

self-development mechanisms at the post-graduate stage appear especially important in the aspect of solving new educational tasks.

In accordance with this, the participants of the scientific school "ACME" work out nowadays such significant problems for education as the professional-personal enhancement of the pedagogue in conditions of innovative activity of an educational institution, the arrangement of conditions for creative activities of teachers, the provision of effective interaction of teachers and learners by means of the acmeological approach implementation, the formation and development of an acmeological position of the educational process subjects, the creation of acmeological space of the lesson.

Let us name the principal positions defining the essence and main activity characteristics of the scientific school of pedagogues "ACME" (SSP):

- the purpose of the SSP educational activity is not the transfer of knowledge and skills as it is, but teaching scientific creativity;

- the systematic nature and training content mastering consistency is defined by the logic of research and evaluation on the higher priority subject;

- the educational process in the scientific school isn't restricted by time frames, they are individual for every SSP participant;

- the educational process in the SSP "is deepened" in the process of the scientific and research activity itself on the priority subject;

- the SSP participants are offered a free hand at the research subject choice within the framework of the school scientific and research program;

- the training individualization is combined with the research and evaluation collective character;

- the educational interaction result is the becoming of the teacher as a scientist and obtaining objectively new scientific knowledge.

The formation of professionally personal readiness of the teacher for independent scientific and research and scientific educational work is performed by means of the following functions realization by the scientific school:

1. **Information-training:** constant field extension and deepening of knowledge in the area of cognition theory and methodology occur; teachers get current information in panel sessions, lectures and seminars.

2. **Consultative:** in the process of professional experience and self-educational activity apprehension teachers can take opinion of the research manager immediately, if there is a need.

3. **Organization-communicative:** an ongoing psycho-pedagogical seminar, which satisfies the need of teachers in professional communication, research and evaluation experience interchange, provides the acquaintance with current achievements in its academic field and fringe areas of the scientific knowledge, is created.

4. **Motivation inspiring:** the activation of self-education, self-improvement, self-actualization in the professional and scientific-pedagogical activity, personal development, and also the teacher's research methods mastering conation activation.

5. **Axiological-organizational (conceptual-ideological):** the actualization of professionalism and creativity value; conceptual framework apprehension of professional (pedagogical) and scientific and research activity, perspectives of professionally personal development.

6. **Developing:** various forms and methods of scientific and educational interaction of pedagogues at the post-graduate stage, self-educational activity are oriented to the development of all sides of the teacher's personality – the need-motivation sphere, value system, conceptual thinking, operational-technological components of the pedagogical activity, ability and readiness for scientific activity, etc.

7. **General-cultural:** widening of the teacher's general-cultural horizon, the promotion of their human culture and ability to creative self-actualization.

The education at the scientific school of pedagogues should result in the formation (becoming) of an independent scientist, the definition of his own professional position in the scientific and research activity, the defence of doctoral dissertations in pedagogy and psychology.

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CREATION OF NATIONAL EDUCATIONAL STANDARD "SCHOOL – HIGHER EDUCATIONAL INSTITUTION (HEI)" WITHIN CONTINUOUS CHEMICAL EDUCATION SYSTEM OF TVER STATE TECHNICAL UNIVERSITY

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The becoming of a new pedagogical system oriented to the entry into the world's educational space is attended by essential modifications in the theory and practice of the educational process. A change of educational paradigm takes place: another content, other approaches to teaching, other relations between the participants of the educational process, another pedagogical mentality are offered. An important role here is played by the development of relations between the links of the continuous education system, the adequate performance of which is impossible without close collaboration of pedagogical workers of secondary and higher school.

For the purpose of chemistry teaching succession assurance in the Tver State Technical University (TSTU) the system of continuous chemical education of youth has been created, the realization of which is performed in the following basic directions:

- the intensification of research and cognitive activity of school children in Chemistry by means of the enlargement of senior high school students' workshop conferences system in the Tver Region; the assistance to municipal educational institutions in carrying out research works;

- the consulting and methodical support of the preparation for the Uniform State Exam (USE) in Chemistry both for the 11th form students and school teachers of the Tver Region;

- the organization of an experimental ground on the continuous chemical education system development on the basis of one of Tver schools;

- the promotion of chemical academic competitions of school children in the Tver Region;

- the individual work with the most talented students able to in-depth Chemistry study;

- the professional orientation of school leavers.

The enumerated areas of activities imply the educational process modernization and Chemistry knowledge quality improvement as the result of the education content perfection and modern pedagogical technologies introduction, and also the creation of conditions for the assurance of the national educational standard "school – HEI".

The increasing spread between the scientific work current state and the academic activity makes search for educational technologies for early attraction of learners to research activities. The lecturers of chemical departments of the TSTU annually are the research managers of seniors' research works; take part in the workshop conferences "Step into the Future" together with them. Year by year the number of experimental research works carried out by school children on the basis of the university including those carried out in partnership with post-graduates and students grows up. To our opinion, such joint scientific projects are an exclusively useful activation form of the cognitive activity both of school children and students, as they promote the preparation of either for serious scientific investigations.

