Competence-based approach: implementation problems in the context of sustainable development

Ionova Natalia Vladimirovna

Candidate of Geographic Sciences, Associate Professor, Head of Department
Novosibirsk State Pedagogical University, Russia

ORCID: 0000-0003-1903-1950

Abstract. The key goal of modern education in the context of the implementation of the concept of sustainable development is the process of forming a holistic worldview based on the general picture of the world on the basis of a competence-oriented approach. This ensures the formation of the personality of a specialist who is able not only to independently determine the trajectory of professional growth, but also to self-development throughout life, subject to the mastery of competencies. It is education that is a necessary condition determining the possibility of successfully achieving sustainable development goals.

The article outlines the problem of lack of unity in approaches to the formulation of the concepts of "competency" and "competence". The analysis of the interpretations of the concepts presented in scientific publications confirmed the insufficient degree of knowledge of the process for the formation and development of the competency of subject teachers.

Keywords: sustainable development, education system, competence, competence approach, polycompetence.

Introduction

The key state-significant goal of the activities of universities, including pedagogical ones, is to create effective conditions for the development and full use of the intellectual potential of the nation. This creates a prospect for the formation of a creatively thinking young generation, focused on the research, creative activity of specialists with the skills of self-organization, self-education, as well as social responsibility, capable of forecasting and ready to promptly respond to new challenges of a dynamically developing society [10, 17].

In the Strategy for the Socio-Economic Development of the Russian Federation until 2030, a special place is occupied by the development of the knowledge economy, i.e. the sphere of vocational education. According to this document, one of the national projects of the state program of the Russian Federation "Development of Education" for 2018–2025 is "Training of highly qualified specialists and workers, taking into account modern standards and advanced technologies." Russian pedagogical universities are one of the priority platforms for the

implementation of this strategy, and they train specialists - future subject teachers who can take the vanguard place in the implementation of this project of the state program, which will ensure an increase in the country's competitiveness in the world market.

Despite the steady and even growing interest in the problems of professional training of highly qualified specialists (in the context of the content of the research - competence of specialists), there is still, firstly, no common approach to the interpretation of the concepts of "competency" and "competence". Secondly, there is no common understanding of the ratio of the volumes of these concepts. Thirdly, there is no clear understanding of the essence and procedural specifics of the implementation of the competence approach of learning. In this regard, the problem of research is the need to study and analyze the available scientific publications covering these issues.

The purpose of the study is to examine the theoretical foundations of studying the competence approach in the context of sustainable development in the preparation of a polycompetence specialist (subject teacher) in the education system.

To study scientific works and publications on the theoretical foundations of the study of "competency", "competence" and "competence-approach", the author used methods of analysis and synthesis, the method of a systematic approach, systematization of scientific research, methodological literature on the problem of research.

Scientific novelty lies in the disclosure of the relationship between the concepts of "competency", "competence approach" and "competence" in teacher education; substantiation of the possibility of using the term "polycompetence of a specialist".

Research results

At all levels of the modern education system (ES), large-scale changes are taking place, which are accompanied by structural, functional, organizational and managerial, professional and methodological, criterion-evaluative transformations. Thus, the structure of ES is constantly becoming more complex as a result of the opening of specialized educational organizations, including for adult education in order to ensure the continuity of the educational process. The network of methodological associations, professional communities, including network ones, is expanding.

The constant acceleration of the processes of development of society nullifies attempts to predict the development of the economy and professional characteristics in accordance with the requirements of employers. In this connection, the main feature of the modern education system (and most likely the future) is its applied nature. That makes its own adjustments to the functions of the education system and leads to a significant revision of priorities. One of the leading functions of the education system is the process of forming students' needs for lifelong education, creating

opportunities for the development of skills and abilities of self-education [14, p. 23]. The transition to the competence of the learning model is explained by the transformation of functions.

The need to implement the competence of the learning model requires a revision of the content of the main basic document - the Federal State Educational Standard (FSES), which is guided by the development of curricula, exemplary work programs as elements of the organizational and managerial component of the education system. So, on May 31, 2021, the federal state educational standard for basic general education (FSES) was approved, approved by Order of the Ministry of Education of the Russian Federation №287. Training under this federal state educational standard is planned to be carried out from 01.09.

Professional and methodological transformations lead to a rethinking of the expediency of mastering and applying educational technologies and methods of a productive nature in the learning process, and, of course, a revision of the content of approximate work programs of basic general education, curricula of basic professional educational programs, etc.

