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## The analysis of the new gynecology and obstetrics clinical teaching model through system integration

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### ABSTRACT

Clinic teaching, as an important part of the medical education activities, aims to train excellent doctors with strong clinic skill and the solid theoretical foundation. Because the quality of the gynecology and obstetrics clinical teaching activities has a direct and objective influence on the book review of the clinic medical development, in recent years more and more foreign medical teaching organization apply “ the clinic teaching model based on the system integration” and get excellent achievement, deserving our study. Based on the current situation of the gynecology and obstetrics clinical teaching and by comparing the clinic teaching model based on the system integration and the traditional clinic teaching model, we get the conclusion that the traditional one have many disadvantages and then actively study the new gynecology and obstetrics clinical teaching model. This paper introduces the advantages of “ the clinic teaching model based on the system integration” and its basic framework, and effectively predict the practical efficiency of conducting this model based on the managing condition of the new curriculum system. We hope our study and discussion can provide a theoretical basis for the reform of the gynecology and obstetrics clinical teaching model.

### KEYWORDS

System integration; Gynecology and obstetrics; The clinic teaching; The teaching model.



## INTRODUCTION

In now days more and more medical colleges and universities integrate training student's clinic skill in the basic knowledge teaching activity: students can not only learn the basic knowledge but also do some practical activity, inspiring students to use what they learn in the practical activity. With the rapid development of the modern medical technology and treatment, more and more advanced technique and information are published, pushing a great pressure on the traditional medical education theory. Facing the new situation, medical colleges and universities, to train personnel meeting the social demand, have began paying more attention on the study of the teaching model.

According to the teaching model formed through system integration, teachers should connect the clinic curriculum with the basic curriculum after students learn some basic theoretical knowledge. Teachers professional in biochemistry, pathology and genetics and clinic medical researchers combine the basic knowledge of pathology, pathogen, etiological diagnosis and disease treatment with the clinic practice. They should also guide students to master the system and get the comprehensive theoretical knowledge and basic skill in the compulsory curriculum through various teaching ways such as self-study, network teaching, practical training and school teaching. By this way the teaching efficiency can also be improved. There are many differences between the clinic teaching model based on the system integration and the traditional clinic teaching model. These differences are shown as TABLE 1:

**TABLE 1 : The differences between the clinic teaching model based on the system integration and the traditional clinic teaching model**

	<b>traditional teaching model</b>	<b>teaching model based on system integration</b>
curriculum time	grade 3 and grade 4	grade 4 (10 weeks) One week of an enlarged class Two weeks in obstetrics
curriculum management	40 hours of an enlarged class three weeks of probation (the grade 4) six weeks of practice (the grade 5) there are three tests	Two weeks in gynecology One week in delivery room Two weeks of practice in affiliated hospital One week of optional curriculum One week of review for test

## THE DISADVANTAGES OF THE TRADITIONAL TEACHING MODEL

The traditional clinic teaching model is led by the way of “ theoretical education being dominant with the supplement of the practical activity and various curriculum”. For example, because the gynecology and obstetrics curriculum is arranged in the same semester with other physician and surgeon curriculum, students cannot diagnose so much basic theoretical knowledge in such a short period. With the 24 weeks of the practice, which always can be finished till the end of the second semester, students doing practice till teachers finish their basic theoretical teaching would appear many problems, shown in TABLE 2 bellow:

**TABLE 2 : The problems of the traditional teaching model** <sup>[2-4]</sup>

<b>The traditional teaching model</b>	<b>Problems</b>
The teaching model	The theoretical curriculum adopts a backward teaching model. There is much distinct difference in hours of the theoretical curriculum and of the practice.
The practical teaching	There is no efficient connection between curriculum and the teaching efficiency is weak.
Teacher's activity	The full-time teaching model has a negative influence on teacher's activity.
Student's activity	Students study passively and cannot be inspired out their learning activity.

Just as what is shown in the TABLE 2 above, the current gynecology and obstetrics clinical curriculum under the traditional teaching model has many problems, which not only directly damages the teaching efficiency but also is not helpful to the improvement of student's professional skill and comprehensive medical literacy. So in the future teaching the traditional teaching model should be reformed to optimize the curriculum management and the teaching idea, making a solid theoretical and practical foundation for the gynecology and obstetrics clinical teaching model.

