

## Competence-based approach as an effective way to increase the level of training of geographers in universities

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**Abstract.** The paper considers the main problem of including the competency -based approach in preparing of future geographers in universities, in particular, it considers the basic definitions of competence and competency, that ( Y.G. Tatur, E.F. Zeer , I.A. Zimnyaya , T. Hoffman) single out. Main operational programs in geography are analyzed, in particular , the subject line of textbooks "Spheres" of 5-9 classes, the first-level standard of HPE in the training area of 050100.62 teacher education. The authors highlighted the geographical competency, which includes information and cognitive competence, as well as the main directions of updating the content and structure of geographical education.

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### Introduction

The realization of the requirements and recommendations of the Bologna Declaration, the essence of which is to update the competency-based approach in teaching students becomes a priority direction of state policy in the field of higher education.

This approach allows using all the creative potential, knowledge, abilities and skills in professional activity. For the preparation of the future expert geographer the formation of geographical competency is an essential aspect, its formation begins with the youngest school level and ends at the university. It is multifaceted and includes informational and cognitive competence, among which we single out: reader's and research, which are formed through practice-oriented and personality-centered nature of learning. The content and structure of modern geography education aims to prepare a professionally trained specialist with geographic competency.

### Method

The following methods were used in writing the article:

Theoretical: the analysis of psychological and pedagogical literature, university and school programs.

Empirical: the analysis of the legal documentation, structuring and generalization of the main competencies of future geographers.

### The main part

First publications concerning the essence of the above-mentioned approach appeared in the U.S. in particular, the article "Testing for competence

rather than for intelligence" is one of these publications [1].

Subsequently, the problems of competency-based approach were considered in domestic psychological and pedagogical science. Researchers in the field of competence-based approach in education ( V.I. Baydenko , E.F. Zeer , Y.T. Tatur , A.V. Khutorskiy, I.A. Zimnyaya , J. Raven , T.J. Halperin , V.V. Davydov, A.N. Leontiev, V.D. Schadrikova, I.S. Yakimanskaya etc.) determine competency as the personality's ability to independently acquire knowledge, skills, to professionally solve problems, to acquire personal qualities (cognitive , creative , methodological, communicative , ideological). In their theoretical and pedagogical works, we see psychological theories of activity as the active form of relations, they also developed teaching models, which include methods of forming of individual components of education, they also consider issues of formation and mastering of generalized knowledge, skills [2, 3, 4, 5, 6].

In the competency-based approach there are two concepts: competency and competence. So, J.G. Tatur (2004) formulated the following definition of competency: "... the competency of specialist with higher education - is the manifested by him in practice willingness and ability to fulfill his potential for a successful creative activity in the professional and social spheres, realizing the social importance and personal responsibility for the result of this activity, and the need for its continuous improvement ". [5]

T. Hoffman relates to competency:

- Visible and recordable activity results;
- Some activities' standards;

- Personal characteristics that determine the effectiveness of the given activity [7].

In the works of E.F. Zeer and I.A. Zimnyaya competence is considered as a man's possessing of relevant competence, including his personal attitude to it and to the activity [2, 3, 8, 9].

Competence, which is an integral part of competency, in turn, is defined as an integrative wholeness of the acquired knowledge and skills and the unity of theoretical and practical preparedness, implementation that provides a successful realization of a particular professional activity of a person. The competence components in this definition are: 1) informational component - methods of administration, storage, processing and transmission of information; 2) Designing component - the methods of determining the objectives, resources for their achievement, actions, time; 3) evaluation component - ways to compare the results with the objectives, classification, prediction, systematization, concretization; 4) communicative component - the modes of information transmission and attraction of other people resources to achieve their aims [2, 3, 5, 6].

E.F. Zeer identifies three categories of competencies - basic competencies, social and professional competencies, key competencies. Each of these groups contains general cultural, social, educational and cognitive, organizational and special components [2]. We should add, that the symposium in Bern in 1996, the European Council identified key competencies, which young Europeans must have, for successful work (political and social competencies, competencies related to life in a multicultural society, communicational competencies, competencies related to the informatization of modern society, with the ability to learn throughout life as a foundation of lifelong learning [10].

We should notice that the relevance of implementing competency-based approach to the system of Russian education is determined, above all, by some its trends in recent years: variability and alternativeness of educational programs, increasing competition and commercial factor in the activity of educational system, the change in states' function in education from the control and planning to general legal regulation, the prospect of Russian education and Russian economy inclusion into the international system of labor development [11].

