.

By administering the test „*Evaluation of the training level of prospective competence values*” in *Functional Didactics*, the data from the test and retest stage for students from the Psychopedagogy specialty (Tiraspol State University) were comparatively analyzed. The results are shown in Figure 7.

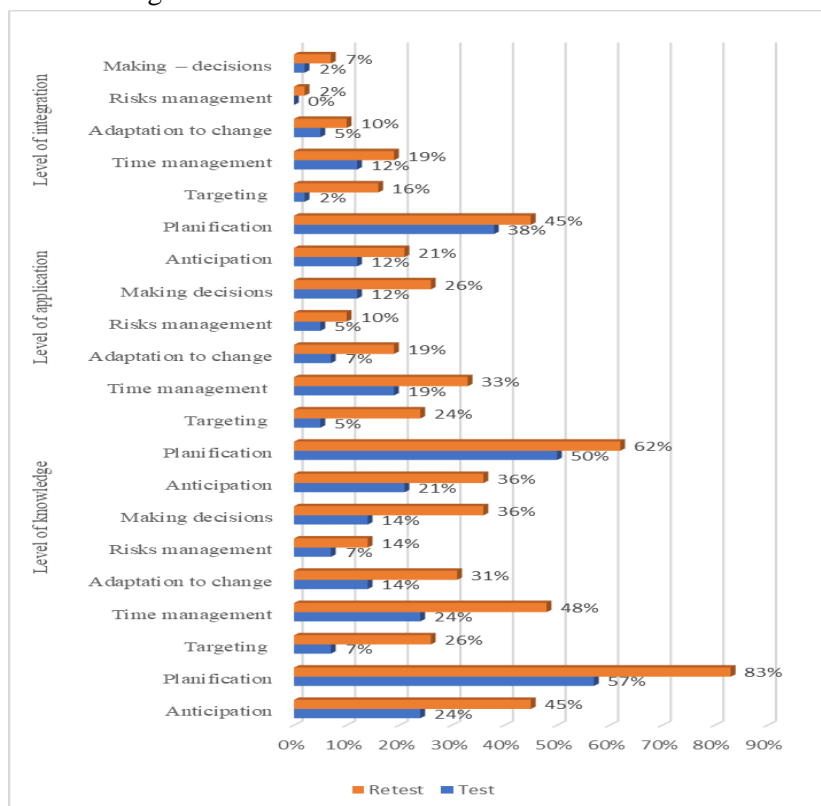


Figure 7. The Comparative Levels of Prospective Competence Values Formation in Functional Didactics (test-retest)

Analyzing the data for *the Functional Didactics* course, integrated approach, recorded following the student survey

(*Psychopedagogy* specialty) and in accordance with the indicators for evaluating the values of the prospective competence elaborated by levels, we determined that the students from the State University of Tiraspol having pedagogical studies (college) formed the value of planning 45% of the subjects, a significant increase is observed for the value of time management from 12% to 19% and respectively of the value of anticipation from 12% to 21%, values that are of first necessity in the use of didactic design.

It can be seen from Figure 7 the formation of the planning value at the I level of training increased from 57% to 83% for the *Psychopedagogy* specialty. Level II formation of planning value increased from 50% to 62%. Level III formation of planning value increased from 38% to 45%.

To confirm the effectiveness of the formative experiment, the same statistical formula of the t-Test was applied, where it was demonstrated that anticipation $t = 2,79$, direction $t = 2,56$ and decision-making $t = 2,40$ are significantly at $p = 0.05$, and the planning value $t = 2,71$ significative at $p = 0.01$.

We specify that in some cases there was an insignificant increase, in other cases values were set for general results for the value of adaptation to change, the value of risk management, the value of time management and the value of information management.

We note that developing these skills can be difficult for several reasons: - as with creativity and innovation, these skills require more than a few hours of training to be fully developed. They require continuous practice and constructive feedback to be internalized and applied effectively; - sometimes students do not immediately see the relevance of these values to their career. Without a clear understanding of how these skills apply in pedagogical practice, their motivation to learn and apply them may be low; - being in the Covid -19 period, the course was taught online, where it was less possible to apply more interactive approaches, such as project-based learning, experiential learning and simulations, to help students learn and practice these values; - educational culture that does not actively value or support these values can make their development difficult. It is important that educational institutions promote a culture of adaptability, risk management, time management and information management.

Developing the values of adaptation to change, risk management, time management and information management among student teachers

requires a holistic approach that combines theoretical training with real practice, continuous support and interactive teaching methods, but also an educational culture that supports these values.

