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## IMPROVING THE METHODOLOGY OF BASIS OF PEDAGOGICAL CONDITIONS THAT HELP THE FORMATION OF CARTOGRAPHIC COMPETENCE IN STUDENTS

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## ABSTRACT

This scientific article is based on flexible, evolving selected pedagogical conditions, taking into account the pedagogical conditions that help higher education institutions to form cartographic competence in students majoring in "Geography", the successful formation of cartographic competence, optimizing the process of teaching individual, random, cartographic subjects issues of formation of cartographic competence of students are described.

**KEYWORDS:** Individual, Randomly Selected Pedagogical Conditions, Cartographic Disciplines, Teaching Process, Optimization.

## **INTRODUCTION**

For the successful formation of cartographic competence of students, it is necessary to identify pedagogical conditions that facilitate this process and thus ensure the effectiveness of student training.

Based on the understanding that individual, randomly selected pedagogical conditions cannot significantly influence the formation of cartographic competence through career-oriented learning technology, we consider flexible, dynamically evolving complex pedagogical conditions necessary to optimize the teaching process of cartographic subjects.



The pedagogical conditions of effective teaching in cartographic subjects should also be understood as a set of measures developed by the teacher to ensure the implementation of person-centered teaching technology in the learning process that contributes to the formation of cartographic competence of students.

**The main part.** The results of experimental teaching using person-centered learning technology aimed at the formation of cartographic competence of students confirmed the research hypothesis that the teaching of cartographic subjects is the most effective and the formation of cartographic competence will continue more effectively if the following pedagogical conditions are met:

1	• Determination of the purpose of diagnostics, selection and structure of the content of educational material is carried out in accordance with the characteristics of the activities of bachelors in person;
2	• the choice of forms, methods and teaching aids that contribute to the formation of cartographic competence, the variability and flexibility of their application;
3	• Developed a system of quality control of cartographic training of students, which is carried out at all stages of the process of implementation of person-centered learning technology;
	formed the readiness of teachers and students to put into practice the technology of person-centered teaching;
5	Encourage students to master the content of educational materials in the study of cartographic subjects;
	Person-centered interaction between teachers and students in the learning process.
	Figure 1. Pedagogical conditions

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## **RESEARCH RESULTS AND DISCUSSION**

According to the results of the experimental test, we substantiate the importance of the so-called conditions that help to form the cartographic competence of students of higher education institutions.

An important condition that contributes to the formation of cartographic competence of students is the goal setting, selection and structure of the content of educational material in accordance with the standard of higher education.

Goal setting is one of the most important steps in designing a person-centered learning technology aimed at shaping the cartographic competence of higher education students.

Goal setting in the context of person-centered technology provides motivation: each lesson involves an appropriate system of goals: didactic, educational, developmental, mainly aimed at creating an indicative basis for student activities to master the learning content.

Goal setting requires the selection and structure of learning material. The main content of the training material is determined by the direction of education and the standard of education related to this area.

One of the conditions is the choice of these special forms, methods and teaching aids. Given that this condition is described in detail and is reasonable, we will focus only on the basic rules.

The use of certain forms and methods of teaching is characterized primarily by a special type of interaction and interaction between teachers and students, created on the basis of unity of content and goals of personal training and acting as the most important condition for personal development.

Within the framework of person-centered technology of teaching cartographic disciplines, various methods and forms of training were used to ensure maximum activation of students' learning and cognitive activity. Together, they create a tool that guides the process of shaping students 'cartographic competence.

The use of the following teaching methods in the teaching of cartographic subjects - lectures (including its non-traditional forms), seminars, laboratory classes, practical and independent work, special games, tests, consultations, field practice, abstracts and individual interviews - confirmed their hypothesis. They contribute to the formation of students 'cartographic competence.

Monitoring and evaluation of learning outcomes provides information about the level of formation of cartographic competence of students in the process of mastering cartographic disciplines. This allows the teacher to clarify the purpose and content of the lesson in a timely manner, to reconsider approaches to the choice of teaching methods, forms and tools, thereby changing the learning trajectory, and the student learns the correctness of mastering the material based on reflection. The following types of control were used: initial, current, intermediate, final.

Current supervision is carried out systematically during the planned classes and is directed to the student. The student must be self-directed and understand the level of mastery of their knowledge and skills, on the basis of which the teacher can, if necessary, correct the reading



activity in a timely manner. To do this, it is advisable to use computational-graphical, descriptive and measurement functions.

The task of intermediate control is to determine the level of mastery of the cartographic material of each module by students in general. Test assignments are used for this (by options).

The final control is carried out in the final stages of the training, which allowed to determine the level of formation of cartographic competence of students.

The most important element of a teacher's readiness to form cartographic competence in the context of the use of person-centered learning technology is his integrated training, ie: knowledge of his subject and related disciplines, computer capabilities and skills to work with it; mastering the skills of managing students' learning activities.

In our opinion, the qualities of a teacher of cartographic sciences in higher education institutions are: knowledge of the subject, the ability to communicate with students, the ability to create an environment of interaction in the classroom, high methodological skills, ie work with pedagogical and methodological technologies. as a teacher in a higher education institution, she must have design, constructive, flexible, organizational, communicative, diagnostic, practical, evaluative and reflective skills.

