

# Research on the Application Effect of Process Evaluation in the Teaching of Public Elective Courses in the Whole School

## —Take "Chinese and Foreign Food Culture" as an Example

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### ABSTRACT

In order to cultivate the independence of thinking and the autonomy of learning, the process evaluation system is used to assess the learning results and improve the teaching effect. There are a large number of students in major categories and a large number of students taking school's public elective courses. Therefore, the evaluation system is particularly important, and it is very important to properly embed process evaluation. The study divides the 261 students who took the "Chinese and Foreign Food Culture" into a control group and a test group. Through a comparative analysis of questionnaires and interviews, it was found out that the test group's performance was significantly better than the control group, and the difference was statistically significant. Therefore, embedding procedural evaluation in the public elective courses of the whole school is of obvious significance for improving the teaching effect.

**Keywords:** Process evaluation, Public elective courses of the whole school, Chinese and foreign food culture.

### 1. INTRODUCTION

Teaching evaluation is an important part of teaching work and plays an extremely important role in improving teaching quality. According to different purposes, teaching evaluation is usually divided into summative evaluation and process evaluation. Summative evaluation takes students as the evaluation objects, and teachers are the implementers. The evaluation methods are mostly quantitative examinations. The curriculum of colleges and universities in our country adopts the credit system, and the assessment method of students is generally still based on traditional teacher evaluation. Process evaluation is different from summative evaluation. It mainly diagnoses problems in educational programs or plans, educational processes and activities, and provides feedback information for ongoing educational activities to improve the quality of ongoing educational activities in practice. The method is generally composed of teacher's evaluation, mutual evaluation between peers, and learner's self-evaluation [1]. Process evaluation mainly emphasizes the evaluation of students' learning

in the process of teaching implementation. It does not only focus on the process and not the results, but also simply observes the students' learning process. It is a guiding evaluation method, emphasizing from the students Promoting learning methods that emphasize experience, practice, participation, cooperation and communication based on their learning interests, life experience and cognitive level. However, in the actual teaching evaluation process, many teachers try to construct a "comprehensive and rich" evaluation program or system [2]. They think that since they want to promote the all-round development of students, the evaluation of students must be comprehensive, and simply believe that the more evaluation activities, the better The all-round development of students is the mechanical addition of all aspects of student development. As a result, a large amount of evaluation information has been collected, such as classroom performance, written assignments, work display, group projects, individual projects, etc., and even a number of individual awards have been established. This series of activities are difficult to operate in practice (such as in

large class teaching), tedious and time-consuming. Because the workload is too large to complete with quality and quantity, teachers can only cope with it, making the evaluation mere formality.

The full name of the public elective course is the public elective course of the whole university. The public elective course is a kind of course generally set up in Colleges and universities, which aims at expanding students' knowledge, guiding students to dabble in different disciplines, improving students' knowledge structure, and enhancing students' ability to adapt to social development. At the same time, public elective course has the characteristics of interdisciplinary, knowledge and practicality, which plays an irreplaceable role in improving students' comprehensive quality, optimizing students' knowledge structure, and improving students' innovation and entrepreneurship ability. Therefore, the public elective courses have the characteristics of large number of students, loose relationship between teachers and students, low attention of teachers and students, and in the evaluation of elective courses, most of the teaching assessment is simple and the score is arbitrary, which leads to the loss of its original significance. Therefore, it is very important to strengthen the assessment of the public elective courses [3], especially the process assessment, and improve the attention of teachers and students. This study takes the public elective course "Chinese and foreign food culture" of Shandong University of technology and industry as an example, and uses different evaluation methods in two different elective classes, that is, one class adopts the summative evaluation method, and the other class adopts the method of combining process evaluation and summative evaluation. The evaluation results are reported as follows.

## **2. RESEARCH OBJECT AND METHODS**

### ***2.1. Research Objects***

Two classes of Chinese and foreign food culture from March to June 2021 were selected by the method of objective sampling. 130 students in class A were in the experimental group, and 131 students in class B were in the control group. There are 93 girls and 37 boys in class A. they are from freshmen to seniors. All majors are distributed in the school; There are 85 female students and 46 male students in class B. they are from freshmen to seniors. All majors in the school are distributed. There was no significant difference in age, gender and the main culture course scores of the two classes ( $P > 0.05$ ).

### ***2.2. Research Methods***

Class B (control group) adopts conventional evaluation methods, using traditional teaching methods. Teachers give lectures, students listen to lectures, and write related homework after class. A shift to rain classroom as an important tool for self-learning platform and process evaluation of a large number of process data for recording, analysis and management. The main tasks of teachers are: uploading materials, publishing task points, publishing homework and statistical analysis results, and querying the progress of homework, etc.; students' main tasks are: uploading homework, viewing outstanding works, testing and reviewing evaluation, group mutual evaluation, etc. The control group used traditional experimental teaching methods. The teacher taught the experiment content in class, the students did the operation, and the related homework was completed after class.

