

ПЕДАГОГИКА ЖӘНЕ ПСИХОЛОГИЯ

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DOI: <https://doi.org/10.37788/2023-4/12-17>**D.M. Bobizoda¹, B.D. Kairbekova², A.M. Utilitova³, T.Zh. Shakenova^{3*}**¹National University, Tajikistan²Innovative Eurasian University, Kazakhstan³NAO "Pavlodar Pedagogical University named after Aka. Margulan"

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Research competence as one of the components of the system of key competencies**Annotation**

The main problem is that the study of research competence does not lose its relevance nowadays, but on the contrary, requires special attention of teachers of secondary schools. The main subject of the study is teaching students research skills to the most effective methods of mastering key competencies.

Objective: the role of research competence in the learning process of students.

Methods: analysis, synthesis and comparative analysis are the main research methods.

Results and their significance: as a result, the concept of "research competence" was studied. Various views on this idea are considered. In the last ten years, the program of socio-economic development of Kazakhstan has determined the main directions of the development of the system of education of students. The research has both theoretical and practical significance, since its results can be used in the development of programs and methods for the development of research competence in biology lessons.

Keywords: research competence, analysis, synthesis, students, training, society, knowledge, skills

Introduction

In the modern world, following the path of globalization, the ability to quickly adapt to the conditions of international competition is becoming the most important factor for the successful and sustainable development of the country. Consequently, successful, competitive graduates who have adapted to new social conditions, mastered various types of activities and demonstrate their abilities in any life situations are currently becoming in demand by society. Today we are talking about the formation of meta-subject skills and abilities, which are the result of an educational form built on top of traditional subject knowledge, skills and abilities, which is based on the mental-activity type of integration of educational material and the principle of reflexive attitude to the basic organization of thinking. It becomes clear that the main task of the teacher at the present stage is to correctly shift the emphasis when assessing the results of education from the concepts of "education", "training", "skills", "knowledge" to the concepts of "competence", "competence".

Research in the modern world is considered not only as a highly specialized activity of researchers, but also as an integral part of any activity, as a style of a modern person. As it is noted in modern pedagogical literature, a "new person" must quickly solve qualitatively complex tasks, be able to see and solve the problem, offering creative options. According to a number of authors, these and other tasks can be solved by a person with research competence.

With all the apparent significance and relevance of this issue, there is currently a variety of approaches to determining the essence of research competence, but there is no unified understanding of it.

Most researchers tend to consider the research competence of students as the result of well-planned research activities (writing a research paper, staging and analyzing the results of an experiment, etc).

Biology is one of the most practice-oriented disciplines studied in a secondary school. Its teaching is directly related to the process of formation of research competence, since the methods on which biological science is based (analysis, experiment, modeling, etc.) largely coincide with the main

components of research competence. Therefore, setting priorities in their work, the main task of a biology teacher can be noted the formation of research competence of students during the teaching of the school subject biology. In our opinion, the spontaneous instilling of a number of research skills in students during lessons and even by means of extracurricular work cannot serve as a basis for the formation of the competence of the same name. Only the systematic use of the capabilities of several modern pedagogical technologies (research, design, information and communication, etc.) can provide a solution to the task.

Materials and methods

The research material was the work of famous scientists (teachers, psychologists) who studied this problem. The main research method used in the work is the method of comparative analysis.

Results

Among the competencies, students' research competencies can be distinguished in a special way, which are based on key competencies. Key competencies are multidimensional and include various mental processes and intellectual skills. In order to formulate the concept of "research competence/competence" and determine its content, in our opinion, it is necessary to consider the essence of research activity. There are various approaches to the interpretation of the concept of "research competence", some of them we will stop:

- from the standpoint of a systematic approach (L.A. Golub, V.S. Lazarev, T.A. Smolina, etc.), research competence is a component of professional competence;

- from the point of view of the knowledge-operational approach (M.A. Danilov, E.F. Zeer, M.A.Choshanov, etc.), research competence is a set of knowledge and skills necessary for carrying out research activities;

