

## Research on the Student Evaluation Indicators and Content of Classroom and Online Teaching

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### Abstract

Student evaluation of teaching is an important part of course teaching evaluation. The construction of evaluation indicators, the content of indicators and the setting of weights have a decisive influence on the authenticity and reliability of evaluation data on the results of teacher teaching evaluation. However, traditional teaching evaluation indicators and evaluation content usually have some problems. For example, the traditional classroom teaching questionnaire indicators are not perfect, students are difficult to grasp and score, resulting in students not being active in evaluating teaching, teachers disapproving the results of teaching evaluation, and most teachers don't know the students' specific learning experience and learning gains, resulting in no improvement in teaching skills. For more complex teaching needs, teaching evaluation indicators for online teaching are particularly important. In order to solve these problems, we have designed more suitable evaluation indicators for online teaching and classroom teaching. In the process of implementation, by letting students participate in the formulation of teaching evaluation indicators, organizing publicity activities for scientific evaluation of teaching and objective evaluation of teaching, etc., students' sense of identity and participation rate are increased, and we establish an online evaluation indicator system for students centered on "learning", to solve these problems in student evaluation of teaching (SET).

### Keywords

Classroom Teaching; Online Teaching; Evaluation Indicator and Content; SET.

### 1. Background

In the trend of "Internet +", online learning methods and online teaching resources have experienced vigorous development for several years. At present, there are many high-quality online course resources and live communication platforms which are used by the universities. Teachers can flexibly use SPOC, MOOC and other platforms to carry out teaching based on social network groups, PPT + audio, offline preview combined with online guidance and other modes of teaching. However, the high registration rate and low completion rate of online teaching such as MOOC have always been the main problems that plagued builders. In order to deal with the poor effect of MOOC online learning, some scholars have conducted research on the factors affecting the learning effect of online and offline blended teaching. Among many research methods, the survey method of the teaching evaluation questionnaire is one of the most reliable choices.

Therefore, it is necessary to set reasonable evaluation indicators and content. For traditional classroom teaching methods, the university adopted a single paper questionnaire survey. With the advent of the internet, online teaching evaluation has gradually replaced paper questionnaires, and the efficiency of teaching evaluation has been significantly improved. Colleges and universities have done a lot of reform work in the reform of evaluation methods



and continuous improvement of the evaluation index system [1]. But so far, there are still many problems. Mainly include: when designing evaluation indicators and their weights, they are often only set for the behavior of teachers, mainly considering how well the teacher teaches, and no specific evaluation indicators are set for how well the students learn, the evaluation criteria are only set for the behavior of teachers, the establishment of evaluation indicators ignores the bilaterality and diversity of teaching activities, an evaluation indicator system uses one standard and one template for all courses, and no distinguish between the different attributes of theoretical and practical courses, which results in students not being positive to evaluate in the process of teaching evaluation. As a result, the teacher did not approve the result of SET[1-2].

Therefore, the establishment of a teaching quality evaluation system centered on student learning to evaluate teachers' teaching level and students' learning effects from the perspective of "learning" [2] is an important means to create an outstanding course. This article introduces our work in the construction of student evaluation indicators and the determination of evaluation content [3-4].

## **2. Construction of the Indicator System for SET**

### **2.1. The Types of SET Indicators**

According to the different subjects and teaching types, we have set up seven types of teaching evaluation categories, such as "classroom teaching", "experimental teaching", and "practical teaching", reflecting the ideas of classification evaluation and classification guidance, making the evaluation of teaching more scientific, reasonable and targeted. However, this article only discusses learning mainly in the classroom, including classroom teaching, experimental teaching and online teaching. Each type of index is set up in accordance with the four major parts of "Comprehensive Evaluation of Teaching", "Basic Evaluation of Teaching Indicators", "Basic State Check" and "Subjective Evaluation". The "Comprehensive Evaluation of Teaching" examines the overall feelings of students, with a score weight of 40%. "Evaluation of basic teaching indicators" understand students' learning gains and feelings from different angles and aspects, and the score weight accounts for 60%. "Basic status spot check" and "Subjective evaluation" are designed to collect the basic status in the teaching process and students' opinions and suggestions, and feed them back to the college and teaching teachers, as a reference for teachers to improve teaching.

