

Innovative Methodological Approaches to Developing Scientific-Philosophical Worldview in Future Teachers

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Received: 18 April 2026; **Accepted:** 03 May 2026; **Published:** 31 May 2026

Abstract: This study is devoted to the development of innovative methodological approaches for fostering a scientific and philosophical worldview in future teachers. The research clarifies the structural components, criteria, and indicators of a scientific and philosophical worldview and substantiates the pedagogical conditions for its development. A methodological model based on the integration of collaborative approaches, cognitive technologies, frame technology, mind mapping, logical graphs, metaplans, and philosophical case studies is proposed. The findings contribute to the development of critical, reflective, and systemic thinking, enhancing future teachers' ability to independently analyze scientific and philosophical information and apply it effectively in professional practice.

Keywords: Scientific and philosophical worldview, future teacher, innovative methodology, cognitive technologies, frame technology, mind mapping, collaborative approach, reflective thinking.

Introduction: The development of the scientific and philosophical worldview of future teachers in the modern education system is one of the urgent pedagogical problems. The introduction of a competency-based approach in higher education institutions requires teachers not only professional knowledge and skills, but also scientifically based thinking, critical analysis and a reflexive approach. From this point of view, the development of innovative methodological approaches aimed at developing a scientific and philosophical worldview in future teachers is of important scientific and practical importance. The development of the scientific and philosophical worldview of future teachers in the modern education system is one of the urgent pedagogical problems. The introduction of a competency-based approach in higher education institutions requires teachers not only professional knowledge and skills, but also scientifically based thinking, critical analysis and a reflexive approach. From this point of view, the development of innovative

methodological approaches aimed at developing a scientific and philosophical worldview in future teachers is of important scientific and practical importance.

LITERATURE ANALYSIS AND METHODS

We recommend the following methods based on the 5-stage teaching methodology for developing the scientific and philosophical worldview of future teachers when teaching the subject of "Philosophy":

I. In the 1st stage: "10 discoveries", "Cubic"; In the process of using the "10 discoveries" creative method, future teachers are invited to think about what surrounds them in their professional activities and make 10 discoveries for themselves within a week.

The report is presented in the form of a photo with a brief description.

II. At the 2nd stage: "Joint solution", "Enlargement and reduction of the problem (largest and smallest)", "Problem map", "SWOT analysis";

In the creative method "Joint solution", students will

need large sheets of paper and various pens and pencils. Students are divided into small groups. Let's say there are 12 people in our group. They are divided into 2 groups of 6 people. Each sheet of paper is divided into 6 equal sectors with rays from the center, each student tries to understand his topic in this sector. After 15 minutes, the students move clockwise. Now they must continue the idea of their colleagues. In this way, every 15 minutes, the sectors change until the listeners return to their places. After the work is completed, the groups analyze the results obtained.

III. At the 3rd stage: "Disney's creative strategy", "Socratic conversation", "Hermeneutic analysis" methods.

"Hermeneutic analysis" is a textological method aimed at understanding not only complex scientific and philosophical texts and categories, but also at understanding their inner meaning, interpreting them and comparing them with the achievements of today's scientific and technological development.

Texts about "matter", "substance", "spatial infinity" in classical philosophical works (for example, Aristotle, Descartes or Eastern peripatetics) are hermeneutically analyzed by students. The ideas in the text are interpreted through the prism of the discoveries of the modern scientific paradigm - quantum physics, cosmology and astrophysics. This activates the mechanism for transferring mythological ideas to the level of a scientific worldview in students.

IV. At the 4th stage: "Plus, minus, interesting", "KWL method", "6th grade", "Innovation, Attractiveness, Creativity", "Simple, Complex, Unreal" "Philosophical cases" methods.

"Philosophical cases" are a method of systematic analysis of complex existential and sociocultural problem situations (cases) that arise in life, scientific or professional activities that do not have a clear one-sided solution and the creation of a model of alternative solutions. For future teachers, problem cases are presented on the topics "Artificial intelligence and human thinking: Who controls whom?" or "Transformation of pedagogical ethics and values in the digital age". Students, divided into groups (in a collaborative approach), philosophically and logically analyze the contradictions of science, technology and social reality in the case. As a result, they develop

practical competencies in filtering fake information, forecasting alternative strategies, and reflective-evaluative skills.

V. Stage 5: "SCAMPER", "O'zgan's idea". The creative method "O'zgan's idea" is divided into groups of three or four listeners with different points of view and who are considered experts in this field, and each group is given a name. Each group, using their full creative abilities, takes on a role in a theatrical sense. The main task is to learn to look at the problem from different angles. Each group must convey its point of view to other groups. The idea should include problems related to the personal role. Each group reports to the others, shares experiences, and through discussion, the groups identify the most successful solutions.

In the process of research work, in order to develop the scientific and philosophical outlook of future teachers, to form the virtue of self-protection from external influences and information, the local technologies "Free Thought Square", "Deep Look" - collective essay writing technology" were effectively used.

Local technology "Free Thought Square". The purpose of the technology: to enable students to think and solve a specific problem individually (or in a small group), find a solution, choose the necessary one from alternative ideas, to generalize the selected ideas and to form a clear understanding of the problem posed on their basis, as well as to be able to justify their own ideas. Expected result: students will be able to think freely, independently and logically, work in a team, research, collect ideas and form a theoretical and practical understanding of them, convey their ideas to the team, justify them, solve the problem posed and give a general understanding of the topic. They learn to apply their knowledge on the topics.

