Teaching Reflection and the Improvement of Teaching Ability of New Teachers in Colleges

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Abstract. This paper aims to explore effective ways to improve the teaching ability of new teachers in colleges. Through extensive research, this paper analyzes problems of new teachers in teaching reflection. On the basis of studying the importance and necessity of teaching reflection on the improvement of teaching ability of new teachers [1-3], this paper creatively introduces teaching reflection trilogy. Applying this teaching reflection trilogy to daily teaching, as shown in Figure 1, new teachers can improve their teaching ability step by step. Teaching practice shows, teaching reflection trilogy is conducive to improve the teaching ability of new teachers from multiple dimensions as shown in Figure 3.

Introduction

Teaching reflection is the self-reverse and self-reflection of the teacher's teaching practice in the whole teaching process. It is essentially a cycle of "practice-recognition-re-practice-re-recognition". Teaching reflection is an important part of the development of teachers' teaching, especially an effective measure for new teachers to improve their teaching ability. New teachers in colleges continuously improve their teaching ability and business level through the cycle of teaching activities and the summary of teaching experience. To a certain extent, the ability of teaching reflection determines the teaching development ability of a new college teacher.

However, there are still some problems in the reflection of the new teachers in colleges, which hinders the improvement of the teaching ability of new teachers [1]. First, at the beginning of the teaching work, the new teachers are less conscious of their own reflection on their own teaching behavior, thus lacking teaching reflection activities [5]. Second, teaching reflecting on the specific teaching behaviors is superficial on the surface. The achievement of the teaching objectives and the entire teaching philosophy are rarely involved. Last but not the least, due to the lack of effective external feedback, the teaching of new teachers is still in a state of self-exploration. The basis of teaching reflection is mainly based on their own teaching experience or some kind of guess.

On the basis of a large number of teaching reflection theories [1-4], combining the self-reflection practice, this paper puts forward a trilogy of teaching reflection, that is, reflection before class, reflection in class and reflection after class. The steps and operation methods of each step are listed in detail, and the specific content and reflection basis for each step are given. The new teachers can carry out teaching reflection according to the teaching reflection trilogy and teaching reflection contents, and gradually improve their teaching reflection ability and teaching level in teaching practice.

This paper mainly divided into three parts: firstly, introduces teaching reflection trilogy in detail; secondly, explains the specific contents of teaching reflection; thirdly, explains that after the teaching reflection, the teaching ability of the new teachers has been improved in multiple dimensions. In the summary, this paper will give a conclusion and suitable scenarios of teaching reflection.
Teaching Reflection Trilogy

The teaching reflection of college teachers has been transformed into the whole teaching career. In view of the teaching process, the teaching reflection is divided into trilogy, that is, reflection before class, reflection in class and reflection after class. The specific process is shown in Figure 1.

![Figure 1. Teaching reflection trilogy.](image)

**Reflection before Class, Forward-looking Reflection**

**Conduct Instructional Design and Determine the Appropriate Teaching Plan.** The process of personal preparation mainly focuses on teaching design. Teaching design requires teachers to arrange the teaching elements in an orderly manner according to the requirements of the curriculum standards and the characteristics of the teaching objects, and determine appropriate teaching plans, ideas and plans. Teachers should fully analyze the character of the course, the academic situation, the teaching objectives, the teaching content and the key points and difficulties of teaching, so as to make the
teaching content reasonable decomposition, time allocation, teaching resources, methods of
assessment and evaluation methods. Due to lack of experience, the new teachers are mostly concerned
with the teaching contents, and therefore ignore the analysis of the academic situation and the
effective methods adopted in the class, which are also needed to pay more attention to the lesson
preparation. The key points that teachers should pay attention to in preparing for lessons are shown in
Figure 2.

![Diagram showing key points in lesson preparation]

Figure 2. The emphasis which teachers need to pay attention to when preparing lessons.

**Give An Account of the Teaching Design and Teaching Contents inside the Teaching Team or inside the Teaching and Research Room.** The teacher expresses rational thinking and
re-examination of the course to peer experts and ask the peer experts to evaluate the orientation,
design, content, methods, conditions, and effects of the course, and to provide valuable suggestions
and guidance. This process is necessary for new teachers. The new teachers reflect on their own
analysis and understandings of the course based on the advice and guidance of peer experts, and
reflect on their own teaching design, and modify their curriculum design according to the results of
reflection, in order to be more perfect.

**Teachers in the Teaching and Research Section Work Together to Preset the Class Situation and Modify the Teaching Plan.** The new teacher can organize the group discussion again after the
Teaching and Research Section. Before class, upload resource, release task and preview in
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**Reflection in Class, Monitoring Reflection**

**Teachers Give Lessons.** In the course of the class, the teacher mainly puts the teaching design into
practice, and transforms the teaching preset into teaching generation. Based on the information
teaching platform, such as Superstar Learning, the entire teaching process can be divided into three
steps: pre-class, in-class, and after-class. Before class, upload resource, release task and preview in
advance on information teaching platform. In class, release task, teach knowledge, discuss plan, implement task, summary and evaluation and assign homework. After class, check homework, answer questions, inspect evaluation and ask students to give feedback. The traditional teaching process pays more attention to the in-class part. In fact, after using the information teaching platform, the importance of the two parts before and after the class is more and more prominent. Due to the lack of experience, the new teachers often need to adjust the task arrangement according to the pre-study situation of the students, and fully reflect on the teaching contents and teaching methods according to the completion of the homework and the feedback of the students, so that timely adjustments can be made in subsequent courses.

