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PRACTICAL AND THEORETICAL OPPORTUNITIES OF FIELD PRACTICE IN BOTANY AND ZOOLOGY FOR THE FORMATION OF PROFESSIONAL COMPETENCIES IN SECOND-YEAR STUDENTS

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Abstract
The article shows the possibilities of field practice in the course "Botany and Zoology" when training bachelors of the direction "Teaching Biology" in mastering the main competencies of their professional activities; a system of work (various forms and types of activities, methodological tools) aimed at consolidating the theoretical material is presented.

Keywords: Individual approach, competencies, future teacher, field practice, botany, zoology, herbarium, educational process, morphological and ecological direction, educational standard, biomorphological parameters.

Introduction

Аннотация
В статье показаны возможности полевой практики по курсу «Ботаника и Зоология», при обучении бакалавров направления «Преподавание биологии» в освоении основных компетенций их профессиональной деятельности; представлена система работы (разнообразные формы и виды деятельности, методический инструментарий), направленная на закрепление теоретического материала.

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Ключевые слова: индивидуальный подход, компетенции, будущий учитель, полевая практика, ботаника, зоология, гербарий, учебно-воспитательный процесс, морфолого-экологическое направление, образовательный стандарт, биоморфологические параметры.

Field practice is an important part of the training system in biology and biological disciplines, botany and zoology. The curriculum and work program of the course on field practice provide for "Comprehensive educational and field practice in botany and zoology" - to strengthen knowledge of the diversity of the plant world, anatomy, morphology and taxonomy of plants, to introduce the flora and fauna of Uzbekistan, to form an ecological worldview, to familiarize with the Red Book of Uzbekistan, to master the methodology of compiling a herbarium. Study of the main taxonomic groups of plants and animals, biological, morphological and anatomical features of plants and animals. The educational standard of the direction "Pedagogical education" provides for the formation of a wide range of competencies in future graduates (general cultural, in the areas of pedagogical and cultural and educational activities) necessary for the implementation of modern approaches to teaching students. [1].

Mastering the skills acquired in practice ensures and forms in future biology teachers the ability to solve professional problems and typical tasks that arise in real situations of professional and pedagogical activity using knowledge, professional and life experience, values and inclinations of a person" [2].

"Such competencies include: general cultural competencies, such as the ability to use knowledge about the modern natural scientific picture of the world in educational and professional activities, to apply methods of mathematical processing of information, theoretical and experimental research; readiness to use methods of physical education and self-education to increase the adaptive reserves of the body and strengthen health" [3]. In our case, competencies in the field of pedagogical activity are:

- ability to solve problems of education and spiritual and moral development of the personality of students;
- use modern methods and technologies, methods of diagnosing the achievements of students to ensure the quality of the educational process;

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- the ability to use the educational environment to form universal types of educational activities and ensure the quality of the educational process;
- the ability to interact with students, parents, colleagues, social partners;
- the ability to organize cooperation of students, support activity and initiative, their independence, creativity;
- readiness to ensure the protection of life and health of students in the educational process and extracurricular activities [4].

The following competencies acquire a cultural and educational focus: the ability to develop modern pedagogical technologies taking into account the specific features of the educational process, the tasks of education and personal development; the ability to use the main methods of scientific research in educational activities [2]. In accordance with the requirements of state educational standards of higher professional education, a future biology teacher should know the species composition of the flora and fauna of his native country, his region, area, protected species of plants and animals. Field practice will provide good experience in organizing the educational process at a school educational and experimental site, plan the territory of the educational and experimental site, place the main crops and plant varieties, determine the content and types of work in senior and junior classes on their sites, organize experimental work on the site for different age groups of students, this is a direct link between consolidation of theoretical material and practical work, development of skills of scientific research activities; learn to work with plant identifiers, organize and conduct excursions to nature and agricultural production correctly, conduct phenological observations correctly; correctly organize the productive work of schoolchildren; use the materials and results of work on the site to equip the biology room; learn to master the skills of using an excursion event, the methodology of compiling herbariums and collections for secondary schools.