- from the point of view of the procedural and technological approach (A.V. Khutorskoy), research competence is considered "as a person's possession of an appropriate research competence, which should be understood as knowledge as a result of a person's cognitive activity in a certain field of science, methods, research methods that he must master in order to carry out research activities, as well as the motivation and position of the researcher, his value orientations" [1, p.8];

- from the standpoint of the functional-activity approach (B.G. Ananyev, N.V. Kuzmina, A.K.Markova, V.D.Shadrikov, etc.), the concept of "research competence" includes a set of personal qualities necessary for effective research activity. The qualities that characterize the researcher include the following: a steady focus on solving the problem of research; obsession with work, nonconformism; criticality and self-criticism, constant dissatisfaction with the achieved result, etc.;

- from the position of competence approach (B.G.Ananyev, V.A.Bolotov, A.A.Derkach, I.A.Zimnaya, N.V.Kuzmina, V.V.Laptev, A.K.Markova, S.I.Osipova, V.V.Serikov, V.A.Slastenin, A.P.Tryapitsyna, V.D.Shadrikov, etc.) research competence It is considered as an integral characteristic of the student's personality, expressed in the willingness and ability to independently master and receive systems of new knowledge as a result of the transfer of the semantic context of activity from functional to transformative, based on existing knowledge, skills, skills and methods of activity. Within the framework of this approach, V.A. Slastenin emphasizes that the structural components of research competence should coincide with the components of research activity, and the unity of theoretical and practical research skills constitute a model of students' research competence [2, p.83].

Most researchers tend to consider the research competence of students as the result of well-planned research activities (writing a research paper, staging and analyzing the results of an experiment, etc.).

S. I. Osipova draws attention to the transformative nature of research competence and presents it as an integral personal quality, expressed in the willingness and ability to independently master and receive systems of new knowledge as a result of the transfer of the semantic context of activity from functional to transformative, based on existing knowledge, skills, skills and methods of activity [3, p.45].

The same author proposes to distinguish three main elements of the student's research competence, expressed in the following abilities:

- highlighting the purpose of the activity;
- definition of the subject, means of activity, implementation of the planned actions;
- reflection, analysis of performance results (correlation of achieved results with the set goal).

These elements, in our opinion, reflect competence in conducting research to a greater extent than in educational practice. We would like to note that research competence should be formed in any person, as one of the integral ones, in the course of educational and cognitive activity.

Research activity is inherent in humans phylogenetically, it has passed to us from the animal world. Researchers – physiologists have found interesting designations of the indicative research behavior of primates: "disinterested curiosity" (I. P. Pavlov); "research impulse" (N. Y. Voitonis); "survey activity" (N. N. Ladygina-Cats) [4].

Considering the work of psychologists, we can distinguish two main manifestations of research activity, this is an orientation reflex inherited by humans from animals, and a research reaction. Let us pay attention to these psychological categories emanating from the senses, which should first of all develop in the course of research activities. Based on the works of S. L. Rubinstein, V. S. According to Mukhina, we can define the first manifestation of research activity – the orientation reflex: the ability of a person not just to look, but to see, even better, to contemplate (consider observe) and, as a result, to perceive what his attention is drawn to [5].

To. Obukhovskiy believes that the orientation reflex is a factor that initiates further cognitive activity of a person, which, in turn, is divided into a "simple orientation reaction" and a "complex research reaction", manifested in the cognition of an object or phenomenon of interest to one degree or another. The more opportunities the object under study provides, the greater the strength of the research reaction, a kind of motive for research is manifested here.

Discussion

Having analyzed the content of the above approaches, we can conclude and consider research competence as an integral characteristic of the student's personality, manifested in the willingness to take an active research position in relation to their activities and themselves as its subject, independently and creatively solve research tasks based on existing knowledge and skills. It follows from this that a student can independently master and build systems of new knowledge only when he is a subject of his education, clearly aware of the meaning and significance of research competence in educational activities, interested in obtaining research results. In this case, the initiative, independent, research attitude of students to reality, other people and themselves as a researcher is one of the most important elements of a conscious approach to the need to form their research competence.

The essence of research competence is manifested through the interrelation of its components: motivational, informational, cognitive, communicative, reflexive, personal.

