

INTRODUCTION FROM THE EDITOR-IN-CHIEF



The concept of science education is one of the theories that have shaped the development of the world's leading educational systems in recent decades. While implementing the strategy of integration into European cultural and educational space, Ukraine has enhanced modernization of the field over the last years. We are honored to note that the concept of science education is used as one of the roadmaps for this modernization process: the transformations in line with the fundamental principles of the concept of New Ukrainian School reform are put into practice; the activities of the Junior Academy of Sciences of Ukraine focused on the implementation of science

education principles gain a greater social importance and respective institutional and legislative support; the training of teachers able to successfully apply science education approaches in their professional activities undergoes systemic transformations and etc.

The launch of a Journal was initiated by the Junior Academy of Sciences of Ukraine (JASU) with the aim to share at international level its experience in tackling theoretical and practical problems of modern science education and raise readers' awareness on similar international practices. The Journal is focused on the development of science education as a generally accepted and efficient educational concept and on the creation of a space for the qualitative communication of science education theorists and practitioners.

The editorial team recognizes that it is important for the international readers to be aware of the institutional capabilities of the Journal founder, and feel their comparability with own developments in the theoretical and practical issues of science education. The JASU is a national educational system that ensures the organization and coordination of students' research activities, creates conditions for their intellectual and creative development, promotes initiatives aimed at the prospective vocational training and facilitates the country's scientific capacity building in the 21st century. Currently, the Junior Academy of Sciences of Ukraine includes 25 territorial units, which engage over 300 thousand students in research activities in 64 scientific fields annually. More than 10 thousand teachers from all regions of Ukraine provide pedagogical support for the implementation of the principles. At the end of 2017, UNESCO recognized the Junior Academy of Sciences of Ukraine as a leader in the field of science education in Eastern Europe and established the UNESCO Centre at the JASU. The core specialists of the JASU take an active part in international working groups on science education (ALLEA etc.) For many years now the Junior Academy of Sciences of Ukraine has been productively cooperating with the European Organization for Nuclear Research (CERN) in Geneva, Argonne National Laboratory (USA), the International Movement for Leisure Activities in Science and Technology (MILSET), International Academy of Sciences, Arts and Letters, leading space agencies and etc.

It is planned to publish this Journal twice a year, involving the prominent theorists and practitioners of science education as authors and members of the Editorial Board. In particular, the first issue of the Journal will contain a series of articles by UNESCO science education experts, which testifies to the synergy of cooperation between the Junior Academy of Sciences of Ukraine and this reputable international organisation in the field of education, science and culture. An important step for the Journal's launch was a lengthy and careful consideration of the request by a key partner of the JASU – National Pedagogical Dragomanov University – regarding the establishment of a Chair on Science Education. The decision to set up the UNESCO Chair on Science Education at the National Pedagogical Dragomanov University, adopted by the UNESCO Secretariat at the end of 2019, will contribute to the development of scientific discourse in Ukraine and other countries of the world. Thanks to this landmark event, the scientific discussion about the theoretical and practical issues of science education will make a quantum leap and require an appropriate academic platform, and the Theory and Practice of Science Education Journal may be used as this platform.

Launching this Journal, we were guided by the understanding that the science education, on the one hand, is an internationally recognized concept, an integral part of a global modern education policy, which, however, has some differences at the national levels, covering the peculiarities of respective national educational systems. The scientific discussion highlighted in the Journal should help to resolve the global and local (national) contradictions in order to provide science education with a thorough support in the field of educational policy, educators training models in Ukraine and abroad. The Junior Academy of Sciences of Ukraine, both in the Journal pages and in its activities, acknowledges the need for a harmonious combination of Ukrainian educational system achievement and internationally recognized methods of science education, such as *La main à la pâte*, *TheoPrax*, *Philosophy for Children (P4C)*, etc.

In view of the above, the Editorial Board of the Theory and Practice of Science Education Journal recognizes that the current state of science education remains far from ideal both in Ukraine and globally. As for Ukraine, it should be noted that the national education, at all levels, has a promising niche for further implementation of science education approaches – from modern practices of New Ukrainian School and extracurricular education to the models of training teachers - carriers and effective translators of science education principles. The Junior Academy of Sciences of Ukraine has a considerable experience in implementing principles of science education and strives to ensure a strong relationship between the theory and practice: a well-considered scientific expertise with the involvement of own and partner research resources precede the introduction of any science education methodology into the JASU activities. Of particular note is the fruitful cooperation with the subdivisions of the National Academy of Sciences of Ukraine, Institute of Gifted Child and other institutions of the National Academy of Pedagogical Sciences of Ukraine, National Pedagogical Dragomanov University etc.

The recognition of the need to harmonize in our strategy the theory and prac-

tice of science education actualized the necessity to launch the Journal. The Journal has two content blocks that serve as a platform for academic discussion about the issues of theory and practice of science education. The Editorial Board proceeds not only from the practical need to respond to the enquiries of Ukrainian educational system, but also from the ethical principle of promoting the sustainable and civilized progress of humanity, development of active citizens in education, resonating in the Journal's strategy with the provisions proposed by the European Commission in the report "Science education for responsible citizenship" (2015). The Junior Academy of Sciences of Ukraine, while extending existing ties with the leaders in implementation of science education principles, is committed to making its own significant contribution to the supporting gifted youth and solving global problems of human development by fostering a new generation of young people using the potential of science education.

The Editorial Board is looking to cooperate with theorists and practitioners in the field of science education in publishing the Journal, aiming to further develop the scientific discussion and find effective strategies for its implementation in the real-world practice of modern education!

*Sincerely yours,
Editor-in-Chief of the Journal
President of the NC "Junior Academy of Sciences of Ukraine"
Member of the National Academy of Sciences of Ukraine
Doctor of Physics and Mathematics, Professor*

Stanislav Dovgyi