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## Organization of Distance Education in the System of Teacher Postgraduate Education

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#### Abstract

The process of development, theoretical substantiation and implementation of distance education system organization model into teacher postgraduate education has been considered in the paper.

Postgraduate pedagogical study with wide-area distance study is greatly distinguished from present system by level of study quality, number of users, focus on personality, democracy, variance, application of modern information-communication technologies and telecommunication networks in study. The platform of distance education has to be applied for supplement and expansion of traditional process of institution study and communication in the teacher postgraduate education institutes. Implementation of distance education in the teacher postgraduate education system creates the educational system of retraining and professional development for teachers on-the-job, and improvement of educational services, proposed by educational institution.

**Key words:** distance education, teacher postgraduate education, distance course, model of distance education.

#### Research relevance

In the modern in formational society the knowledge and skills in various spheres require permanent update, especially in education. To be "not behind the times" the continuous renewal and improvement of professional and about professional skills of teacher is needed. Therefore the foreground task of teacher post-graduate education is providing of specialist by complex of knowledge and skills, needed for active creative and qualitative professional activity of teachers, who would be able to apply their knowledge in the conditions, which are changing, and whose main competence would be to take part in permanent life long self study.

#### Results of research

To solve the tasks of teachers retraining it is necessary to provide the education development on the base of new progressive concepts, to implement the new pedagogical technologies and scientific methodological achievements into educative process, to create new system of education dataware, to integrate Ukraine into global system of informational resources. The implementation and development of distance education in the teacher postgraduate system is needed for this aim as soon as possible.

Implementation of postgraduate distance study system in the institutes of retraining and professional development of teachers is aimed to create educational system for teachers on-the-job, to improve educational service, offered by educational institutions.

Achieved results of distance education system implementation in Ukrainian and foreign educational institutions have leaded to implement the distance education system in the institutes of retraining and professional development of teachers. The example of such systems are National Academy For Public Administration under The President Of Ukraine, The Institute of Extramural and Distance Education of National Aviation University, Ukrainian Centre of Distance Education of Kyiv Politechnic Institute, Taras Shevchenko National University of Kyiv, Kyiv Mohyla Academy. These teams actively work on practical realization of distance methods of study, implementation of module system of education, creation of electronic libraries.

The system of distance study in the teacher postgraduate education system is the complex of interconnected resources and processes, which provide the realization of study process, which main components are given on the scheme 1.

Pedagogical processes and processes of education management in the distance study system of teacher postgraduate education:	Organizational processes in the distance study of teacher postgraduate education:	Resources of the distance study system of teacher postgraduate education:
<ul> <li>planning of study process;</li> <li>control of study groups;</li> <li>study;</li> <li>management of study.</li> </ul>	<ul> <li>enrollment of university entrants;</li> <li>solving of organization issues of distance course listeners;</li> <li>solving of organization issues of tutors;</li> <li>management of documents circulation and formation of graduate qualified documents.</li> </ul>	<ul> <li>Informational infrastructure of general purpose.</li> <li>Technical platform of distance education system realizes the technical support of distance education system functioning.</li> <li>Content and electronic courses, which are media of conceptual part of educational programs.</li> <li>Standard documents, which determine the sequence of distance education system processes realization and documents forms of it.</li> </ul>

Scheme 1. Components of distance study system of teacher postgraduate education

Listed above resources and processes of distance study of teacher postgraduate education prove the complexity of task of this system creation and determine the sequence of its development and implementation.

The methods of study, which satisfy chosen pedagogical tasks and organizational model of study, have been determined simultaneously with determination of tasks of the distance study system of teacher postgraduate education. Pedagogical methods determine the main types of study activity of listeners, teachers and tutors – lectures, seminars, self work, consultations, testing, written works, and also the ways of remote interaction through special site, electronic mail, forums, chats, conferences, which are applied in the system of distance education.

The configuration of platform (model) and scheme of consolidation of it with present system of pedagogical university has been designed and the structure and design of content have been determined on the next stage of construction of the distance study system of teacher postgraduate education.

