Exploration and Research on the Application of Collaborative Learning Mode in Vocational Education

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Abstract: *The application of cooperative learning is conducive to the formation of positive mutual dependence and positive interaction among trainees, and is conducive to improving the efficiency of learning Xi. The puzzle teaching method, peer teaching method and PBL teaching method in the cooperative learning Xi mode can provide teachers with group training ideas and improve the quality and effectiveness of teaching.*

Keywords: *cooperative learning; companion Teaching; PBL teaching method*

Introduction

Cooperative learning is a learning model that emphasizes cooperation, where members of the entire learning group formulate learning objectives, make reasonable divisions of labor, cooperate with each other, inspire each other, and discuss with each other based on the learning materials provided by the teacher and resources on the internet, to ultimately complete learning tasks and achieve the learning objectives.

The innovative spirit, subject consciousness and overall quality of the learners can effectively make up for the shortcomings of the traditional teacher-centered classroom, such as valuing teaching materials over students, valuing knowledge over ability, valuing unity over innovation, valuing results over process. "Early Jinzhong training students have a certain work experience and learning foundation, the training content needs to pay attention to knowledge transfer, skill practice and communication between peers, in order to effectively help students solve the difficult problems encountered in the work." Cooperative learning mode can not only enable trainees to learn the theoretical knowledge of teachers and textbooks, but also assist in learning the strengths and experiences of other students, so as to truly realize the learner-centered and achieve common progress.

The cooperative learning model refers to a teaching method where teachers use group collaboration and discussion during the implementation of educational activities, with each member of the group a primary participant in the activity.

1. Exploration of the advantages of cooperative learning in training

Cooperative learning generally takes 2 to 6 learners as a group to carry out learning activities in the form of mutual learning. Learners should achieve both group and individual learning goals at the same time, which can not only promote the interaction between trainees, but also improve personal responsibility and collective consciousness. It has strong applicability and practicability for the trainees who already have professional foundation and work experience.

1.1 Forming positive interdependence among trainees

Cooperative learning requires both physical and psychological environment of cooperation, and the combination of physical and psychological can form a good learning atmosphere between the trainees, and produce a good learning ecology of mutual help and mutual trust. By consciously designing interdependent learning environment for group roles, learning objectives, learning materials and achievement rewards, teachers can organically generate positive interdependent mechanism. The

learning objectives include both individual and group goals. The learning materials have been expanded from a single textbook to materials based on the materials independently collected by the learners, and certain rewards are set for the completion of the learning objectives. Although the trainees in the same class come from different units, but the professional and work content is similar, by each taking on different roles in the group and making efforts to achieve the group goals, it can help to form a positive and interdependent relationship between the trainees.

This learning mode can not only maintain a good learning atmosphere during the training period, but also maintain long-term communication between each other after the training, which is conducive to building a professional communication and discussion atmosphere, and transforming the single learning relationship into a multi-dimensional cooperation and communication relationship.

1.2 Improving the quality and effectiveness of training and learning

Cooperative learning mode can greatly improve the learning quality and effectiveness of trainees from two aspects of learning objectives and learning content. In the cooperative learning mode, learn

The learner's learning goal is changed from a single goal to a two-level goal of individual and group, and the learning content is expanded from the main teaching material to the independent collection and expansion of learning materials on the basis of the teaching material.[1]

There are two levels of learners' goals. Each member of the group should not only clarify the individual learning goals but also set the group learning goals together with the group members. Both of these goals need to be achieved. Students cannot achieve all their learning goals alone, and each needs the close cooperation of the other members. At the same time, the personal goal is linked to the group goal, and the failure to complete the personal goal will affect the achievement of the group goal, so as to avoid the trainees' perfunctory response to their personal goal, and change the mentality that the training is only the process of obtaining a certificate and ignoring the content. Compared with the single goal dimension of infusion learning, the two-level goal of cooperative learning can ensure the learning participation of the students.

Under the cooperative learning mode, learners' learning content is also expanded. Students need to collect a lot of relevant materials on the basis of reference materials as evidence to support specific issues. Under the premise of group tasks, students will naturally form material interdependence, and everyone needs to find and share information according to the learning content. The sum of data collected by students constitutes the learning content of the training, and the data collected by themselves becomes auxiliary learning materials, and the training learning content is naturally expanded. At the same time, teachers need to consciously sort out and save all learning resources. The sum of materials collected by students after multiple trainings can become the resource pool of this course to help teachers carry out auxiliary teaching learn.

