Construction and Exploration of the Teaching and Research Section of Pharmaceutics Curriculum

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Abstract: For a long time, the teaching and research section, as the grass-roots teaching organization in universities, has played an important role in teaching, scientific research and teacher training. However, with the development of society and the deepening of teaching reform, the teaching and research section is the most important teaching implementation organization, which should re-examine the management mode and adapt to the development direction of education and teaching. In order to better respect the law of the growth of talents, the teaching and research section needs to constantly improve and reform to meet the new requirements of the country and society for the quality of talent training. Taking the teaching and research section of the pharmaceutics curriculum as the core, this paper analyzes the current problems in teaching the pharmaceutics curriculum. It explores the objectives, tasks, and methods of constructing the teaching and research section. The construction of the teaching and research section aims to improve the teaching quality of the pharmaceutics course system and cultivate more high-quality pharmaceutics talents with innovative spirit and practical ability.

Keywords: Pharmaceutics; Teaching and Research Section; Construction; Curriculum System; Teaching Reform

1. Introduction

The pharmaceutical teaching and research section is an important base for cultivating pharmaceutical talents, and its construction and development are of great significance for improving the quality of pharmaceutical teaching and promoting the development of the discipline. However, there are still some problems in the current construction of pharmacy faculty, such as insufficient faculty, lack of teaching resources, and insufficient practical teaching. Therefore, this paper aims to discuss the construction of the pharmaceutical teaching and research section to provide reference for the related fields.

2. The Significance of the Construction of Pharmaceutical Teaching and Research Section

Pharmaceutics is a comprehensive discipline that studies the basic theory, preparation process, quality control, and rational application of drug preparation, which is an important branch of the pharmaceutics specialty. As an important part of the pharmaceutics specialty, the construction and development of the pharmaceutical teaching and research section is of great significance to improve the teaching quality of the pharmaceutics specialty and cultivate high-quality pharmaceutics talents [1]. Specifically, the significance of the construction of the pharmaceutical teaching and research section includes the following aspects:

2.1 Improve the Quality of Pharmaceutics Teaching

By carrying out teaching research, reforming teaching methods and improving the curriculum system, the pharmaceutical teaching and research section can improve the teaching quality of pharmaceutics and cultivate more excellent pharmaceutics talents.

2.2 Promote the Development of the Discipline

The pharmaceutical teaching and research section is an important base for pharmaceutics research, which can promote the development of the discipline of pharmaceutics by carrying out scientific research and strengthening academic exchanges, and provide support for innovative development of the pharmaceutical industry.

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2.3 Serve the Society

The high-quality pharmaceutics talents cultivated by the pharmaceutical teaching and research section can provide high-quality medicines and services for society and contribute to the health of the people.

3. Problems Existing in the Construction of the Teaching and Research Section of Pharmaceutics Curriculum

3.1 Insufficient Faculty Members

Teachers are the core resource of the education sector and are the main force behind the educational and research work of the faculty. However, teaching and research sections have long been neglected in fulfilling their function of teacher training. This is mainly manifested in two aspects: firstly, the channels for teachers to pursue further education are not smooth enough, and there are many restrictions, leading to the fact that some teachers have to bear heavy teaching duties in the process of pursuing higher academic qualifications; secondly, there is the problem of "passive cultivation" in the current way of teacher training, and the schools are often unable to develop individualized cultivation programs based on the actual needs of teachers, thus making it difficult to satisfy the teachers [2].

3.2 Lack of Teaching Resources

Since pharmaceutics is a highly practical discipline, it needs a large number of teaching resources, such as experimental equipment and reagents, to support teaching and scientific research. However, there are problems such as obsolete experimental equipment and incomplete varieties of reagents in the teaching and research section, which directly affect the improvement of teaching quality and scientific research level.

3.3 Insufficient Practical Teaching

Pharmaceutics is a discipline with strong practicality, but at present, there is an obvious shortage of practical teaching. The experimental curriculum is not perfect, the experimental content is simple and repetitive, and there is a lack of comprehensive and design experiments. At the same time, there is a lack of cultivation of students' practical ability in experimental teaching, which leads to insufficient practical operation ability of students.