Through the administration of the „*Evaluation of the training level of prospective skills*” test, the data obtained at the test and retest stage for students from the Technical University of Moldova were comparatively analyzed. The results can be examined in Figure 8.

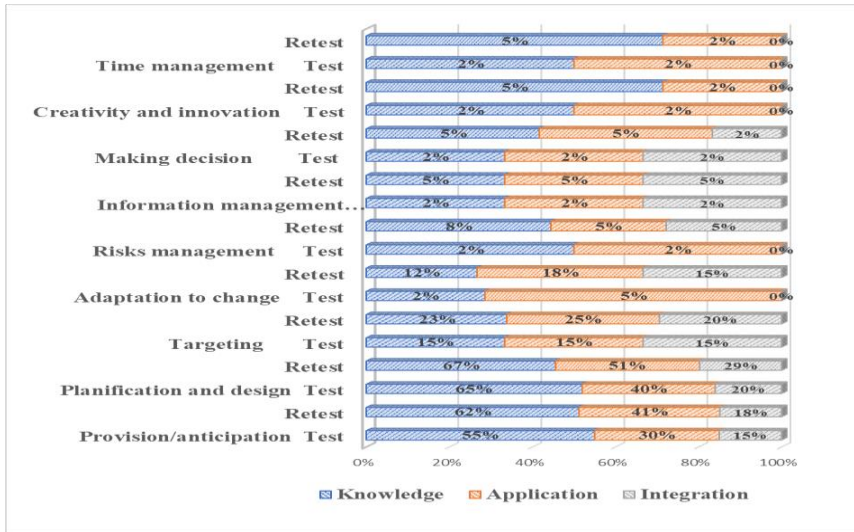


Figure 8. The comparative Levels of Prospective Competence Values Formation at Professional Ethics

Following the application of the Professional Ethics course, integrated approach, the repeated questionnaire was applied and in accordance with the competence evaluation indicators developed by levels, we obtained an increase in prospective competence from the level of knowledge to the level of application and integration.

Data analysis confirms significant changes in project value $t = 2.57$, adaptation to change $t = 2.58$, time management $t = 2.51$, decision making $t = 2.50$, information management $t = 2.07$, all results being significant at $p=0.05$. We have values as creativity, direction, risk management, anticipation which have no significant results. It can be explained by the fact that engineering students perceive professional

ethics as more theoretical and less relevant to the technical skills they consider essential for their careers. This perception can reduce the motivation to engage in activities that develop creativity.

In order to determine the effectiveness of the formative experiment, the questionnaire „*Evaluation of the training level of prospective competence*” was applied, the data obtained at the test and retest stage for students from the Technical University of Moldova were comparatively analyzed. The results shown in Figure 9.

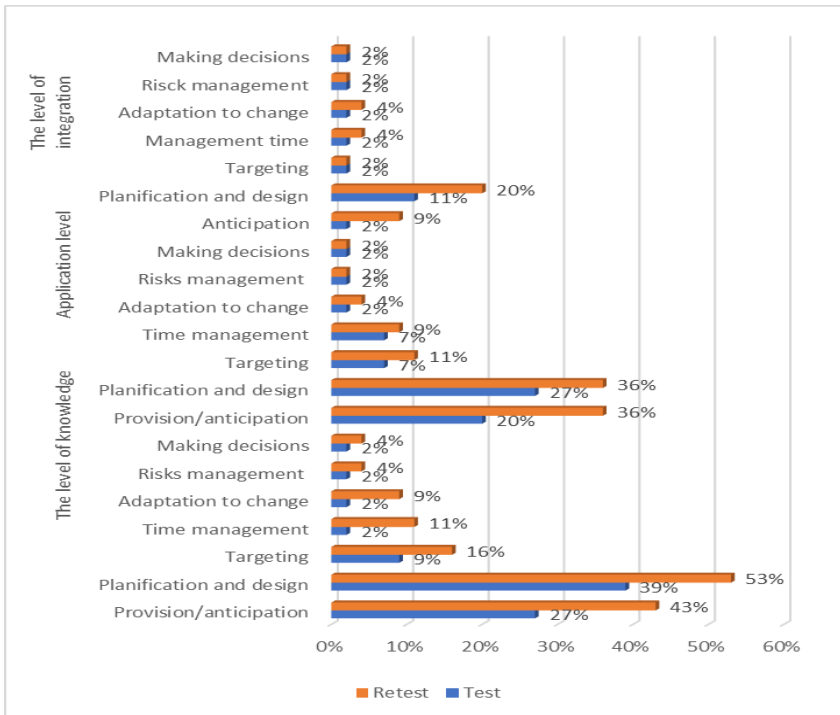


Figure 9. The Comparative Levels of Prospective Competence Value Formation in the Course Communication and Academic Writing

Analyzing the comparative test and retest data for the course *Communication and Academic Writing*, integrated approach and according to the indicators of prospective competence assessment developed by levels, we observe an increase in the planning value from the initial 11% to the final 20% for the integration level, an increase for

the anticipation value from 2% to 9% is highlighted - important values for future engineers in the accelerated pace of change.