Thus, the implementation of competency-based approach in professional education contributes to the achievement of its primary purpose - training of qualified specialists with appropriate level and profile, who is competitive in the labor market, with fluent knowledge, skills and abilities required in his

profession, and oriented to related areas of his activity, capable to work effectively in the specialty at international standards, ready for continuous professional growth, social and professional mobility [5, 3]. Updating the content of education, its methods, techniques, changing objectives from knowledge to competence, the formation of personality traits of the individual, according to E.N. Chekanushkina lead to successful training of qualified, competitive professionals up to international standards [6].

Scientists also see the necessity of mastering competencies associated with social interaction by the future specialists.

I.A. Zimnyaya considers actual social competencies as a unity of the following components: a) readiness to competence manifestation (motivational aspect), b) knowing the competency's content (cognitive aspect), c) experience in manifestation in various standard and non-standard situations (behavioral aspect) d) attitude to competency's content and to its application object (value-semantic aspect, which acts as a motivational) e) emotional-volitional regulation of the process and result of competence's manifestation [3].

The formation of geographic competency begins with young classes of studying the subject "surrounding world" and continues on subsequent courses of natural history and geography at school, university, thereby making an important pedagogy principle of continuity in geographic education. In elementary school, there is a system of universal learning activities as key competences that provide the formation of students' ability to self-mastering of new knowledge, among them: subject, personality, cognitive, communicative and regulatory.

Thus, universal learning activities, formed during the study of the course "surrounding world" as key competences, in their content they correspond to the kinds mentioned above, and serve as the basis of geographical competence that continues to shape during the study of geography in primary and secondary schools [12].

Analysis of the work programs in geography, particularly the subject line of textbooks "Spheres" for classes 5-9, showed that the basic school continues to form and develop universal educational actions, which provide the mastery of key competences of geographical competency:

motivational, the structure of which includes needs, motivations, cognitive interest in the study of geographic disciplines;

value-motivational, the content of which is primary related with the students understanding of the values of studying geography, that become motives of learning activity, based on the needs of

students, they are cognitive, ecological and aesthetic, moral, communicational, national, moral and ethical behavior norms, the basics of Russian civic identity and social responsibility);

cognitive- informational, which involve the mastery of geographical knowledge about the planet Earth as a peoples' planet; work with geographic maps, devices, as well as the mastery of geographical methods and techniques of mental operations;

communicative, which imply cooperation in pairs, in groups, participation in discussions, considerations, reports speech, presentations of the project;

practice-creative, which include the application of knowledge and skills for solving cognitive tasks, the ability to assess the state of the environment, to predict changes in nature influenced by anthropogenic factors, create eco-geographical personal significant projects, use geographical knowledge and skills in everyday life, be able to explain the phenomenon and processes in the natural environment [13].

Formation of geographic competence based on the principles of succession and continuity continues in high school. The standard of first-level of HPE in the area of training 050100.62 teacher education and training profile geography and English, geography and biology lays claim to professional competences on the main base unit, namely the graduate is able to use systematized, theoretical and practical knowledge of geography in practice (conception about the geographical cover, the basics of socio - economic geography, population geography, geography methods), as well as to explain, analyze, compare, summarize geographical information. The graduate is ready to apply advanced methods and technologies, including informational, to ensure the quality of educational process in the teaching of geography.

In the area of educational work, the graduate should apply modern technologies, methods of diagnosing learning results, he should carry out the process of socialization and professional self-determination. The demands of special competencies are identifying the relationship between natural, economical and social components, the mastering of methods of scientific research, the prediction of interaction between natural and socio-economic processes. [14]

Summarily looking at the formation of geographical competency on the principle of succession and continuity of the formation of geographical competency in school-university system, we come to the definition of competency as a set of specialized knowledge, skills, personality abilities, its experience, creative activity, which

allows to qualitatively and efficiently carry out its professional activity, allows to orientate in life.

Competency-based approach in education is impossible without practice-oriented and personality-centered nature of learning. Information- cognitive and practical- creative competences are formed during the performance of practical work. Practice-oriented approach of the students aims at the orientation of application of the received knowledge, skills in practice and in everyday life. The formation of practical skills is realized by the performance of practical work, required both in the value - semantic, and in the creative stages of geographical competency. At value- semantic stage of geographical competency formation, practical work is focused on the deepening, development and consolidation of the acquired knowledge and skills, at that informational and cognitive competence is formed.

