

# Design and implementation of participating teaching quality information feedback system

Qingru Sui

ChangChun University of Science And Technology, Changchun city of jilin province

sqr1979@21cn.com

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**Abstract.** With the reform and development of teaching, teaching quality has become the main focus of the various colleges and universities teaching problems. To improve the teaching quality of teachers, improve the teaching ways and methods, this paper studied, by means of participating in teachers' information collection, sorting, and it is concluded that the teacher in the whole process of teaching in the eyes of different evaluation subjects. Considering the information development needs and under the premise of convenient information acquisition, rely on the development of the network and related software, information feedback system was designed and implemented.

## Introduction

Teaching work is the center of the regular school work, teaching quality evaluation is an important link in teaching management, is an important means of improving teaching quality and teaching efficiency. With the development of China's higher education cause, as well as the education system, teaching management and so on various aspects the deepening of reform, teacher's teaching quality evaluation has become an open research and solve the problem, has very important practical significance. [1]Participating is an evaluation system of teaching quality information feedback in the form of information feedback, from different evaluation subjects for teachers' classroom teaching information system. System based on the experience of the existing teaching quality evaluation in colleges and universities, adopting B/S structure to design, USES the PHP + MySQL for development.

## Relevant concepts

### The participating

Multi-party participation refers to the diversification of involved in the teaching evaluation, reflects the service to promote the development of teaching and learning evaluation. In the evaluation of teaching, in order to avoid due to participate in the evaluation group is too single to produce unfair phenomenon of the evaluation results, the concepts of participating, to expect more fair and impartial evaluation results.

### The quality of teaching

A school of education quality mainly depends on its various branches teaching quality. [2]Teaching quality is to point to by teaching activities for the promotion of students to achieve their education results, including learning activity is reasonable and appropriate, whether to consider the characteristics of students (such as age, prior knowledge, motivation, etc.), involving many factors of teaching, especially the processing of teachers to the students and the content, the learning task, activity organization and processing, etc.[3]

### The information feedback

Information feedback in teaching is to point to in the process of teaching through the combination of different groups of different feedback form feedback way to get some information about the teaching, teachers and students' study, we collected data and information, analysis, summary, finally can improve, improve, improve the teaching level and teaching quality of teaching means, teaching

form, learning method, and applies them again to late in the process of teaching, make "teaching" and "learning" infinite loop process.

### **Teaching evaluation**

Teaching evaluation are systematically collected from various feedback information of teaching, and based on the information obtained, according to the training objectives and requirements of the teaching process and the results measured and value judgment, decision provides the basis for the teaching, so as to realize regulation of teaching activities in order to achieve target process. For science teachers' teaching process, teaching level evaluation can scientifically according to teacher's teaching quality and quantity of indicators; Teaching evaluation can constantly provide teachers teaching feedback; Teaching evaluation can be fully affirmed the teachers' teaching level and teaching quality, the esteem needs, achievement motivation and satisfaction, and further stimulate, produce positive emotion experience. [1]

## **Key issues in the analysis of evaluation system**

### **Determination of subject and object in the evaluation system**

#### 1) Clear evaluation main body

Students: Teachers teaching is the student, the student is the direct participants of teaching. By the student to the classroom teaching evaluation, reflects the various classes of overall teaching quality and school teaching effect, at the same time to understand the needs of the student to the teaching. Research shows that when the number of students in to participate in the evaluation of reaches a certain proportion, the evaluation results as representative, the stability and reliability. [1]

Teachers: the teacher is the organizer of teaching activities, is the most familiar people for their own teaching situation. Assessment from teachers' self can rise to reflect fault, carries forward the advantages, improve the quality of teaching.

Peer teachers: relative to the student, the teacher in the subject and have a more profound understanding of teaching environment, they can stand in the Angle of the observer status of teaching and students' reaction, help colleagues found that the problem.

Teaching supervision experts: The expert is refers to the teaching work and teaching experience for many years, have a certain teaching theory knowledge, understand the teaching material, teaching goal of expert teachers. They represent the sorting to the supervision and administration of the teaching of teachers, is an indispensable part of teaching to make evaluation system. So the experts teaching information feedback is more objective and true information feedback. School teaching quality supervision department: they are mainly responsible for contact with each branch teaching supervision expert, coordination and service work, collecting, sorting, analysis, distribution and information feedback teaching evaluation and teaching supervision work, establish the teaching quality assessment files, etc.

#### 2) Clear evaluation object

The object of teaching quality evaluation should be a teacher's classroom teaching, rather than the teacher himself. First of all, we want to make sure a few elements of evaluation of classroom teaching, they are: teachers, students, teaching management, and then on the basis of the teaching goal, teaching law and public opinion polls, decomposition of several factors, find out their specific expression method, the evaluation index system is formed.

### **The determination of information feedback model [4]**

Information feedback model divided into three types, namely: direct feedback model, indirect feedback model and the three-dimensional model. Three models have both advantages and disadvantages, this system mainly adopts three-dimensional feedback mode (see figure 1). In this mode provided by the peer students and teaching feedback submission way more freedom and diffusion, which means that the teacher can get direct and indirect feedback information from multiple channels, but for the teaching ideas and Suggestions from different perspectives, compare and analysis to the teacher, can reflect the transmission model of three-dimensional feedback timeliness, authenticity and pertinence.