The data analysis confirms the numerical dominance of the indices for the planning variables $t = 2.006$, anticipation $t = 2.406$, direction $t=2.50$, adaptation to change $t = 2.57$ with $p = 0.05$ and for the decision-making values $t=2.58$, management risks $t=2.57$, adaptation to change $t=2.57$ being significant at $p = 0.01$. We note that mostly of the tasks were more focused on the development of these values and less allowed to focus on decision-making, time management, adaptation to change, etc.

From the discussions with the students it was determined that the planning value felt a considerable increase due to the fact that they are put in a position to plan in other courses as well.

The analysis of the experimental data of the students at the test and retest stage (Figure 10) demonstrates an increase in the indices for all the variables of the prospective values, a fact that confirms the effectiveness of the program carried out with the students.

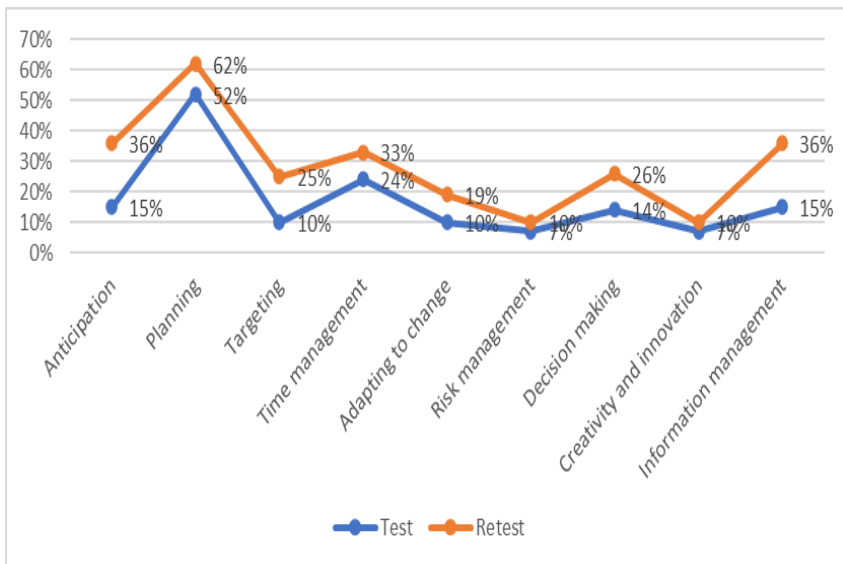


Figure 10. The dynamics of students' prospective values of Tiraspol State University Students (test, retest)

From Figure 10, significant changes are highlighted in most of the prospective values, but we have no changes in the case of the risk

management value and the creativity and innovation value. This situation can be explained either by resistance to change, or by the fact that students in the pedagogical field are less oriented towards these values through practical application.

The comparative analysis of the experimental data of students from the Moldova Technical University shows significant changes in some variables and less significant in others, results that can be viewed in Figure 11:

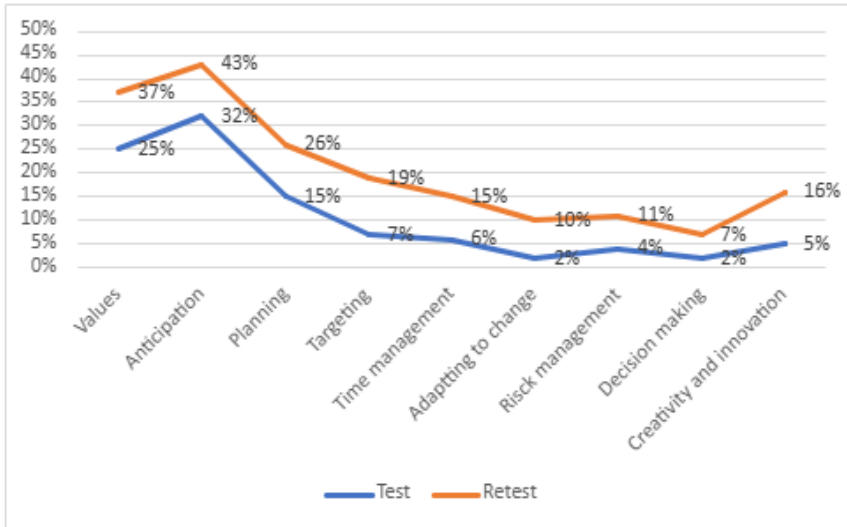


Figure 11. The dynamics of students' prospective values of Moldova Technical University (test, retest)

The observable differences between Figure 10 and Figure 11 can be explained by the fact that within the State University of Tiraspol, the prospective education curriculum was applied with a number of 30 classroom hours, and within the Technical University of Moldova, the values of prospective competence were integrated in other courses, respectively, less time was allocated to this issue.