Geographical competency includes informational and cognitive competences, let us consider them on the example of readers' and research competences. Possession of readers' competencies for the future teacher of geography is not just important and necessary; it is unique in its significance. The ability to work with information, to comprehend it, to assess it, forms critical thinking, on the taxonomy of modern education of B. Bloom, "... it is a high- level thinking, at the level of analysis, synthesis and evaluation "[15].

Reader's competences include the ability to analyze the text (information), to find the necessary information, to allocate the main idea, to form cause and effect relationships, to find answers to questions, the similarities and differences, to present evidence, to make charts and tables, to formulate a meaningful question - an indicator of intellectual development and the fact that the studied problem is personally important for students.

Systematic work with literature, internet sources, conducting observations, tests, experiments, especially ecological and geographical ones, allows to deepen the theoretical knowledge and practical skills, develops logical thinking, self- independence in the cognition of natural objects, phenomena, processes, promotes creative development of students' abilities.

In the process of research work, the students acquire the ability to plan their search activity, to work with information about the studied question, to apply mental operations: analysis, synthesis, comparison, finding causal relationships and the basic contradictions, make predictions, bringing evidences, generalization, the ability to sum results and make decisions.

Thus, readers' and research competences are integral components of informational and cognitive competence, which leads to activization of the cognitive activity of the students, gives a new impulse to knowledge, produces "the ability to learn throughout life," as one of the key competences, adopted in 1996 by the European Council [16].

### Conclusion

In our study, "competency" is a combination of theoretical unit, which characterizes a circle of geographical knowledge of physical, social and economical geography, operational-activity unit, representing a combination of methods and implementation abilities, geographical knowledge, and personal-psychological block, reflecting motivational, intellectual, value, emotional and volitional aspects of human psyche.

Formation of geographical competency of future teacher of geography should be improved in line with the main directions of updating of the content and structure of geographical education. These are:

differentiation and integration, related on the one hand, with the further division of geography into relatively independent parts - physical and economical geography, on the other hand, with the integrative tendency to seek common geographic regularities, inherent in the objects of natural and socio-economic territorial formations;

humanitarization and humanization, a stimulating introduction of the person into the content of geographical education, the emergence of the cultural, social, behavioral geography; humanization of forms and methods of training set of conditions;

socialization, which is closely related to the humanization of geographical education content, which includes various territorial generality of people, i.e. sociosphere, as an object of study.

Thus, the geographical competency is formed as an aggregate of motivational, value-motivational, informational and cognitive, communicative, creative practical competences, which determine the ability of the expert geographer to independently solve problems within his professional activities, with particular importance to informational and cognitive (reader's and research ) and practical- creative competences, that corresponds to the main directions of updating the content and structure of geography education.

### Findings

Introduction of competency-based approach to the education system is an implementation of the requirements and recommendations of the Bologna Declaration.

While working on the issue of the competency-based approach we have examined the studies of Hoffman T., McClelland D.C., White R.W. and Russian authors: A.V. Khutorskoy, I.A. Zimnyaya, E.F. Zeer, J.G. Tatur.

Researchers distinguish concepts: competency and competence. The specialists standpoints are different, but they combine into that competency - is a manifestation in practice of the desire and ability to realize our potential for a successful creative professional career.

The formation of geographic competency determines the development of motivational, value-motivational, informational and cognitive, communicative and practical-creative competences.

Considering the definition of geographical competency as a complex of specialized knowledge, skills, which lead to the development of personality and its experience of creative activity, we concluded that it allows to qualitatively performing professional activities.

Competency - based approach in geographical education supposes a practice-oriented nature of learning, which forms the practice-creative competence and personality-centered character, when the learner becomes an absolute value, and the entire educational process is aimed at the development of his individual abilities.

Geographical competency includes informational and cognitive competences, including readers' and research, the values of which is indubitably, because they include the ability to analyze, interpret, evaluate, establish causal relationships, which gives a new impulse to knowledge.

From our point of view, competency is a combination of theoretical operational-activity, and personal-psychological blocks. Geographical competency should be improved in line with the main directions of updating the content of geographical education.

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