

THE DEVELOPMENT OF STUDENT RESEARCH COMPETENCY IN PERIOD OF STUDY AT THE UNIVERSITY

Barno Nazarova

Researcher, Tashkent State Pedagogical University
Tashkent, UZBEKISTAN

ABSTRACT

The article presents an analysis of competencies that is part of the structure of research competence. On the example of one of the directions of the university, the competence model of the graduate was monitored, the competencies included in the structure of research competence were identified. Based on the analysis, recommendations are given for the development of the student's research competence at the university.

Keywords: Research competency, research competence.

INTRODUCTION, LITERATURE REVIEW AND DISCUSSION

In the framework of the competency-based approach, the modern system of higher education is aimed at teaching students how to search and process (structure) information through independent research. Such a development vector requires the targeted development of research competence among students.

Speaking about research competence, we rely on two basic concepts that are the basis for disclosing the definition of "research competence": a competency-based approach and competence.

In the understanding of D.A. Ivanov, the competency-based approach is defined as an attempt to bring the mass school and the needs of the labor market in line, an approach that focuses on the result of education, and the result is not the amount of learned information, but the person's ability to act in various situations [1]. A. Andreev notes that the main intention (the orientation of thinking as an object) of the competency-based approach is the strengthening of the practical orientation of education. VA Bolotov defines a competency-based approach as a generalized condition for a person's ability to act effectively outside of training subjects and situations [2].

Turning to the concept of "competence", we single out a number of authors who fully disclose this concept. E. Zeer, E. Symanyuk define competencies as the integrative integrity of knowledge, skills and abilities that ensure professional activity, as a person's ability to put into practice his competence. They note that the structure of competencies is not limited to activity components (knowledge, abilities and skills), but also includes a motivational and emotional-volitional component, and an important component is experience - integration into a single whole of a person's acquired individual actions, methods and techniques for solving problems [3]. A. Khutorskoy believes that competence is a set of interconnected personality traits (knowledge, skills, methods of activity), defined in relation to a certain circle of objects and processes and necessary to act in a qualitatively productive manner in relation to them [4].

Summarizing the distinguished concepts, we conclude that the competency-based approach is nothing more than a practice-oriented training, which includes the ability to act and solve

problems not within the educational process, but in the process of professional activity. In turn, competence is what can be described as the ability of a person to direct his knowledge, abilities and skills into practical channels, outside of training situations.

The research competence, in the understanding of MB Shashkin and AV Bagachuk, has an integrative personality profile, which involves the possession of methodological knowledge, research technology, recognition and willingness to use them in professional activities, characterized by a stable motivation [5].

EF Zeer in his study identifies the structure of research competence, which includes the motivational, cognitive, activity, reflective components [6].

The interpretation of EF Zeer of each of the components of research competence is as follows: the motivational component is a combination of cognitive motivation (curiosity, the desire to discover new knowledge), professional motivation (the desire to learn one's profession and get results), and achievement motivation (desire to improve one's professional activity, strive for success). The cognitive component is the totality of acquired knowledge that is necessary when performing research activities, which include basic knowledge (theoretical and methodological foundations) and process knowledge (research methodology). The basis of the activity component is, first of all, research skills: skills to navigate in the subject area of research; problematization, that is, the ability to identify and understand the problem of the question of research; research planning; collection, analysis and interpretation of data during the study. The reflexive component is the ability to analyze the results of one's activity, and the ability to value the product of one's activity [7].

An analysis of the components of research competence has led us to a shorter interpretation of each component.

We see that research competence includes four components: motivational, cognitive, activity-oriented and reflective. The full combination of all four components leads to the active development of research competence.

Let us take as a basis the approach proposed by Professor E.A. Mogilevkin that a set of certain competencies may constitute a person's competency that allows him to successfully cope with a certain activity. Further, we will talk about research competence as a set of competencies that allows us to successfully master research activities and develop in this direction.

Lukashenko S.N. explains that research competence is "an integral quality of a person, expressed in readiness and ability to independently solve research and creative tasks, owning the technology of research activities, recognizing the value of research skills and their willingness to use them in professional activities". It is determined by analytical and research competencies [8].

The process of formation of the research competence of the individual is planned from the moment of schooling, so that training sessions contribute to the acquisition of skills by students to independently organize the search for necessary information (answers) to the questions posed. That is, during the period of schooling, students learn to independently analyze the facts, generalize and draw logical conclusions, based on the information received and studied.

