

# Study on the Target Guidance in the Integration of Teaching Protocol

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**Abstract:** Integration of teaching protocol is an original creation of China's basic education. This model emphasizes the balance between the student as the subject and the teacher as the dominant. "Target-Guided Teaching" refers to the use of target guidance strategy to improve teaching, enabling students to effectively use information tools and resources to improve their learning and adapt to social development. This paper studies the target guidance model based on the integration of teaching protocol. After analyzing the early studies, we defined the concepts related to the target guidance model based on the teaching protocol, and elaborated on the strategies for determining learning and using goals for the reference of front-line education workers.

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## Introduction

As a part of educational activities, classroom teaching is extremely purposeful. The Japanese educator Masao (1996) believed that “The fundamental condition for the formation of all educational phenomena and processes is the goal”. In the teaching process, the teaching objective is the main line of classroom teaching. It plays an important role in guiding the direction and process of classroom teaching and is also the basis for classroom evaluation. The effect of classroom teaching can be tested by the degree of achievement of teaching objectives (Lin, 2015). With the advancement of the new curriculum reform, the efficiency of classroom teaching is the most concerned topic for educators, scholars and frontline teachers working in teaching positions (Deng, 2013). The reform of the new curriculum standard changed the teaching objective to the learning objective, and proposed three-dimensional learning goals of knowledge, skills, and emotional attitudes. Learning objectives are the basis of the teaching process, and whether they can be achieved is related to the success or failure of the entire classroom teaching (Lin, 2015).

Teaching protocol is considered to be a useful material to promote students’ autonomous learning (Zhou & Li, 2020). The classroom teaching model based on the teaching protocol is a new model derived from the carrier of the teaching protocol, and it has always received extensive attention from education researchers. On the basis of the concept of “learning is fundamentally the student’s own business, teaching activities should stimulate students’ drive to learn and make learning really happen to the students themselves”, Li (2019) believed that the classroom teaching model based on the teaching protocol is a goal-oriented, problem-centered, self-preparation as the prerequisite, the combination of self-inquiry and intensive instruction as the foundation, and in-class training as the guarantee.

This article focuses on target guidance research based on teaching protocol. Based on the analysis of the existing target guidance research, clarify the related concepts of classroom guidance, teaching goals and target guidance based on the teaching protocol, and then determine the method of learning objectives and the strategies of how to use learning objectives for classroom guidance.

## Research Status

### Current Status of Foreign Research

There are few studies on target-guided teaching abroad, and most of them focused on the study of teaching objectives. Tyler RW, an American educator, elaborated on the



definition of goals, and believed that “various changes in behavior are the teaching goals” (Pi, 2008).

Japanese scholar Atsushi Mita proposed a Japanese-style teaching target classification theory. In the fields of cognition, emotion and motor skills, from the perspective of goal realization, the school teaching goals are divided into three types, i.e. basic, improvement and experience goals (Chen, 2002). American educator Bloom BS believed that the goal is the expected result. It embodies the researcher’s shift of research objectives from classification research to teaching application. His research showed that the realization of teaching goals should be based on classroom practice activities (Zheng, 1990).

Among the above studies, Bloom’s goal theory of education classification has the most extensive influence. Bloom’s classification theory of educational goals was first proposed in 1956 (Lorin & Laren, 1994). This theory has been adopted by education fields all over the world and has been translated into 22 languages. However, in the process of being applied, the shortcomings of this theory have gradually emerged. The most significant shortcoming is that it assumes that the cognitive process is one-dimensional, it is only a sort of behavior from simple to complex, and in the hierarchical structure, the categories of different levels do not overlap, which is not reasonable in actual teaching (Shukran & Nor, 2017). After five years of research, Anderson et al. revised it in 2001 (Aly, 2006). Bloom’s goal classification theory divides all the goals that should be achieved in education into three fields: the cognitive field composed of the mastery and understanding of knowledge and the goals of intellectual development; and the cognitive field composed of interests, attitudes, values, and correct judgment, and adaptation. The affection field composed of the goal development; the motor skills field composed of various skills and motor skills. The goals in the cognitive domain include knowledge, comprehension, application, analysis, synthesis, and evaluation from low level to high level. In the domain of affection, the degree of internalization of value includes five levels: receiving, responding, valuing, organization, and characterization. In the field of motor skills, it includes perception, orientation, guided response, mechanical action, complex external response, adaptation, etc. (Gu, 2003).

In sum, although there are few studies on target-guided teaching abroad, the above-mentioned studies all reflected the importance of learning objectives in teaching practice. Among them, Bloom’s target classification theory also provides a theoretical basis for the target-guided teaching model based on the teaching protocol.

## **Current Status of Research in China**

In China, the research on target guidance has a history of decades, and they were mainly reflected in the research on teaching goals and learning goals.

### **Research on Teaching Goals**

#### ***Research on the Function of Teaching Goals***

Li & Li (1991) believed that the function of teaching goals mainly has directing, motivating and standardizing functions.

- The directing effect refers to the guiding effect of the teaching goal on the learner's attention;
- Motivating effect refers to the teaching goal can stimulate and maintain learners' interest and motivation in learning;
- The standardizing effect means that teaching goals can be used as standards for testing and evaluating the teaching effects.