#### ***2.2.1 The Implementation Process of the Test Group***

Pre-class teachers publish pre-study assignments through the Yu Classroom platform: various national quality class content, PPT scheduled to be taught in each course, exercises, discussion questions and thinking questions, and establish a self-learning platform for students in the "Chinese and foreign diet culture" course. Students are required to complete the submission of the preview and homework within the specified time, and use the rain class to record the completion and accuracy to evaluate the students' pre-class preview.

In the classroom, according to the self-study (preparatory) situation before class, the key and difficult points that are not understood are organized in a targeted manner, and the rain class is used for real-time answering and barrage interaction, and points are scored based on the positive situation and quality of the speech. Each team will upload pictures to submit the results of study, discussion and analysis together with the whole class, to complete a good team bonus points. Evaluate students' classroom participation and knowledge mastery.

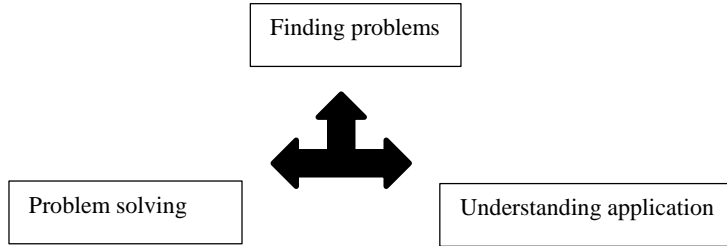
After class is an extended part of extracurricular, the use of rain to upload basic questions with less difficulty and some challenging and innovative thinking questions, students can choose to do according to their own learning situation, and at the same time score. Assess students' self-consciousness in learning.

2.2.2 The Implementation Process of the Control Group

The teacher teaches the learning content in class, students listen to the lecture to complete various classwork, and complete the homework after class. The teacher scores based on the completion of the homework.

The specific teaching links are divided into three modules: discovering problems, solving problems, and understanding applications. The implementation process is shown in Figure 1.

2.2.3 Test Group Implementation Plan



**Finding problems (Preview):** send the course difficulties to students in advance by recording video, and ask the students to find out the problems pertinently, and find out whether they understand the knowledge points and find out the problems through the form of pre class homework.

**Problem solving (Classroom teaching):** according to the students' mastery of the situation, targeted explanation, focus on clear levels, pay attention to the interaction between teachers and students in the teaching process, a variety of teaching methods.

**Understanding application (Review and application):** use the rain class to release different difficulty questions for students to choose according to their own learning situation, and score at the same time. Combining with social reality to solve practical problems. Summarize the learning methods and learning thinking to improve the learning ability.

2.2.4 Establishing Process Evaluation System

The course assessment of the experimental group consists of five parts: preview, class participation, group work and after class development (Table 1).

Table 1. Process evaluation index system and composition

Evaluating indicator	Concrete content	Proportion (%)
Preview	Preview according to the teaching content and judge by preview homework	20
Classroom participation	Judge through classroom teacher-student interaction, rain classroom participation, etc.	30
Group work	Teachers arrange group work according to the teaching content, and judge according to individual division of labor and completion	25
After-school expand contents	Individual assignments, according to the quality of the job is completed to score	25

2.2.5 Design, Distribute and Collect the Questionnaire

According to the research results of Wang Dandan [4] and Liu Ying et al. [5], a total of 261 students in class A and class B were given questionnaires through the questionnaire star, and 261 valid questionnaires were collected, with a recovery rate of 100%. The questionnaire survey included 10 objective questions

and 8 open questions, all of which were answered anonymously.

3. RESULTS

3.1. Comparison of Test Group and Control Group

All the scores of the first semester (experimental group: composed of process evaluation scores and final

scores; The average score of the control group was  $(89.50 \pm 6.70)$ , and that of the experimental group was  $(85.33 \pm 8.58)$ . The difference between the two groups was statistically significant ( $t = 3.383, P = 0.049$ ). It can be considered that the implementation of process evaluation improves students' academic performance.

**3.2. Correlation Analysis of Experimental Report and Process Evaluation**

Pearson linear correlation was made between the scores of the experimental group and the process evaluation, and the results showed that they were moderately correlated ( $r = 0.738, P < 0.010$ ).

**3.3. The Results of the Questionnaire of the Test Group**

The survey results showed that the experimental group was generally satisfied with the process evaluation of "Chinese and Foreign Food Culture". Among them, the satisfaction of "improving learning initiative and participation" was the highest, reaching 95.9%. It can be seen that the implementation of process evaluation is effective in cultivating students' learning enthusiasm and initiative [6]. The sexual aspect plays a positive role (Table 2).

