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Research on the assessment reform of animal biochemistry blended teaching evaluation under the background of new agricultural science

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Abstract
Under the background of the new agricultural science, this paper takes the course of animal biochemistry in the College of Animal Sciences of Guizhou University as an example, and according to the requirements of professional talents and training program, uses online assessment and offline assessment to build an assessment and evaluation system that combines the process assessment and the final examination, aiming at stimulating students' autonomous learning ability and strengthening students' mastery of course knowledge at ordinary times, improve the teaching effect and the quality of personnel training.

Keywords: new agricultural science, mixed teaching, course assessment, animal biochemistry

1. Introduction

Since 2019, many agriculture-related colleges and universities have issued the "Anji Consensus - Declaration on the Construction of New Agricultural Sciences in China", which is a new requirement of our country for the talent cultivation mode, requiring the cultivation of outstanding agricultural and forestry talents, comprehensively improving the innovative awareness, innovative ability and scientific research literacy of students, so as to cultivate high-level, high-level and international innovative talents [1]. The "Anji Consensus" focuses on creating "golden courses" and eliminating "water courses". The quality of the front-line curriculum construction directly affects the teaching effect and talent training objectives of teachers. Therefore, the College of Animal Sciences of Guizhou University, based on the new agricultural and forestry talents training goal of "new agricultural science" construction, actively carries out various curriculum reforms and explores appropriate and efficient teaching models and teaching platforms. "Animal Biochemistry" is a subject that studies the chemical composition, structure, function and metabolic change law of organisms at the molecular level, and it is highly theoretical and practical, and it is a compulsory professional basic course for bioscience majors [2].

As an important link in curriculum teaching, teaching assessment and evaluation plays an important role in teaching activities that mobilize students' enthusiasm and initiative in learning and give full play to teachers' leading and guiding role [3]. However, under the traditional teaching mode, the assessment and evaluation method of animal biochemistry curriculum failed to pay enough attention to the process assessment of students. The usual assessment is also limited to attendance, homework, classroom questioning and other methods. It is mainly to use a single indicator of the final examination results to assess students' learning results, which has great limitations. It cannot test students in the multi-dimensional assessment of quality, knowledge and ability. For this reason, this course changes the traditional classroom teaching mode to the mixed teaching mode, and at the same time reforms the teaching assessment system, which improves the innovation and high-level of the animal biochemistry course, and provides a certain theoretical reference for cultivating new talents with solid professional knowledge, good at finding and solving problems, and independent thinking ability.

2. The necessity of curriculum assessment and evaluation system reform

The traditional course assessment is generally divided into two parts: the usual score (40%) and the exam score (60%) [4]. The usual results include attendance, homework, classroom questions, etc. The final exam results are obtained in the form of examination papers. This assessment method has its shortcomings. Through the analysis of the author, it mainly includes the following aspects:

a) The assessment and evaluation subjects are lack of diversification. The course assessment and evaluation are decided by the teachers, and lack of peer evaluation and self-evaluation links, which makes the assessment and evaluation unable to play the role of motivation and feedback, and is not conducive to the overall development of students.
b) The feedback of assessment results lags behind. To evaluate the learning effect of students through the final examination, we can't find the problems existing in the learning process of students in time, and teachers can't adjust the teaching content in time.
c) The assessment method is relatively simple. The traditional course assessment method cannot truly reflect the students' learning state and initiative at ordinary times, lacks the quantification of the usual results, ignores the students' process evaluation, and the final examination results cannot objectively reflect the students' learning effect [5].

Based on the above analysis of the author, the traditional assessment method mainly focuses on summary assessment, neglects process assessment, and implements multi-dimensional dynamic assessment and evaluation mechanism, which is an internal requirement for the reform of assessment methods under the mixed teaching mode.

3. Construction of assessment and evaluation mode of mixed teaching mode

This study takes the course of animal biochemistry in our school as an example, adopts a mixed teaching mode (including online and offline links), uses multi-dimensional process assessment, that is, the key and difficult points of knowledge run through all kinds of assessment systems on weekdays, gives full play to students' subjective initiative, improves students' autonomous learning ability, and carries out comprehensive assessment and evaluation on students in combination with the assessment and evaluation system of the traditional final examination. The assessment system of this course is shown in Figure 1.

