

THEORY AND PRACTICE OF USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE PEDAGOGICAL FORMATION

Timur Vezirov

Dagestan State Pedagogical University, Makhachkala, Russia, *timur.60@mail.ru*

The analysis of a condition of a development of education testifies to wide use of computer-focused and other modern technologies in pedagogical process, about cardinal change of methodical system of training.

In this connection working out of models of interaction of trainees with the given technologies at school and high school, an effective utilisation of pedagogical potential of various means within the limits of the given technologies is an actual problem of the paramount importance for all education system in Russia. Especially it is important taking into account the concept of continuous and advancing formation in the conditions of so multifactorial and difficult system, as «school - pedagogical high school - improvements of professional skill of shots».

In structure of the modern formation based on new information and communication technologies, its such basic subsystems, as **teoretiko-methodological, technological, pedagogical, organizational and economic** (Fig. 1 are allocated). Here there are essentially different opinions of researchers and experts.

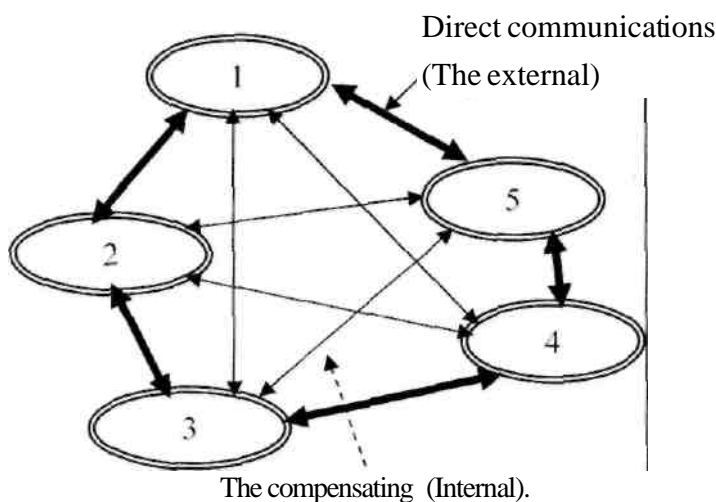


Fig. 1. The ring-shaped, closed structure Modern formation and Its communications with subsystems: Teoretiko-methodological (1); technological (2); Pedagogical (3); Organizational (4) and Economic (5). Model of the author, Based on Euler-Hejsa ideas.

For example, with a position of some experts in a sphere of education of use of new technologies in educational process conducts to radical changes only in one subsystem of formation - technological, and its other subsystems essentially do not change.

However the analysis of a development of education in the modern world leads to other conclusion. Namely, it testifies that use of new information technologies only in that case conducts to the decision of acute problems of modern formation when development of a technological subsystem of formation is accompanied by radical changes in all other subsystems: pedagogical, organizational, economic - and even essentially mentions theoretical and the methodological bases of educational system. Thus, new technologies only then can be effective in formation when they are not entered in already existing educational system, and *enter as an element* into a new education system.

Development of information and communication technologies involves formation of

essentially new educational system which can provide granting to millions people of educational services of high quality at reduction of specific expenses for education. Not the teacher applying new means in old educational system, i.e. at old pedagogical methods, economic mechanisms and the work organisation, namely the teacher operating in new educational system, provides successful functioning of formation in the modern world.

Thus, application of new information and communication technologies in formation should be considered as the strategic decision focused on formation and development of new educational system. Thus in an education sphere, as well as in many other things fields of activity, last years there were especially actual not technical, but *pedagogical, methodical, organizational, social and economic* problems of application of information and communication technologies.

The modern information-technological culture assumes

Concentration of attention not on technical questions at introduction of new information and communication technologies, namely on pedagogical, organizational, social and economic. Now it is a question of reorganisation, reengineering of all educational process, instead of about private technical decisions.

Thus, the effective utilisation in formation of modern information and communication technologies assumes reengineering of educational activity, considerable changes not only in a technological subsystem of educational system, but also in all its other basic subsystems-pedagogical, organizational, economic, teoretiko-methodological. Each of these subsystems, in turn, represents the complete system consisting of set of elements. Thus all subsystems of new educational system are in close interrelation and interdependence. Everything, that occurs in any one subsystem, affects all other components of formed complete educational system.