The criterion-evaluative transformations in order to achieve compliance of the learning outcomes with international criteria led to the introduction of all-Russian testing, the final state certification in the MSE and USE format in the context of the implementation of basic general education. In the context of secondary vocational education, the format of the demonstration exam is increasingly used. In the context of higher education, the result is the process of training the competence of a specialist who owns the competency system. But, in our opinion, it is more appropriate to talk about the polycompetence of a modern specialist (subject teacher).

Russia has accumulated significant experience in training personnel for different levels of education based on the competence approach. Here are just some examples of the published results of research on this issue (Adolph V.A. [1, 13], Gheorghe I.V. [4], Gladilina I.P. and Koroleva G.M. [5], Zimnyaya I. A. [7], Ilyina N.F. [9], Karavaeva E.V. [11], Savchuk A.N. [1], Sergeeva M.G. [12], Stepanova I.Yu. [13], Tamozhnyaya E.A., Belovolova E.A., Dronov V.P., Lopatnikov D.L. [15], Tarkhanova I.Yu. [8], Khutorskoy A.V. [16], Shkerina L.V.[18], etc.).

The analysis of scientific and scientific-methodical publications, dissertation research confirmed, firstly, the wide application of such concepts as "competence", "competency" and "competence approach"; secondly, the presence of a large number of interpretations of these concepts; thirdly, the need to systematize and identify the nature of the relationship between these concepts on the basis of a synergistic approach.

There are different approaches to formulating the concepts of "competency" and "competence". So, the first approach, in which researchers consider these concepts as synonyms (i.e., identify) (see V.A. Bolotov, V.S. Lednev, M.V. Ryzhakov, V.V. Serikov). Supporters of the

second approach consider these concepts as independent, but at the same time define "competence" as the primary category (see I.A. Zimnyaya, A.V. Khutorskoy, S.E. Shishoy) [2, 6, 7, 16].

"Competency" represents the ability to act as a personality trait and the basis for competence. "Competence" is more often understood as a manifestation of activity that reflects the level of ownership of competency, while competency is a complex or integrated system. The composition of competency will change over time in accordance with the transformation of requirements for a specialist and the education system. Therefore, "competence" is a system of competency that is or can be applied by a specialist.

The analysis of approaches to understanding the competence approach in education makes it possible to assert about its evolution and gradual transition from a key consideration of the content of education to competency and, as a result, consideration of the competence approach as a complex system that has its own interrelated components [2, 3, 19].

The introduction of the competence of the learning model is due to a number of objective factors, which include the implementation of general globalization, the integration of Russia into the world economy, and participation in the Bologna process. This led to the universalization of requirements for specialists, in the preparation of which the main reference point for educational institutions is the system of universal, general professional and professional competencies, presented in the curricula of the main professional educational programs.

The competency level of the graduate / specialist reflects his competence. Provided that the graduate / specialist owns the entire competency system at a high level, then the concepts of "competency" and "competence" become identical. However, it is very difficult to achieve this in life, especially in connection with the high speed of development of society, economy, and hence the system of requirements for a graduate / specialist - the competency system will be constantly updated. This requires regular implementation in a short time of "personnel reset" in the education system [10], where schools, colleges, universities, as well as social and professional communities of teachers act as inseparable links of lifelong education.

The key element of the modern system of higher pedagogical education is the problem of training a subject teacher who has competency in the field of sustainable development and is able to educate a "thinking" graduate as a representative of the country, a zealous user, custodian and creator of socio-cultural values and traditions of their homeland [10].

Thus, the following conclusions can be formulated:

1) today, in the context of the implementation of the concept of sustainable development in the education system, cardinal changes are taking place, which are accompanied by structural, functional, organizational and managerial, professional and methodological, criterion-evaluative transformations;

- 2) there is a transition from knowledge-based to competence learning model as a result of the transformation of the functions of the education system;
- 3) analysis of scientific publications devoted to the formation of competency, confirmed the insufficient degree of knowledge of approaches to the process of formation and development of competency of specialists, in particular, subject teachers;
- 4) a key element of the modern system of higher pedagogical education is the process of preparing a subject teacher who has a system of competency in the context of the implementation of the concept of sustainable development, i.e. polycompetent specialist.

