

Application of SPOC blended learning model in physiology experiment teaching

Lihong Liu^{*}, Shao Li, Liang Zhu, Hua Piao, Xuefei Wu, Lili Guan

1. Department of Physiology, College of Basic Medicine, Dalian Medical University

SPOC is derived on the basis of MOOC, mainly for small-scale, specific people to provide a kind of blended learning model. It can take advantages of campus and online learning. Applying SPOC on the basic medical experimental teaching is more conducive to ensure the effectiveness of medical students' experimental learning, enhancing students' independent learning ability and practical skills.

At present, the following problems exist in the routine physiology experiment teaching : 1. The result of Teacher's pre-experiment is always in accordance with the expectation, but there are many problems in students' practice, and the proportion of unexpected results is high; 2. The students' resolution of experimental data is not enough; 3. The cost of experimental investment is getting more and more expensive. Therefore, the students' practice progress is lower than expectation.

In view of the above problems, we break the traditional single teaching mode of the experimental course, and use the newly-built virtual simulation experimental teaching platform of our school combined with various media, to carry out a new model of blended learning , that is a blended learning model of Online learning- Classroom teaching-Online extension after class.1.Online learning: It could make knowledge transfer to the pre-class; 2.classroom teaching: "Half-flipped classroom"teaching arrangement to achieve personalized deep interaction between teachers and students; 3. Online extension after class: To achieve the aim of consolidating and expanding applied knowledge for students.

According to the characteristics of blended teaching in colleges and universities, we have constructed the application model of SPOC in traditional experimental teaching. After a year of trial run, it is gradually improved and put into practice in various subjects of basic medicine in order to provide a more flexible teaching method for experimental teaching. The SPOC MODEL in physiology experiment teaching is more beneficial to ensure the effect of medical students' experiment study, so it is universal and worthy of popularization in medical experiment teaching. This model won the third prize of Liaoning Province General Higher Education undergraduate course teaching achievement in 2018.

Project support: 1.2020 Project of Medical Education Branch of Chinese Medical Association (20B0243). 2.2020 Dalian Medical University Teaching Reform Research Project (DYLX20002)