The model of distance study system organization of teacher postgraduate education determines the general principles of construction of organizational processes in it. The characteristics of the model of distance study system organization of teacher postgraduate education, which are based on integration of full-time and distance forms of study, are given on the scheme 2.

Study process in the postgraduate education system:			
Full-time	Distance		
<ul> <li>Introduction questionnaire</li> <li>General fundamental lectures</li> <li>Exams, defence of course and diploma projects</li> </ul>	<ul> <li>Lectures</li> <li>Practical, seminar, laboratory lessons</li> <li>Intermediate testing</li> <li>Consultations</li> <li>Forums, discussions, considerations</li> </ul>		

Scheme 2. The model of distance study system organization of teacher postgraduate education

Integration of full-time and distance forms of study is the most prospective model, which is proved by experience, and it can be applied both to school education (main courses, use of distance education courses for broadening of knowledge, liquidation of knowledge gaps) and to higher education.

Each distance education course is valid educational process. The support of it is provided by development of the virtual institute, which involves creation of well structured informational education environment, which contains all study courses, provided by study plan of specialist retraining, library of such courses (by specialties, by disciplines of curriculum, etc.), laboratory and practical works, additional materials (virtual libraries, vocabularies, thesauruses, electronic databases, etc.). Also there is possible to use various pedagogical and information-communication technologies for organization of cooperative activity of

course listeners in the small collaboratives on various levels of study, contacts with teacher, discussion in the framework of teleconferences, forums, collaboration projects, etc. The electronic multimedia study books and manuals are used in the net model of distance study. The administrative block is the important component in the net type of distance study, it is the block, where the registration of course participants, monitoring of their study, personal issues and other services.

The construction of distance education system model is realized on the base of balanced choice of listed above parameters, chosen educational programs, methods of study.

Structure of distance course:

- 1. General data on course contain its mission, aim, tasks, content, structure, application conditions, registration forms, conditions for course credit.
- 2. Questionnaires pocket (for acquaintance of potential listeners) contains blocks of questions on various aspects and it is used to get additional data on listener.
- 3. Questions pocket of pretesting for determination of initial level of knowledge and skills of listeners on course theme. Groups are formed according to testing results. Testing also helps listeners to get acquaintance with each other and with teacher. Group formation takes into account the unity of interests, the level of skills, creative abilities and other listener peculiarities, which are determined due testing and help to organize and design the study more adequately.
- 4. Reference materials in the form of database on subject sphere of course are manuals, vocabularies, glossaries, encyclopedias.
- 5. Course library includes additional study materials, resources on the server, links for web-sites.
- 6. Study course, which is divided into interconnected modules, chapters, themes, lessons in thematic form.
- 7. Block of tasks is aimed on comprehension of material and checking out of its understanding, consideration and application (tasks, workbooks, etc.).
- 8. Block of creative tasks is aimed at self mastering of knowledge and skills in solving specific problems; implementation of individual projects in cooperation group; practical tasks (individual and group).
- 9. Block of monitoring of listeners self activity results (individually or in cooperation groups) tests, interviews, questionnaires, logs (introduction to course), report on activity, etc.
- 10. Exam materials, requirements to level of knowledge by groups (A, B, C), if they are supposed by this course, exam test.
- 11. Study of listener thoughts on course is conducted in the chapters Voting and Questionnaire.

The choice of Learning Management System (LMS), which is base (main) instrument of distance study system platform. Configuration of distance study platform depends on chosen pedagogical technologies, content structure.

The requirements for certain system implementation are:

Capacity. Requirements to Learning Management System capacity determine the maximal load of system by number of simultaneously working users, maximal response time for user queries.

Functionalities. Requirements to Learning Management System functionalities are formed on the base of pedagogical purposes, organizational model of study and content.

General technical and technological possibilities. General technical and technological requirements include requirements for stability and safety (secure) of data, usability for users and administrators, options for further system development.