References

- 1. Adolf V.A., Savchuk A.N. Forecasting the formation of professional competence of a university graduate // Monograph. Krasnoyarsk.–2014.–353 P.
- 2. Bolotov V.A., Serikov V.V. Competence model: from idea to educational program // Pedagogy. -2003. No 10. P. 8-14.
- 3. Galustyan O.V., Radchenko L.A., Pleshakov M.A., Palchikova G.S. The concepts of competency and competence in modern pedagogy // Humanities. 2019. №2.– P. 10–14. URL: https://cyberleninka.ru/article/n/ponyatiya-kompetentsii-i-kompetentnosti-v-sovremennoy-pedagogike/viewer
- 4. Gheorghe I.V. Formation of professional competencies of students of educational institutions of higher education on the basis of the organization of independent work: monograph. Tyumen: TRU, 2016. 143 P.
- 5. Gladilina I.P., Koroleva G.M. Formation of general cultural competencies of student youth: conceptual foundations: monograph. M.: Moscow Metropolitan Governance Yury Luzhkov University, 2012. 136 P.
- 6. Gutsol Yu.V., Zharinova I.A. Competence approach in teaching: basic definitions and component composition // Bulletin of the Samara Scientific Center of the Russian Academy of Sciences. Social, humanities, biomedical sciences. − 2018. − V.20. − №3. − P. 13–15.
- 7. Zimnyaya I.A. Key competences as a target-based basis for a competence approach in education. Author's version. M.: Research Center for the Problems of the Quality of Training of Specialists, 2004. 40 P. URL: http://fgosvo.ru/uploadfiles/npo/20120325214132.pdf
- 8. Measurement and assessment of the formation of universal competencies of students in the development of educational programs of bachelor's, master's, specialty: collective monograph /under the sci. edi. of dr. ped. sci. I. Yu. Tarkhanova Yaroslavl: EPD YSPUU, 2018. 383 P.

- 9. Ilyina N.F. Formation of the teacher's innovative competence: theory and practice // Monograph. Krasnoyarsk. 2014. 224 P. URL: https://www.studmed.ru/ilina-n-f-stanovlenie-innovacionnoy-kompetentnosti-pedagoga-voprosy-teorii-i-praktiki_2418f506aba.html
- 10. Ionova N.V., Nechepurenko G.Ya. Preparation of a geography teacher for the implementation of a system-activity approach in the course "Geography of Russia" // Modern Geography Education: Problems and Development Prospects: Materials of the IV All-Russian Scientific and Practical Conference (Moscow, November 02, 2019) / Sci. ed. E.A. Tamozhnyaya. M.: Quill, 2020. P. 262–266.
- 11. Researcher of the XXI century: the formation of competencies in the system of higher education. Collective monograph / ex. ed. E.V. Karavaeva. M.: Publishing house "Geoinfo", 2018. 240 P. URL: http://www.acur.msu.ru/docs/pgrant/final/5_1_Monograph.pdf
- 12. Sergeeva M.G. Continuing economic education as a priority area for the modernization of Russian education // Almamater. $-2010. N_{\odot}6. P. 19-24.$
- 13. Stepanova I.Yu., Adolf V.A. Designing a practice-oriented teacher training at a university: monograph // Monograph. Krasnoyarsk. 2013. 368 P.
- 14. Suslov V.G., Nechepurenko G.Ya. Theory and methods of teaching geography in a differentiated school: textbook. Novosibirsk: Publishing house of the FSBEI HE «NSPU», 2013. 182 P.
- 15. Tamozhnyaya E.A., Belovolova E.A., Dronov V.P., Lopatnikov D.L. Professional-methodical competence of a teacher of geography in the context of the implementation of the Federal State Educational Standard of General Education: monograph. M.: Quill, 2018. 229 P.
- 16. Khutorskoy A.V. Model of the competence of education // Higher education today. 2017. 12. P. 9-16. DOI: 10.25586/RNU.HET.17.12.P.09 URL: file:///D:/Downloads/model-kompetentnostnogo-obrazovaniya.pdf
- 17. Shadrin A.I., Larionova L.Yu., Ionova N.V. Training of master-geographers in the system of network interaction of pedagogical universities // Bulletin of pedagogical innovations. 2021. №2(62). P. 50 62. DOI: 10.15293/1812-9463.2102.05 URL: https://elibrary.ru/item.asp?id=46368482
- 18. Shkerina L.V. Diagnostics of students' professional competencies based on educational cases // Bulletin of KSPU named after V. P. Astafyev. − 2012. − №4. − P. 62−67. − URL: https://cyberleninka.ru/article/n/diagnostika-professionalnyh-kompetentsiy-studentov-na-osnove-uchebnyh-keysov
- 19. Elkonin B.D. The concept of competence from the standpoint of developing education // Modern approaches to competence-based education. Krasnoyarsk, 2002. 267 P.