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«The effectiveness of the pedagogical conditions for organizing the educational process using distance educational technologies at the university»

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Materials and methods

Options for organizing the educational process at the university

- Traditional full-time and part-time education (control group – 1216 students)
- Part-time education with partial use of distance learning technologies (experimental group №1 – 1026 students)
- Fully distance learning (experimental group №2 – 1325 students)

Clusters of pedagogical conditions

- Learning content: use of a university distance learning platform developed on the basis of Moodle / attraction of third-party electronic educational resources
- Training time: synchronous / asynchronous training
- Teaching method: traditional teaching methods and forms / active teaching methods and forms
- Learning control: test items / detailed answers

Criteria for evaluation

- Motivation for learning
- Trainedness
- Learnability
- Strength of learning outcomes (residual knowledge)

Results and discussion

The influence of the pedagogical conditions of distance education on the quality of student learning (Student's t-criterion)

Cluster of conditions	Control group (t_{emp})	Experimental group №1 (t_{emp})	Experimental group №2 (t_{emp})
Motivation for learning			
Learning content	0,38	1,24	1,16
Training time	4,21	6,92	2,09
Teaching method	5,87	6,99	2,13
Learning control	0,59	1,01	1,19
Trainedness			
Learning content	0,56	3,69	3,78
Training time	0,35	3,14	2,32
Teaching method	4,22	3,19	3,36
Learning control	3,47	4,27	3,12
Learnability			
Learning content	0,95	0,94	3,06
Training time	0,45	1,17	4,20
Teaching method	3,49	4,11	4,27
Learning control	0,14	0,18	1,02
Strength of learning outcomes			
Learning content	0,54	0,37	0,29
Training time	1,12	0,69	1,36
Teaching method	3,94	4,16	3,28
Learning control	5,27	4,11	3,24

Conclusions

Effective pedagogical conditions for traditional and distance learning

- The use of active methods and forms of teaching in the educational process has a positive effect on the level of learning, learnability and strength of student learning outcomes
- Regular current, intermediate and final control, which includes test tasks, detailed answers (with mandatory checking for the presence or absence of borrowings), interdisciplinary tasks have a positive effect on the learning and strength of student learning outcomes

Effective pedagogical conditions for all forms of implementation of distance learning

- Involvement of third-party content (electronic educational resources) while controlling their quality and appropriate methodological and informational support has a positive effect on student learning

Effective pedagogical conditions for different forms of implementation of distance learning

- Asynchronous learning and the use of active forms and methods of teaching have shown their effectiveness for the development of motivation for learning, increasing student learning in the organization of the educational process with partial use of distance learning technologies, for the development of student learning in the organization of the educational process with the full use of distance learning technologies