

A Practical Study on the Flipped Classroom Teaching Model of “Obstetrics and Gynecology”

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Abstract: Objective: It is to analyze the practical application effect of flipped classroom teaching mode in Obstetrics and Gynecology. Methods: A total of 60 undergraduate students majoring in clinical pharmacy in Qiqihar Medical College from September 2021 to July 2023 were selected as the research objects. Among them, 30 students from September 2021 to July 2022 were treated as the control group (conventional teaching mode), and 30 students from September 2022 to July 2023 were treated as the observation group (flipped classroom teaching mode). The excellent rate and teaching feedback score of the final exam paper and course score were compared between the two groups. Results: The excellent rate of paper scores and course scores in the study group was significantly higher than that in the control group ($P < 0.05$). The teaching feedback score of the study group was significantly higher than that of the control group ($P < 0.05$). Conclusion: The application of flipped classroom teaching mode in the teaching of Obstetrics and Gynecology can improve the teaching effect and be accepted by students.

Keywords: Obstetrics and Gynecology; Flipped Classroom; Teaching Mode

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Obstetrics and Gynecology has always been the difficulty and focus of medical teaching because of its wide range of contents, professionalism and strong entirety. The traditional teaching mode is teacher-led in the classroom. Both in theoretical teaching and practical exercises, students are guided by teachers. Most of them passively accept knowledge, which is not conducive to cultivating their independent thinking and learning ability. Flipped classroom teaching can break the limitations of traditional teaching mode, treat both teachers and students as the main body of the class, increase the interaction frequency between teachers and students, and help teachers identify teaching problems to better carry out teaching work^[1]. Studies have pointed out that flipped classroom teaching mode can improve the teaching effect of Obstetrics and Gynecology^[2]. This study further verified and discussed the application value of flipped classroom teaching mode in Obstetrics and Gynecology teaching. Here's the report:

1. Objects and Methods

1.1 Objects

A total of 60 undergraduate students majoring in clinical pharmacy in Qiqihar Medical University from September 2021 to July 2023 were selected as the research objects. Among them, 30 students from September 2021 to July 2022 served as the control group, and 30 students from September 2022 to July 2023 served as the observation group. The study group was 19 to 21 years old, with an average age of (5.00 ± 0.34) years. The control group was 20 to 21 years old, with an average age of (5.01 ± 0.64) years. The objects of this study are all 5-year undergraduates majoring in clinical medicine, and they have studied gynecology theory for the first time, and can actively participate in the study of gynecology theory. All students are informed of the research content.

1.2 Methods

The control group: Traditional teaching mode was adopted, that is, Lecture method + practical practice. Combined with the teaching mode of ppt + teaching video, teachers explained the operation methods of female diagnosis, including double diagnosis and triple

diagnosis methods,precautions during operation,how to communicate with patients,gain their trust,and make them accept the examination in a peaceful state.After the theoretical teaching,teachers organized practical exercises,and after the practice course,they summed up the shortcomings of students'operation,demonstrated and emphasized the diagnosis of operational details and operational techniques and other knowledge.

The research group:It adopted flipped classroom teaching model.The teacher would send emails to students one week before class to provide them with relevant self-study materials and put forward corresponding questions,and guided students to try to conduct self-study through literature review,mutual discussion and other channels on the basis of what they had learned,and answered questions at the same time.In formal classes,teachers first learned about students'autonomous learning,listened to the answers and made comments.Then they explained the theoretical knowledge,answered students'doubts during the course,and organized tests,including rushing to answer or vote,etc.At the end of class,they organized students to answer the questions in the pre-class review again,checked the learning effect,summarized the class content,and helped further consolidate knowledge.In terms of practical operation,teachers randomly commented on students'practice procedures and techniques in class,and asked questions,such as how to comfort patients with depression,and what are the application advantages and scope of double and triple diagnosis?At the same time,they answered students'questions and organized discussions appropriately.After class,they summarized the learning effect of students,adjusted and optimized the deficiencies.

Both groups have 16-20 class hours.

