

Development and Utilization of Pharmacology Loose-leaf Teaching Materials under the Background of Vocational Education Reform

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Abstract: Based on a comprehensive analysis of the current situation of traditional textbook construction, the characteristics and purpose of loose-leaf textbook construction, and the problems faced in the development and construction of loose-leaf textbook development, this paper puts forward the research ideas, methods and main approaches for the development and application of loose-leaf school-based textbook for pharmaceutical engineering and technology majors. The specific measures are to use the three-level matrix to reconstruct the course to clarify the main posts and tasks of the course docking and the corresponding skills and knowledge requirements of the posts and tasks. The main body of loose-leaf teaching materials and supporting information resources and the revision and improvement of teaching materials should be completed in combination with pharmaceutical care competition.

Keywords: Vocational education; Pharmacology; Loose-leaf teaching materials; Pharmaceutical engineering technology

Pharmacology is a limited elective course for pharmaceutical engineering majors. Through the course study, students should master the research content and rules of pharmacology, the role, mechanism of action, adverse reactions and application of representative drugs in various drugs, and be familiar with the characteristics of other drugs in various drugs, so as to provide theoretical basis for clinical rational drug use and disease prevention and treatment. At the same time, it cultivates students' ability to analyze and solve problems, equips students with the ability to comprehensively apply medical and pharmaceutical knowledge, improves students' knowledge thinking structure, and lays a foundation for the study of other follow-up courses and the long-term development of talents.

Undergraduate students can participate in the licensed pharmacists examination two years after graduation, and some students need to take the master's degree, and choose to test the four pharmaceutical content. There are also some students who think that they can make drugs into the factory, and do not need to understand the pharmacological effects of drugs. However, in general, professional students are not often exposed to these drugs in the future, resulting in many students easy to forget after learning. How to make each student feel that the study of pharmacology is related to themselves, to establish the correct thinking of drug use, to use drugs reasonably, and to improve students' thinking ability are the teaching objectives of this course after the analysis of learning situation. As vocational undergraduate students, they are not interested in boring theoretical learning, so the teaching strategy is to integrate theoretical knowledge into each specific task module. Each class of this course is permeated with the course ideology and politics, and gradually cultivates students' traditional cultural thinking, dedication, innovation and enterprising spirit, so that students gain the shock and touch related to pharmaceutical care, and run through the course ideology and politics.

In order to achieve this goal, according to the "National Vocational Education Reform Implementation Plan" issued by The State Council on January 24, 2019, the plan clearly promotes the integration of production and education and the "dual" education of schools and enterprises, and insists on the integration of knowledge and practice and the combination of work and study. Advocate the use of new loose-leaf and workbook-type teaching materials and the development of information resources. It can be seen that the development and construction of loose-leaf teaching materials in combination with job tasks and vocational skills needs has become an inevitable trend. The development and use of loose-leaf teaching materials can update the teaching content in time according to the development of the industry and better meet the needs of vocational skills training. We have made some exploration on how to develop the loose-leaf teaching material of pharmacology in the implementation of the reform of three education.

1. Current situation and the problems

In October 2019, the Ministry of Education launched the construction of national planning teaching materials for "13th Five-Year Plan"

vocational education, focusing on advocating the use of new loose-leaf and workbook-type teaching materials, and the development and construction of domestic workbook-type and new loose-leaf teaching materials kicked off. The development and selection of teaching materials in colleges and universities are still limited to traditional teaching materials, and there are some problems such as the disconnection between the construction of traditional teaching materials and the actual production of enterprises, the aging of contents, and the delay in updating.

1.1 Current situation of traditional teaching materials construction

The construction of traditional pharmacology textbooks often refers to the construction of undergraduate textbooks, focusing on the systematization and integrity of subject content. In the process of construction, we try to cram all the relevant theoretical knowledge into the teaching materials to form a more comprehensive knowledge system, and dilute the type characteristics of vocational education that should strengthen practice and training.

1.2 Characteristics and construction purposes of loose-leaf teaching materials

Loose-leaf teaching material is a new type of teaching material jointly written by university teachers and industry front-line employees, which can be freely combined and used at any time, anywhere and flexibly revised. The content of the teaching material is updated dynamically and timely with the development of the industry and industrial upgrading to reflect the characteristics of vocational education. The "dual" cooperation between the institute and the enterprise has the following research purposes for the timely development and construction of loose-leaf teaching materials with pharmacological characteristics:

First, it is convenient for teachers to combine teaching materials freely to meet the teaching requirements of students with different degrees of difficulty and implement personalized teaching;

Second, provide practical and effective learning materials for employee training and intern teaching.

Third, strengthen the cultivation of students' vocational post ability, meet the needs of the industry and improve the employment competitiveness of graduates.

