

Think activity pedagogics as the basis of modernization of education at becoming hydrogen economy

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In the modern world priority problems of economic development for all countries are problem of search of new energy carriers and maintenance of ecological cleanliness of use of power resources. The answer to these problems is the hydrogen economy. Creation of hydrogen economy will demand the big inflow of the young scientific, engineering and administrative staff. A professional training with adequate innovative problems of hydrogen economy a skill level is necessary to begin with the senior classes of school.

This training should provide to schoolboys an opportunity to receive such education in the field of hydrogen energy at which they would be from the very beginning included in sphere of real activity on becoming hydrogen economy so that in the further to continue this formation in high school and to take a worthy place in structure of hydrogen economy. Creation of such educational system is real only in conditions of integration of a science, the industry and formation [1]. Such formation requires essentially new training technologies which are developed with the framework of think activity pedagogics [2].

Scientific research institute of innovative strategy of development of the general education (NII ISROO) of Department of education of Moscow is the leading capital center on development and realization of experimental and innovative strategy of development of educational systems of all levels. NII ISROO provides development and introduction of unique educational models and technologies, carrying out organizational-acting games (ОДИ) with a view of development of educational systems, pedagogical and administrative collectives, creation of programs of experimental and innovative work [3]. Together with Institute of advancing researches (IOI) it. E. L. Shiffers (area of specialization – administrative and business-consulting) elaborates programs of industrial and regional development, and also organizational-acting games on development of the companies and corporations and creation of programs of regional development are carried out.

The Institute was the developer of programs “Formation as method of development of regional public systems” and “The Western district – uniform educational space: The infrastructure of the childhood”.

Now the Institute of innovative strategy of development of the general education is the basic developer of the program “The Moscow School of the future” [4] in the context of the priority national project “Education”. In this direction of activity essentially new educational models, including model educational the Internet-space “Epistemoteka” [5] in which schoolboys are trained epistemical technologies of work with knowledge in fundamental sciences are created.

Other directions of work (the some together with IOI) are following:

- The program “Northwest district—the scientific future of Russia: Reproduction of the fundamental (practice-focused) science on territories of Northwest district and strategic types of employment for youth”;
- Construction meta-industrial instrument-making cluster (together with Physicotechnical institute it. A. F. Ioffe of the Russian Academy of Science) [6];
- Construction chemical-pharmacological cluster in the city of Biisk — scientific city (together with company “Roel”);

- Elaboration of strategy of regional development for the Sakhalin;
- Elaboration of the standard of management by development "The All-Russia vertical of projects" ("a line of VVP");
- Folding and development of an innovative network "Thinkactivity pedagogics";
- Elaboration of the pioneer program "The Russian School of the future in Moscow";
- Elaboration (together with Y. V. Krupnov) programs "Transport civilization promotion – the concrete script of development of Russia". Creation of corridors of development [7];
- Elaboration of the concept of the Russian society of development.

Within the limits of the experimental program "Northwest district – the scientific future of Russia: Reproduction of the fundamental (practice-focused) science on territories of Northwest district and strategic types of employment for youth" conditions for integration of a science, the industry and formation are created. The major partner in this work is the Institute of hydrogen energy and plasma technologies of the Russian centre of science "Kurchatovsky institute" (IVEPT RNC "KI"). In 2006 on the basis of some schools SZAO the experimental network platform "School of chief designers it. P. G. Kuznetsov" (SGK) has been created. At School of chief designers pass experimental approbation of technology of thinkactivity pedagogics focused on education in the field of hydrogen energy. At School there had training those schoolboys who in the future should provide personnel structure of hydrogen economy. Teaching is conducted with attraction of employees of IVEPT RNC "KI". Since 2008 a number of employments are spent directly in IVEPT on the modern equipment of hydrogen power. Carrying out of the Olympiad first in Russia on hydrogen power is planned.

Training of schoolboys is constructed on following key principles: the thinkactivity approach assuming training in specially organized acting and cogitative situations, the competenceness approach assuming development of abilities and competence of pupils, transfer of universal technologies of cogitative work, integrativeness, training of research and design activity.

In 2007 pupils of School accepted active participation in the exhibition lead by scientific research institute ISROO "The Youth EXPO – 2007 in Northwest of Moscow: integration of a science, the industry and education " [8].

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