The motivational component is associated with the formation of the student's interest in research activities, both individual and group, the need for this activity and the focus on achieving its results.

The motivational and value component includes:

- shows interest in knowledge, curiosity;
- shows cognitive activity that develops into a cognitive need;
- striving for independent creative research activity;
- striving for self-improvement;
- readiness for volitional tension, forecasting, generating ideas, defining problems;
- the desire to work in a group of researchers, experimenting.

To solve problematic tasks in the Biology course, students need to look for additional information and be able to work with sources. Therefore, the information component is important for the formation of research competence.

The information component is determined by the student's ability to extract and process information, skills in working with modern computer, multimedia and other equipment.

Solving problem tasks, the student shows his ability to carry out a bibliographic search, to receive and summarize information on the issue. Working on a problem, he can bring his decision on this issue into a research project, implementing the cognitive component of research competence. The cognitive component of research competence is represented by the ability to use the acquired knowledge in various non-standard life situations; it is conditioned by the system of knowledge about research activities, its norms and values in modern society.

The cognitive component includes the following skills:

- ability to see the problem and formulate it;
- ability to formulate research goals and objectives;
- the ability to carry out a bibliographic search, receive and summarize information on the issue;

- the ability to use a variety of methods of empirical research;
- the ability to perform research in a certain sequence;
- the ability to present the progress and results of the work, properly formalize your research work, etc.

The student, solving biological problems, can carry out research projects individually or in pairs, which undoubtedly requires communication, the ability to establish contact, dialogue. These skills are included in the structure of the communicative component of research competence and include:

- the ability to organize and carry out productive communication both with individuals and with a group of people;
- the ability to find and see non-standard ways to solve problems;
- ability to make decisions taking into account personal and social consequences;
- ability to rationally plan your actions in a research group;
- the ability to see and find ways to solve problems in group relationships, to make their own decisions taking into account the interests of all members of the research group (research team), to use the laws of interpersonal communication in situations of research interaction.

The structure of research competence also includes a reflexive component, which requires students to recognize, evaluate and analyze research phenomena, situations arising in life, research abilities not only their own, but also those of others.

An important role in the formation of research competence is played by the personal component, which involves the development of students' skills of self-organization, independence, self-learning, self-regulation, self-determination and self-development. The consequence of the research task is cultural self-determination, self-identification of the student. Performing a research project on a topic of interest to him, the student chooses the direction of his future profession, he determines himself. This is all part of the basis of the personal component of research competence.

Conclusion

Analyzing the above, we can conclude that all the components included in the structure of research competence are interconnected and complement each other. It is difficult to imagine research without creativity, so psychologists often identify research and creative abilities, including cognitive traits (observation, independence in judgments, high intelligence, good memory, the desire to express their own truth, etc.) and personal (the richness of the inner world, increased sensitivity to their fantasies, motives, impulses, etc.).

LIST OF SOURCES USED

- 1 Компетенции в образовании: опыт проектирования: сборник научных трудов / Под ред. А.В. Хуторского. М.: Научно-внедренческое предприятие «ИНЭК», 2007. - 327 с.
- 2 Слостенин В. А. Педагогика: учебное пособие для студентов педагогических учебных заведений/ В.А. Слостенин, И.Ф. Исаев, А.И. Мищенко, Е.Н. Шиянов. М.: Школа-Пресс, 1998. - 512с.
- 3 Осипова, С.И. Развитие исследовательской компетентности одарённых детей [Текст] / С.И. Осипова. – ГОУ ВПО «Государственный университет цветных металлов и золота» www.fkg.ru/conf/17.doc.
- 4 Феськова Е.В. Составляющие элементы исследовательской компетентности. - URL: http://gdt.k26.ru/gnpk/index.php?option=com_content.
- 5 Хуторской А.В. Ключевые компетенции как компонент личностноориентированной парадигмы образования / Доклады 4-й Всероссийской дистанционной августовской педагогической конференции "Обновление российской школы" (26 августа - 10 сентября 2002 г.). - <http://www.eidos.ru/conf/>.