## THE MAIN CHARACTER AND THE BASIC FRAMEWORK OF THE NEW TEACHING MODEL

After adopting the teaching model based on system integration to the gynecology and obstetrics curriculum, the curriculum's hour is cut to less than 10 weeks. The specific characters are below:

(1)the curriculum hour has been cut. There are only one week arranged to the basic theoretical curriculum and the test of the teaching efficiency. The teaching subject taught in the enlarged class has been divided into several small parts; not only teachers can use media tools to help their teaching and by this way of combing the literary knowledge with information in internet the teaching content is largely enriched, but also students can also with the help of the internet study by themselves, such as doing network test, by which they can learn about their study level. The student’s initiation and passion to study can be inspired. (2) The combination of the theoretical curriculum and the practical activity is helpful for students to apply their knowledge to the clinic activity. This not only can deepen their understand of the theoretical knowledge but also improve their professional skill. (3) In addition to the compulsory curriculum, there are also optional curriculum. Students are divided into several teams and then discuss the subject they are interested in. After making a deep study through what they have learn, students should write down the detail research results, which will be evaluated by teachers at the end of the curriculum. (4)The new teaching model breaks the limit existing between teachers and students given by the traditional teaching model, efficiently improving the relationship between teachers and students. And the frequent interaction between them can make a positive influence on the teaching efficiency and its role in improving student’s comprehensive literacy is self-evident.

**The goal of training personnel**

The continuous changing of the society requires medical colleges and universities to do some changes to calculate more medical personnel. We remake the program for training the gynecology and obstetrics personnel based on the new requirement provided by the modern society. The teaching goal has been identified as that : combing the medical theoretical knowledge and the training practice; promoting student’s comprehensive improvement of morality, wisdom and health and training the professional clinic personnel with innovative thinking and the strong practical skill; And guide students to have an awareness of “ put the patient first”, respect them and communicate with them; combine the medical science and the humanistic and social science to improve student’s legal and moral awareness and their comprehensive literacy. The new curriculum focuses on the training of student’s practical and researching skill, so it more easily trains the professional clinic doctors with solid theoretical knowledge and the practical skill. Besides strengthening student’s professional skill, we should also cultivate their morality and help them to get a noble virtue.

**The personnel cultivation structure**

The personnel cultivation model is the important way of guiding students to forming knowledge structure and improving their practical skill and their comprehensive literacy. It reflects the radical teaching idea of medical colleges and universities and provides a theoretical basis for training professional personnel. In the process of reforming the curriculum we have integrated the teaching content and the teaching resources, find their connections and then make them being integrated into each other, to improve the teaching efficiency. For example the uterus systemic teaching can be connected with some elementary curriculum such as the humanist science and the basic medicine to refresh the teaching content and generate the teaching idea. We have made a new curriculum system, the curriculum in which has been divided into three parts of the nucleus curriculum, the optional curriculum and the clinic practice. The systemic integration framework of the gynecology and obstetrics clinic curriculum is shown as Figure 1.

The first year		The second year		The third year		The forth year		The fifth year	
first semester	second semester	third semester	forth semester	fifth semester	sixth semester	seventh semester	eighth semester	ninth semester	tenth semester
English		Computer							
public basic courses			systemic comprehensive module		clinic nucleus module		clinic teaching		later optional curriculum (17metrics)
body structure, gastrointestinal nutrition, elementary study, cardiovascular, breath, Hematology, infection, immune, muscle, Xerography, medical treatment, organism balance, reproduction, development, growth			Skills module: clinic method, communicating skill, clinic practice, all-life study, in the early period of doing clinic practice		probation in many disciplines		alternate clinic practice		intensified practice
humanity and social science(including health and the society)									
early optional courses(five credits)						professional and comprehensive test		comprehensive clinic test	
test of every course		basic and comprehensive test							
								turning back to the basic study	

**Figure 1 : The systemic integration framework of the gynecology and obstetrics clinic curriculum**

### The arrangement of the nucleus curriculum

This module accounts to 56 percent of the total courses and is arranged in semesters from 1 to 7. The curriculum is involved in public basis, systemic integration, the skill teaching and the nucleus clinic teaching. Through its requirements of catching the basic medical knowledge and then applying it to the clinic practice, student's professional skill has been improved greatly.