The experimental results confirm the effectiveness of the research hypothesis, demonstrating the validation of the *Prospective Education Paradigm*, of the experimental approach from the perspective of the prospective competence formation of students.

GENERAL CONCLUSIONS AND RECOMMENDATIONS

The definitive research aims at the theoretical and methodological foundation of prospective education, which is necessary in the conditions of the global crisis of education, the challenges and reforms in which the university is and is related to national and international educational policies, on the one hand, and starting from the need to prospective education, of prospective competence value formation of students and continuous development of human being on the other hand. The analysis of studies in the field represents premises, arguments or objective landmarks, intended to highlight the significant positions and theories of scholars in the field of pedagogy, philosophy, psychology, sociology, etc.

Through the analysis of ideas, opinions and visions from the perspective of the past-present-future relationship, we find that prospective competence training in the university educational system presents confusions that have an impact on the quality of the educational process, of professional training, because no clear, scientific positions are established with reference to the conceptualization of prospective education, prospective pedagogy, a fact that constitutes an obstacle in differentiating them at the level of organization and essence, in specifying the methodology of training students' prospective competence.

The important scientific results of the research carried out are concentrated in the following **conclusions**:

1. From the perspective of theoretical approaches, **„white spaces,, were established in the professional and scientific terminology of the concepts „prospective”, „prospective education”, „prospective pedagogy”,** a fact that leads to terminological deficiencies regarding the failure to capitalize on the essence of the training stages of the future specialist, the importance of innovative pedagogical technologies in this process, changes in the field. As a result, **the scientific foundations of prospective education were determined** based on the theoretical research of the issue regarding the concept of prospective education, its evolution was decisive, both through the analysis of the theories regarding the prospective triangle of change, the theory of change, the theories of perspective, forecasting, anticipation, modernization, which have demonstrated *that the future can be scientifically known and that prospective education is necessary to mitigate educational and social risks and crises.* [43, p. 35] (Chapter 1 of the thesis).

Through the analysis of the educational policies focused on university education and the ways of actions carried out by them, a convergence of the educational policy documents with the European ones was found, focused both through reforms and research, with a major role oriented towards scientific, technical and social. The role of the university in the knowledge society was specified [44, p. 8] by the fact that it ensures the optimal functioning of three significant fields of activity: education, scientific research, innovation and the involvement of the institution in social, economic and cultural activities.

2. *The experimental study to identify the values of the students' prospective personality* was carried out by applying the Questionnaire „Adaptation to professional changes” to students, the application of the Questionnaire „Assessment of prospective competence” to teaching staff in the university and the Questionnaire „Adaptation to change and innovation of the superior educational institution” applied to managers, results that present the difficulties of perceiving the significance of the prospective competence, but also the problems they face in anticipating the consequences, it allowed highlighting the ways to implement prospective education within the university and specifying the evolution of professional interests and recording the possibilities of adapting to the change of students.

The analysis of the university curricula (specialty Psychopedagogy, Information Technologies, etc.) from the two universities proved the need for the system of prospective values that are essential for the characterization of the system of professional skills due to changes in society [94, p. 475; 95; 96]. Through the analysis of the university curriculum, the approach for the formation of prospective competence values was established within the university [42] in view of the functionality and convergence of prospective education.

