Research on Construction and Practice of General Zoology Practice Teaching System

Limin Liu, Junxia Yang, Hai Bai

College of Life Sciences, Shanxi Datong University, Xingu Street, Datong City, Shanxi Province, China

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Abstract: General zoology, as an important basic course in biology for higher vocational colleges, plays an important role in the entire curriculum. The general zoology teaching course has obvious comprehensive and systematic, so practical teaching is an indispensable important link in the cultivation of general zoology talents. According to the training objectives and ability requirements of the general zoology major, this paper constructs a practical teaching system including curriculum teaching experiment, comprehensive teaching internship, professional internship, scientific research training, social practice, graduation internship, etc., and puts forward the guarantee practice. Specific measures for the implementation of teaching links.

1. Introduction

General zoology is a core course of biology major. The discipline not only has extensive theoretical research content, but also has inseparable relations with many practices such as agriculture, forestry, animal husbandry and deputy fishermanship. It is suitable for cultivating students in new animal varieties. Technical applications, industrial development and innovation capabilities in education, protection and industrialization play an important role. The main content of general zoology includes the main characteristics, morphology, structure, function, classification and common types of major animal groups and the relationship with humans or economic significance, from the low to the high. Ordinary zoology has the characteristics of large amount of content information, complex knowledge system and comprehensive nature. Therefore, in the traditional teaching process, it is found that students have poor mastery, and the enthusiasm for learning is not high, and no good learning effect is achieved. In view of this, this article will summarize and discuss the teaching reform of general zoology in biology majors from the teaching content, teaching methods, practical methods and assessment methods, in order to promote the reform and practice of teaching and improve the quality of teaching and learning.

Based on the cultivation of students' innovative spirit and practical ability, the teaching practice of zoology meets the ideas and requirements of the 21st century teaching reform, and builds a complex knowledge structure. This teaching practice mode, which integrates knowledge transfer, ability training and quality improvement, expands and extends the purpose of zoology teaching, realizes the teaching and research, and cultivates students' innovative spirit and practical ability in teaching practice. Despite this, there are still some shortcomings in zoology teaching internships, such as the lack of internship funds, the compression of internship time, the backwardness of internship equipment, and the bottleneck of the practice base. In the future, the transition from the traditional teaching mode to the “new teaching + scientific research mode” focusing on the cultivation and improvement of students' ability and quality, the first thing to do is to put forward higher requirements for the professional quality and field work ability of the instructors. Secondly, make full use of the inherent base of the school, construct a joint mode of university building and sharing, and jointly build bases with relevant scientific research institutions and nature reserves to jointly develop and utilize existing resources. Third, rely on the project as a support to crack Internship funding and equipment challenges. As long as we firmly adhere to the new concept of zoology internship reform, good teaching results can be continuously improved in the process of change.

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2. Problems in Traditional General Zoology Practice Teaching

There are the following problems in the process of preparation for zoology in colleges and universities: students have no clear understanding of the objectives and tasks of the internship before the internship; the experimental skills of the students during the internship And field operation skills are not skilled; few students have access to relevant literature and instruction books before the internship. Students are still unfamiliar with zoology internships, and some theoretical knowledge is not well mastered; some instructors have low level of business and are internship process. There is no way to answer the questions that may arise.

During the internship, students only pay attention to the collection and production of specimens, but lack of deeper thinking about zoology internships. During the internship, students only collect specimens for collecting specimens; students lack sufficient knowledge of the tools and instruments used in the internship process, and only operate some simple instruments such as shovel, bucket, dissector, specimen rack, insect net. , excavators, etc., and the lack of operational skills for difficult instruments such as plotters; colleges and universities update the internship tools and instruments are not in place. At the same time, there is a serious shortage of internship instructors, with an average teacher-student ratio of 40:1. The problem is that the problems encountered by the students during the internship cannot be promptly guided by the teachers; the teachers cannot fully take care of the students' clothing, food, housing, transportation and safety issues; some of the school's internship locations are only selected at the school. The surrounding areas, but these internship animal species are not rich, can not guarantee the completion of the internship task; the school's zoology field internships are concentrated in the summer vacation, without considering the animal's development and breeding season.

Most colleges and universities will process the collected animal specimens at random after the internship, so that a large number of animal specimens are lost, and the students' internships only stay in the observation and understanding stage. When some colleges and universities conclude after the internship, they usually only ask students to write a personal summary or internship thesis, but lack some knowledge summary and research, and no professional guidance.

3. General Zoology Practice Teaching Philosophy and Reform Goals

General animal science practice teaching concept. On the one hand, student-oriented, improve the autonomy and initiative of students internship. During the internship, the teacher is the “director” and the student is the “actor.” The teacher focuses on guiding and guiding, inspiring the students' desire for expression, giving the internship initiative to the students, allowing the students to solve problems in an atmosphere of autonomy, self-consciousness and self-interest, improving students' sense of teamwork, and cultivating students' innovative spirit and Practical ability. On the other hand, with an eye for interest, build a dynamic and internship concept. The innovation of the teaching concept, students from the “boring and boring” field life to understand the meaning of “happiness” in zoology internship, can be described as “being happy in the bitterness”, “being happy”, enhancing professional interest and inspiring students' internship Enthusiasm and innovative inspiration.