### **2.2. Students Participate in the Update of SET Indicators**

In order to allow students to play a better role in SET process, give full play to the main role of students, and reflect the educational philosophy of "learning-centered", we have planned activities for students to participate in the setting of evaluation indicators. "Let students participate and choose their favorite evaluation indicators", this is an innovative approach in our university undergraduate teaching management. In order to further enrich the connotation of teaching evaluation indicators, increase the types of teaching evaluations, and strengthen the in-depth integration of modern information technology and teaching, and the new requirements of higher education development such as curriculum ideology and politics. In April 2019, after more than half a year of deliberation and design, we decided to comprehensively revise the existing student evaluation indicators. A highlight of this revision process is to involve students and choose their favorite evaluation indicators. The method adopted was to extensively solicit the opinions of teachers and students through the exclusive WeChat official account of the Academic Affairs Office, various classes and online work groups of teacher groups, and finally collected more than 1,500 valid opinions and suggestions. Judging from the results of soliciting opinions, students pay more attention to teaching evaluation,



hoping to make a scientific, fair and standardized evaluation of teachers' teaching work. In the selection of teaching evaluation indicators, the opinions of students are not unconditionally accepted. The final evaluation index not only considers the feelings and needs of students, but also considers the new requirements of higher education in the new era. For example, in the evaluation index of "challenge of course learning", it was not excluded from the evaluation index system because of the lowest percentage of students voting (5.48%). Because the purpose of this option was to guide teachers to build a high-level, innovative and challenging "golden class". In order to appropriately increase the difficulty of classroom teaching and improve the level and quality of classroom teaching, we still add this indicator to the new teaching evaluation indicator and give it a lot of weight. The prerequisite for respecting students' opinions is to adhere to principles. We cannot give up our original intention of building golden courses and improving the quality of classroom teaching because of students' choices, because it meets the requirements of contemporary higher education for the construction of high-quality courses. In the "Basic Status Sampling Check" section, the two options "Most worthy of recognition" and "Most in need of improvement" were adopted because they were recognized by most teachers and students.

Compared with the original evaluation index system, the newly revised teaching evaluation index system pays more attention to students' sense of experience and acquisition, and adds "teacher's teaching input", "challenging of curriculum learning" and "organic integration of ideological and political education elements", etc. The new evaluation content further highlights the educational concept centered on student development and strengthens the organic integration of knowledge transfer and value guidance.

### 3. Determination of the Content of the Reference Index for SET

Evaluation indicators are composed of four parts: "Comprehensive Evaluation of Teaching ", "Basic Evaluation of Teaching Indicators ", "Basic State Check" and "Subjective Evaluation". Among them, the index contents of "Comprehensive Teaching Evaluation" and "Subjective Evaluation" are consistent. In the "Comprehensive Evaluation of Teaching" section, observation points are set up in accordance with the concept of fuzzy evaluation, and students are required to "make a comprehensive evaluation objectively and fairly based on the overall teaching situation of the teachers in this course", with a weight of 40%. There are four levels of excellent, good, medium, qualified, and unqualified, corresponding to different scores. The "Subjective Evaluation" part mainly collects students' subjective opinions and suggestions. During the implementation of the evaluation, the opinions and suggestions in this part are more concrete, and teachers know how to improve teaching based on this. Other parts reflect the differences in the content of different types of indicators.

#### 3.1. Classroom Teaching

In the "Basic Evaluation of Teaching Indicators ", there are 9 observation points set up, including: through the study of this course, my gains in knowledge and abilities; stimulating students' interest and interacting with students; the teacher's teaching investment in this course; The learning of the course is challenging; to be a good teacher, to teach seriously, to manage the classroom, to respect and treat every student fairly; to teach in Putonghua, the content is proficient, the key points are prominent, and the logic is clear; the multimedia courseware is excellent or the blackboard standard is clear, and the teaching effect is good. The content is closely integrated with the frontiers of disciplines and industrial development, organically integrated into the elements of ideological and political education, helping me to establish a correct outlook on life and values. The weight proportions of each observation point are: 12 points, 10 points, 8 points, 8 points, 5 points, 5 points, 4 points, 4 points, and 4 points.



The setting and weighting of the content of the observation points take into account the opinions of both students and teachers.

