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**THE METHODOLOGY OF STUDENTS' SYNERGETIC  
WORLD OUTLOOK DEVELOPMENT BASED ON THE  
TRANS-DISCIPLINARY APPROACH**

*Abstract.* The paper discusses the present stage of the world educational system development influenced by the fast increasing flow of information and knowledge. The situation requires the adequate pedagogical technologies for compressing the learning information; one of them is the trans-disciplinary technology based on the synergetic methodology identifying the order parameters and general conformities of organizing the academic content. The trans-disciplinary technologies incorporate the general laws of evolution, Bohr's principle of complementarity, fundamental concepts of nonlinearity, fractality, actual and potential infinity, etc. As an illustration to the trans-disciplinary approach, the author analyzes the fundamental methodology principles of Aristotle and Newton's mechanics.

The author points out the equal importance of understanding the asymptotic adequacy principle by students of the natural sciences and humanities profiles; implementation of the trans-disciplinary approach being regarded as a way for the fundamental knowledge acquisition and the world outlook development.

The research findings are addressed to the higher school academic staff for theoretical and practical applications.

*Keywords:* synergetics, post-non-classical science, order parameter, trans-disciplinary principle.

**References**

1. Andrianov I. V., Barantcev R. G., Manevich L. I. Asimptoticheskaia matematika i sinergetika: put' k celostnoj prostote. [Asymptotic mathematic and synergetic: the way to whole simplicity]. Moscow: Editorial URSS, 2004, 304 p. (In Russian)
2. Kline M. The mathematic is the way to truth. Moscow: Mir, 1988, 298 p. (Translation from English)

3. Lubishev A. A. Nauka i religija [The science and the religion]. St-Petersburg: Alteia, 2000, 356 p. (In Russian)
  4. Mainzer Klaus. Thinking in Complexity. The Computational Dynamics of Matter Mind and Mankind. Moscow: URSS, 2009. 464 p. (Translation from English)
  5. Malinetskiy G. G. Chtob skazku sdelat' byl'ju... Vysokie tehnologii – put' Rossii v budushhee. [To make the tail as true story. The high technology is the way of Russia to the future]. Moscow: URSS, 2012, 224 p. (In Russian)
  6. Puncare A. O nauke. [About the science]. Moscow: Nauka, 1983. 560 p. (Translation from English)
  7. Solodova E. A. Novye modeli v sisteme obrazovaniya: Sinergeticheskiy podhod. [New models of the education system: the synergetic approach]. Moscow: URSS, 2013, 344 p. (In Russian)
  8. Feldstein D. I. The problems of the forming of personality of increasing man during new historical stage. *Obrazovanie i nauka*. [Education and science]. 2013. № 9. P. 3–24. (In Russian)
  9. Freid Z. The future of one illusion. *I and Its*. Moscow: Eksmo-Press; Harkov: Folio, 1999. 863–914 p. (Translation from English)
  10. Judge A. Conference Paper, Ist World Congress of Transdisciplinarity, Union of International Associations, 1994. Available: <http://www.uia.org/uiadocs/aadocnd4.htm>. (Translation from English)
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