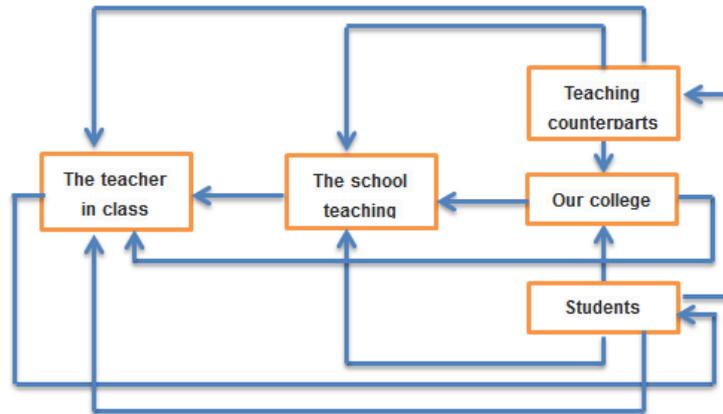


Figure 1 Three-dimensional information feedback mode

### The determination of evaluation standard

Evaluation standard is refers to the subject from their own interests to judge whether the size of the standard value and value evaluation object.[5] According to different evaluation subjects, establish the evaluation criterion should also be different, such as: when the student mainly from the aspect of knowledge, behavior and language instructor, teaching discipline, to student's love and sense of responsibility and teaching methods, evaluation and feedback; Peer appraisal of teaching, should pay attention to the depth and breadth of curriculum, the choice of teaching methods, and interact with students' situation evaluation and feedback. Sorting the experts should focus on the teacher's education teaching idea is advanced, the classroom teaching design and the organization is scientific and reasonable, whether it has good teaching consciousness, etc.; School teaching quality supervision department can be more comprehensive and objective evaluation and guidance of the teacher, so as to constantly improve teachers' level, and then realize the improvement of classroom teaching quality.

### The implementation of evaluation system

Multi-party participation teaching quality information feedback system is made up of evaluation objects (that is, the teachers' classroom teaching), Evaluation criteria (including assignments, tests and lesson plans, etc.), evaluation subject (students, teachers and experts), computer software (for collecting and processing evaluation information) elements, these elements associated with each other to form a system. System goal is to each teacher's classroom teaching in schools for effective evaluation and judgment, found that the problem timely feedback, effectively improve the quality of classroom teaching, can according to the evaluation and judgment information again at the same time, for every teacher a phase identification of classroom teaching.

The system includes three modules, respectively is: student module, teacher module and administrator module. After login the user can enter the system, of which, students can view, modify personal information and grade evaluation for classroom teachers; Teachers can view, modify personal information, you can look at teaching students, fellow teachers, college level experts for their evaluation content, but also to yourself take courses in the self-assessment. The administrator can information for students, teachers, class information, college information changes, and be able to view all of the evaluation results.

To make evaluation result more scientific and reasonable teaching quality, the system will be involved in the process of teaching the all factors influencing the teaching quality of system analysis, screening can directly reflect the quality of teaching the essence of common factors as evaluation indexes. Then, according to different evaluation subject designed a relatively independent evaluation index system. The evaluation index system is determined, to through the formula to calculate each assessment object the final score.

After investigation and research, Ultimately determine the system of evaluation content should include: The situation of the teachers in class, students homework and scores of three parts, Every part of the evaluation content proportion in the system as shown in table 1. From the perspective of

different evaluation main body, the evaluation system, evaluation subject of weight value, as shown in table 2.

Table 1 the evaluation content and weight

Evaluation content	Level 1 weight
The teaching situation	0.5
Homework feedback	0.1
Results feedback	0.2
Experiment(training)feedback	0.2
Total	1.0

Table 2 primary evaluation weight table

Evaluation of the main body	Symbolic representation	Level 1 weight
Students	S	0.3
The teacher himself	T1	0.1
Teaching counterparts	T2	0.15
The experts in this institute	E	0.25
The school teaching	R	0.2
Total		1.0

Finally a evaluation object the cumulative score method calculated the overall evaluation, formula is as follows:

$$S = \sum_{i=1}^4 S_i \alpha$$

In which S is the sum of a student to teacher evaluation scores, Si for students to evaluate teachers some evaluation content of the ith evaluation value, a is corresponding to the main () for the students in the formula of the primary evaluation weights (i.e., 0.3). Scores of other evaluation subject is similar to the above formula, no longer write too much here.

Will eventually get all evaluation subject to an evaluation object of teachers evaluation score, these points can be evaluated object teachers view respectively, also can be viewed to the final overall evaluation scores.

## Conclusion

Participating teaching quality evaluation system of feedback information for different evaluation subjects evaluate teachers teaching, provides a platform for the teacher to recognize themselves, improve teaching methods, and provides the reliable basis to improve teaching quality. The system is based on the network of colleges and universities teachers' teaching quality evaluation system, based on the perspective of participating in information collection, integration, finally get reasonable results, meet the needs of the development of modern information and teaching requirements.

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