Depending on the age of the student, the functions of development of research activity, in the future, and research competence are formed.

For a university student, in turn, the presence of research competence is very important. In the process of mastering knowledge in the educational process, he often encounters a research environment. Various essays, control, laboratory and term papers, graduation projects, scientific works - these are some of the options for research activities. When performing research activities, the student learns to clearly see the research problem, analyzes the known and the unknown, and on the basis of analysis puts forward his subjective hypothesis to solve a problem and substantiates it.

In the learning process, the student must create the conditions for the further formation and maintenance of the development of research competence. IN AND. Andreev highlights the principles that correspond to the formation of research competence.

1. The principle of consistency. Training material must be complete and sufficient; content structuring into component parts should be carried out taking into account the interconnections between them, and it is also necessary that the content of students' research competence development be integrated with the content of various curriculum disciplines, be developed taking into account the corresponding interdisciplinary connections.

2. The principle of modularity. It is necessary to divide the material into relatively independent, logically completed structural parts, taking into account the interconnections between them, and also to supplement the material with methodological recommendations for mastering the content, aimed at enhancing the students' independent work with the material.

3. The principle of professional orientation. It is necessary to prefer material that reveals the role of research in the future profession and can be implemented in conditions close to professional research in the professional field.

4. The principle of creative activity. The selection of educational material, which creates a field for active educational activity and stimulates creative thinking, is aimed at supporting and developing subjectivity among students, and also teaches students how to successfully overcome situations of uncertainty during professional research activities [9].

Based on the theoretical analysis, we can conclude that research competence is a set of research actions, a person's readiness for effective educational and research activities, active cognitive activity in order to search for knowledge to solve problems. Research competency includes four components (motivational, active, reflective and cognitive), which are interconnected and complementary.

The functions of developing research competence depend on the age of the individual. The starting point for the formation of research competence is preschool education. For university students, the presence and maintenance of the development of research competence is important. Development takes place according to the principles of systematic, professional orientation, modularity and creative activity.

Research competency includes a set of other, narrower competencies aimed at the development of various fields of activity and human personality. Schematically, we present a set of competencies that are part of the structure of research competence.

Value-semantic competencies - the ability to see and understand the world around us, realizing our role and our mission in this world, as well as the ability to choose a goal and semantic settings for our actions and deeds. The competence of personal self-improvement is to know

the methods of physical, spiritual and intellectual self-development, emotional self-regulation and self-support. General cultural competencies are the ability to navigate independently in various areas of social and professional life, in the space of culture, the ability to independently find ways to solve the problem. Social and labor competencies are the ability of an individual to interact with social institutions, perform social functions, and also orient himself on the labor market. Educational and cognitive competencies are the sphere of independent cognitive activity. Information competencies - possession of modern media, analysis, selection of necessary information, its transformation, storage and transmission. Communicative competencies are the activities of participants in communication, during which a general view of things and actions with them is developed [10].

The educational process at the university is aimed at the formation of students as a general cultural (OK) and professional competencies (PC). In order to single out the main student OKs that are consistent with research competence, for example, we analyze the competency model of the graduate of the "Human Resources" direction (Table1)..

Table 1. General cultural competencies of a student forming research competency

General cultural competencies (GCC)	
The code	Interpretation
GCC 1	knowledge of the basic values of world culture and the willingness to rely on them in their personal and cultural development [12].
GCC 2	knowledge and understanding of the laws of development of nature, society and thinking and the ability to operate this knowledge in professional activities [12].
GCC 5	knowledge of the culture of thinking, the ability to perceive, generalize and economic analysis of information, setting goals and choosing ways to achieve it [12].
GCC 6	ability to logically true, reasoned and clearly build oral and written speech [11].
GCC 7	ability to defend one's point of view without destroying relationships
GCC 8	willingness to cooperate with colleagues, to work for a common result, possessing the skills to organize and coordinate interactions between people, to control and evaluate the effectiveness of others [11].
GCC 9	ability to find organizational and managerial decisions, develop algorithms for their implementation and is ready to bear responsibility for their results [11].
GCC 10	knowledge and ability to use regulatory legal documents in their professional activities [11].
GCC 11	the desire for personal and professional self-development, the ability to prioritize, set personal goals, the ability to learn from personal experience and the experience of others [11].
GCC 12	the ability to critically evaluate personal strengths and weaknesses, to respond constructively to criticism [11].
GCC 15	proficiency in one of the foreign languages at a level ensuring effective professional activity [11].
GCC 17	having an idea of the role and importance of information and information technology in the development of modern society and the knowledge economy [11].
GCC 18	knowledge of the basic methods, methods and means of obtaining, storing and processing information, the availability of computer skills as a means of information management [11].
GCC 19	ability to work with information in global computer networks and corporate information systems [11].

