

*Materials of Conferences*

**APPLICATION OF INFORMATION-COMMUNICATION TECHNOLOGIES AND COMPUTER SOFTWARE MEANS FOR FOREIGN LANGUAGES TEACHING AS AN ESSENTIAL PART OF TRAINING ENGINEERS IN THE TECHNICAL UNIVERSITY WITHIN THE FRAMEWORK OF THE BOLOGNA AGREEMENT**

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Signing the Bologna Agreement in 1999, Russia entered a new phase in the reformation of the education system. Due to globalization the following objective was developed: to create an integrated extent European education system. «An incorporated association in the education system is an essential part of the cooperation community, united in different regional organizations to achieve the goals in economic integration, social unity and political security» (HSE, 2005).

According to the national policy in the higher education system, it is critical for an engineer to be capable of adapting to variable living conditions, analyzing situations, evaluating and finding solutions to initial problems, possessing communication skills and developing intercultural relations (Sorokovikh, 2004). This would make it possible for the future engineer to tackle professional problems not only in the native language, but also in the foreign language (in our case in English).

Under conditions of educational globalization, many Russian universities develop and implement modern multilevel educational programs, covering both a good command of the foreign language and professional-oriented communication and suggest improvement of computing base.

Development of computer technologies and telecommunication means of search, handling and information exchange radically influences the content and ways of organizing future professional activity of engineers. Computer-mediated communication (including the foreign language) is highly demanded in the society, which requires the skills of competent oral and written speech, self-presentation, an effective deal with different information and critical evaluation of information recourses (Evdokimova, 2004).

Information community formation results in the development of the computer environment of business, scientific and everyday communication. According to this, when formulating objectives of training technical specialists, it is necessary to take into account changes in the professional field peculiarities in computerization conditions. Besides, in the communication engineer training the emphasis is often placed

on special features of communication by means of educational computing.

Newly designed courses application in engineering professional-communicative teaching as an integrated part of the engineers' curriculum enhances implementation of such educational programs, which suggest application of combination of teaching programs based on the ideas of computer software training with other means of teaching. Information-communication technologies are connected with television, computers, projectors or text-, audio-, television- and computer environments.

One of the computing technologies fulfilled in practice is an interactive board. It successfully combines possibilities of projective technologies and a sophisticated touch-sensitive device, which allows not simply displaying information, but also operating the process, i.e. adjust and correct the data, make notes and remarks. Thus, the following major facilities are realized in the interactive board: slide show, audio- and video-information representation, text and image edit and display, the Internet connection, teleconference, etc.

Consequently, original engineering problems, encouraging creation of professional-communicative situations and meeting the current engineering demands to develop their communicative skills, win new bright and vivid sides. The educational program acquires a new language-teaching approach, which stimulates language motivation of future engineers, their creativity and independence.

Thus, application of computer technology as an integrated part of engineering curricula reinforces the introduction of a new curriculum course. Engineering problems and situations can be challenging in designing professional-communicative situations and meet the needs of engineering students in the development of their communication skills.

The Bologna Agreement encouraged dynamic development of the new education programs for intercultural professional-oriented communication with application of computer technology, which raise highly qualified Russian engineers who can communicate effectively in a multicultural professional world and growing global marketplace.

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## PEDAGOGUE PROFESSIONAL FORMATION AND DEVELOPMENT MONITORING

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The idea of continuing educational process and professional pedagogue work effectiveness tracking arose and practically carried out in the end of 80-s and in the beginning of 90-s in XX century [1]. At the same time, the term "monitoring", which meant continuity, scientific character and diagnosing of this process, became widespread in our country.

Monitoring gives an opportunity to find out the effectiveness of pedagogue professional formation and development process, to get information about object state and to provide with feedback. Taking part in pedagogical monitoring raises the level of teachers culture, stimulates self-examination of their professional formation and development. Pedagogue professional formation and development monitoring was considered as a continuing science-based process of noticing the changes in pedagogue professional work with a purpose to get a clear picture of changes, which happen in the process of professional formation and development at the particular moment. Besides, monitoring gave an opportunity to trace tendencies, to fore-know possible ways of administrative work, directed at positive tendencies support and development. To our mind, monitoring arrangement lets use more effectively a zone of proximal teacher development, understand its weak and strong aspects, and provide necessary administrative assistance.

One of the most important goals in monitoring process is to choose a criterion, which allows to assess the level of pedagogue professional formation. The rule is to distinguish criteria for pedagogical and methodological teacher's grounding and his practice results estimation. At the present time the following pedagogical professional work diagnostics methods are extensively used: qualitative teacher work results evaluation (Y. K. Babanskiy, A. D. Dementcev and etc.); diagnostics of pedagogue work development level (E. A. Fedorova); teacher practice effectiveness determination (V.P. Simonov), self-diagnosis (E. I. Rogov and etc.) and etc.

The pedagogical monitoring technology of pedagogue professional formation and development, that we presented, was realized on the basis of Stavropol Institute of educationalists advanced training, and consisted of seven interrelated stages:

1. A preparatory stage expected an organization and realization of purposeful, systematic information collection according to the criteria of professional work effectiveness (methods: questionnaire poll, observation, testing, document analysis, qualimetric methods).

2. On the stage of preliminary diagnostics there were distinguished initial indexes of pedagogue

professional work, tendencies, which changes will be tracked in future, and also there were revealed the levels of pedagogue professional formation, the degree of the correspondence between pedagogue professional characteristics and eligibility requirements, also there was distinguished the level of pedagogue professional formation (methods: observation, conversation, documentation analysis).

3. Qualifying stage. The main goal of this stage was to distinguish objective and subjective reasons, determining pedagogue professional work effectiveness. There was studied pedagogue employment history, distinguished professional crises and its influence on master formation process, examined colleague, parents, students opinion about the pedagogue professionalism level (methods: sociometric test, conversation, observation, documentation analyses).

4. Prognostic stage. Its task was to distinguish the tendencies of pedagogue formation and development process, planning and projection his professional work. There were marked out positive tendencies in pedagogue formation and development process, showed the conditions, according to which, the positive elements would be dominant.

5. Occupational and organizational stage meant the organization of the work with a pedagogue, directed on problems liquidation, which were exposed in the professional formation and development. Also there was studied methodological literature, organized arrangements, due dates and reporting documentation. There was organized pedagogue's participation in different kinds of methodological work (seminars, pedagogical reading and etc.), his study outside of educational institution.

6. Correcting stage. For provision pedagogue formation and development process with right course, it was necessary to correct combined actions of pedagogue and educational institution leadership.

7. The task of analytical stage was to distinguish the effectiveness of intensional-organizational arrangements with the goal to improve pedagogue professional formation and development process.

In the process of the monitoring technology practical realization we systematically and particularly examined the work of one and the same pedagogues, which illustrated the process of their professional formation and development. This methodology included the following: primary conversation, observation in the process of professional work, final results analysis, consultation, planning of actions, directed on pedagogue professional formation and development perfection.

We have studied thirty professional pedagogue biographies and made up their individual characteristics. We noticed that every specialist in the process of professional formation and development overcame crises, connected with the work, amount of which was purely individual. The distance, which means the transition from the one professional formation level to an-