



 Research Article

PROFESSIONAL COMPETENCE OF FUTURE BIOLOGICAL SCIENCE TEACHERS

Submission Date: September 08, 2023, **Accepted Date:** September 13, 2023,

Published Date: September 18, 2023 |

Crossref doi: <https://doi.org/10.37547/tajssei/Volume05Issue09-04>

Journal Website:
<https://theamericanjournals.com/index.php/tajssei>

Copyright: Original content from this work may be used under the terms of the creative commons attributes 4.0 licence.

Khojaniyazov Sardor Umarovich

Doctor Of Pedagogical Sciences, Associate Professor, Urgench State University, Uzbekistan, Uzbekistan

Sharipova Fazilat Ollaberganovna

Independent Student, Urgench State University, Uzbekistan

ABSTRACT

In this article, methods of modernizing the education of the "Biology" department of Urganch State University in order to ensure the conditions for the formation and development of alternative models of the professional and personal growth of teachers for today based on the principles of training and sustainability of the new generation of biology teachers. was studied. In order to ensure sustainable development, ideas and methods of integrating education and professional training of future biology teachers were defined. The factor forming the methodical system of preparation for professional activity is the idea of combining an active approach to knowledge acquisition with their moral reflection, awareness of personal value in professional and everyday life.

KEYWORDS

Future biology teacher, education, training, competence, creative approach, pedagogy situations, best practices.

INTRODUCTION

Today the most important point of change in a developing society is teachers. From the past to the present, the teaching profession, known as a professional group that has always assumed the task of guiding social life, has sometimes been the guardian of the regime and sometimes the architect of the social structure.

Pedagogical competence, which is the mainstay of such a delicate profession, is important for the future. This article presents information about the research conducted in the context of the sample by studying the professional competence beliefs of future biology teacher candidates according to the variables of gender, university, department and type of teaching.

The beginning of the 21st century was characterized by a whole set of global changes in the social, economic and spiritual spheres of society, the formation of a new philosophy of life that lost the values of the past centuries, and the emergence of a new philosophy. Deterioration of a person's quality of life, mental, physical and social disorders are manifested in the reduction of his level of adaptation to daily psychological and physical stress, early development of neuroses, not only in adults, but also in psychosomatic and mental diseases. Formation, maintenance and strengthening of children's health, raising a healthy child has been one of the most important problems in pedagogy for a long time.

The future of our country, the prospects of independent Uzbekistan, the success of reforms in the field of education largely depend on the teacher, his level, preparation, selflessness, enthusiasm for educating the young generation and raising them to the level of a mature person. liq.

The President of the Republic of Uzbekistan Sh.M. Mirziyoyev said, "It is very important to solve another problem: it is the professional level of pedagogues and professors, their special knowledge." In this regard, it is necessary to create an environment that actively supports the processes of education, spiritual and educational maturity and formation of real values", their opinions are of great importance.

Oliy Majlis on December 14, 2016 by the President of the Republic of Uzbekistan Shavkat Mirziyoev in the directions of modernizing the education system in our country, training highly qualified specialists, providing thorough education to the younger generation, raising them to become physically and spiritually mature people. The most important tasks determined at the joint meeting of the Chambers determine the need to organize and coordinate the innovative activities of the

teachers of UOM on the basis of the continuous development of professional competence of the teachers in the development of the continuous education system, ensuring its quality and efficiency.

MATERIALS AND METHODS

The problems of professional training of the future teacher in the field of biology teaching theory and methodology are devoted to the works of Verzilin NM, Vsesvyatsky BV, Nikishov AI, Pasechnik VV, Ponomareva IN, Solomin VP, Traitaka DI. At the same time, a number of researchers (Orlova LN, Mironova MN, Sukhorukova LN, etc.) note that there is a big gap between the existing special training of future biology teachers (Slastenin VA). Methodical training aimed at forming knowledge in the field of biological sciences and ecology and the content and principles of building school programs, modern requirements for biology teaching methods, organizational and methodical skills.

It is known to us that teacher training is in the concept of development of pedagogical education [4], in the professional standard of teachers of general secondary education [5], in the state standard of basic secondary education [6]. should meet the established public requirements, should be taken into account. Global trends and recommendations of authoritative international organizations on teacher training.

Research is a series of tasks to achieve research methods were used:

- comparative analysis;
- use of the ideas of sustainable development in the development of a methodical system of training biology teachers for professional activity;

- generalization of pedagogical experience, use of scientific observation, interviews, questionnaires in the content of training of future biology teachers;

The experiments were carried out in 2022-2023 at the "Department of Biology" of the Faculty of Natural Sciences of Urganch State University.