REFERENCES

- 1 Kompetentsii v obrazovanii: opyt proektirovaniya: sbornik nauchnykh trudov / Pod red. A.V. Khutorskogo. M.: Nauchno-vnedrencheskoe predpriyatie «INEK», 2007. 327 s. [in Russian].
- 2 Slastenin V. A. Pedagogika: uchebnoe posobie dlya studentov pedagogicheskikh uchebnykh zavedenij/ V.A. Slastenin, I.F. Isaev, A.I. Mishchenko, E.N. Shiyarov. M.: Shkola-Press, 1998. 512s. [in Russian].

3 Osipova, S.I. Razvitie issledovatel'skoj kompetentnosti odaryonnykh detej [Tekst] / S.I. Osipova. – GOU VPO «Gosudarstvennyj universitet tsvetnykh metallov i zolota» www.fkgru.ru/conf/17.doc. [in Russian].

4 Feskova E.V. Sostavlyayushchie elementy issledovatel'skoj kompetentnosti. - URL: http://gdt.k26.ru/gnpk/index.php?option=com_content [in Russian].

5 Khutorskoj A.V. Klyuchevye kompetentsii kak komponent lichnostnoorientirovannoj paradigmy obrazovaniya / Doklady 4-j Vserossijskoj distantsionnoj avgustovskoj pedagogicheskoj konferentsii "Obnovlenie rossijskoj shkoly" (26 avgusta - 10 sentyabrya 2002 g.). - <http://www.eidos.ru/conf/> [in Russian].

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Зерттеу құзыреттілігі негізгі құзыреттілік жүйесінің құрамдас бөліктерінің бірі ретінде

Аңдатпа

Негізгі мәселе: бұл күндері зерттеу құзыреттілігін зерттеу өзектілігін жоғалтпайды, керісінше, жалпы білім беретін мектеп мұғалімдерінің ерекше назарын қажет етеді. Зерттеудің негізгі пәні студенттерге негізгі құзыреттіліктерді меңгерудің ең тиімді әдістерін зерттеу дағдыларын үйрету болып табылады.

Мақсаты: студенттерді оқыту процесінде зерттеу құзыреттілігінің рөлін анықтау.

Әдістер: талдау, синтез және салыстырмалы талдау зерттеудің негізгі әдістері болып табылады.

Нәтижелер және олардың маңыздылығы: нәтижесінде "зерттеу құзыреттілігі" ұғымы зерттелді. Бұл идеяның әртүрлі көзқарастары қарастырылады. Соңғы он жылда Қазақстанның әлеуметтік-экономикалық даму бағдарламасы оқушылардың білім беру жүйесін дамытудың негізгі бағыттарын айқындады. Зерттеудің теориялық және практикалық маңызы бар, өйткені оның нәтижелерін биология сабақтарында зерттеу құзыреттілігін дамыту бағдарламалары мен әдістерін әзірлеуде қолдануға болады.

Түйінді сөздер: зерттеу құзыреттілігі, талдау, синтез, студенттер, оқыту, қоғам, білім, дағдылар

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Исследовательская компетентность как одна из составляющих системы ключевых компетенций

Аннотация

Основная проблема заключается в том, что изучение исследовательской компетентности в наши дни не теряет своей актуальности, а наоборот, требует особого внимания учителей общеобразовательных школ. Основным предметом исследования является обучение студентов исследовательским навыкам наиболее эффективным методам овладения ключевыми компетенциями.

Цель: определить роль исследовательской компетентности в процессе обучения студентов.

Методы: анализ, синтез и сравнительный анализ являются основными методами исследования.

Результаты и их значимость: в результате было изучено понятие «исследовательская компетентность» Рассматриваются различные точки зрения на эту идею. За последние десять лет программа социально-экономического развития Казахстана определила основные направления развития системы образования учащихся. Исследование имеет как теоретическую,

так и практическую значимость, поскольку его результаты могут быть использованы при разработке программ и методов развития исследовательской компетентности на уроках биологии.

Ключевые слова: исследовательская компетентность, анализ, синтез, студенты, обучение, общество, знания, умения

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