As LMS is multiplatform program, therefore the selection of operational system has to be substantiated, it is first layer. The universal components of LMS, such as HTTP-servers, servers of applications, DBMS, which can be delivered in the kit with LMS or its selection is proved by project, are related to second layer. Specialized components of LMS constitute third layer. They are software of LMS, which directly realize the basic services of distance study. Finally, fourth layer consists of optional software: discussion forum, electronic mail, cooperation in real time, etc.

The selection of Learning Management System often occurs as compromise between its value and required capacity, functionality and manufacturability, which are needed for construction of distance education system. Therefore Control Management System Moodle has become such compromise in the Institute of Retraining and Advanced Training.

Control Management System Moodle is specially developed for creation of distance courses by teachers and their publishing in the web. The theory of social constructivism in the study lays in the base of the Moodle project (htpp://www.moodle.org). Moodle spreads as software with open code under license GNUGPL (General Public License GNU).

Implementation of chosen Learning Management System is actually beginning of realization of distance study system implementation.

The registration processes and authorized access to distance study, delivery of courses to listeners, teachers and tutors, management and control of study process are realized by Learning Management System.

Content is used in the Learning Management System. Content is the set of electronic study materials of courses, which function in the area of distance education system and realize educational programs. Development and implementation of content is proceeded with participation of both teachers and tutors.

It should be noted, that requirements to content of distance retraining education system differ from those to advanced training of specialists. The main requirements to content for retraining are matter and methodological support, i.e. content has to satisfy educational and qualifying characteristics of specialty, study plan and assessment of knowledge.

The main requirements for content of advanced training of specialists in the distance education system are formatting, quality of text, graph and multimedia parts of courses.

Next resource, that is included in distance study system, is informational site. The main designation of site is promotion of distance educational services of Institute, informational support of study process, creation of distance education listener fellowship (fig. 1).

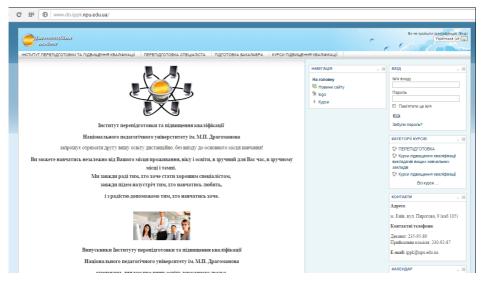


Fig. 1. The main page of teacher distance postgraduate study of National Pedagogical Dragomanov University

The approbation in test regime with control group of advanced training course listeners, composed of nine officers of secretariat of The Cabinet of Ministers of Ukraine began from September 2013. At the same time the control groups of listeners of retraining by specialties "psychology" and "economics" were collected. Thus the period of development and establishment of distance study system of pedagogical education in the Institute of Retraining and Advanced Training began.

#### **Conclusions**

Distance study in postgraduate pedagogical study plays role of catalysis for reforming of system in the way of characteristics and indices of open study. Postgraduate pedagogical study with wide-area distance study significantly dif-

fers from traditional system by level, study quality, users number, orientation on personality, democracy, variability, application of modern informational communicative technologies and telecommunication networks.

Distance study initiates the formation of Ukrainian web-environment of postgraduate education and promotes the integration of Ukrainian postgraduate education in the world education environment.

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Vy`mogy` do vy`shhy`x navchal`ny`x zakladiv ta zakladiv pislyady`plomnoyi osvity`, naukovy`x, osvitn`o-naukovy`x ustanov, shho nadayut` osvitni poslugy` za dy`stancijnoyu formoyu navchannya z pidgotovky` ta pidvy`shhennya kvalifikaciyi faxivciv za akredy`tovany`my` napryamamy` i special`nostyamy` / Nakaz Ministerstva osvity` i nauky` Ukrayiny` vid 30.10.2013 # 1518 [Elektronny`j resurs]. – Rezhy`m dostupu: http://zakon4.rada.gov.ua/laws/show/z1857-13

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