### The arrangement of the optional curriculum

The module takes a proportion of 24% in the total courses and is divided into two parts, the early optional ones and the later optional ones, in which the early ones are arranged in 1-6 semesters with a requirement that students must get more than 5 metrics and the later ones in the tenth semester and is involved in such contents as the basic clinic practice and the intensified clinic practice disciplines with a requirement that students must get 17 metrics.

### The arrangement of clinic practice

This module accounts of 20 percentage of the total disciplines and is arranged in 8-9 semesters. The arrangement of the practice in the early period can make the arrangement of the basic theoretical study and the intensified optional practice in later period more flexible and is helpful to diminishing the contradiction between student's employment and practice.

### The main characters of the new disciplines

#### Greatly enriching the network teaching content

In now days the network teaching, as an important character of the new teaching module of the gynecology and obstetrics clinic teaching, is represented by the exploration of the gynecology and obstetrics clinic teaching model based on the systemic integration. The new disciplines applied more network courses and encourage teachers to use media tools such as pictures and nominations to present the odious gynecology and obstetrics knowledge. By this way not only the teaching difficulty can be declined but also student's study initiation can also be greatly inspired.. Especially the development and application of the self-testing greatly improves the teaching efficiency. The basic function of the optional question bank is shown as TABLE 3.

**TABLE 3 : The basic function of the optional question bank**

range of topic	of	a single module or an unit in a module can be selected as the topic of this module or this unit.
form of questions	of	1. select questions randomly, select the non-redundant questions randomly 2. add new questions, select new questions from the question bank
type of questions	of	there are eleven kinds of questions including: single-choice question, multiple-choice question, True or false, close test, fill in a table, Type B-choice question, Type C-choice question, Type K-choice question, terminology, short answer question, essay question
basic function		after students offer answers, the program would automatically judge them and then provide the right answer and the total score. Some relatively difficult questions would give students some answer suggest that should be added by teachers when they input these questions.
assist-function		1. Students can present their opinions. Students can learn about other ideas about the question and also give their own opinions (for example, if they think there are something wrong in the answer.) 2. Select questions, students can select some representative questions and write them on the "network notebook" with some comments, which can be used in the future review. 3. The recommended question :recommend the question that you think is valuable to others and present your reasons, so that to strengthen the communication between each other.

### The full implement of the guiding thought of strengthening student's comprehensive literacy and innovative skill

This module has reflected the change of modern medical teaching model. Now the medical teaching pays more attention on developing student's nonintellectual factors and guiding students to form a comprehensive personalities and good psychologist literacy. This module also applies the disciplines of health and the society, aiming to teaching student's skill of learning about patient's behavior and psychology. By this way doctors can make an efficient communication with the patient, declining the distraction between the patient and the doctor. It is also helpful to form a noble medical virtue, which can inspire doctors to do their best efforts to service the patient. The improvement of doctor's skill to prevent and handling the medical negligence can increase the security and reality of the medical activity. Besides what is shown above, professional doctors should also know well the relationship between the society and the environment and the relationship between the environment and people's health.

### The new curriculum system changes the traditional inculcation education

Teachers should actively use the modern teaching methods to improve the teaching efficiency, so that to cultivate student's initiator to study the theoretical knowledge and the skill to resolve problems. For example, teachers should apply

some teaching ways such as the interactive teaching, group consulting study and the student-reported teaching and cut the hours of the compulsory course to enable students have more free time to do self-study. In the new curriculum, the hours of the compulsory course have been cut to 2788 hours, so students would have more opportunities to learn what they are interested in. The open management of the lesson notes, CAI course-ware and the electronic reading room facilitates teachers and students to research the references. This not only cuts the repeated content about the medical physics and chemistry but also reduces student's load of reciting the basic physical knowledge. The teaching way of the public basic curriculum and the basic medical curriculum should be reformed: not only reduce their hours to give students sufficient time to do self-study but also require them to finish some certain tasks within the schedule time. Besides, teachers should guide students to do good communication with patient's relatives, so that to improve the relationship between doctors and patients, reducing the times of happening clinic disputes. By this way, student's serving awareness can be developed, which can enable them to increase their serving quality and to form a good medical ethics.