3. The analysis of university documents, educational policies, works in the pedagogical, economic, social, psychological field, *led to the finding of changes in various professions*, as a result, some skills or professions become outdated, others are either required and projected, because professions are taking shape specific with a transdisciplinary character (lawyer in the field of roboethics, virtual habitat designer, game designer, environmental recovery engineer, etc.). [47, p. 108] (Chapter 2) and allowed the synthesis of prospective values [45, p. 65-66]. The scientific values produced in the research created objective premises for **the consolidation of the axiological reference of the prospective**

personality in the university environment and determining the mechanisms of prospective personality formation in higher education. Emerging from the scope of investigated concerns, it was established that the specific aims of prospective education, contents and learning activities form the *Prospective Education Curriculum* that develops together with the curriculum development process [49, p. 72; 43, p. 154] due to the economic, social, technological and cultural evolution of contemporary society [51, p. 117], which led to **the elaboration of the Prospective Education Curriculum and the recommendations for the implementation of prospective competence values** [45 p. 62-69;] within university curricula through an integrated approach, materialized in the „Prospective Pedagogy” course support [43, p. 9] and in the Guide to designing prospective competence in university curricula [42]; to **the prospective competence conceptualization**, prospective competence *being introduced and defined* as a completed structure, generated by mobilizing a quantity of internal resources of the subject in a framework delimited by significant situations (pedagogically intentional or spontaneous, disciplinary or inter-transdisciplinary) that manifest through knowledge, attitude and aptitude in the perspective of values, anticipation, design, as well as attributions of meaning and direction of the action [42, p. 35] (Chapter 2).

4. The scientific values produced in the research created premises for the **elaboration of the Theory of Prospective Education** as a necessity in the accelerated pace of changes, contemporary issues, anticipation of crises in education, etc. It was established that prospective education is a study discipline of Prospective pedagogy [93], and in the context of its reconceptualization at the concept level, prospective education was *defined in a broad sense and in a narrow sense*. As a scientific argument, *the terms of "prospective education" were conceptualized* in a broad sense: *prospective education foresees a new value organization of the expectations of the personality, through the valuable and significant ranking of skills, based on prospecting the evolution of society and anticipating the future in scientific perspectives, contributing to the achievement of the ideal educational*, and in a narrow sense: *prospective education represents an organized and designed process of personality development for the future from a biological, psychological and social point of view, of forming consciousness and proactive behavior of active integration in the ever-changing social life*. At the theoretical level, *prospective education represents a fundamental*

pedagogical concept, which directs all aspects of the educational act towards preparing the student for the future through conscious change.

5. Establishing the methodological foundations of prospective education represents: a) **The Prospective Education Paradigm**, embodied by *the Dual Base* composed of *the Epistemological Block* and *the Operational Block*, dependent on *the subsequent Resort*, which highlights the prospective values, centered on the formation of prospective competence values, organized on the basis of the general principles of learning but also of the prospective approach to education, the particularities individual, it is identified in its functionality through the materialization in the prospective education course, thus promoting, in the educational activity, a fundamental concept - *prospective competence*; b) **prospective education principles** (*temporal perspective, social stringency, anticipation, prospective orientation*); c) **the legitimacy of change**, prospective pragmatism and orientation towards the future; d) **the conditions for the formation of the prospective personality** (ensuring the effective interaction between past-present-future); e) **the mechanisms of prospective personality formation** in higher education; f) considering the links between existing goals and objectives; g) establishing priorities depending on societal changes/challenges; h) effective application of prospective methods, techniques in the teaching-learning-evaluation process); i) the readjustment of the contents of the discipline in the perspective of permanent connection to the standards of the future [47, p. 10; 95, p. 474] (Chapter 3 of the thesis). All this reflects the quintessence of the conceptual, methodological and practical foundations, developed in the perspective of the formation of prospective competence values of students.

6. Elaborated evaluation tools, the Prospective Competence Evaluation Matrix and the implementation of the prospective education curriculum in the university context, the design of prospective competence as an integrated approach [44, p. 38-47; 93, p. 62-63] created premises in order to develop the pedagogical experiment. By designing and ensuring implementation through a **special approach (disciplinary-Curriculum Prospective education)** and/or **integrating prospective education in the courses „Professional Ethics”, „Communication and Academic Writing”, „Functional Didactics”, the Prospective Education Paradigm was capitalized through experiment with the aim of training or development prospective competence values,**

through which the increase in the level of knowledge, application and integration of prospective competence of the students involved in the formative experiment was found.

The results of the research allowed the *validation of the Prospective Education Paradigm* and the highlighting of some important segments aimed at its theoretical and methodological foundation. *It was found that the organization of the educational process from a prospective perspective requires an analysis of the factors and mechanisms of prospective competence formation* [42, p. 9-10; 93] through prospective values (*anticipation, design, direction of action, time management, information management, risk management, decision-making, creativity and innovation, adaptation to change*) in the context of educational, political, economic, social transformations, a fact that allows the adaptation of the training within social changes, but also the challenge/innovation of aspects in the professional field (Chapter 4 of the thesis).

The described theoretical and practical framework outlines the scientific identity of research in **the area of the new research direction: Theory and methodology of prospective personality development**, which will lead to the prospective value self-determination of students, stimulating the innovation of pedagogical thinking regarding the development of the prospective personality.