Training procedure. The teacher conducts the training on threats and dangers that negatively affect the education of young people: international terrorism, religious extremism, drug addiction, AIDS, egocentrism, the philosophy of immorality, "Citizens of the World" - cosmopolitanism and what to do against them: protecting children, vigilance, ideological arming of young people, strengthening ideological immunity, explaining the essence of threats in simple terms. It begins with explaining with words and real examples, forming responsibility for the future of the nation,

strengthening willpower and faith, teaching conscious living, revealing the essence of the information attack, and providing information on ensuring the strength of families. In his introductory speech on the main topic of the training, the teacher noted that nowadays much attention is paid to strengthening ideological immunity in young people, because ideological immunity is the ability to resist when faced with foreign, harmful ideas and ideologies. He expresses his opinion that it is impossible to form such immunity until every person, first of all, every young person, has their own independent opinion, and therefore explains the need to illuminate the content of today's educational session through the topic "Modern Global Problems".

After the introduction, the teacher divides the students into small groups of 3-5 people, depending on the total number of students (the number of small groups is 4 or 5, depending on the purpose). Then he explains to the students the purpose of the training and the procedure for conducting it. He presents each small group with previously prepared handouts. The teacher asks the members of the small group to familiarize themselves with the issues included in the topic "Modern Global Problems" and choose one of them, the main idea of which is written in the table provided in the handout. The selected group is asked to express their thoughts in writing together on the selected problems, to do this, their relationships are shown with the help of lines or other symbols: the team's unique or contrasting situations are worked out.

"Deep Look" is a technology for writing a collective essay. The purpose of the technology: to arm participants with information; to bring about a friendly relationship and a creative atmosphere, to teach students to overcome psychological barriers.

Expected result: this technology will allow to arm the teacher and student team with information about their nature, creative capabilities, abilities, work attitudes, as well as who to work with and how in the pedagogical process, what to pay attention to, who to help with what, whom to encourage.

Procedure for conducting the training. Before the start of the lesson, at the request of the teacher, students are selected one by one from the numbered papers prepared on a special table at the entrance to the room (numbered papers are prepared according to the

number of students) and are seated at chairs arranged in a circle.

After the students have taken their places, the teacher agrees with them on the topic of the story to be composed or the teacher suggests a topic (the topic of the story, taking into account the age and interests of the students, can be adventurous, vital or about the life of young people, morality). The lesson can begin with a story by one of the students on a certain issue or a chosen topic (in less active groups, the teacher can start the story on the topic). The student who started the story stops at the most interesting part and says, "The story continues with the student with the number." The student whose number is shown continues the story (event) from where he left off (without going off topic). This student, like the previous student, stops at the most interesting part of the story and says, "The story continues with the student with the number." The student whose corresponding number is shown continues the story (event) from where he left off. The story telling and continuation process continues in this way until each student in the class has participated.

The teacher monitors the logical connection and content of the stories told by the students, and corrects any deviations from the topic or content.

Based on the results of the analysis, we concluded that the scientific and philosophical outlook of future teachers is their readiness and ability to implement the cognitive mechanisms of educational and cognitive activity (goal setting, planning, analysis, reflection), as well as an integrative quality of a person that includes motivational-value-oriented, cognitive, process-activity, and reflexive-evaluative components.

The scientific and philosophical worldview of future teachers is considered one of the basic types of personal abilities, therefore, in modern conditions, every specialist should have it. It can also be interpreted as a component of other types of worldviews, the fundamental basis of continuous education.

Based on the structure of the scientific and philosophical worldview, the following tasks of its development can be distinguished: developing students' motivational and value orientation towards philosophical education and the profession they are pursuing; equipping with technologies for organizing independent learning activities; methods of reflection

and objective self-assessment, and forming skills for emotional and volitional management of learning and cognitive activity.

DISCUSSION AND RESULTS

From a socio-pedagogical point of view, the main task is to form a scientific and philosophical worldview in students at a level that provides them with effective educational and professional activity and develops the ability to acquire independent knowledge throughout life. Because only a specialist with high professional competence can achieve success in modern competitiveness in the labor market, professional activity and personal self-realization.

CONCLUSION

The results of the study showed that the development of a scientific and philosophical worldview in future teachers is a complex, multi-component pedagogical process. It was found that the effectiveness of this process depends on the integrated development of motivational-value, cognitive, active and reflexive-evaluative components. During the study, the structural structure, criteria and indicators of a scientific and philosophical worldview were identified and pedagogical conditions serving its development were substantiated.

In the proposed methodological model, it was proven that the integration of a collaborative approach, cognitive technologies, frame technology, mind maps, logical graphs, meta-plans and philosophical cases serves to develop critical, systematic and reflexive thinking of future teachers. It was also found that the development of skills in searching, analyzing, processing and applying scientific information in practical activities has a positive effect on increasing their professional competence.

The results of the pilot study confirmed the effectiveness of the developed methodology and showed that it serves to develop the abilities of future teachers to independently master scientific and philosophical knowledge, analyze problems on a scientific basis, and make innovative decisions in pedagogical activities. Therefore, the use of the proposed methodological approaches in the process of training pedagogical personnel in higher educational institutions is an important factor in training competitive and modern teachers with a developed

scientific and philosophical worldview.

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