



Reform of Curriculum Structure and Educational Mode of Preventive Medicine Specialty in Colleges and Universities

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Abstract. The purpose is to reform the current curriculum system of preventive medicine undergraduate education based on the biomedical model, make full use of the comprehensive quality of colleges and universities, integrate and optimize it comprehensively, reform the teaching methods, and establish a set of new preventive medicine professionals suitable for the healthy development of the 21st century. First of all, through the current learning of higher vocational colleges and higher vocational colleges “four levels” of training objectives are deeply discussed. Secondly, this paper has made a comparative analysis from two aspects to point out the present situation and existence problems of higher vocational technical education in our country, and points out the importance of higher vocational technical education in our higher vocational technical education. On this basis, combined with the current medical development trend, this paper discusses the professional construction and development trend of preventive medicine specialty [1].

Keywords: comprehensive university · preventive medicine · curriculum · reform

1 Introduction

At the end of the 20th century, a large-scale reform of school-running system was carried out nationwide starting from 1952, resulting in the integration of a large number of single-major schools with other schools, and the establishment of some comprehensive or multi-subject schools with more comprehensive majors (hereinafter referred to as “comprehensive”) [2]. This brings new development space and opportunities to our higher education cause. Newly established colleges and universities established their “Public Health” and “Preventive Medicine department” one after another, and opened their “Preventive Medicine Department” and “Medicine Prevention Department”, providing a new way of thinking and method for the prevention and control in our country [3]. At present, there are both opportunities and challenges for the training of preventive medicine professionals in colleges and universities. How to keep up with the pace of The Times [4], constantly innovate, constantly deepen the reform, overcome difficulties,

on this basis, give full play to the characteristics of colleges and universities, study and learn foreign excellent practices, combined with the national conditions and the actual situation of the school, the training plan and training methods of preventive medicine professionals in colleges and universities scientific design, this is a major reform problem. This has a very significant impact on our higher medical education and the healthy development of the whole society. In higher vocational education, curriculum system and teaching method is an important part of higher vocational education, is an important part of higher vocational education, but also an important part of higher vocational education. In our higher vocational and technical education, strengthening education of higher vocational and technical colleges is the inevitable choice to improve the education quality of higher vocational and technical colleges and promote the development of vocational and technical education [5].

On this basis, this paper discusses the developing trend of our country's higher vocational education and puts forward corresponding countermeasures [6].

2 Discussion on the Curriculum System and Teaching Model of Preventive Medicine Specialty

Since the 1940s, the world has entered the “new technological revolution” dominated by information technology, and the medical technology has developed rapidly. The medical way has also changed from the “traditional” medical way to the “biological”, “psychological” and “social” medical way. With the development of society and economy, the new demand for medical and health professions is becoming more and more urgent. All countries in the world are carrying out the medical and health education which takes improving the comprehensive quality of medical and health professions as the core, especially the “problem-oriented” medical and health education promoted by Xiyu College in the 1950s [7], which is the famous “Xiyu model”. This model breaks traditional teaching methods and outdated educational concepts, takes the clinical thinking ability of students as the main content, carries out a high degree of integration of basic and clinical, advocates students to communicate with clinical as soon as possible, takes independent learning as the main content, and conducts group discussion under the guidance of teachers. Since the 1960s, there have been more than 40 colleges and universities, such as McMaster Medical School in Canada, Senburg in the Netherlands [8], Australian University and Newcastle in Australia, Suez in Egypt, West Coast in the United States, West Coast in New County, etc. The Association of Medical Colleges and Universities of America (AAMC) has taken them as the guiding ideology for the development of the medical and health cause in our country. In the Edinburgh Declaration, the concept of “problem-oriented” teaching was put forward, and it was taken as the guideline for teaching reform. See Fig. 1 (Tables 1 and 2):

Table 1. Evolution of higher medical teaching mode in foreign countries

Age	Teaching mode	background
Middle ages	Individualized teaching model	Slave society, feudal society (5th century to the second half of 17th century)
18th century	Herbart Model of Teaching (1776)	The first industrial revolution at the beginning of capitalism
Early 20th century	Flexner model of teaching	Biomedical model of the second industrial revolution
In the 1950s	Xiyu Style (1952)	The third and fourth industrial revolutions after the 1940s. The emergence and development of biological - psychological - social medical model
	Question formula (1956)	
	Community Orientation (1978)	W H O proposes to achieve the Global Health Service strategic goal by 2000 Everyone has access to health care.

Table 2. Application of medical teaching model in our country

Scope of application	Applied teaching model
Whole process of medical teaching	Subject-centered, community (rural) medical education
Department of Medical Teaching	Problem-oriented, learning-oriented, social practice, student-oriented, computer-aided instruction (C AI)

3 Analysis of the Curriculum System and Teaching Mode of Preventive Medicine Specialty

In a study on preventive medicine:

1. 87.6% of the students said that the training objectives and basic training standards in the educational syllabus of preventive medicine are basically consistent with the current situation of the country and the training of preventive medicine talents. However, more adjustments and optimization are still needed in the educational syllabus and content.