The scientific values produced in the research created objective premises for the development of the prospective values of the students through the new knowledge produced in the research (*Prospective Education Theory, Epistemological Block of prospective education, Operational Block of Prospective Competence Formation, Prospective education Paradigm*), a fact that theoretically and practically ensures the prospective education methodology, generating the personal and professional value system according to the present demands and future of society. The need for prospective education and the continuous development of the human being has the status of premises intended to highlight the significant positions and theories of scholars in the field of pedagogy, psychology, sociology and philosophy of education.

The direction of the study creates conditions for pedagogues to be formed with openings towards prospective values, by facilitating the construction of knowledge. Their quality, in any context, presupposes an openness of prospective education to a higher level on the need for educational change and innovation.

The important scientific problem that has been solved consists in the *theoretical and methodological substantiation of prospective personality formation* through the conceptualization of the Theory and Methodology of Prospective Education; the development of the university curriculum from the perspective of the formation of the values of prospective competence, by methodologically ensuring the capitalization of the mechanisms of formation of the prospective personality of students, thus contributing to the development of the theory and practice of prospective education in a university context.

Our research has demonstrated that, starting from globalization and the crisis of education that have been permanent, an opening *has been made from the development of Prospective Pedagogy, in the current conditions, through the theoretical and methodological formation of prospective personality development as a new scientific direction of research.*

Thus, perspectives for research regarding:

- the problem of prospective education implementation at the other educational levels become evident;
- analysis of the anticipation of concrete types of changes in education;
- analysis of the necessary skills for the labor market analyst;
- the deep examination of the influence of technological development on the educational future;
- anticipating crises in higher education caused by current and future changes and innovations, etc.;
- anticipating skills in the accelerated pace of change.

At the same time, the research carried out opens perspectives in the pedagogical science of the republic, for the continuation of the prospective pedagogy investigation as a holistic approach at all levels of the education system.

Based on the results of the investigation, the following **recommendations** were formulated for.

1. The decision-making factors: of the Ministry of Education and Research:

- *The Prospective Education Paradigm* can serve as a methodological basis for the formation of prospective personality and the development of educational policies that claim to be connected to the needs of the present and the future, namely: in the development of training standards for all specialists there is a need to include prospective competence, a fact that would allow awareness of the flexible nature of

society's demands, anticipation, adaptability to changes in the field. Its main ideas can be useful for the inclusion of prospective education in the initial and continuous training curriculum of specialists in various fields, as it aims at a better insertion of the individual in a polymorphous and dynamic world, where specific skills become outdated at a fast pace.

- To develop the performance of pedagogues in the perspective of prospective competence design and training, it is recommended that higher education institutions change the number of hours for the didactic norm in favor of those for continuous training and research, which will lead to the possibility of adaptation, forecasting and innovation of the educational process, ensuring competitiveness on the labor market.

2. University teachers:

- Introduction of a new course with the title *Prospective education/Prospective pedagogy* in the University Education Plan.

- The implementation of Prospective education in the continuous professional training process of both university, managerial and general teaching staff, as well as specialists in various fields.

- Elaboration of methodological guides with suggestions, strategies and technologies for prospective competence formation and prospective education implementation through integration within various university courses, etc.

- Connecting the theoretical results obtained at the national level with the theory and praxeology of prospective education on a global level.

- *Foundation of the Center for prospective analysis in the university education system.*

3. Labor market representatives. In the recruitment process, organizations can refine their policies in this regard by using questionnaires measuring foresight: creativity – proactivity – adaptation of possible scenarios.

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ADNOTARE

LUNGU, Viorelia,

„Fundamente conceptuale și metodologice ale educației prospective”,

Teza de doctor habilitat în științe ale educației, Chișinău, 2024.

Structura tezei include: introducere, patru capitole, concluzii generale și recomandări, bibliografie din 428 titluri, adnotare (în limbile română și engleză), concepte-cheie (în limbile română și engleză), lista abrevierilor, 22 de anexe, 278 de pagini (text de bază), 54 de figuri, 37 de tabele.

Publicații la tema tezei: 64 de lucrări științifice.

Cuvinte-cheie: *prospectiv, educație prospectivă, pedagogia prospectivă, competența prospectivă, valori morale, valori prospective, personalitate prospectivă, curriculum, student, cadru didactic, paradigmă.*

Scopul studiului constă în dezvoltarea pedagogiei prospective prin conceptualizarea și valorificarea practică a Paradigmei educației prospective orientată spre formarea personalității prospective a studenților în învățământul superior.