1.3 To train trainees to form promotional interactions with each other

In the cooperative learning mode, students have the opportunity to deeply communicate with each other. In order to achieve both group and individual help and encourage each other, students have made efforts in the process of achieving individual learning goals and group learning goals, and they will form in-depth recognition and trust between each other. The process of achieving learning goals is also a process of accurate and beneficial communication, acceptance and support among students, and constructive solution to specific problems.

Studies have shown that peer feedback is more likely to promote change in students than feedback from superiors. In the process of cooperative learning, the verbal or non-verbal expressions used in the communication between students can greatly reflect the excellent learning performance of each student. Students who fail to devote themselves to learning will find themselves in communication problems with other group members, which will force peers who lack learning motivation to participate in the discussion and avoid being left alone. The trainees themselves have a certain amount of work experience, and they also expect to exchange skills with each other during the training process, so this kind of facilitating interaction will be more rapid and obvious.

2. the implementation of cooperative learning

Spelling pattern teaching method, peer teaching method and PBL teaching method are teaching

methods based on cooperative learning mode, all attach great importance to learners' participation, and are suitable for all types of practical training and teaching, providing a reference path for teachers to carry out teaching practice.[2]

2.1 Application of spelling pattern teaching method

The teaching process of spelling pattern can be divided into six steps: teachers divided into initial groups - task cutting and issuing expert cards - independent learning - setting up expert groups to implement discussion and learning - returning to the initial group for intra-group mutual learning - teacher feedback and performance evaluation. (See Figure 1)

Initial group grouping → Task block → Independent learning → Expert Group → Mutual learning → Teacher feedback

Figure 1 Spelling learning process

The first step is to divide the teachers into initial groups. The teachers need to divide the class members into groups of 4-6 people (called initial groups). In the second step, the task is segmented and the expert card is issued. The teacher divides the learning materials into sections and numbers them (for example, numbers A, B, C, D, B, F; The number of numbers corresponds to the number of students in each group), and each paragraph is roughly the same length. At the same time, the teacher needs to prepare an expert card for each paragraph of content (corresponding to the number of content), on the card to write in detail for this paragraph of content students need to answer the question after learning, and sent to the students, each group of students have a set of expert cards, each student is assigned to an expert card; The third step is independent study, each student has enough time to read and study the content assigned by the expert card; The fourth step is to set up a group of experts to discuss and learn. Students assigned to the same content will form a group of experts to discuss the learned content and how to answer the questions on the expert card. The fifth step is to go back to the initial group for intra-group mutual learning. After the discussion of the expert group, everyone goes back to the initial group and explains the content assigned by themselves to other members to ensure that other members of the group can understand the learning content through their own explanation; The sixth step is teacher feedback and grade assessment. The teacher gives feedback according to the learning situation of each group and makes grade assessment.

Spelling pattern teaching is very suitable for the training. The instructor can assign the learning of the operation process of different types of equipment to different students. The students first need to complete the operation learning of a certain type of equipment independently, so that they can express their understanding of the equipment and fully communicate and interact with other students during the discussion of the expert group. Understand the operation experience of the equipment summarized by others in the work, and form a stimulating interaction. At the same time, in the group mutual learning, students can understand the operation process and principle of other types of equipment, compare with each other, and deepen the understanding of professional equipment.[3]

2.2 The application of peer teaching

The concept of peer teaching was put forward by Eric Mazur, professor of physics at Harvard University in the United States, in the course of teaching. Through the use of concept test questions and the help of classroom voting device, students are guided to participate in the interactive teaching mode in the form of autonomy and cooperation, so that experienced peers can provide information, support and guidance strategies for experienced peers. "Peer teaching is conducive to sharing experiences with each other, and it is suitable for trainees who are newly trained." With the accumulation of professional knowledge and practical experience during their working years, the peer teaching mode can build a platform and channel for them to share and communicate. In the actual primary school, teachers can realize the exchange of excellent experience and knowledge among students through the teaching mode of expert explanation, distributed leadership and debate.