General zoology practice reform goals. On the one hand, strengthen the cultivation of students' theoretical ability and practical ability. The realization of this kind of goal can not only consolidate and improve the professional knowledge of classroom teaching, experimental teaching, and internship, but also cultivate students' ability to work hard and work independently. Through internships, we will strengthen our understanding of the dialectical relationship between animals and the environment, and consider how to protect the environment, protect animal species diversity and the development and utilization of animal resources. In short, the internship is a teaching practice that comprehensively improves the quality. On the other hand, guiding internships from a confirmatory to a research shift. Based on this, the internship content must be updated to optimize the internship method. In the internship, combining scientific research and strengthening practice will not only facilitate the two-way communication between teaching and scientific research, but also accelerate

the transformation of students' ability structure. Internship is an important practical activity that directly faces the unknown field and is a good time to carry out research activities.

4. The Construction and Practice of the General Zoology Practice Teaching System

Based on the teaching internship program, strengthen students' research and practice ability. Before the start of the internship, the students were instructed to strictly operate the procedures, learn to make the folding and labeling of the poison bottles and the triangular paper, and to infiltrate the scientific research. The most important thing in field practice is to learn the retrieval method. Learning the use of the retrieval tool is equivalent to mastering a key. Therefore, it is necessary to fully mobilize the initiative of the students, let the students make and identify the specimens themselves, and not blindly “see the picture and read the words, check the number.” Students can work independently according to their own interests and hobbies, and identify insects to families (genus) and even species. Encourage students to actively participate in the ecological research and biological observation of wild animals, let students collect the specimens of freshwater worms, learn to raise worms, conduct related experiments and collect, observe and raise cockroaches, and record the original data. Research papers. At the same time, the bioecological characteristics of birds and two climbing species were investigated, and the integration of biology and environment was deeply realized, and the structure and function were unified.

Develop and extend the content of internships and cultivate students' awareness of innovation. “Interest is the best teacher”, through the active participation of students, the realization of the concept of teaching practice from verification to research. In the past, the content of verification internships was mechanically rigid. Most of them were cognitive specimens, which were often attached to theoretical textbooks. The internship vision was not broad enough. The internship method was single and boring. The pure production of specimens and the lack of human geography knowledge were not conducive to the cultivation of students' comprehensive quality. Therefore, during the internship, in addition to completing the normal internship tasks, the internship content should be continuously enriched and improved. Let students make homemade animal specimens, such as butterfly specimens, with their bright colors and graceful posture, which can arouse students' interest. You can stick the wings of the butterfly on the transparent tape, cut it with scissors and put it on the postcard-sized card. Draw the body and tentacles of the butterfly, stick a maple leaf or ginkgo leaf according to your own hobby, and then arrange it in space, and then write cultural symbols such as animal protection, ecological civilization, beautiful China, related poetry, aphorisms, and record internships. Time and place are reserved for commemoration. This kind of internship method can explore the talent training mode of scientific foundation, practical ability and humanistic literacy integration development.

Integrate the advantages of internship and develop students' social practice ability. During the internship period, the school youth league committees set up a platform to encourage students to unite with local forestry departments, use physical specimens, photo exhibitions, and use science and technology to broadcast wildlife propaganda activities in the form of audiovisuals, radio, and leaflets, which not only exerted professional advantages, but also cultivated The social practice ability of students. At the same time, the dissemination of advanced production technology and scientific knowledge has provided strong support for the development of communities around.

Carry out teaching internships with scientific research projects or teachers' research projects. In the field of zoology practice, through field observation and practice, students are exposed to a wide range of unknown fields and unparalleled richness in life phenomena, thus stimulating students to explore the mysteries of nature, learning ways and methods of studying scientific problems, and training students. Gradually, it has an important role to play in the aspects of biosciences, literacy, flexible thinking, innovative ability, and unconventional life science workers to cultivate sentiment and exercise will. Field science and technology activities are the basic prototype of scientific research, and they are practical and innovative. In the teaching internship, with research projects or part of the teacher's research projects, design research internships, collect scientific research materials, study

local animal fauna and its diversity, and investigate the pests and diseases of local vegetation, forests, and garden plants. Regional economic services. Finally, students are required to write survey reports and research papers to make students realize that scientific research must have the spirit of hard work, loneliness, high knowledge base, scientific literacy, and cultivate students' innovative spirit and practical ability.

Constructing innovative and practical zoology teaching appraisal system The formation and development of innovation ability is based on practical activities. Practice ability is an important prerequisite for the formation and development of innovation ability. The results and effects of innovation must be realized through practical activities. Reflected in the world. Through years of exploring the teaching internship assessment system, the teaching internship has been changed only as a verification of theoretical knowledge and attached to the state of theoretical teaching, and assessed separately. In the past, the internship assessment was mainly based on the number of students collecting specimens and the effect of the production and the number of types of identification. Through years of teaching practice reform, based on the active participation of students, we have come up with a new assessment system. The assessment of teaching apprentice consists of three parts: usual performance, research report and practical examination: The usual performance mainly includes the level and ability of collecting, producing, appraising and preserving specimens; Requires the research report to be written in the format of scientific papers, summarizing the special research Small topics, accumulating raw data and materials for the official publication of small papers; Internship examinations are mainly hands-on, teachers design operable models, including skilled production of specimens, using the search table to identify specimens.

5. Conclusion

The general zoology practice teaching is to deepen and supplement the textbook knowledge. It is necessary to strengthen the practical teaching link and improve the teaching quality of the internship through diversified teaching methods. In the internship, not only must learn animal identification, specimen collection and production, but also learn to analyze problems and solve problems by using internship tools and search tables, and mobilize students' ability to actively explore knowledge to cultivate independent research in zoology. . Through group internships, together to complete the internship task, you can also cultivate students' organizational ability and teamwork awareness.

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