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EXPERIMENTAL VERIFICATION OF FORMATION OF READINESS FOR PROFESSIONAL ACTIVITY WITH THE USE OF INTERACTIVE TECHNOLOGIES OF FUTURE GEOGRAPHY TEACHERS

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Summary. The article defines that today, the priority task of modern pedagogical science is the development of the theoretical and methodological foundations of innovative processes, the study of the interrelations of theory and practice. Therefore, there is a need to determine the organizational and pedagogical conditions and test their effectiveness on the way to improve the professional training of modern specialists in the field of study.

The article considers the developed author's structural-functional model of formation of readiness of future teachers of geography to professional activity, which acts as a system of interrelated elements: goals, objectives, methodological approaches and principles, structural and functional components, content, forms, methods, results, as well as criteria and indicators of the level of formation of readiness for professional activity.

The article presents the results of an experimental verification of the effectiveness of introducing a structural-functional model of the formation of readiness of future teachers of geography to professional activity using interactive technologies and testing the success of its functioning in the created organizational and pedagogical conditions. In the course of the experiment, on the basis of certain levels of structural components of readiness, data were obtained on the formation of readiness for professional activity in the experimental and control groups. The results obtained will allow us to conclude that the model we have proposed is effective and appropriate for its introduction into the process of professional training of future teachers of geography.

Keywords: training of future teachers of geography; readiness for professional activity; organizational and pedagogical conditions; structural and functional model; level of readiness; interactive technologies

Formulation of the problem. Current changes in society and new strategic goals in the development of economic, political, social and cultural spheres supersedes the requirements of the education system. In the dynamic world of the teaching profession remains stable, although its content, working conditions, qualitative and quantitative composition change. Modern educational system inherent in the subject-subject relationship. Reality requires a qualitatively new model of higher professional teacher education, creating conditions for the development of personal and creative potential of future teachers of primary and storage practices. [5]

Professional training of future teachers of geography in higher education requires formation in Ukraine teacher readiness for professional activities. Today, the priority of modern pedagogy is to develop theoretical and methodological foundations of innovative processes, study the relationship of theory and practice. Then there is the need to define the organizational and pedagogical conditions and verifying their effectiveness in improving training modern specialists in the study area.

Analysis of recent research and publications suggests a certain scrutiny of the various aspects of the use of interactive technologies, as reflected in the works of local and foreign scientists. Disclosed questions about application features interactive technologies in education, the structure of educational activities, ways and means of implementation in educational practice in the works of V. Bezpalko, H. Selevko, O. Piekhota, O. Pometun [3], L. Pyrozhenko [4], etc. In studies K. Durai-Novakovoi, M. Diachenko, L. Kandybovych, V. Moliako, M. Savinoi, V. Slastonina, Yu. Turchanynovoi and other problems reflected the

readiness of teachers to the profession. Analysis of the current educational paradigm, as reflected in the works of O. Dusavytskoho, G. Klimov, V. Korzhenko, V. Kremen V. Lutay V. Ognevyuk, M. Romanenko and others.

These studies had a great influence on the systematization of scientific knowledge on this issue, but aspects of interactive technologies in preparation for future teachers of geography remained poorly understood, in particular, require further study issues related to discovery and scientific substantiation of organizational and pedagogical conditions that may the transition to competency-oriented education in vocational education, promoting the formation of professional competence of future specialist.

The purpose of the article highlight experimental results verify the effectiveness of the formation of future geography teachers to the profession using interactive technologies.

The main material research. Studying the theoretical aspects of training of teachers and the use of interactive technologies to create readiness for professional activity in the plane of philosophical and pedagogical knowledge paved the way for the development of structural-functional model of formation of future teachers of geography. For this purpose, the content of the components of readiness formation is determined and the corresponding skills are highlighted. So by all bases to identify and theoretical study of organizational and pedagogical conditions for preparing future teachers for professional and experimental verification of structural and functional model of formation of future geography teachers to the profession using interactive technologies.

The aim of the experimental work was testing the structural and functional model of formation of future geography teachers to the profession using interactive technologies and test its operation in progress created organizational and pedagogical conditions.

Author developed structural-functional model of formation of future geography teachers to the profession appears as a system of interrelated elements: purpose, objectives, methodological approaches and principles of structural and functional components, content, forms, methods, results and criteria and performance levels formation of readiness for professional activities.

Achieving this goal provided a set of complementary and cross-checking methods: create, study, synthesis and testing of teaching experience; modeling; prognosis; educational experiment; conversation, questioning; analysis of educational documentation and the products of creative activity of students; methods of statistical data.

Experimental work was carried out at the Odessa I. I. Mechnikov National University. Participants in the experiment were students of Geology and Geography faculty who study the

field 014 "Secondary education (for professional purposes "Geography")" and 106 "Geography". Total experiment involved 172 students.

Experimental work was carried out in the study of disciplines of professional and practical training, which included the study of psychological and educational courses, teaching methods and practical training and subject-science cycles. In the experimental group training was developed by the author structural and functional model of formation of readiness for professional activity of future teachers of geography of the proposed organizational and pedagogical conditions. Members control groups were taught the traditional program.

Experimental work was carried out in four stages.