Fourth, improve the ability of pharmaceutical care, according to the requirements of the national Pharmaceutical care Skills Competition, as one of the training reference materials for the competition.

1.3 Problems in the development and construction of loose-leaf teaching materials

At present, pharmacology textbooks are mainly written by personnel engaged in medical research, which are mainly theoretical and boring in content. Most students are not engaged in pharmacological research, so they think that they are not applicable, and there are very few pharmacology textbooks that can provide pharmaceutical services. The main reason is that there is a serious imbalance between supply and demand in the current pharmaceutical care market, and the phenomenon of "teacher and apprentice" among industry employees has existed for a long time. Moreover, front-line employees generally have low education or even no education, so it is difficult to participate in the compilation of teaching materials.

2. Ideas, methods and approaches

The textbook consists of 7 loose pages, including learning objectives, working background, theoretical knowledge, working cases, working process, summary feedback, and effect evaluation.

2.1 Three-level matrix reconstruction of lesson points, set learning target loose leaf

The three-level matrix reconstruction lesson point system is guided by the holistic theory, feedback theory and interaction effect matrix theory to clarify the relationship between the cultivation goal of the curriculum system, the teaching goal of the curriculum unit and the project task goal, and to develop the moment of the curriculum system from top to bottom according to the consistency of the goal, the connotation of the lesson point, the necessity of curriculum content reconstruction and the measurable principle of learning output standards Matrix, course unit (course) matrix, project matrix, and clarify the supporting relationship between the matrix and the target at all levels; Reasonable design of project learning output and effective learning output measurement standards, and then explore an effective path for the achievement of application-oriented talent training goals. According to the three-level matrix constructed by the training goal of pharmaceutical engineering technology, we reconstruct the lesson points according to the three-level matrix and construct the learning goal leaflet, so that students can have a clear learning goal and a good sense of goal to have a learning direction.

2.2 In combination with the pharmaceutical care skills competition, five loose pages are set

The core of pharmaceutical care is prescription review, which focuses on the legitimacy, standardization and suitability of prescriptions to ensure the safe, effective, economical and appropriate use of drugs. Second, strengthen the guidance of rational drug use to improve the safety and compliance of the public; The third is to strengthen health management and chronic disease management, and promote pharmaceutical care to be close to patients, close to clinical practice and close to society. The purpose of carrying out the pharmaceutical service skills

competition is to achieve "promoting construction by competition and enhancing ability by competition", enhance the construction of the provincial pharmacist team and pharmaceutical talent team, promote the improvement of the pharmaceutical service ability of the pharmacist team, and highlight the professional value and social value of pharmacists. Pharmaceutical Care Skills Competition is a competition aiming at practical pharmaceutical care. Through the competition, students can improve their comprehensive quality, improve their pharmaceutical care skills, enrich their practical experience in pharmacy, stimulate their love for the pharmaceutical industry, test their ability in pharmaceutical care, and integrate pharmacology knowledge. Starting from the real work scenario of pharmacists, the competition promotes learning by competition, improves the ability of pharmacists in prescription review, medication replacement, humanistic competency, etc., improves the professional level and professional quality of pharmacists, promotes the training of pharmacists in various regions and the construction of pharmaceutical shortage talents, improves the overall level of pharmaceutical care, and promotes the construction of a healthy China. The competition is divided into two parts: theory and practical operation. The theory part is set in the theoretical knowledge loose leaf of the textbook and the question bank.

Medication consultation and chronic disease management module in the competition - ask for recommended drugs combined with disease symptoms, recommend primary drugs and combined drugs, take them out of the display rack and show them to the judges, explaining the reasons for recommendation; This allows students to apply boring knowledge and arouse enthusiasm for learning. Set up working background loose-leaf according to competition requirements.

It is required to select a recommended attending drug for medication replacement, explaining drug usage and dosage, common adverse reactions, medication precautions and storage methods, etc. We have drug instruction manuals in our pharmacology textbooks, which are in loose-leaf form to facilitate teaching. Set up a work case binder according to this practice session.

These two practical operation links need to evaluate standards, we set up the working process and summary feedback of the loose leaf implementation.

2.3 Integrate ideological and political education into teaching materials and set up leaflet for effect evaluation

Textbooks will use some philosophy and stories, so that students have a good understanding of the concept at the same time, to establish patriotism, love the party and love the feelings and noble professional ethics. For example, when talking about the cause of treatment and symptomatic treatment, how to understand the relationship between the two, apply the discussion of combating both symptoms and root causes as a case, "deepening the treatment of both symptoms and root causes, and seizing the overwhelming victory of the anti-corruption struggle", and win time for treating the symptoms and root causes, and consolidate the results of treating the symptoms and symptoms.

In order to reflect and evaluate the teaching effect and ideological and political effect of a course, the effect evaluation loose leaf is set up.

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