The formation and development of all these types of activities is carried out during field practice in the course "Botany and Zoology", the duration of which is two weeks. Field practice of secondary school students is organized at the agrobiological station of our university, where there is a typical school educational and experimental site, a greenhouse experimental farm where

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mushrooms (oyster mushroom and champignons) are grown. Most of the field practice is conducted in the form of excursion work with students in various natural biogeocenoses (meadow, reservoir, forest, mountainous areas, agrobiocenosis, steppe) - Bostanlyk district. Planning educational excursions takes into account not only the topics of the curriculum of the biology faculty, but also the peculiarities of local climatic conditions. Field practice includes theoretical and practical parts. The theoretical part of the practice provides for independent work of students with literature, presentation on topics provided for by the methodological recommendations for field practice [4]. The practical part includes various options for organizational forms of educational work, supervision of students' work on the educational experimental site or participation in care work for objects of the school educational experimental site. In recent years, we have established close cooperation with general education institutions of the city of Chirchik (schools 9, 8, 15) on the basis of ChSPU in the summer period there are school biology camps, students are involved in research activities organized both at the university agrobiological station and in the laboratories of the Department of Biology. The field practice program involves an excursion to the station of young naturalists of the city of Chirchik, the Institute of Zoology, the Institute of Evolutionary Biology of Tashkent, during which students get acquainted with the organization of club work of students, the topics of research work of younger and other age groups of schoolchildren, a variety of topics of phenological observationsSeparately, in additional classes, students study the regulatory documentation governing the activities of students at the school educational and experimental site ("Model Regulations on the School Educational and Experimental Site", "Instructions for Labor Protection When Working at the Educational and Experimental Site"), get acquainted with the species diversity of plants in this area, they are offered a package of examples of possible experiments, observations. They assess the organization of experimental work with students, get acquainted with the requirements for keeping a diary of experimental work of schoolchildren, cards or use other visual material with a description for bookmarking experiments, methods and conducting experiments in botany and zoology. Much attention is paid to the organization of excursion work with schoolchildren. Students study

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the document "Instructions for Ensuring Safety" when organizing and conducting an excursion, analyze the methodological features of their preparation and implementation. They develop projects for excursions to study plants and animals of different biogeocenoses, conduct them, and make a written analysis. Of great importance in the content of field practice is the methodology for organizing bioindication studies of students, summer assignments provided for by the program of the course "The World Around Us" for grades 2-4, phenological observations of students, "Natural Science". It should be noted that an ecological path for schoolchildren in the city of Chirchik is organized and worked on. Students develop corresponding projects for the arboretums of the city of Chirchik. Upon completion of field practice, each student forms their own plan of activities and works with it throughout the subsequent period of study at the university, including the time of passing all types of practices, including pedagogical ones. The plan of activities makes it possible to:

- to acquire skills in identifying plants based on the morphological features of organs, generative and vegetative shoots, analyzing plants by biomorphological parameters, to become familiar with the basic methods of drying and herbarization of plants;
- to acquire skills in determining the belonging of a plant to a certain family, genus and species. We carry out the determination on fresh material using a guide (dichotomous tables).
- to acquire skills in making a herbarium, plants are sewn with threads or glued with strips of paper. Herbarium - covered with a sheet of thin tissue paper or tracing paper, a label is glued on;
- to acquire skills in compiling herbarium collections of higher plants to give a brief description of the species of different systematic groups studied by biology students during their field practice in the course "Plant Taxonomy". This will help students develop knowledge about the species diversity of the flora of the practice area, improve their knowledge, skills and abilities in collecting plant material in the field;
- a written analysis of the state of the educational and experimental site of the school where the pedagogical practice takes place;

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- a detailed plan for organizing and conducting an experiment on the educational and experimental site (a topic of the student's choice);
- a summary of the developed excursion with a detailed description in cards for organizing independent work of students;
- a developed topic of summer assignments for one of the courses "The World Around Us" (grades 2, 3, 4); "Natural History, Botany, Zoology",
- materials of information stands used to design an ecological trail.

This system of work is effective and allows us to talk about the formation and readiness of students to work as an organizer of naturalistic research activities of students from elementary to senior grades in a comprehensive school.

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