

Research on Biology Field Practice Teaching in Local Colleges

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ABSTRACT. *Field practice is an important part of college biology practice teaching. Students actively participate in biology field practice, which can significantly improve students' ability to apply biological theories, and they can master the field work methods of biology and improve their ability to work independently. This paper first elaborates on the value of field biology practice, and then analyzes the main problems and points in the field biology teaching of our college in combination with the training objectives of local college biology talents.*

KEYWORDS: *Biology, Field practice, Practical teaching*

1. The value of field practice in biology

Field practice is an important part of the practical teaching of botany and zoology courses in colleges. From the perspective of students, actively participating in field internships can consolidate and further enrich classroom teaching content. The content of biology is very rich, and the content teachers said in the classroom is only one part of the vast knowledge system of biology. If college students want to deeply understand the biological knowledge they have learned and master more biological knowledge, they need to step out of the classroom and expand the breadth and depth of knowledge in the field practice of biology. At the same time, students can further understand the relationship between biology and ecological environment.

Through field practice, students can more clearly understand the relationship between living creatures and their ecological environment from the aspects of vision, smell, hearing and touch, thus arousing their passion for loving nature. In addition, students can further understand the impact of human beings on biological growth. In recent years, the problem of human destruction of the ecological environment is still very prominent, the destruction of the ecological environment has led to a sharp decline in the number of some precious creatures. Through field practice, students can reflect on the macroscopic level of human damage to the ecological environment, and actively explore scientific measures for the development, utilization, and protection of precious organisms[1]. In addition, they can also enhance their ability to work independently. Through field practice, students can initially master the most basic field work methods in biology, and at the same time improve the ability to find problems, analyze problems and solve problems, and the ability to work independently, which will greatly help students' future career development.

2. The Main Problems in the Field Practice Teaching of Biology

At present, there are several main problems in biology field practice teaching in local colleges.

2.1 *Inadequate Preparation for Field Practice*

Field practice in biology requires students to have rich professional knowledge and strong field practice skills. In addition, students should attach great importance to the practice plan, purpose, discipline, safety and relevant arrangements[2]. Through investigation, it is found that in the field practice activities of biology in local colleges, students sometimes forget the equipment for practice, act alone, get injured accidentally and destroy the ecological environment.

2.2 *The Teaching Objective and Content of Field Practice Are Simple*

During field practice, some teachers aim to introduce students to a certain amount of biological information

(mainly names). Teachers require students to memorize knowledge mechanically in the shortest possible time, but seldom train students' ability to compare, summarize and sum up knowledge. In terms of teaching content, most of the students focus on collecting and making specimens, lacking such contents as biological quantity statistics and environmental qualitative and quantitative analysis. Boring content is not easy to stimulate students' enthusiasm for internship.

2.3 Field Practice Teaching Evaluation is Too One-Sided

Many teachers regard students' field practice reports or papers as the only or main criteria to evaluate the effect of students' field practice, but ignore the evaluation of students' attitudes, behaviors and related abilities in field practice. In addition, the main body of evaluation is teachers, ignoring the cultivation of students' self-evaluation ability.

3. Teaching Essentials of Biology Field Practice

3.1 Make Preparations for Field Practice

Compile biology field practice instruction materials. According to the photos, specimens and written materials taken by the teaching teams in the field practice of biology over the years, special field practice teaching materials for biology are compiled, such as field practice guidance for biology, maps of common animals in field practice and maps of common plants in field practice. Teachers should read the above materials carefully before the students begin their field practice.

Formulate a scientific field practice plan. The field practice plan includes the practice time, location, personnel arrangement, schedule, equipment, transportation, etc. According to the requirements of the college's syllabus, field practice in biology are generally conducted in June or July of the next semester, and the practice time is 7-10 days. In terms of practice base, our school has established practice base in Xiaowutaishan and Yantai seaside. Therefore, two practice bases or some nature reserves and scenic spots around can be selected as field practice sites. Teachers should carefully check or ask students to check whether the field practice equipment they carry is complete[3]. In addition, in order to facilitate the unified management of students, teachers should take the practice content as the standard to divide students into several study groups, strictly require students to make phone calls during the practice, and encourage students to supervise and help each other to avoid falling behind.

Teachers should emphasize the contents and methods of this field practice to students. During this period, teachers should focus on environmental education to improve students' awareness of environmental protection. For example, to capture animals without injury, record them through mobile phones, digital cameras and other devices, and then release them to nature; when it is necessary to collect plant specimens, ask the teachers and schools if they have the same specimens in time to avoid repeated collection. When it is necessary to collect, it is also necessary to collect as little as possible to avoid affecting the healthy growth of plants^[4].

3.2 Improve Field Practice Teaching

Establish a scientific internship concept. Teachers should try to use heuristic teaching methods to guide students in field practice and encourage them to observe, think and summarize. Teachers should encourage students to actively explore the diversity of organisms, the relationship between organisms and the environment, biological populations and community structure, etc. by using biological quantity statistics and environmental qualitative and quantitative analysis methods[5].

Enrich the practice content. Teachers should fully combine the factors such as the purpose of practice, funds, and road safety to choose suitable places for practice, enrich the content of practice, and improve the enthusiasm of students. In addition, on the basis of requiring all students to complete the unified practice content, teachers should also let students choose the topic practice content of interest independently, so as to improve their initiative and enthusiasm in practice.

Optimize the practice method. During the practice, teachers should guide students to carry out biological data collection and quantitative research with the help of various advanced equipment. If the amount of data is small, teachers should let students collect while studying. If there is a large amount of data, the teacher can ask the students to properly save or release the data to the network teaching platform, WeChat group or QQ group, and then conduct a unified research on the data after the internship. At the end of the practice, the teacher should ask

the students to finish the internship report or thesis with high quality.

Strengthen field practice evaluation. After the field practice, the teacher should evaluate the students' practice activities. During the evaluation, teachers should not only evaluate students' practice reports or practice papers, but also evaluate their initiative, enthusiasm, discipline, innovation, cooperation and practical ability during the field internship. To do this job well, teachers need to be good at observing and carefully recording the students' various performances during the students' field practice. In the evaluation, teachers should also pay attention to students' self-evaluation and guide them to self-evaluation, self-reflection and self-development.

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