The process of peer teaching is applicable to the learning of conceptual questions, which are specially designed conceptual questions for the knowledge points of the course, in order to timely discover the students' blind spots in conceptual understanding. The teacher first asks the conceptual questions, which are closely related to the course content. Different conceptual questions can

correspond to the important and difficult points of the course, and each question is clearly worded and has reasonable wrong answers. Students first think and submit answers to ensure that each student has the opportunity to think

After reaching a consensus, individuals will submit their answers again. Finally, the answers will be shared in the group. After the class discussion, the teacher will make a supplementary summary. Teaching in the same class not only helps students to think independently, but also ensures experience sharing and mutual assistance among peers.

The teaching content of the training is very suitable to be designed as a specific conceptual problem in combination with the actual work of the students. The teacher ensures that the students focus on one concept at a time when learning, and then proceed to the next after completing the conceptual problem

One stage study content or the next question.[4]

2.3 Application of PBL teaching

PBL teaching method refers to that the learning process revolves around specific learning projects or problems, fully chooses and utilizes the optimal learning resources, and obtains relatively complete and specific knowledge through practical experience, internalization, absorption and exploration and innovation. "PBL approaches both problem-based and project-based learning, both of which are based on realistic and real-world tasks, both of which have no definitive answers and require independent thinking and inquiry. Among them, PBL based on question is more suitable for short-term learning of a certain knowledge point in a single discipline. The duration is shorter, and the results are also countermeasures and suggestions for problems or discovery of enlightenment. Project-based PBL learning is suitable for long-term interdisciplinary learning, which is longer and fruitful. These two learning modes are of reference significance to the training.
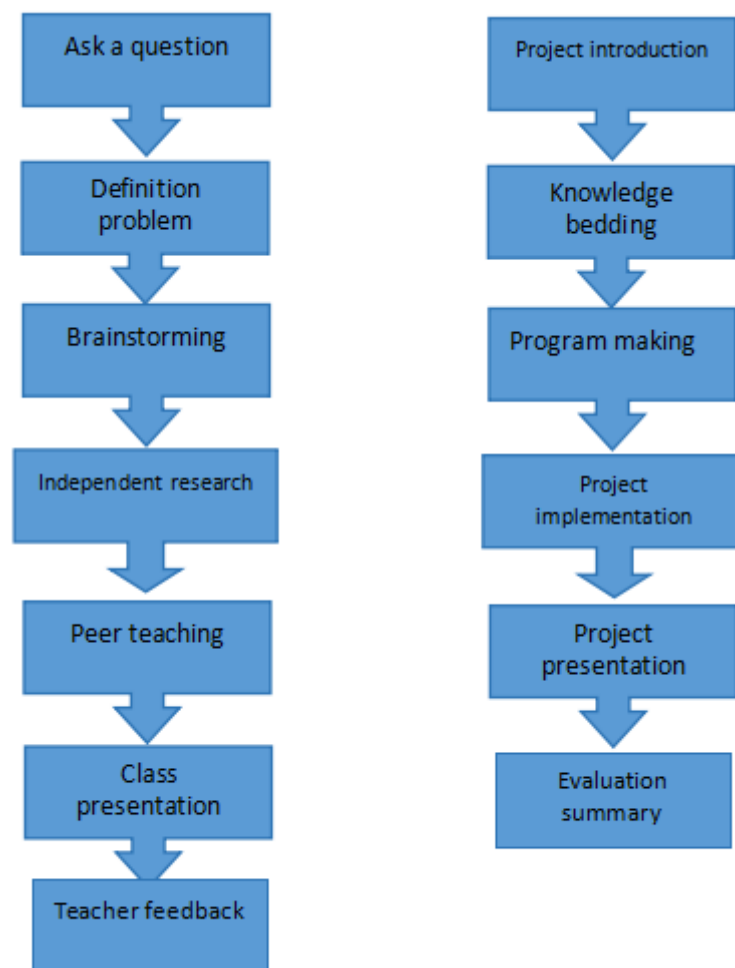
In the learning of fundamental problems, teachers design challenging problems related to the course, assign them to students, and lead students to define and solve problems to avoid understanding bias due

to differences in individual experience and knowledge background. Brainstorming is organized among students to analyze the causes of the problem, and then each person does it.[5]

Conduct independent research, share the conclusions with group members and present them in class

Finally, the teacher evaluates the score. In these steps, students improve their knowledge, learning ability and critical thinking by solving specific problems. The trainees themselves have accumulated a lot of experience in their work and have also encountered difficult problems. During the study situation survey, the teachers can collect the problems encountered by the trainees in their actual work as a basis for designing the driving problems, which can not only effectively solve the problems encountered by the trainees in the work process; It can also make students feel that their opinions and suggestions are valued and adopted, and promote them to participate in learning more actively.