1.3 Observed indicator

(1)Final examination papers are randomly selected from the question bank of our school.The final exam results,class performance and course results were compared respectively.The excellent rate was compared between final exam paper scores and course grades.(2) A questionnaire survey was conducted on the two groups of students after the performance assessment.Students'feedback information was collected in terms of clear learning objectives,improved course discipline,better mastery of theoretical knowledge,increased interest in learning,increased enthusiasm for the classroom,enhanced self-restraint ability,enhanced classroom attractiveness,improved learning efficiency,improved case analysis ability,team collaboration ability,and reasonable evaluation methods,etc.The feedback results were rated on a visual analog scale(VAS),with 0-3 being"not helpful",4-7 being"helpful",and 8-10 being"very helpful".

1.4 Statistical analysis

SPSS21.0 analysis was used,the measurement data were in line with normal distribution,represented by($\bar{x} \pm s$),after t-test,the count data undergoes χ^2 test,represented by(%),and the difference is statistically significant as $P < 0.05$.

2. The Result

2.1 Comparison of excellent and good rates of paper scores and course scores between the two groups

The excellent rate of paper scores and course scores in the study group was significantly higher than that in the control group($P < 0.05$).See Table 1:

Table 1 Comparison of excellent and good rates of paper scores and course scores between the two groups($\bar{x} \pm s$, n(%))

Group	Number	Paper score(points)	The excellent and good rate
The study group	30	94.32 \pm 1.31	(28/30)
The control group	30	90.23 \pm 2.12	(22/30)
t/ χ^2		8.989	4.320
P		0.000	0.038

2.2 Comparison of teaching feedback results between the two groups

The teaching feedback score of the study group was significantly higher than that of the control group($P < 0.05$).See Table 2:

Table 3 Comparison of teaching feedback results between the two groups($\bar{x} \pm s$,points)

Group	Number	Teaching feedback
The study group	30	8.65 \pm 0.43
The control group	30	7.66 \pm 0.52
t		8.036
P		0.000

3. Discussion

The Study has pointed out that during the teaching of Obstetrics and Gynecology, teachers should attach great importance to the training of students' clinical thinking and practical skills, and pay attention to learning and absorbing new teaching modes, so as to promote teaching and learning and improve teaching quality^[3-4]. As a new teaching model, flipped classroom allows students to achieve both learning and thinking in class, which is conducive to internalizing knowledge and significantly improving their independent learning ability.

Yuting Li^[5] et al. suggested that flipped classroom could stimulate students' subjective initiative in learning obstetrics and gynecology. Wen Chen^[6] said that flipped classroom model can improve students' comprehensive assessment and learning awareness in obstetrics and gynecology teaching. The results of this study showed that the excellent and good rate and teaching feedback score of the study group were significantly higher than those of the control group ($P < 0.05$). It shows that flipped classroom model can improve the teaching effect of Obstetrics and Gynecology and improve students' mastery of knowledge. This study believes that the flipped classroom model has the following advantages: Firstly, it can activate the classroom atmosphere, create a democratic and harmonious teaching environment, and make boring knowledge visual and three-dimensional, which is conducive to stimulating students' learning interest and improving their course participation. Secondly, in the form of arranging learning and answering questions in advance, it can guide students to think about the teaching content in advance, help them familiarize themselves with the classroom content in advance, facilitate their quick entry into the learning state after class, and cultivate their independent analytical ability. Thirdly, it should pay attention to the unification of theory and practice, combine theory with practice, and truly hand over the classroom to students. Teachers give guidance and comments, and students change passive learning into active learning, which is conducive to improving students' subjective initiative, improving learning and exploration motivation, and cultivating their innovative thinking. Students enter the class with questions, and in a relaxed and pleasant classroom atmosphere, they can stimulate their interest in learning, solve problems while absorbing knowledge, which is conducive to internalizing and consolidating knowledge, and obtain good learning results.

To sum up, the flipped classroom model, applied to the teaching of Obstetrics and Gynecology, can improve the teaching effect.

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