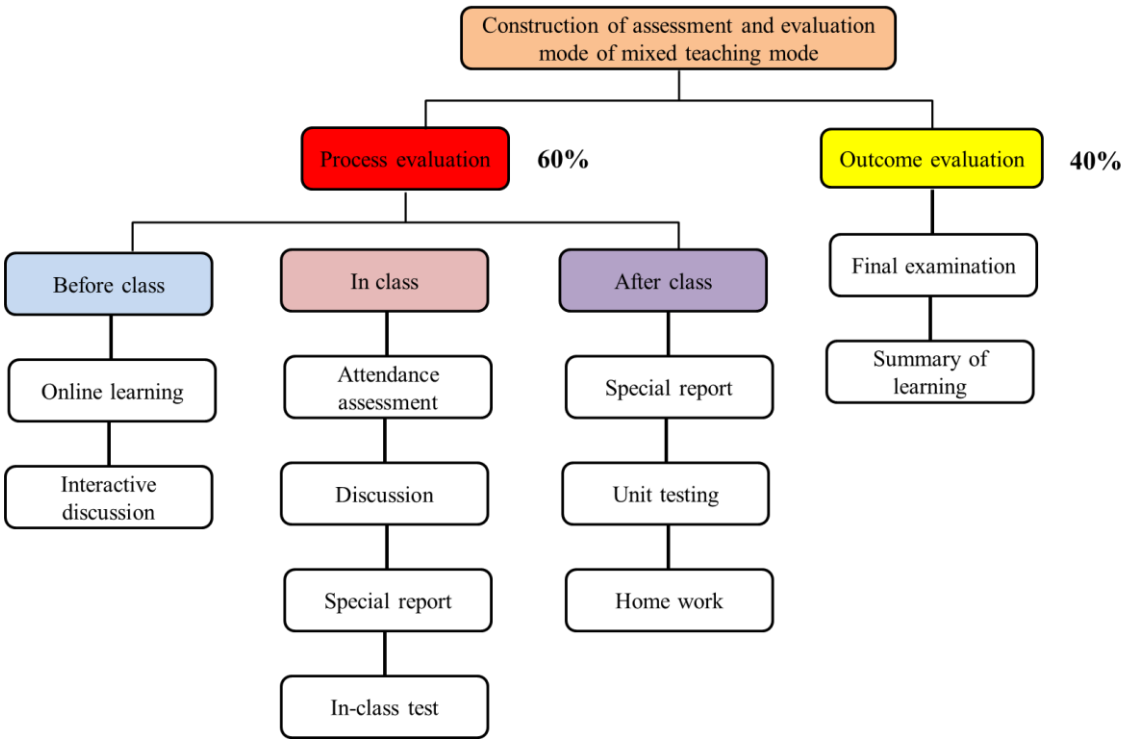

Fig 1: Construction of assessment and evaluation mode of mixed teaching mode of animal biochemistry.

3.1 Process evaluation

The multi-dimensional dynamic evaluation system of the blended teaching mode subverts the traditional evaluation method, and the proportion of the process evaluation index ("sandwich" evaluation system before class, in class and after class) is 60%. In addition, the assessment and evaluation are carried out in stages before class, in class and after class to achieve the purpose of comprehensively testing the students' knowledge mastery. Before class, the task assignment is problem-oriented, allowing students to learn independently, communicate and discuss with each other, and cultivating students' active thinking ability. In the class, through case analysis, students are guided to share knowledge, discuss in groups, and then make thematic reports, focusing on cultivating students' practical and innovative abilities. Finally, the discussion results are sorted out and submitted to the teacher for evaluation. Promote the transformation of students from "shallow learning" to "deep learning". In addition, in the process of online and offline teaching, teachers need to make records, activate the classroom atmosphere, and solve problems encountered by students in pre-class learning. After class, it is an important stage to

consolidate learning achievements, strengthen online learning assessment, strengthen knowledge debate, strengthen outward bound training, strengthen comprehensive practice, and strengthen learning effect feedback. Through small tests and ordinary assignments to deepen the learning effect, in addition, complete the special report: literature review - preparation - division of work among group members - classroom PPT report - group mutual evaluation and evaluation in combination with teacher evaluation, to achieve the purpose of testing students' proficiency in knowledge, and also improve the ability of cooperation and coordination between students.

3.2 Outcome evaluation

The final examination adopts the traditional closed-book method, and the questions meet the requirements of the syllabus. It mainly assesses the students' grasp of the basic concepts of animal biochemistry and the nutrient metabolism system. The content of the test questions focuses on the examination of the students' ability to comprehensively analyze and solve problems by using the knowledge they have learned, which has changed the previous examination method for the purpose of single theoretical knowledge point examination.

4. Reform effect of course assessment method

After the course examination, the students in the teaching class of this course will be surveyed by questionnaire. The survey contents mainly include: learning enthusiasm, learning effectiveness, assessment methods, and teaching methods. The survey results are shown in Table 1 by assigning 1-5 points from high to low.

Table 1: Practical application effect of multi-dimensional dynamic assessment mechanism in animal biochemistry course

Item	5 points	4 points	3 points	2 points	1 points
Learning enthusiasm	7%	92%	1%	0	0
Learning results	10%	90%	0	0	0
Assessment methods	40%	60%	0	0	0
Teaching methods	20%	80%	0	0	0

It can be seen from Table 1 that 99% of the students have significantly improved their learning enthusiasm after the reform of the course assessment. The reform of the assessment method has significantly improved their learning enthusiasm, reduced the pressure of the final assessment, and divided them into the motivation of ordinary learning. At the same time, most students believe that the mixed teaching assessment method can comprehensively, objectively and impartially reflect the learning process and learning effect, and the assessment content is more focused on the comprehensive mastery and improvement of students' knowledge, ability and comprehensive quality. It can be seen that the multi-dimensional dynamic assessment and evaluation mechanism with process assessment and result assessment as the core has been highly recognized by students, in order to further deepen the curriculum teaching reform. It provides a certain basis for improving the teaching quality of the course.

5. Summary

Based on the actual situation of the College of Animal Sciences of Guizhou University and the cultivation goal of new agricultural and forestry talents constructed by "new agricultural science", this paper carries out the curriculum reform of animal biochemistry, explores the appropriate teaching mode, and cultivates the applied talents with innovative entrepreneurship and strong practical ability. The assessment and evaluation of animal biochemistry curriculum should continue to be considered from multiple perspectives. It is a feasible strategy to combine the process assessment with the final assessment, highlight the systematicness, rationality and fairness of the assessment results, and truly reflect the learning ability of students. It effectively improves students' interest in the curriculum and independent learning ability.

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