The "Basic Status Check" section sets up the most affirmative areas of teacher teaching, the areas where teacher teaching needs the most improvement, the teacher's after-class guidance and answering questions, the number of coursework submissions, the teacher's lateness and early departure, etc., aiming to collect the teaching process. The basic status data does not account for the weight of the score. The evaluation indicators of this part can be selected according to the actual situation of each stage of evaluation. In the use of the number of indicators, it is best to choose 2-3 items each time.

### 3.2. Online Teaching

The evaluation indicators for online teaching are mainly designed for the large-scale (almost all undergraduate students) classroom teaching courses to be conducted online in the spring semester of 2020 due to the epidemic. Compared with the evaluation indicators of traditional classroom teaching, online teaching has higher requirements for teachers' pre-class preparation and in-class teaching software (platform). Therefore, in the "Evaluation of Basic Teaching Indicators", the observation points have been adjusted, including: "the teacher can master the selected online teaching platform for teaching activities", "I have a smooth communication with the teacher during the course", "I can get the teacher's guidance in time after class", "Online teaching design, organization and management of teachers of this course". In the "Basic Status Check" section, three observation points are set up, "Before class" Have you understood and completed the pre-study tasks before class, "In class" Teacher-student communication in the course, "After class" Homework Q&A Condition.

### 3.3. Experimental Teaching

In the "Basic Evaluation of Teaching Indicators" section, 9 observation points are set up, including: through the learning of this course, my gains in knowledge and ability; the challenge of the experiment content; the course stimulated my interest in learning; Opportunities for hands-on operation in the experiment; teacher guidance is patient and meticulous, guiding students to use what they have learned to analyze the phenomenon and results of the experiment; the teacher does not arbitrarily adjust or suspend classes, complete the teaching content according to the plan, and does not reduce the class hours; the laboratory environment is clean and the equipment and drugs are in place, Fully prepared; the content of the experiment is closely integrated with the frontiers of the subject and the development of the industry; the organic integration of the elements of ideological and political education has helped me establish a correct outlook on life and values. The weight ratios of each observation point are: 10 points, 10 points, 10 points, 5 points, 5 points, 5 points, 5 points, 5 points, and 5 points.

In the "Basic Status Sampling Check" section, there are the areas where the instructor's teaching is worthiest of recognition, the areas where the instructor's teaching needs the most improvement; and the instructor provides you with options such as the number of individual instructions. It aims to collect basic status data in the teaching process, and does not account for the weight of the score.

## 4. Implementation Results of Teaching Evaluation Indicators

This article counts the evaluation scores of classroom teaching (including online) courses for the three years from 2017 to 2019. As shown in the table below, the total average scores of classroom teaching courses in the past three years are compared. The comparison found that the total average score of online teaching in the spring semester of 2020 was slightly lower than that of previous semesters, but the overall score remained stable. The implementation of the new teaching evaluation indicators in 2019 has increased the overall student evaluation rate



by about 3.5 percentage points. Among the more than 20,000 students in the school, about 700 students will participate in teaching evaluation activities.

**Table 1.** The total average score and evaluation rate of SET from 2017 to 2020

Semester	2017 Fall	2018 Spring	2018 Fall	2019 New Spring	2019 New Fall	2020 (online) Spring
The average score	94.40	94.28	94.41	94.41	94.10	94.03
Evaluation rate	94.85%	94.41%	94.60%	96.91%	98.42%	97.86%

## 5. Conclusion

After more than two years of practice, it has been proved that the revised evaluation indicators are more scientific and reasonable, more targeted, and can be understood and accepted by most students. Moreover, the collected subjective evaluation opinions have more reference value and are beneficial to teachers to improve and improve classroom teaching quality. In the evaluation process, students are more motivated to participate, and the proportion of students participating in teaching evaluation has increased from less than 95% to more than 98%. From the subjective evaluation opinions of students, students have a higher degree of recognition of the new evaluation indicators, and teachers are more convinced of teaching evaluation results. At present, the results of students' online evaluation of the courses taught by our teachers are used as part of student evaluation (including online evaluation and on-site evaluation), and they are directly used in the evaluation of teachers' teaching level according to the established ratio. The teaching evaluation indicators and evaluation content in this article can provide references for other colleges and universities to evaluate teaching work.

## References

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