4. The Objectives and Initiatives of the Construction of the Teaching and Research Section of Pharmaceutics Curriculum

4.1 Construction Objectives

The goal of the construction of the teaching and research section of the pharmaceutics course is to improve the teaching quality of the pharmaceutics course and cultivate high-quality pharmaceutics talents with innovative spirit and practical ability. By constructing the teaching and research section, we optimize the teaching content, improve the teaching methods, perfect the practical teaching system, and comprehensively improve the knowledge levels and practical abilities of students.

4.2 Initiatives to Strengthen the Construction of the Teaching and Research Section of Pharmaceutics Curriculum

4.2.1 Strengthen the construction of faculty

Improve the overall faculty level of the teaching and research section by introducing high-level talents and strengthening internal training [3-4]. It should actively introduce excellent teaching and research talents at home and abroad, establish a perfect talent recruitment process, formulate reasonable salary policies and research incentives in combination with its situation, and focus on cooperation with enterprises and social organizations to expand the channels for introducing talents. The construction of the faculty should be strengthened through internal training and selection, carrying out professional skills training in teaching and educational research, cross-disciplinary training and other forms of training to improve the professional quality and ability of the existing teachers, and at the same time, excavating and discovering the internal excellent talents, strengthening the selection and cultivation, so as to enable them to gradually grow into faculty talents with international level [5]. We strongly support teachers to study abroad, cooperate in domestic and international project, and participate in academic exchanges at home and abroad. In recent years, three teachers have visited and studied abroad, broadening their academic horizons.

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4.2.2 Enriching teaching resources

Through increasing investment and updating experimental equipment, provide places for students to carry out practical operations and cultivate students' hands-on and practical application abilities. Through online courses, learning websites, and digitized literature, students can be helped to obtain more learning materials and information to improve their learning effect [6].

4.2.3 Standardizing teaching management

Through establishing a sound teaching management system and teaching assessment mechanism and strengthening teaching supervision and management, teaching management is standardized, and teaching quality and efficiency are improved [7-9]. Further improve and strengthen a series of rules and regulations concerning the construction of the teaching team, such as the Rules for Quantitative Assessment of Teachers' Educational and Teaching Work, the Code of Conduct for Teachers, the Implementation Plan for the Year of Teachers' Virtue Building, the Commitment for the Year of Teachers' Virtue Building, the Provisions for Strengthening Teachers' Virtue and Conduct and Enhancing Work Efficiency, the Management System of Full-time Teachers' Training and the Measures for the Routine Teaching Inspection and Competition.

4.2.4 Strengthening scientific research

The faculty should identify research priorities with prospective and applied value, such as new drug delivery systems and biological effects of drug preparations, according to the development trend and practical needs of the discipline. Teachers and researchers are encouraged to form research teams for better resource integration, knowledge and experience sharing, and joint research projects.

4.2.5 Optimization of curriculum

The construction of the teaching and research section of the pharmaceutics curriculum needs to be centred on optimization of curriculum and teaching content. Firstly, a scientific and reasonable curriculum system should be formulated according to the characteristics of the discipline and the needs of students, focusing on the combination of basic theory and practice and strengthening the practical ability of students. Secondly, the teaching content should be constantly updated according to the development trend of the discipline and the needs of society, and new research results and technologies should be introduced to maintain the cutting-edge and practicality of the teaching content [10].

The pharmaceutical curriculum system is divided into three modules: First, basic courses, including pharmaceutics, biopharmaceutics and pharmacokinetics, to enhance students' pharmaceutical ability and cultivate the spirit of craftsmanship through the study of basic theories, dosage form knowledge, new technologies and new dosage forms of drug preparation; Second, extension courses, including pharmaceutical Japanese, specialty English of pharmaceutics, monograph on preparation of traditional Chinese medicine, drug delivery system, to enable students to understand the dynamics and progress of international pharmaceutics, so that students can timely understand the international pharmaceutical trends and progress; Third, practical courses, including pharmaceutics experiments and opening experiments, aiming to enhance students' hands-on ability, innovation ability and critical thinking consciousness. The effect and quality of pharmaceutics experiment teaching were improved by optimizing the content of experiment teaching, strengthening the comprehensive design experiment teaching and reforming the test method [11]. The group of pharmaceutics courses is shown in Figure 1.