Such system sight at processes of formation and development based on new information and communication technologies of educational system should become a basis of management of formation in the modern world as at the system approach to management of formation increase of its efficiency is possible.

For today management of formation at its various levels far is not always characterised by systematical approaches. So, in the majority of educational institutions introduction of new information and communication technologies is accompanied by changes only in a technological subsystem of formation, more often very superficial, fragmentary, connected with use only one any computer or telecommunication technology from all their huge variety.

However any even the advanced technics and the developed technology, any even the best experts in its use cannot lead to increase in efficiency of formation if introduction of new technologies is not accompanied by essential changes in all other subsystems of formation. In full conformity with "the General theory of systems", in particular, with its section "Evolutionica" and ring self-organised Euler-Hejsa sets only complex, the system approach to management of formation, complete character of innovations can become by formation and development of essentially new system based on new information and communication technologies of formation.

At realisation of the system approach to management of modern educational system it is necessary to recognise that each of subsystems of educational system itself represents the difficult system consisting of a number, the elements connected among themselves.

Let's allocate basic elements of a pedagogical subsystem of modern formation and we will define their communications as among themselves, and with other subsystems, to open system character of management of formation which is based on modern computer and telecommunication technologies.

The basis of educational process is made *by a studying subject, its maintenance* defining set of knowledge, abilities, skills which the trainee seizes. This element of pedagogical system defines, to that teachers learn. That trainees have mastered the certain maintenance, a number of the training courses having at the heart of the program of training set of means for achievement of the purposes and problems of these programs, and also for the control over results of this process etc. the Given element is developed connected with designing and

working out of training courses.

Courses should be not only are in details developed, but also in appropriate way are given for studying. Therefore the element of a pedagogical subsystem connected with delivery, granting of courses is allocated. This granting assumes the certain educational environment which is the important component of pedagogical process.

And, at last, training process assumes constant maintenance of communications between the teachers trained and all other people involved in it, and also between them and those means which they use. Adjustment and maintenance of such communications, the organisation of educational process is a separate element of pedagogical system.

So, basic elements of a pedagogical subsystem of new educational system are connected with following kinds of activity: ***definition of the maintenance of training; designing and working out of training courses; granting, delivery of training courses; creation of the certain environment of training; the organisation of educational process.***

It is possible to allocate these elements and in traditional educational process, but both character of the activity connected with them, and interrelations between these elements essentially differ in case of based on new information and communication technologies of formation.

Not only separate elements of a pedagogical subsystem of modern formation are closely interconnected, but also all this subsystem is connected with others in uniform educational system. For example, definition of the maintenance of training essentially leans against the teoretiko-methodological bases of educational system. Ways of granting of courses and the training environment are continuous from a technological subsystem based on new information and communication technologies of formation. The organisation of educational process is included as a component and into an organizational subsystem of educational system.

Scientific novelty of research consists that the theory and practice of complex use of information, communication and traditional technologies in a pedagogical education for the first time is developed, including:

- The conceptual model of use of information and communication technologies in a pedagogical education is constructed.
- Principles of use of information and communication technologies in a continuous pedagogical education are proved. The system of use of pedagogical technologies on the basis of information and communications means is developed.
- Acmeological possibilities of the computer-focused technologies are revealed and proved in training of students-humanists of a Teacher Training University and conversion training of teachers of the comprehensive schools in the conditions of the open educational environment.
- Tendencies of the further research of the theory and practice of use of information and communication technologies in a pedagogical education are defined.

Results of researches contain scientifically proved theoretical and technological decisions on a problem of perfection of base preparation of pupils, students and teachers-predmetnikov on use of information and communication technologies; bring the essential contribution to development of a paradigm of open formation, the theory and practice of remote formation; allows to optimise educational process on computer science and information technologies at school, preparation and retraining of teachers on information and communication technologies. Results of researches are introduced in a number of schools of republics Dagestan and Karachaevo-Circassia, at pedagogical university, at institute of improvement of professional skill of pedagogical shots [1].

Literature

1. Vezirov T.G. pedagogical of a basis of use of information and communication technologies in system of continuous formation: the monography.-Makhachkala: DGPU, 2000. - 228 p.