Questionnaires were conducted to study the opinions of students of the second stage of higher education who are studying in the field of biology:

- relevance and expediency of forming sustainable development ideas;
- readiness to apply the studied ideas to the educational process;
- diagnostic indicators of students' personal attitude to the environment and living nature and the level of formation of moral and value orientations of their thinking.

Today, we understand the educational environment as a system of conditions and influences on the formation of a person with a certain form of behavior, as well as the opportunities available in the social and spatial environment for its development. As a factor of sustainable development - an appropriate educational environment, nature and its components are understood and helps to form an ecological culture based on the understanding of human value.

RESULT AND DISCUSSION

We mainly used the methods of forming a valuable attitude to nature in the process of transforming future biology teachers into their inner world, objective necessity into subjective importance. They are carried out both in the course of rational cognitive activity and in the course of emotional and value-based assessment activities in terms of compliance with the

principles of sustainable development in all aspects of society's life. It can be seen that for this, the teacher who conducts the teaching process does not use the knowledge obtained from books, filled with personal experience, but the knowledge obtained as a result of creative research, supported and filled with information obtained from books. should rely on the knowledge of z [1,2, 4,7].

Based on the results of the surveys, it was determined that the main ideas of the concept of sustainable development, which should be included in the content of the training of biology teachers in the future, are as follows.

1. All of the environment in relation to the benefits of nature the possibility of consumption or use of elements divided into two categories depending on: conditions - environmental factors that change in time and space, but do not end;
2. resources - all ecological factors of the environment that are consumed or used by all living beings, reducing their number. Humans are not only in the dimensions of the present time should live, but look with confidence at the possibility of his future.
3. People should not only live in the dimensions of the present time, but also look with confidence at the possibility and stability of their future. Healthy lifestyle of people and environment.
4. Natural environmental conditions and anthropogenic factors determine human health, and at the same time, the level of development of society (economy, health care, education) determines the state of health of its inhabitants.
5. There is a direct and inverse relationship between the healthy lifestyle of people and the state of the environment. A healthy lifestyle is ecologically and

economically desirable for every person, country and the whole planet.

6. The main principles of sustainable development, which are of decisive importance in the formation of the content of biology as a school subject, and future teachers methodological preparation of all living beings and their respect and care for groups; improving the quality of human life; maintaining the vitality and diversity of life manifestations on earth; ensuring sustainable use of renewable resources; minimize depletion of non-renewable resources; change of individual position and activity.
7. The main structural elements of education for sustainable development are: self-knowledge, self-learning and the ability to make independent decisions in everyday life.

We can cite the following examples of scientific-methodical works in the field of applying a competency-based approach to training undergraduates, including natural sciences (Gavrinskaya Yu.Yu., Ivanova V.I., Kolomin V.I., Matveeva T.A., Myltseva N.A., etc.).

special professional competencies of the bachelor of pedagogical education (biological profile) we understand the generality of scientific knowledge in the field of biology and biology teaching methodology;

skills related to the organization and conduct of biological observations and experiments;

skills in teaching biology;

experience in applying the above knowledge and skills to solve professional problems.

At the same time, under the professional task of a biology teacher (Slastenin V.A., Talyzina N.F., etc.), we understand a conscious pedagogical situation aimed at

changing the pedagogical reality in order to form a student in the activity of a biology teacher; knowledge of biological objects, their origin and development, activity, distribution and interrelationship with each other, as well as with the outside world; the ability to solve biological problems, organize experiments and explain their results [3,5,6,8].

Based on the analysis of scientific and pedagogical works devoted to the competence-based approach (Adolf V.A., Verbitsky A.A., Zimnyaya I.A., Kolesnikova I.A., Markova A.K., etc.), the problems of forming subject competence of future teachers (Doroshenko E.G., Kazachek N.A., Makhaeva T.P., Osipova L.A., Toropov S.I., etc.) it can be concluded that subject competence (biological profile) of a bachelor of pedagogical education should be understood as having appropriate special professional competencies [7,8,9].

Based on the analysis of scientific and pedagogical works devoted to the competence-based approach (Adolf VA, Verbitsky AA, Zimnyaya IA, Kolesnikova IA, Markova AK, etc.), the problems of forming subject competence of future teachers (Doroshenko EG, Kazachek NA, Makhaeva TP, Osipova LA, Toropov SI, etc.) it can be concluded that subject competence (biological profile) of a bachelor of pedagogical education should be understood as having relevant special professional competencies [7,8,9].