**Students Attend Classes.** The teacher monitors and adjusts the teaching process according to the student's attendance status. This kind of monitoring and adjustment thinking process generally exists as a semi-invisible thinking accompanying the teaching implementation process, not the dominant thinking form in the teaching process, which is difficult for new teachers to keep pace with the teaching process. For the new teachers, it is necessary to use the monitoring and adjustment thinking to improve the teaching process on the basis of the implementation of the teaching plan. In the early stage, if the two thinking processes cannot be paralleled, it is necessary to make full use of the feedback results before and after the class to reflect on the teaching content and teaching process in order to adjust the follow-up teaching process.

**The Experts Listen to the Class.** At the beginning of the class, new teachers can invite experts or supervisors to attend classes. During the course of the lecture, the experts are requested to fill out the lecture record form and take a video which can be used for reflection.

**Reflection after Class, Critical Reflection**

**Students Feedback.** Using information technology, students will be given quizzes or after-school assignments and feedback after each class. Through the quizzes or after-school assignments, teachers can grasp the mastery of the students' teaching objectives and reflect on whether the teaching presets are achieved. Through after-school feedback, teachers can understand the students' recognition of teaching methods and teaching methods, and reflect on whether the teaching methods are scientific and appropriate.

**Experts Evaluation.** After class, organize the experts to evaluate the course in time by watching the course videos. The evaluation is based on the achievement of the teaching objectives, the state of the students in the class, the highlights and the inadequacies. Experts discuss the above contents, analyze the reasons for success and failure, and study strategies to improve the teaching process.

**Reflection and Promotion.** The teacher writes the course reflection record based on the feedback of the students and the comments of the experts, as well as the reflections of each part of the class before and during the class. Based on the reflection record, the teacher prepares the lesson again, perfects the teaching design. The design of similar courses forms a well-considered teaching design idea, so that the teacher can have experience in following the course of similar courses. This process of reflection is crucial to the improvement of the teaching ability of new teachers.

**Consolidation of Achievements.** The new teacher can repeat the above process, continuously optimize the lesson plans, write teaching cases, and share the experience and achievements in the form of after-school lectures within the team. The above process can be repeated many times, and the teaching ability of the new teachers gradually rises spirally.
The Contents of Teaching Reflection

Whether the Teaching Goals Preset Are Realized

The teaching goals are initially set in the course of preparing lessons, and are gradually improved in the follow-up processes. It is generally divided into knowledge goals, ability goals and quality goals. The realization of the teaching objectives requires a certain assessment method. Through the assessment, the new teachers can reflect on whether the students have achieved the knowledge and ability goals. Through the feedback of students and the evaluation of the experts, it is possible to further reflect whether the whole teaching process has reached the teaching goal preset. If the goal is effectively achieved, the new teacher can record the highlights that contribute to the achievement of the goals in the goal setting, teaching design and implementation process. If the teaching objectives have not been reached yet, the teacher needs to carefully consider which steps and links hinder the achievement of goals and reflect on the improved strategies in the process of re-distribution.

Whether the Teaching Content is Complete and Comprehensive

In the process of teaching analysis, teachers mainly base on professional catalogues and curriculum standards to scientifically process teaching content according to students’ cognitive characteristics. In the class, the teacher needs to carry out a complete and comprehensive presentation of the processed teaching content, and ensure that the students' understanding is not biased. The teaching content is complete and comprehensive, which is conducive to students to fully grasp the knowledge. In the process of teacher recruitment and expert evaluation, the teacher's expression of the teaching contents can be fully understood.

Whether the Use of Teaching Methods is Scientific and Appropriate

Scientific and appropriate use of teaching methods is conducive to stimulating students' interest in learning and motivating students' enthusiasm for learning. It also helps teachers to more clearly present teaching contents and achieve teaching goals. Whether the teaching method is appropriate or not can be obtained by observing the students' learning status in the class and the feedback of the experts of the course. New teachers can enrich their teaching methods and teaching experience by observing the teaching process of experienced teachers and participating in teaching ability training, and improve their ability to comprehensively and effectively use various teaching methods.

Reflecting Teachers' Inspiration and Student Innovation

During the implementation of the class, teachers and students will inspire a spark of inspiration during the constant communication process. Teachers must pay attention to these momentary and fleeting inspirations, because this is the innovation of teachers' teaching methods and the supplement of teachers' effective teaching. At the same time, these inspirations may be the most reasonable expressions of teachers and students' understanding of problems. When encountering such an instant, the teacher should record it in time, write down the clever answers of these students, question the teaching content, and record the teaching methods of temporary increase and multiplication. With the increase of these moments of inspiration, the teaching level of new teachers will also rise. These random and inspirations are worthy of reflection from teachers.

Evaluation of New Teachers' Teaching Ability

Under normal circumstances, teachers' teaching ability can be comprehensively evaluated from five dimensions: teaching design ability, teaching implementation ability, teaching evaluation ability, teaching innovation ability and teaching reflection ability. The teaching ability of each dimension of the new teacher is shown in the orange dotted line in Figure 3. According to the teaching rethinking trilogy, after 3-5 rounds of effective teaching reflection, the teaching ability of all aspects of the new teacher has been greatly improved, as shown in the green solid line in Figure 3.
Summary

Teaching reflection should run through every teacher's teaching career. Through continuous teaching reflection, the new teachers can continuously improve their teaching ability and business level, and eventually grow into an experienced and innovative expert, even a famous teacher. At the same time, teaching reflection should not only float on the surface and flow in form. New teachers should deeply introspect their own teaching practice process through continuous learning of teaching theory and observation of peer experts.

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