Obiectivele cercetării: stabilirea reperelor conceptuale ale EP în condițiile ritmului accelerat al schimbărilor și a inovării în procesul educațional universitar; studiul experimental preliminar de identificare a valorilor personalității prospective a studenților; dezvoltarea cunoașterii științifice a PP prin conceptualizarea Paradigmei EP, reprezentată de configurarea Bazei duale (Blocul gnoseologic al educației prospective și Blocul operațional al formării CP), axate pe Resortul subsecvent în vederea formării personalității prospective; reconceptualizarea și dezvoltarea semnificației termenilor de PP, EP, valori ale personalității prospective, CP în contextul Teoriei EP; elaborarea și valorificarea bazei metodologice a EP în învățământul superior reprezentată de legitățile, principiile, condițiile și mecanismele de formare a personalității prospective; consemnarea și descrierea VPP în context universitar; elaborarea concluziilor științifice și a recomandărilor metodologice privind teoria și metodologia EP.

Noutatea și originalitatea științifică constă în dezvoltarea cunoașterii științifice a PP prin determinarea fundamentelor teoretico-metodologice ale EP în termeni de valori ale personalității prospective; conceptualizarea Paradigmei EP, reprezentată de Teoria EP prin Blocul epistemologic al EP și Blocul operațional al formării CP; metodologia EP valorificată prin elaborarea legităților, principiilor, condițiilor și mecanismelor de formare a personalității prospective. Prin elaborarea Teoriei EP au fost create premise în vederea reconceptualizării EP, a definirii noțiunii de PP, a VP și a CP. Studiul experimental preliminar al identificării VP a studenților a permis elaborarea metodologiei EP, a instrumentelor de evaluare a VP, stabilirea demersului de formare a CP, identificarea VP a studenților și consolidarea referențialului axiologic al personalității prospective în mediul universitar.

Noua direcție de cercetare – Teoria și metodologia dezvoltării personalității prospective.

Rezultatele științifice principale noi: dezvoltarea pedagogiei prospective, conceptualizarea și valorificarea Paradigmei educației prospective prin fundamentarea epistemologică a educației prospective; reconceptualizarea educației prospective; definirea termenului de pedagogie prospectivă și competență prospectivă; consemnarea și consolidarea referențialului axiologic al personalității prospective a studenților; determinarea dimensiunilor EP; stabilirea legităților a principiilor, și a condițiilor formării CP în cadrul universitar; întemeierea științifică a Teoriei EP; dezvoltarea curriculumului universitar prin elaborarea curriculumului disciplinar Educația prospectivă și proiectarea EP la disciplinele: Etica profesională, Comunicare și scriere academică și Didactică funcțională; elaborarea și aplicarea în practica educației universitare a instrumentelor de evaluare a competenței prospective la studenți.

Semnificația teoretică rezultă din dezvoltarea PP, conceptualizarea Paradigmei EP, în contextul căreia a fost elaborată Teoria EP, au fost stabilite dimensiunile EP (temporală, anticipativă și vectorială), au fost determinate principiile (perspectivei temporale, stringenței sociale, anticipării) și legitățile EP (anticipării, orientării educației spre viitor, schimbării și pragmatismului prospectiv). Interpretarea și descrierea abordărilor teoretice și studiul experimental au permis completarea aparatului noțional teoretico-metodologic cu termenii de „EP”, „PP”, „CP”; consolidarea referențialului axiologic al personalității prospective și formularea indicatorilor și descriptorilor CP.

Valoarea aplicativă a cercetării se referă la: validarea în practica educației universitare a Paradigmei EP, axată pe Blocul gnoseologic și Blocul operațional, integrate prin Resortul subsecvent cu scopul formării personalității prospective; identificarea condițiilor EP la nivelul elaborării, aplicării curriculumului universitar EP și a integrării VP la disciplinele: Etica profesională, Comunicare și scriere academică și Didactică funcțională, orientate spre formarea CP la studenți. Pentru estimarea CP a studenților a fost propusă matricea de evaluare a CP, au fost elaborate și aplicate instrumente de evaluare a CP, au fost formulate recomandări metodologice privind formarea personalității prospective.

Implementarea rezultatelor științifice au fost realizate în cadrul a 43 de evenimente științifice internaționale și naționale, în cadrul Departamentului Științe Socio-Umane, FCIM, Universitatea Tehnică a Moldovei și a Catedrei PEP, Facultatea Pedagogie, Universitatea de Stat din Tiraspol, cu sediul la Chișinău.

