Universe Scientific Publishing

10.18686/ahe.v6i19.6292

Based on the“Reversal of the Classroom” Model of the Next Generation of Internet Technology Curriculum Model and Evaluation of Applied Research

Ying Xu , Ning Guo , Hongguo Lv

Qingdao Xingxing College of Science and Technology Shandong Qingdao 266000

Abstract: The traditional teaching model is teacher teaching, student learning, students lack of initiative, poor self-learning ability. Turning over the classroom can well reflect“Student-centered”, while adding the evaluation method of process assessment can grasp the degree of students' mastery of the curriculum in time, adjust teaching methods and models in time, and evaluate the curriculum with students' learning. Through the teaching practice of the next generation Internet technology course in 2 classes, the application of the“Turn over the classroom” model and the reform of curriculum evaluation, the learning effect and achievement of students have been improved.

Keywords: Flip the classroom; Next-generation Internet technology; Curriculum models; Evaluation methods

1. Current situation at home and abroad

In the early 19th century, the overturn of the foreign classroom. Maureen J. Lager was the first to propose a flip-flop teaching, in which he provided his class’s knowledge to his classmates after class, and guided the students in their own confusion during class. J. Wesley Baker lets students use computer equipment to learn in advance, making classroom activities more flexible and time-efficient. In 2008, Jonathan Böhlmann and a partner made a video of a lecture that was posted on the school’s website for those on leave to watch -- the world’s first reverse class. In 2011, the Khan Academy, which was founded by the Salman Khan, attracted the attention of a large number of teachers, and the roll-over classroom was better integrated into the teaching, driving the development and expansion of the roll-over classroom.

In China, wei-wei Qin explained the application of flip classroom from the essential aspect . Zhou Ping from the meaning and source of analysis, proposed that this model will be the focus of higher education and teaching reform .

2. Research content

2.1 The application and effect of problem-oriented inversion in class

（1）Problem-oriented, adequate pre-class preparation

Teachers fully understand the content of their designed courses, the characteristics of the students, and analysis of the students for the original knowledge of the degree of mastery, each student for individual differences, and representativeness of the characteristics, leave questions for students, so that students in the pre-class by consulting information, watching videos and other forms of learning. (2) classroom display, exercise the ability of using information-based means and expression

Through group discussion, students will be left to the pre-class teacher questions into PPT, rain class and other forms, and explain to other students to listen to the lecture, after the lecture to add peer evaluation, teacher evaluation link, at the same time, students and teachers through the evaluation and interactive discussion, deepen the understanding and mastery of the curriculum.

（3）According to the flipping class content, arrange the homework, further deepen the knowledge understanding and mastery according to the flipping class topic and the question raised in the class, assign the homework to the class, consolidate the content learned, increased the sense of participation of other students.

（4）Learning evaluation feedback, effective improvement of teaching mode

At the end of the"Turn over the classroom", every student gives feedback on this teaching model and puts forward suggestions to improve the following teaching model.

2.2 Application and effect of examination process assessment

The overall idea of reform is to adopt the form of process assessment score (50% of the total score) + final examination score (50% of the total score) .

（1）Increase the evaluation content, enrich the evaluation methods, and strengthen the process assessment

①Increase the content of evaluation. Review Test, module test, reversal of the classroom and other evaluation.

②Rich evaluation methods. According to the syllabus and teaching materials, the course is divided into three parts, namely, basic knowledge of the Internet, Next Generation Internet technology (flip the classroom) , next generation Internet technology (deep extension) . In Part 2 of the course, a student-centred, flip-flop class was used to explain the next generation of Internet technologies in small groups, which accounted for 20 per cent of the assessment results. Among them, the reversal of some classroom results include PPT production (30%) , speech performance (30%) , speech content (40%) .

③Strengthen the process assessment. Add 3 module tests in parts 1 and 3, and 2 review tests to examine students' review of the course.

（2）Strict check, serious proposition, pay attention to the final examination

The final examination still evaluates the students' learning in the form of the final examination, which reflects the students' mastery of the course to the greatest extent from the aspects of the content, the form and the difficulty of the test

In a word, the examination reform of this course can realize the"All-round", "All-process" and"More objective" examination of students, not only to inspect the students' mastery of book knowledge, at the same time, students can inspect the ability of consulting materials, summarizing, language expression and so on. The change of process examination can effectively reduce the situation of students cramming for exams and cultivate students' ability of long-term study.

3. Research Effects

Through the teaching of 2 classes, 1 class as a pilot class, another class as a control class. Through the use of"Flip the classroom" and six process evaluations, the two classes were as follows:

项目	试点班	对照班
最高分	90	87
90-100分（优秀）	0.00%	0.00%
80-89分（良好）	38.46%	25.93%
70-79分（中等）	61.54%	48.15%
60-69分（及格）	0.00%	14.81%
0-59分（不及格）	0.00%	11.11%
平均分	79.5	73.19

The results show that the highest and average scores of the experimental class are higher than those of the control class, which shows that the application of"Flip class" and process evaluation in the course of"Next Generation Internet technology" has achieved certain results.

References:

[1]Maureen J. Lage, Glenn J. Piatt, and Michael Treglia. Inverting the classroom: a gateway to creating an inclusive learning environment [j] . The Journal of Economic Education, 31(1) : 30-43,2000.

[2]Baker, J. W. The"Classroom Flip": Using Web Course Management Tools to Become The Guide by The Side [a] . Paper Presented at the 11th International Conference on College Teaching and Learning, 2000.

[3]Zhang yue-guo, Zhang yu-jiang. Perspective on"Flip the classroom"[j] . Information Technology Education in primary and secondary schools, 2012(3) : 5-8.

[4]Qin Weiwei. Reversal Learning: A new paradigm for classroom teaching reform [J] . Research in audio-visual education, 2013(08) : 84-90.

[5] Zhou Ping. The reverse classroom based on modern educational technology and its theoretical basis traceability [j] . Foreign Language audio-visual teaching, 2015(162) : 72-77.