A great work among the future enrollees is carried out in specialized chemical and chemical-biological classes of a range of secondary comprehensive and grammar schools of Tver. The activity of these classes supposes the correction of school curricula and programs for the purpose of their approach to HEI requirements, the development of interest in academic disciplines of the University in school children, their in-depth study with the attraction of leading TSTU lecturers.

It is our opinion that the adaptability of the educational system should be performed through an absolute succession of educational programs of second-

dary and higher schools, the strategic renovation of the educational content and technologies used with due account for changing time demands. The succession degree at that should be determined by both search for studied disciplines' desired depth (the fundamental knowledge and practical work experience volume) and balance between the obligatory and variable parts of national educational standards.

For the experimental work on the development of the continuous chemical education system a treaty about the cooperation of the Tver State Technical University and the municipal educational institution of "Secondary comprehensive school №45 of Tver" has been made. The pedagogical essence of the cooperation between the school and University is manifested in the interrelation of the educational process, in the formation of general and special knowledge, abilities and skills in the course of initial professional training, in the cooperation of pedagogical collectives with learners' parents, in the scientific supply of the school's experimental work.

For the organization of the education succession the available school curricula analysis has been carried out and Chemistry, Physics and Mathematics courses in-depth study programs have been developed, the last including all basic HEI forms of classes carrying out – lectures, seminars, colloquiums, laboratory courses, etc. Specialized physio-mathematical and vocational classes, the acquisition of which takes place on a competitive basis from the number of all city educational institutions learners, have been created at the school. A scientific-methodological assistance to pedagogues teaching the profile comprehensive subjects has been organized. A part of the classes on these subjects are conducted by the University lecturers. Meetings of leading TSTU specialists with the profile classes learners and excursions in the HEI labs are regular.

A scientific society has been created at the school. An in-depth preparation of the scientific society members for independent scientific work skills acquisition is performed. The University employees render assistance in the scientific investigations organization, individual work with the most talented school children at the Chairs and in the labs of the TSTU. A program of joint internship of students and senior school children has been launched. A joint participation of school children and students in training research work, in theoretical and practical, scientific and technical conferences of the TSTU has been organized. The educational guidance and control over the professional education of the learners is performed by both the school and the HEI.

At the methodical support of the TSTU a program of the propaedeutical course for the fifth grades "Introduction into Chemistry" has been launched at the school №45. The course is based upon the idea of Chemistry and other natural disciplines (having been studied earlier or studied in parallel) intersubject

communications realization and that is why allows making the learners' chemical and ecological knowledge got at the Nature Study, Biology, Geography classes actual. The course objectives are: the integration of Chemistry into the system of natural-scientific knowledge, the formation of the chemical world view as an element of the natural-scientific world outlook, the formation of a sustained interest in the subject, the implantation of creative attitude towards scientific facts understanding. The application of the research method in education is an effective means of the self-dependence ability and creativity development, that is why propaedeutical course introduction in the fifth grades allowed us to begin the chemical thinking formation in school children at the early stage of learning.

The active cooperation of the TSTU with the school №45 gives its results. Thus, in 2007 a leaver of the school Ekaterina Puklina became the only school-child having gained the maximum possible score – 100 points, at the Uniform State Exam in Chemistry for the whole history of the Tver Region. From the number of the eleven-graders having attended classes with the TSTU lecturers, 80% of the school children passed the USE in Chemistry with the mark “excellent”, and 10% - with the mark “good”. According to the results of the USE passing in Chemistry in 2007 the school №45 has fallen into the best five schools of Tver. In November, 2007, the school №45 won the victory in the interscholastic methodical center creation competition in Chemistry in the Tver Region at the active support of the TSTU employees. No doubt, that such cooperation turns out to be exclusively useful for the secondary and higher natural-scientific education succession guarantee.

The chemical academic competitions among school children represent a harmonic multistage system of seniors' intellectual competitions aiming at the discovery of talented learners able to in-depth study of Chemistry. School academic competitions – is a powerful means of the development of interest in Chemistry.

The Chemistry Department of the Tver State Technical University has been a methodical center on chemical academic competitions among school children in the Tver Region for the last fifteen years. Annually at the TSTU basis an experimental round of the Regional Academic Competition among School Children in Chemistry is held, the Department lecturers work in the judge panel of the city and Regional stage of the competition.

In 2005-2007 the Tver Region became the place of holding of the IV (district) stage of the All – Russia Academic Competition in Chemistry in the Central Federal District. It came as a service acknowledgement of the Tver region in chemical education development (no any other region of the Russian Federation has ever been dignified like that thrice). In the district Academic Competition about 70 school chil-

dren from 17 regions of the Central zone of Russia – winners of the III (regional) stage of the Competition in their own territories, participate. The TSTU Chemical Departments lecturers work annually in the judge panel of this Competition, and its experimental round traditionally takes course on the basis of the Polymer Materials Technology and Chemistry Departments. The experimental capability and staff resources of the TSTU were highly praised by the representatives of the Federal Education Agency and Central Methodical Commission. The objectivity of school children's works evaluation, the professionalism and goodwill of the jury have deserved favourable report of the Competition participants and the teams leaders. The work oriented to the District stage of the All-Russia Academic Competition of school children in Chemistry to be traditionally held in Tver on the basis of the TSTU is being carried out.