ANNOTATION

LUNGU, Viorelia,

"Conceptual and methodological foundations of prospective education",

Thesis of doctor *habilitatus* in Education Sciences, Chisinau, 2024.

The thesis structure includes: introduction, four chapters, overall conclusions and recommendations, bibliography of 428 titles, annotation (Romanian, English), key concepts (Romanian, English), list of abbreviations, 22 annexes, 278 pages of main text, 54 figures, 37 tables.

Publications related to the thesis topic: 64 scientific works.

Keywords: prospective, prospective education, prospective pedagogy, prospective competence, prospective values, prospective personality, curriculum, student, teaching personnel, paradigm.

The purpose consists in the development of prospective pedagogy through the conceptualization and practical valorization of the Paradigm of PE oriented towards the formation of prospective personality student's in higher education.

The objectives of the research: establishing the conceptual benchmarks of PE under the conditions of the accelerated pace of changes and innovation in the university educational process; preliminary experimental study to identify prospective personality values of students; the development of scientific knowledge of PP through the conceptualization of the Paradigm of PE, represented by the epistemological Block of prospective education and the operational Block of prospective competence training, focused on the subsequent Resort in order to form the prospective personality; the reconceptualization and development of the terms PP, PE, prospective personality values, PC in the context of PE Theory; the elaboration and capitalization of the methodological base of PE in higher education represented by the laws, principles, conditions and mechanisms of prospective personality formation; recording the values of the prospective personality in a university context; elaboration of scientific conclusions and methodological recommendations regarding the theory and methodology of PE.

Scientific novelty and originality consists in the development of PP through determining the theoretical-methodological foundations of prospective education in terms of prospective personality values; the development of scientific knowledge of prospective pedagogy through the conceptualization of the PE Paradigm, represented by the EPE through the EBPE and the OBPCF; the methodology of PE capitalized on by elaborating the laws, principles, conditions and mechanisms for the formation of the prospective personality. By developing the Theory of PE, premises were created in order to reconceptualize PE, to define the notion of PP, PV and PC. The preliminary experimental study of the identification of students' PV allowed the development of the methodology of PE, the development of tools for evaluating PV, the establishment of the approach for the formation of PC, the identification of PV of students and the strengthening of the axiological referential of the prospective personality in the university environment.

New research direction: The Theory and Methodology of Prospective Personality Development.

New fundamental scientific results: the development of PP, the conceptualization and valorization of the PPE through the epistemological foundation of PE; reconceptualizing PE; defining the term PP and PC; recording and strengthening the axiological referential of the students' prospective personality; determining the dimensions of PE; establishing the legitimacy, the principles and conditions for the formation of PC in the university setting; the scientific foundation of the PE Theory; the development of the university curriculum by the curriculum PE and the design of PE in the disciplines: Professional Ethics, Academic Communication and Writing, and Functional Didactics; the development and application of the instruments for assessing students' PC.

The theoretical significance results from the development of PP, the conceptualization of the Paradigm of PE, in the context of which the Theory of PE was elaborated, the dimensions of prospective education were established (temporal, anticipatory and vectorial), the principles and legalities of prospective education were determined (anticipation, orientation of education towards the future, change and prospective pragmatism). The analysis of theoretical approaches allowed the completion of the theoretical-methodological notional apparatus with the terms „PP”, „PE”, „PC”. The axiological referential of the prospective personality was consolidated, tools for assessing prospective values were developed, and indicators of PC were formulated.

Practical value of the research refers to: the validation in the practice of university education of the Paradigm of PE, focused on the Epistemological Block and the Operational Block, integrated through the subsequent Resort with the aim of forming the prospective personality; developing the mechanisms of the formation of the of prospective personality; identifying the conditions of PE at the level of the development, application of the PE university curriculum and the integration of PV in the disciplines: Professional Ethics, Academic Communication and Writing, and Functional Didactics, aimed at the formation of PC in students. In order to estimate the PC of students, the PC assessment matrix was proposed, PC assessment tools were developed and applied, methodological recommendations regarding the formation of prospective personality were formulated.

The implementation of scientific results has been carried out within 43 international and national scientific events, within the Department of Socio-Human Sciences, FCIM, Technical University of Moldova, as well as the Department of PPE, Faculty of Pedagogy, Tiraspol State University, headquartered in Chisinau.

Viorelia LUNGU

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PROSPECTIVE EDUCATION**

Summary of the Doctoral Thesis in Educational Sciences
Specialty 531.01. General Theory of Education

Approved for printing: 23.08.2024

Paper format 60x84 1/16

Paper offset. Printing RISO.

Circulation 30 copies

Printing patterns: 4,75