### **The training for strengthening student's medical skill**

In order make students easier to integrate the society after graduation, teachers should strengthen the student's basic skill training and keep doing this training through the whole teaching. And by this way students can have a deeper understand of the medical theoretical knowledge in practice. (1)Building the clinic skill training center. The automatic simulation of patients model should be introduced by medical colleges and universities to make it possible for students to take part in the basic skill training such as making a diagnosis. (2)Setting up the standard patient's information bank. The medical universities can selected healthy people without the medical major but with high literacy to act as the patients to enable students to do the basic medical skill training. (3) Arrange students to do clinic practice in the seventh semester; to do the intensified training in the tenth semester, which focuses on some certain disciplines according to the society's need and is helpful to improve the employment rate.

### **The new curriculum, through systemic integration, changes the traditional teaching method comprised of three parts**

The new curriculum integrate many different disciplines, strengthening the connection between subjects, and therefore helping students to have a more completed knowledge structure. Because the clinic practice is based on the early theoretical learning, students should return to continue their theoretical learning after finishing their practice. By this way students can combine the disease theory and the clinic practice, improving their skill to use their theoretical knowledge. The theoretical learning and the practical activity can improve student's comprehensive literacy and their innovative thinking.

### **Strengthening the training designed to cultivate student's skill to study all life**

Build the all-life learning model, in which the IT, the reference searching and medical statistics are integrated, to encourage students to learn medical knowledge through various ways. By inculcating their skill to analyze and resolve problems by themselves, this model plays an important role in improving student's professional level and lay a solid foundation for them to be the personnel in the future.

## **THE NEW CURRICULUM SYSTEM'S ORGANIZATION AND EXPECTING EFFICIENCY**

The new curriculum is designed for 180 clinic medicine majors entering universities in 2013, who are divided into 9 classes. When they take part in the basic clinic training, they would be divided into several teams, each of which is comprised of 6-9 students.

The curriculum reform committee has been set up. It is led by the president of the medical school and the relative detail work is controlled by the dean of studies. Till now the reform work has been done smoothly. The parts involved in the reform are the teaching outline and the teaching means, making the media teaching tools and the questions bank. In order to increase the teaching quality greatly, the medical school has integrated the teaching content, reorganized the teaching resources and closely combine the basic theoretical knowledge with the clinic practice. And the system managing network platform has been built to assist the reform of the curriculum system

The new curriculum has been introduced in the third "National Gynecological Education Conference", held in 11, April. Leaders and representatives in the conference have expressed their support to this idea. We confirm that under the trend of the higher education becoming more international and modern, the innovative reform surely will win the support of all teachers and students of our university and make a cheerful achievement in the future. The new curriculum focuses on the cultivation of professional clinic doctors with medical virtue, comprehensive literacy and the skill to study by themselves.

## **CONCLUSION**

Through the comparison with the traditional education method, the forming of the new curriculum method should be with the force of the computer and IT. So the gynecology and obstetrics clinic teachers can use the network course-ware to specialize the theoretical knowledge, making it easier for students to understand the test book and fully absorb the knowledge. This also helps students to get a skill to study by themselves. And through the process of applying the theoretical knowledge to the clinic practice, students can make more communication with the patients and handle by themselves more medical treatment, making them deepen their understand to the knowledge and improving their clinic practice skill.

The gynecology and obstetrics clinic teachers should actively explore the new teaching model according to the current medical environment and its development to make the gynecology and obstetrics clinic education modern and lay a solid foundation for inculcating professional doctors meeting the society's requirement.

The sufficient professional teachers and the excellent teaching conditions in some medical universities are not used efficiently because of the lack of generating the teaching method. To avoid this situation, universities should take efficient measures to integrate the teaching content and resources to make them complement each other. By this way, a teaching model closely integrated to the clinic medicine will be built, helping medical colleges and universities to reaching the teaching goal of 1+1>2 and inculcating the high quality medical personnel.

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