**Table 2.** Satisfaction survey of the test group's implementation of process evaluation

Question content	Satisfaction	Ordinary	Dissatisfaction	Satisfaction (%)
Clarify the purpose of learning and improve the interest of learning	121	9	0	93.1
Improve learning initiative and participation	128	0	2	98.5
Improve the ability of autonomous learning and inquiry ability	112	10	8	86.2
Improve the ability of information acquisition, processing and utilization	119	8	3	91.5
Improve the ability to analyze and solve problems	108	12	10	83.1
Improve the ability to understand and remember knowledge	120	7	3	92.3
Improve teamwork and team spirit	116	5	9	89.2
Improving interpersonal communication and language skills	127	3	0	97.7
Improve the ability of integrating theory with practice and using the knowledge flexibly	113	10	7	86.9
Promotion of comprehensive literacy	109	8	13	83.8

**3.4. Feedback from Students**

At the end of the semester, we had a discussion with the students. The results show that the most satisfactory part of the process evaluation system is that the classroom interaction has greatly increased, and the barrage function of the rain classroom can let the students speak freely. The most dissatisfied link in the process evaluation system is that mobile phone calls or new information will affect the use of rain class, leading to the interruption of rain class. The biggest advantage of the traditional teaching method is that the teacher's explanation is clear and thorough, and the students' listening is easy. The biggest disadvantage of the traditional teaching method is that students passively accept knowledge, active participation is not strong, and

the final score evaluation cannot stimulate students' learning motivation. The ideal elective course in students' mind is to stimulate students' curiosity and solve practical problems by their own hands and brain. Objective and fair evaluation of experimental learning should effectively combine the process and results. Compared with the traditional experimental teaching method, students are more willing to accept the mixed teaching mode of online and offline process evaluation. It is true that the process evaluation should also be carried out from many aspects, and the software (APP) used can be more diversified to facilitate students to use during class.

## 4. DISCUSSION

### 4.1. Advantages of Process Evaluation

The introduction of process evaluation in the public elective courses of the whole school can improve students' sense of participation, increase their learning enthusiasm and initiative, solve the problems of students' negative study weariness and inefficiency, give full play to students' individual strengths, and promote students' individualized learning. Change students' long depended teacher "teaching" study habits, in order to "learn, will learn, enjoy learning" as the goal, to achieve the students "learn, will learn" instead of "church" of classroom values, cultivate students' thinking and learning independence Autonomy. In the process evaluation system, dynamic data such as preview time, classroom attendance, classroom performance, correct answer rate, number of speeches, and time spent can be easily managed by the Yu Classroom smart teaching tool. At the same time, Yu Classroom can timely feedback data such as learning situation, classroom performance and performance analysis to the head teacher and counsellor. Students with uncorrected learning attitudes and learning difficulties can promptly detect early warnings. Through heart-to-heart talks, teachers can greatly reduce the workload of teachers and improve management efficiency.

### 4.2. Problems in Process Evaluation and Solutions

#### 4.2.1. Problem

Limited by the problems existing in the evaluation objective, the problem of "form greater than content" will appear in the evaluation process. For students, procedural evaluation is intuitively understood as "handing in more homework"; for teachers, procedural evaluation adds more workload to teaching. As a result, each teacher left multiple assignments, and students were struggling with various assignments every day, and the quality of the assignments could not be guaranteed. The vast majority of teachers did not give feedback on the assignments submitted by students in a timely manner, and could not achieve the purpose of evaluating teaching effects in a timely manner during the teaching process.

The final result of the current process evaluation is the usual grade which accounts for 60% of the student's total course grade. Due to changes in evaluation methods, most students' average grades are not low, so their overall grades have increased overall compared to previous years. However, there is a big discrepancy between the true mastery of knowledge and performance. The reason is closely related to the lack of systematic evaluation. Students are not clear about the

status of the content of procedural evaluation in the overall structure of their knowledge, nor can they find problems in learning through timely feedback from teachers, and procedural evaluation cannot effectively promote the achievement of learning and teaching goals.

#### 4.2.2. Solutions

In view of the above problems, instructors should realize that the ultimate goal of process evaluation is to improve students' learning ability, enhance classroom participation, and ultimately achieve the goal of cultivating students' comprehensive ability. Therefore, they should pay attention to the training of content, the practice of key knowledge points, and the effect of learning. Observation at any time and feedback on students' learning effects. Therefore, the homework should be appropriate and in line with the actual situation of the students. Use a variety of methods to collect, arrange, collect, correct and organize the homework, and feedback the results to the students in time to improve the learning effect and ultimately improve the teaching effect.

The establishment of the evaluation system requires gradual exploration and practice, and corresponding adjustments are made to the problems of students according to the actual situation, especially the large number of public elective courses in the school, different majors and different educational backgrounds, the evaluation index system established in the course of teaching is even more important. Corresponding adjustments should be made according to the actual situation. In each semester, questions can be found through questionnaires and seminars according to the actual situation to gradually improve the existing index system, and ultimately achieve the goal of improving the teaching effect.

## 5. CONCLUSIONS

In the exploration of the reform of the evaluation model of public elective courses in the school, a variety of evaluation methods have been used and the proportion of evaluation of the learning process has increased. Compared with the traditional summative assessment method, the addition of a procedural assessment mode can greatly improve students' enthusiasm for independent learning, deepen their understanding of basic knowledge, and improve teaching effects. However, in the actual operation process, process evaluation also has various problems, which needs to be improved continuously in the future teaching process to achieve better teaching results.

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