Table 3. Comparison of the number of preventive medicine courses between comprehensive universities and single-subject universities

category	Number of schools	mean	Standard number	Maximum value	Minimum value	T	P
Common base class	15	7.20	0.94	8	6	-0.35	0.977
	9	7.33	0.87	8	6		
Basic medical science	15	12.13	3.02	20	9	1.15	0.126
	9	10.89	1.45	13	8		
Clinical medicine	15	11.87	1.85	14	9	1.94	0.947
	9	10.33	1.94	13	7		
Preventive medicine	15	10.08	1.89	15	9	-1.12	0.866
	9	10.89	1.83	14	9		

- 87.6% of the students think that the proportion of class hours of public basic courses, basic medical courses, clinical courses and prevention courses in the teaching plan is about the same, but 77.6% of the students also think that the proportion of political courses in public basic courses is too large, and the teaching effect in practice is not ideal, so it is necessary to adjust the basic courses and education methods of political courses [9].
- 54.2% of the students thought that the subject of this major accounted for about the same proportion in the overall teaching program, 38.7% of the students thought that the proportion was too small, and more efforts should be made. Another 82.3% of the students thought that the subject should be optimized and integrated, and the international research progress and results of this subject should be supplemented.
- About the teaching methods and methods, 78.6% of the students expressed relatively satisfied with the teaching methods and methods of professional courses, and 37.6% of the students said that in the study of professional courses should pay attention to the combination of theory and practice, so as to make students better into the work; 5.43.6% of students said that in experimental teaching, basic experiments (verification experiments) should be phased out, and improvement experiments (design experiments, comprehensive experiments, application experiments) and exploration experiments should be added. 67.6% of the students thought that in the experimental education, they could fully master the whole process of sampling, preparation of experimental reagents, instrument debugging, pre-experiment, experiment, analysis and evaluation of experimental results, etc., and added some modern rapid survey technology to it, so that they could match their work as soon as possible after graduation (Table 3).

4 Establishment and Implementation of Curriculum System and Teaching Model of Preventive Medicine Specialty

The curriculum system must be integrated, and the segmented teaching system of “basic, clinical, professional and practice” in the previous subject-based biomedical model should be broken through. On the basis of the construction of four platforms of public basis, professional basis, specialized course and elective course, in addition to the practical links, a curriculum system should also be built. Among them, there are six specialties: basic course of natural science, basic course, clinical course, prevention course, and comprehensive technology and method course of humanities and social sciences. The Japanese educational circle once put forward that “without synthesis, there will be no great cause, no great man”, which is an important direction of university education reform in the world today.

The total credits of preventive medicine major (5-year program) should be no more than 230 credits (no more than 3900 credit hours). Among them, public basic courses account for more than 25%, which are arranged by the university as a whole and strengthened by giving full play to the advantages of basic subjects in comprehensive universities. Teaching hours in class should not exceed 80%, and practical teaching should be greater than 20% (Table 4).

In the teaching plan of preventive medicine major (five-year program), there are four major modules, namely, general education course, subject basis course, professional teaching course and optional course. According to the horizontal structure, the courses are divided into compulsory courses and optional courses, which account for 6 credits. 4. From the vertical point of view, compulsory courses mainly include: public foundation, professional foundation, specialized courses and practical courses; The elective courses mainly include: humanistic quality course, medical interdisciplinary course, emerging disciplines and scientific method course, and specialty orientation and

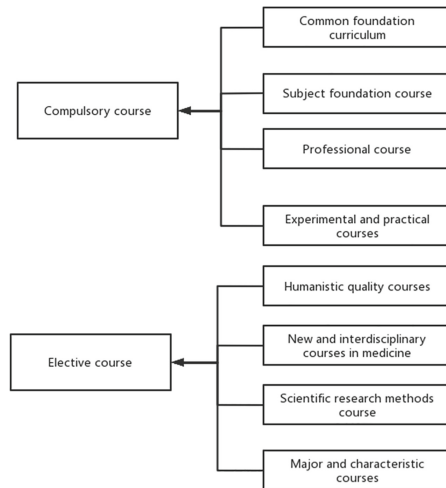


Fig. 1. Overview of preventive Medicine curriculum

Table 4. Credits of various courses of preventive medicine major

Course category	credit	Class hours	Proportion of theoretical courses	Experiment (practice) proportion	remarks
General education	65	1303	84.3%	15.7%	28.6% of the total credits
Discipline basis	49.5	1011	63.4%	36.6%	
Professional teaching	96.5	1281	68.1%	31.9%	
Optional elective	16	288	100%		
total	227	3883	74.7%	25.3%	

characteristics course. Among these regulations, there must be at least eight elective courses for humanities majors and at least six elective courses for humanities majors.

5 Conclusion

In our country, the reform of the curriculum system and teaching ways of preventive medicine should start from the social needs of the 21st century, the purpose of cultivating medicine as the foundation, follow the general rules of the development of modern medicine and talent, take the knowledge, ability and quality as the line, and combine the advantages and characteristics of the school of our universities. Design a complete curriculum system of Preventive Medicine; In addition, at present, the reform of the curriculum system and teaching methods of preventive medicine major in colleges and universities is one-sided and one-sided, lacking of systematization and comprehensiveness. Therefore, we should establish and optimize the curriculum system of preventive medicine as a whole.

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