In project-based learning, teachers can introduce a project throughout the entire training period and clarify relevant requirements. The process of theoretical teaching is also a process of knowledge preparation. After teachers guide students to master relevant knowledge in class, students begin to independently formulate plans for information collection and plan formulation, and teachers need to provide materials and consultation to ensure that the general direction of the plan is correct. Students will try to implement various projects and present the projects after completion, and finally make an evaluation and summary. This mode is conducive to the trainees' in-depth integration of past work experience and learning content, so that they can use what they have learned and effectively improve their training transfer ability.[6]

3. Precautions for cooperative learning practice

3.1 Activity design to reduce the opportunity for individual team members to "free ride"

In the traditional learning mode, the teacher teaches all the content, the students only need to listen to the lecture, the learning discussion is also dominated by the top students, other learners can only listen, do not say, do not do, there are a large number of students in the "free ride" learning.

In the cooperative learning mode, it is necessary to design teaching activities to reduce the opportunity for individual members to "free ride". For example, in the process of spelling learning, each student needs to complete the explanation of knowledge points; in peer teaching, each member needs to express his or her views on conceptual issues and fulfill individual learning responsibilities; and each member's thinking results need to be evaluated by his or her peers. Make sure individual team members are thinking for themselves.

3.2 Timely remind students to conduct group self-control

It is normal for group activities to have unnecessary discussions or to try different ideas, but these discussions and attempts will reduce the efficiency of learning and increase the time for task completion. Therefore, in the process of organizing activities, teachers need to remind students to carry out group self-control in a timely manner, and each student needs to recognize individual responsibilities to themselves, their peers and the group, so as to ensure that individual behaviors are beneficial to the achievement of learning goals in the process of collective learning. After the activity, the teacher also needs to organize a group for reflection, to identify whether the activities of the group members during a certain activity are beneficial or not, and which group activities need to be continued or improved.

3.3 Emphasize the sense of responsibility of training students

Early Jinzhong training is upgraded training, this type of training is easy to make students have their own learning only to obtain the certificate one-sided concept, resulting in the training process of students learning enthusiasm and enthusiasm is low. However, the cooperative learning mode emphasizes that each student must undertake certain learning tasks and be responsible for himself, his team members and his team. Each student bears three responsibilities. Getting the training certificate cannot achieve all the learning goals, and it is necessary to establish the concept that training is to solve the problems encountered in his work and help other students solve their problems. Only in this way can we ensure that students seriously participate and establish a strong sense of responsibility.

3.4 Actively give play to the leading role of teachers

In the cooperative teaching mode, students are the main body, but this does not mean that the teacher is finished

Stay out of it all. Instead, teachers need to take a leading role, which requires more effort than an indoctrination classroom. Before class, teachers need to be fully prepared, not only need to complete the previous lesson preparation tasks, but also need to take every step of the class into account to fully do the teaching design, to provide students with design problems, planning processes, and materials for cooperative learning. In the course, it is necessary to complete the theoretical teaching and grasp the progress of each group when the students cooperate in learning, and provide itinerant guidance and consultation. If there is a group discussion or research content deviation from the classroom, the teacher also needs to make a timely reminder, can not be left unchecked; After class, the instructor needs to give feedback on the content submitted or presented by the students in a timely manner and evaluate each student. Compared with traditional infusing learning, cooperative learning requires more effort on the part of teachers.[7]

Conclusion

Cooperation is a fundamental skill that humans possess and is also the cornerstone of social development and progress. Mutual cooperation and multi-party collaboration can enhance people learning and work efficiency. Cooperative learning mode provides a new way of thinking for the training of teachers. Cooperative learning embodies the teaching ideology of core competencies, with students as the main body of learning, giving full play to the "humanistic thought". On the basis of achieving the original learning goal, it can further improve the students' learning enthusiasm and cooperation ability, and form a positive atmosphere of mutual support among the team members, which has certain guiding significance for the training of junior middle School in Shanxi Province. However, one method cannot be applied to all courses. Although the spelling pattern teaching method, peer teaching method and PBL teaching method play a positive guiding role in the teaching, they cannot be completely copied. It is still necessary to select according to the actual situation and gradually improve the teaching quality and efficiency by seeking truth from facts.

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