According to S.R. Bakhareva, the content of professional tasks is adequately based and formed on the professional activity of a biology teacher, which consists in forming in schoolchildren: scientific knowledge about the animal world and the laws of its development, the foundations of ecological literacy; the ability to use the scientific terminological process in the description of biological objects and processes, in the assessment of the consequences of human activity in nature; ability to solve biological problems;

skills of applying biological research methods, explaining and analyzing the results of biological experiments; ability to analyze biological data from various sources; the ability to assess the impact of risk factors on human health, the ability to provide first aid; motivation to lead a healthy lifestyle, compliance with hygiene rules; consists of professional decisions in medicine, veterinary medicine, agriculture and forestry, biotechnology, nature management and nature conservation.

In order to diagnose the level of formation of students' personal attitude to nature and the moral and value orientations of their thinking, we proposed a questionnaire to determine the relationship between views on nature and morality. There are a total of 74 second-year biology master's students, and 62.8% of them understand the importance of knowledge about the ideas of sustainable development in everyday life, and it is known that the rest are only studying the classical content of Biology was [1,10,11].

The received biological education is based on "What is life and what are its laws will develop?" 78% of those asked whether it allows them to answer the question answered positively; 9.6% answered negatively; 12.4% could not answer.

Answering the question: "Did it help answer personal questions about the meaning of life"? (your future life, goal, etc.) answered 13.7% of students - yes; 69.8% of students - no; 16.5% of students said that they are not interested in such questions. Some students perceive Biology as an academic subject that is not related to their real life, they do not understand the prospects of applying it in their daily activities.

CONCLUSION

In order to fully study all the features of the development of socio-cultural competence in future teachers of biology, it is necessary to pay attention to the following aspects:

- considering national, spiritual and educational values in the educational process as an important factor in the development of professional competence in students;
- formation of a special knowledge system to reduce high-level communicative and psychological barriers in order to develop professional competence in future teachers;
- solving the issue of determining the theoretical basis of the development of socio-cultural competences of future biology teachers;
- taking into account the characteristics of the development of professional competence, it is appropriate to determine the specific characteristics of this process in the conditions of professional pedagogical education.

The obtained conclusions serve as a basis for the development of a methodological system of training biology teachers for professional activity based on the ideas of sustainable development. One of the main tasks of the system is to master the knowledge component of professional competence in the implementation of education for sustainable development in the content of school biological education. It combines two ways of integrating education for sustainable development into the content of professional training of biology teachers:

- a stable model of behavior transmitted using the method of imitation organization of a nature-oriented educational environment in higher education based on the concept of development;

- implementation of special activities on training students to form ideas of sustainable development among schoolchildren.

REFERENCES

1. Abdullah, A., Zakaria, SZS, & Razman, MR (2018). Environmental education through outdoor education for primary school children. *International Journal of the Malay World and Civilization*, 6(1), 27–34. <https://doi.org/10.17576/jatma2018-06S11-05>
2. CA Wei, M. Brown, M. Wagner, *Case Studies in the Environment* 2, 1 (2018), <https://doi.org/10.1525/cse.2018.001065>
3. L. Benton-Short, KA Merrigan, *Journal of Environmental Studies and Sciences* 6, 387 (2016), <https://doi.org/10.1007/s13412-015-0341-x> F. Findler, N. Schönherr, R. Lozano, D Reider, A. Martinuzzi, *International Journal of Sustainability in Higher Education* 20, 23 (2019), <https://doi.org/10.1108/IJSHE-07-2017-0114>
4. G. Caniglia, B. John, L. Bellina, DJ Lang, A. Wiek, S. Cohmer, MD Laubichler, *Journal of Cleaner Production* 171, 368 (2018), <https://doi.org/10.1016/j.jclepro.2017.09.207>
5. S.Ghorbani, SEM Jafari, F. Sharifian, *Journal of Teacher Education for Sustainability* 20, 20 (2018), <https://doi.org/10.2478/jtes-2018-0002>
6. Markova A.K. *Psychology is professionalism*. - M.: Znanie, 1996. - 340 c.
7. Musurmonova O. *Pedagogical technologies - a factor of educational efficiency*. Monograph. - T.: Youth Publishing House, 2020. - 184 p.
8. Richard E. Boyatzis. David C. McClelland: For The *Wiley Encyclopedia of Personality and Individual Differences Volume IV: Clinical, Applied and Cross – Cultural Research*. December 5, 2016
9. J. Raven (1984). *Competence in modern society: Its Identification, Development and Release*. - UK. P.220
10. *Transforming our world: the 2030 Agenda for Sustainable Development*(2015), <https://sdgs.un.org/2030agenda>
11. Kolova S.M. *Formirovanie sotsiokulturnoy kompetentnosti budushikh spetsialistov*. dis. ... sugar. ped. science S. M. Kolova. - Chelyabinsk, 2002. - 190 p.