The teacher should develop and build person-centered learning technology, substantiate the logic of organizing pedagogical interactions with students at the communicative level, define forms, methods and criteria of teaching, formulate pedagogical tests and test assignments to organize supervision and self-monitoring, etc. Thus, the content of the teacher's work takes on a creative character, which requires him to constantly update his integral knowledge and personal growth. Teachers, even those with extensive experience (training) in teaching, are often far from new educational technologies in the field of theory and teaching practice, do not master them and do not understand their importance due to conservative thinking. They often experience a psychological barrier to the development of innovative approaches to teaching, which is often obscured by doubts about the pedagogical potential of new technologies.



Figure 2. As a result of studying the course, teachers can get:

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imagination: about the problems and trends in the development of the education system; Status and prospects for the development of educational technologies in higher education; the role of special discipline in the system of personal training; the specificity of teaching this discipline in higher education; knowledge: about the basic concepts of the course ("technology", "teaching technology", "teaching technology design, etc.); teaching technology design methods; specific features of the use of teaching technologies in special subjects; traditional and innovative methods, forms and means of teaching; didactic requirements for the organization of such classes and methods of their conduct; the content and mechanisms of the organization of independent work of students; the basis for the development of control, test assignments and exercises; skills: design, construction and application of teaching technology; implementation of goal setting; content identification; selection and compilation of educational material; modern methods of teaching special subjects; monitoring the learning process; organization of independent work of students, determining its type, size and content; determine the level of mastery of the material studied by students; to analyze and evaluate the quality of assignments given by students, to identify the reasons for students' lag and to adjust the learning process in this regard; to diagnose, analyze and evaluate their individual activities and their results.

In order to create teachers' interest in designing educational technologies and introducing new educational technologies, in our opinion, it is necessary to provide individual competitions, encourage the work of teacher-innovators, as well as certification of developed educational models and subsequent publication of catalogs.

Live exchange of experiences in a narrow range of conferences of special science teachers working in different universities is very effective. Such conferences provide an opportunity not only to learn about new areas of science teaching, but also to see the development of advanced technologies, to compare different approaches.

The role of the teacher is changing due to the introduction of modern teaching technologies in the educational process of higher education institutions. In connection with the emphasis on the independent acquisition of knowledge, the consulting, corrective direction of the teacher's teaching activities will increase, the requirements for his personal, general cultural, communicative qualities will increase significantly. Thus, the requirements for personal training of teachers are growing in the context of excessive scientific and educational information provided to students during their studies at the university.

Summarizing the above, it should be noted that in order to realize the teacher's readiness to apply person-centered technology in practice, it is necessary to:

1) Mastering of new educational technologies and didactic experience by the teacher existing in other higher educational institutions;

2) Training on the basis of the program, which provides not only the use of professionally oriented learning technologies in the educational process of the university, but also their design.

Based on the results of the experiment, we substantiate the impact of the availability of personcentered teaching technology on teacher performance, which carries out the formation of cartographic competence of students. In terms of the application of this technology, the following trends are distinguished: first, the teacher is freed from increasingly difficult didactic functions, including control functions, leaving only creative functions; second, its capacity to Vol. 11, Issue 3, March 2021 Impact Factor: S

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manage the process of cartographic competence formation is significantly expanded; third, there is a growing demand for teacher personal preparation.

The training of not only the teacher but also the students is important for the successful implementation of person-centered teaching technology in the educational process of the university.

Therefore, one of the features of the professionally oriented technology of teaching cartographic sciences in higher education was the targeted orientation provided by individualization, differentiation and a person-centered approach to teaching. This technology is the subject of educational activity - it should be adapted as much as possible to the student.

Analysis of the problem of readiness for work in the psychological pedagogical literature, the application of a system-activity approach, the results of experimental work allow to identify the main signs of the student's readiness to use person-centered learning technology in cartographic sciences. Among them, we highlight the following: the formation of positive motivation for the study of cartographic sciences; availability of necessary knowledge in basic school subjects; adequate mastery of communication skills and abilities; readiness for creative activity. The next pedagogical condition is the motivation of students to master the content of educational materials in the study of cartographic subjects. This stands out as one of the necessary conditions for the formation of cartographic competence of university students, as it is a necessary factor for successful learning. Acceptance of goals, understanding of their importance and significance to the individual has a great impact on the motivation of students' learning activities.

The next pedagogical condition is the motivation of students to master the content of educational materials in the study of cartographic subjects. This stands out as one of the necessary conditions for the formation of cartographic competence of university students, as it is a necessary factor for successful learning. Acceptance of goals, understanding of their importance and significance to the individual has a great impact on the motivation of students' learning activities.

**CONCLUSION:** The effectiveness of the educational process largely depends on the implementation of person-centered interactions between teachers and students in the educational process.

The system of teacher-student relations in the organization of pedagogical interaction in the teaching of cartographic sciences is based on the principles of a person-centered approach.

Summarizing the results of the experimental work, it can be noted that the development of professionally oriented technology of teaching cartographic sciences and its application in the educational process of higher education helps to form the cartographic competence of higher education students.

- The experimental work confirmed the pedagogical conditions for the use of person-centered learning technology, which provides the formation of cartographic competence of university students:

- the choice of forms, methods and teaching aids that contribute to the formation of cartographic competence, the variability and flexibility of their application;

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- Developed a system of quality control of cartographic training of students, which is carried out at all stages of the process of implementation of person-centered learning technology;

- formed the readiness of teachers and students to put into practice the technology of personcentered teaching;

- Encourage students to master the content of educational materials in the study of cartographic subjects;

- Person-centered interaction between teachers and students in the educational process.

Thus, the complex of pedagogical conditions identified in the process of experimental work contributes to the effective operation of the developed professionally oriented technology of teaching cartographic sciences, aimed at the formation of cartographic competence of university students.

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