1. Ascertaining. At this stage determined the following levels:

- theoretical knowledge of students, including interactive technologies;

- the output level of development of practical skills of future professionals and their ability to apply theoretical knowledge in teaching in HEI;

- personal development of students.

2. Diagnostic. At this stage of the experiment program was developed which included goal-setting research and experimental work and its challenges, defining organizational and pedagogical conditions of use of interactive technology. Also in this period by control and experimental groups developed technologies and use of interactive technology.

3. Forming. This step is based on the inclusion of students in specially created organizational and pedagogical conditions for use of interactive technologies during high school vocational teacher training, which involves modeling future careers of students.

4. Summarizing. At this stage, performed data processing, matching set of results with the intended purpose, their qualitative and quantitative analysis and description of the experimental results and theoretical conclusions were refined data obtained by experiment.

Based on the results of theoretical research we have identified components of readiness for professional activity:

- motivational target
- cognitive contents
- operational-activity
- estimated-reflexive

All these components form the integrative unity among themselves and form the basis for determining the level of formation of teachers to the profession. Defining characteristics

studied availability and selection of relevant criteria allowed to specify levels of readiness for professional activities.

The first level is high. High, persistent and strong professional focus on creative transformations in the future teacher of geography. Independent search in acquiring new knowledge, in mastering new techniques and ways of organizing pedagogical activity. Ability to creatively generate new ideas, knowledge. There is a high need for self-education, creative self-realization in the sphere of professional pedagogical activity.

The second level is sufficient. Stability is shown in the focus on mastery of professional readiness, on the use of interactive technologies. Positive orientation to the profession of teacher. Interest in the use of interactive technologies is determined by both external stimuli and internal stimuli, while the former are predominant. Problem solving in educational and professional activities with the use of interactive technologies causes difficulties that are overcome with the help of a teacher or other students.

The third level is average. Shows insufficiently positive motivation for professional activity. The range of knowledge about interactive technologies is not wide enough, in some cases can use elements of interactive technologies in the educational process. There is a focus on acquiring knowledge of interactive technologies in the absence of sufficient scope for individual aspects, but quite often the mastery of knowledge is fragmentary and unsystematic.

The fourth level is low. Instability in the motivational-value relation or absence of positive changes in the application of interactive technologies in new pedagogical situations. Haphazardness and lack of awareness of interactive technology knowledge. The personal position of the future teacher of geography is not expressed in the professional activity. The inadequacy between the set goals of the activity and the methods, methods of its organization is observed.

The effectiveness of the model implementation is evidenced by quantitative data on the formation of motivational-target, cognitive-content, operational-activity and evaluation-reflexive components of future teachers of geography for professional activity, shown in table 1.

As can be seen from the table, if, at the beginning of the experiment, the readiness levels of all structural components for the future activities of the future teachers of geography were almost the same in the experimental and control groups, the maximum deviation was not more than 1.5%. So, at the end of the experiment, we noticed a significant increase in the number of students with high and sufficient levels in the experimental group and a significant decrease in the low level group. In the control group, the situation remained almost

unchanged: the number of students with high and sufficient levels increased by several percent due to the ordinary educational process in which students participated.

Table 1.

Evaluation of the levels of components of future geography teachers to the profession by means of interactive technologies and post-molding stage of the experiment

Stage of control, number of students	The beginning of the experiment (IC)				The end of the experiment (FC)			
	EG - 87 stud.		CG - 85 stud.		EG - 85 stud.		CG - 84 stud.	
	Qty.	%	Qty.	%	Qty.	%	Qty.	%
Dynamics of the levels of motivational target component								
Low	18	20.69	17	20,00	5	5.88	14	16.67
Average	37	42.53	36	42.35	30	35.29	37	44.05
Sufficient	26	29.89	27	31.76	27	31.76	24	28.57
High	6	6.90	6	7.06	23	27.06	9	10.71
Dynamics of the levels of cognitive semantic component								
Low	19	21,84	20	23.53	7	8.24	15	17.86
Average	39	44.83	37	43.53	19	22.35	36	42.86
Sufficient	25	28.74	25	29.41	39	45.88	28	33.33
High	4	4.60	3	3.53	20	23.53	5	5.95
Dynamics of the levels of operational-activity component								
Low	9	10.34	9	10.59	3	3.53	7	8.33
Average	42	48.28	40	47.06	28	32.94	37	44.05
Sufficient	30	34.48	29	34.12	30	35.29	31	36.90
High	6	6.90	7	8.24	24	28.24	10	11,90
Dynamics of the levels of estimated-reflective component								
Low	11	12.64	10	11.76	4	4.71	7	8.33
Average	44	50.57	44	51.76	23	27.06	41	48.81
Sufficient	27	31.03	25	29.41	36	42.35	25	29.76
High	5	5.75	6	7.06	22	25.88	8	9,52

Conclusions. Thus, the results of the experiment made it possible to argue that the readiness process is multilevel in format, which reflects the different levels of formation of professional inclinations in the future teacher. As a result of the work, it can be argued that the

proposed organizational and pedagogical conditions and structural and functional model of preparedness with the use of interactive technologies, contributed to the quantitative and qualitative increase in the level of training of future geography teachers for professional activity.

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