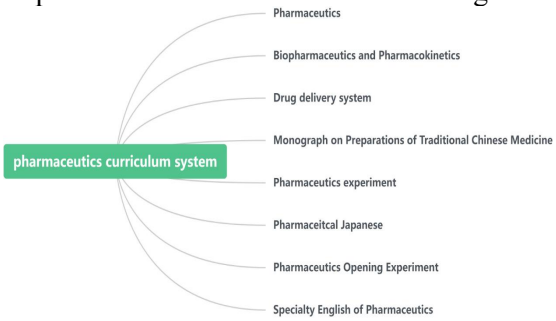

Figure 1. Schematic Diagram of Pharmaceutics Curriculum System

4.2.6 Deepening school-enterprise cooperation

Schools can establish practice teaching bases through cooperation with enterprises to provide students with practice opportunities and enhance their practical ability and employment competitiveness. The teaching and research section can cooperate with enterprises to carry out scientific research projects, jointly promote the integration of production, learning and research, and improve the transformation rate of scientific and

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technological achievements. Actively establish long-term cooperative relationships with enterprises, jointly formulate talent training programs, jointly construct curriculum and teaching materials, jointly implement teaching and internship training, and jointly evaluate the quality of talent training.

5. Conclusions

With the rapid development of the pharmaceutical industry and the continuous improvement of people's demand for health, pharmaceutics, as an important part of the pharmaceutics profession, will become increasingly important in its status and role. Therefore, the construction and development of the pharmaceutical teaching and research section will face more opportunities and challenges. In the future, the pharmaceutical teaching and research section should further strengthen the construction of faculty, improve the teaching resources, and enhance the teaching quality and scientific research level in order to cultivate more high-quality pharmaceutics talents and make greater contributions to the innovative development of the pharmaceutical industry and the social health undertakings. Meanwhile, the pharmaceutical teaching and research section should also strengthen international exchange and cooperation, introduce international advanced pharmaceutics research results and educational experience, and enhance its internationalization and competitiveness.

The construction of the pharmaceutical teaching and research section is a long-term and arduous task that requires the joint efforts of leaders, teachers and students at all levels. Only by strengthening the construction of faculty, enriching teaching resources, standardizing teaching management, strengthening scientific research and optimizing curriculum can we promote the construction and development of the pharmaceutical teaching and research section, cultivate more excellent pharmaceutics talents, and make greater contributions to the innovative development of the pharmaceutical industry and the health of the society.

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References

[1] Liu DZ, Huan ML, Wang W. Construction and practice of pharmaceutics curriculum system under the background of new medicine. China Medical Herald, 2022, 19(25):68-71, 80.

[2] Cui XR, Wu CL. Thinking on the construction of grass-roots teaching organization in universi ties under the new situation. The guide of science and education, 2016, (34):20-21.

[3] Hong ZZ. Evolution and reconstruction of teaching and research departments at the grass-roots level in universities. University Education Science, 2016(3):86-92.

[4] Zhou GL, Yuan F, Song ZZ. Problems and countermeasures of faculty building from the perspective of faculty assessment. Journal of Heilongjiang College of Education, 2017(6):5-7.

[5] Li L, Zhang JQ, Li M. Construction and exploration of teaching and research section based on high-quality development background. The food industry, 2023, 44(12):165-169.

[6] Shen HM, Wang YX. Thinking and practice on the construction of virtual teaching and research room for university courses. Journal of southwest Jiaotong University (Social Sciences), 2023, 24(1):91-94.

[7] Zhang XY. Study on the construction and management of teaching and research sections in universities. Journal of Hunan Post and Telecommunication College, 2020, 19(4):42-44, 57.

[8] Liu HS, Lv JZ, Chang YC. Construction of professional basic teaching and research Section of energy and power specialty under double first-class background.

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Education and teaching forum, 2023, 23:1-8.

[9] Shi J, Wang SM, Chen QF, et al. Construction of four abilities model of the teaching and research office of Chinese medicine pharmaceutics for the new medical science construction. Pharmaceutical Education, 2023, 39(6): 92-95.

[10] Zhang B, Zhang XM, Lin ZJ, et al. Exploration of integrated construction of first-class course, ideological and political education and virtual teaching and research section of Chinese Materia Medical. Education of Chinese Medicine, 2023, 42(3):54-57.

[11] Guo BH, Li XF, Qin LH, et al. Research on reform of pharmacy experiment teaching in pharmaceutical preparation specialty. Educational Science, 2023(07):148-151.

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