The stimulation of an independent search activity in learners by means of gradual sophistication of assignments from reproductive to creative ones allows guaranteeing the differentiation of the Academic Competition participants on the preparation level. The most talented learners able to in-depth Chemistry study become apparent on the results of Academic Competitions. An individual work is carried out with them at the departments and in the labs of the University. Various perspective forms of such cooperation are offered in the TSTU. The idea of the “Young Chemist School” creation on the basis of the University scientific-educational park turned out to be rather productive. An analogous structure – “Small Chemical Academy” – has been functioning successfully on the basis of the Polymer Materials Department for years. The educational process in them is performed on the basis of the learner-centered education technology and differentiated approach to school children with various intellectual activity degrees. Some school children having attended these classes became later the All-Russia Academic Competitions winners, many of them entered chemical specialties of the TSTU. Such practice of work with the enrollees gives an opportunity to raise the knowledge level of school children in Chemistry, implant professional skills to them and expand their outlook using the variability of teaching forms and methods.

The realization of the developed system of Chemical Academic Competitions in the Tver Region stimulates the Chemistry teaching level at schools, promotes the secondary and higher educational institutions' educational programs integration and, helping providing the University with talented enrollees, allows maintaining traditionally high quality of chemists-specialists' training.

Within the framework of annual “Educational Services Fairs” organized by the Federal State Employment Service together with the Regional Educational Office, the TSTU lecturers work on the attraction of learners from cities and districts of the Tver

Region for continuing education at the TSTU chemical specialties.

A great attention is paid to the coordination of the University chemical departments', education regulatory bodies' and city methodical center's activity. Working closely with the Tver Regional Teachers' Extension Course Institute the Chemistry instructors regularly render methodical and consultative aid to pedagogical collectives of Tver and Tver Region schools on the questions of school children's preparation for the USE, solution of advanced complexity problems, entering and studying at the TSTU.

School as a social institution is leading among other educational institutions and kinds of pedagogical systems. It is possible, however, to take up the position that only on the basis of school and HEI cooperation in the present-day world one manages to build such a system of continuous education, which reacts actively to a quick change of life demands and makes the effective connection with the perspective labour market possible.

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USE OF NEW TRAINING METHODS IN TEACHING BRANCHES OF JURISPRUDENCE

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Whatever training methods be applied for the professional education efficiency upgrading it is important to create such psychological-pedagogical conditions, in which the student can occupy an active personal position and manifest himself as an academic activity subject to the full extent. The didactical principle of personal activity in training and professional self-determination conditions the system of requirements for the student's academic activity and the teacher's educational work in the integrated learning process. Internal and external factors, needs and motives are involved into the system. The correlation of these characteristics determines the choice of the education content, concrete forms and methods of training, conditions of organization of the entire process of active creative personality formation. There are no universally effective or ineffective methods.

All training methods have their own strong and weak sides, and that is why, depending on purposes, conditions, time available, it is necessary to combine them in the optimal way. The quality of education is made of training quality and quality of upbringing. The training quality can be achieved only as the result of the efficiency of every training stage. I.e. the whole process of training is built on the scheme: to conceive

– to understand – to remember – to use – to control. To gain the training quality it is necessary to get through all these stages of cognitive activity consistently. The use of various forms and methods in the process of training guarantees the training quality upgrading.

The main forms and methods of training acting to raise the training quality are: role-playing games, business games, conferences, forums, dialogues, problem training, solitary work, abstract defence, individual performances, creative compositions, reports, messages; tasting, programmed control, research work, etc. All the numerated training technologies promote the training quality problems solution.

At a higher educational institution at verbal presentment of training material on jurisprudence branches wordly training methods are generally used. Among them an important place is occupied by a lecture. The lecture acts as a leading part of the whole training program and represents a means of extensional theoretical material presentment, providing the integrity and completeness of the students' perception of it. The lecture must give systematized foundations of scientific knowledge on a discipline; disclose the state and development prospects of the correspondent domain of science and technology; concentrate the learners' attention on the most complex, topical points; stimulate their active cognitive work and promote the formation of creative thinking. However, a traditional lecture has a series of disadvantages, which are conditioned by the following:

1. The lecture teaches to conceive other opinions passively, restrains learners' independent thinking.
2. The lecture spoils the wish to work independently.
3. Lectures are needed, when there are no textbooks or there are few of them.
4. Some students have time to comprehend the material, others – manage only to write the lecturer's words down mechanically. It goes against the principle of the training individualization.

However, the higher school experience testifies that lecture refusal decreases the scientific level of learners' training, breaks the consistency and uniformity of their work during a term. That is why the lecture still remains both guiding jurisprudence branches training method and guiding form of the academic process organization at a higher educational institution. The specified disadvantages can be largely overcome with the help of correct methods and rational composition of the material studied.

To some extent the acuteness of the contradictions named dismisses the opportunity to use non-conventional kinds of delivering lectures in the academic process. The present-day methodology numbers over 250 various methods. These methods result in the change of the teacher's role, new instruments of learners' achievements estimation.