After analyzing the competency model, we see that the student must be able to systematize information; Highlight important structural elements in the text; be able to analyze text and

information; be able to apply cognitive abilities in solving scientific problems; be able to work individually and in a group; own multimedia technology; strives to learn at least one foreign language.

The analysis of the model of general cultural competencies makes it possible to identify the main pedagogical technologies for the development of research competence.

To develop research competence, it is proposed:

1. Modular training, which includes independent work of students with an individual curriculum. The training mechanism in the framework of such a program consists of search methods, statement of cognitive tasks.

2. Game training, which includes independent cognitive activity aimed at the search, processing and assimilation of information. The mechanism of work is involvement in creative activity.

3. Training in the development of critical thinking, which includes the ability to raise new questions, develop a variety of arguments, and make independent, informed decisions. Learning mechanism - interactive teaching methods, including involvement in various types of activities, compliance with the stages of technology implementation: challenge, comprehension, reflection.

4. Research and project training, which includes the organization of search cognitive activity by setting cognitive and practical tasks that require independent work. Learning mechanism - setting research tasks.

Concretizing the teaching technologies, we can distinguish the teaching methods in accordance with the components of research competence, which are reflected in table 2.

Table 2. Teaching methods aligned with research competency components

Research Competency Component	Method	Concretization of the method
Motivational	Training programs	Training to increase personal motivation to achieve the goal
Cognitive	Business games, role-playing games, cases	“Debate”, “Round Table”, “Brainstorming”, professional cases, etc.
Active	Analytical work, participation in conferences, symposia	Works with scientific texts, articles. Collection and analysis of information, description, synthesis, writing of scientific articles together with the supervisor
Reflective	Description of your achievements and career development options	Making a personal career plan

Analyzing the studied material, we can conclude that research competence is a combination of personality traits, implying the possession of research knowledge and skills. The structure of research competence includes four components: motivational, cognitive, active, and reflective. Research competency includes a number of more generalized competencies (value-semantic, personal growth, general cultural, social and labor, educational, cognitive, communicative, informational).

Based on the analysis of the competency model of a university graduate, we identified general cultural competencies that characterize research competence in the aggregate, using the example of the primary education area of study.

Summarizing the theoretical analysis of scientific sources, we identified pedagogical technologies and specific teaching methods that, when introduced into the educational process, will contribute to the development of research competence.

REFERENCES

1. Ivanov D.A., Mitrofanov K.G., Sokolova O.V. Competency-based approach in education. Problems, concepts, tools. - M.: APKiPRO, 2003. -- 101 p.
2. Bolotov V.A., Serikov V.V. Competence model: from idea to educational program // *Pedagogy*. - 2003. - No. 10. - S. 8-14.
3. Seer E.F., Symanyuk E. A competency-based approach to the modernization of vocational education // *Higher Education in Russia*. - 2005. - No. 4. - S. 22-28.
4. Khutorskoye A.V. Key competencies as a component of a personality-oriented paradigm // *Public Education*. - 2003. - No. 2. - S. 58-64.
5. Shashkina M.B., Bagachuk A.V. Formation of research activities of students of a pedagogical university in the context of the implementation of the competency-based approach: monograph // Krasnoyarsk. state ped un nt them. V.P. Astafyev. Krasnoyarsk. 2006.
6. Seer E.F. Modernization of vocational education: competency-based approach // *Science and Education*. - 2004. No. 3. P. 35-43.
7. Ponomarchuk P.N. Content and Diagnostics of the Research Competence of Law Students // *Law and Education*. - 2009. No. 11. S. 80–87.
8. Lukashenko S.N. Development of the research competence of university students in the conditions of multilevel training of specialists // *Bulletin of TPU* - 2011.- No. 1 - P. 100-104.
9. Andreev V. I. *Pedagogy: a training course for creative self-development*. 3rd ed. Kazan: Center for Innovative Technologies, 2003. - 608 p.
10. Khutorskoy A.V. Key competencies. *Construction Technology* - M., *Pedagogy*. - 2003. - No. 5.