Li (2009; 2012) proposed that the basic functions of teaching goals mainly include guiding, evaluating, motivating and feedback function.

- The guiding function refers to the guiding role of teaching goals in the design and implementation of teaching activities, the selection of teaching methods and the performance of student behavior;
- The evaluation function means that the teaching goals have a corresponding evaluation effect on the teaching process and results;
- The motivation function means that the teaching goals have an stimulating effect on students' learning;
- The feedback function refers to the teaching goals can help teachers to evaluate and correct the teaching process.

Yan (2000) proposed that teaching objectives have four functions: orientation, reinforcement, adaptation, and evaluation.

### ***Research on Classification of Teaching Goals***

The research on the classification of teaching objects in China began in the 1980s. The landmark event was the introduction of Bloom's object classification theory to China and had a wide range of influence. The most profound impact on the current research on China's teaching goals is the new curriculum reform introduced by the Ministry of Education in 2001. This reform standardized the expression of teaching goals. On the one hand, it designed the overall goal of the curriculum; on the other hand, in order to implement the overall goal in the compilation of teaching materials, the positioning of classroom teaching goals, teaching organization, teacher training and curriculum resource allocation, the overall goal of the curriculum was divided into three dimensions: "knowledge and skills", "process and method", and "emotional attitude and values" (Cao, 2014).

### **Research on Learning Goals**

#### ***Value Research of Target Guidance***

In 1997, the general research group proposed the "three standards, two guidance, and double five rings" model, which targeted on cognition, moral education, and academic ability. The application in the middle school showed that this model can promote the

improvement of students' moral character and academic performance (General Research Group, 1997).

In 2011, Jiang (2011) established the classroom teaching model of "Target guidance, activity construction, and meeting standards in the classroom" of the middle school history. By comparing the learning effects of the experimental and the control classes, it is found that the experimental class is significantly better than the control one in terms of learning confidence, interest, ability and habits. It is believed that this model implemented the curriculum goals, improved classroom efficiency and students' autonomous learning ability, reduced the learning burden, cultivated interest, and promoted all-round development.

In 2014, Lu (2014) proposed that students who experienced the teaching and training of target guidance were significantly better than the control class in terms of learning interest, habits, ability, experimental operation skills, and subject learning quality.

### ***Use Target Guidance to Cultivate Student Autonomous Research***

In 2009, Huang (2009) pointed out that the "Target guidance" teaching model was proposed to provide information, means, time and space guarantee for students to achieve their learning goals. Promote students to develop good study habits, innovation and inquiry ability, and enhance students' learning ability. The guiding ideology of this model is "teach to learn, learn to cooperate, and actively develop".

In 2010, Wang & Wang (2010) put forward the "Target guidance" teaching model based on "Target guidance-knowledge construction-application improvement", which stimulates students' curiosity, encourages students to learn independently, and also enables students to practice And the comprehensive development of innovative thinking.

In 2010, Zhu (2010) put forward "Target guidance" which requires teachers to use teaching goals as clues in the teaching process, conceal the teaching content in each goal, and guide students to ask questions independently.

In 2013, Song (2013) proposed the three-stage nine-ring teaching method. The three-stage nine-ring teaching method is divided into three stages: presentation, implementation, and detection. By entrusting classroom rights to students, students will be more motivated to learn, and they will be more confident to actively participate in learning.

In summary, we can find that China has a long history of research on the use of Target guidance in classroom teaching based on teaching protocol. At the same time, the above research also proves that Target guidance has a positive effect on improving students' learning interest, habits and abilities.

### **Shortcomings of Existing Research**

From existing studies, it is found that there are relatively more studies on "target guidance" in China, and many methods for constructing "target guidance" in classrooms

have been proposed, but most of them focused on the implementation details and operating methods. Therefore, it has not been formed into a system (Lin, 2015). This paper takes the determination and use strategies of learning goals as the entry points, and studies the teaching protocol-based target-guided teaching model, hoping to provide reference for education practitioners, so that they can more accurately understand target guidance, so as to achieve effective application of the target guidance model that based on the teaching protocol.

## **Definition of Related Concepts**

### **The Definition of Classroom Guidance Based on Teaching Protocol**

There are many statements about the classroom, and Wang Jian's statement is the most comprehensive (Han, 2009). He believes that the meaning of the classroom includes three levels, and a progressive relationship. The first one is to understand the classroom as a classroom, which refers to the main place where school teaching activities occur; traditional teaching theory uses it as a teaching environment to study. The second is to understand the classroom as the classroom teaching activity of the school. The third is to understand the classroom as a synthesis of curriculum and teaching activities, including classroom implementation, curriculum resource development, teaching activities, teacher-student relationship, teaching environment and other educational elements and their relationships (Wang, 2003).

“Guiding learning” is derived from “teaching”. To a certain extent, “guidance” focuses on demonstration, enlightenment, training, and guidance. It requires teachers to learn one step first, learn more, and promote students' thinking through their own thinking. Teachers can become organizers, maker and collaborator and guide the teacher-student activities. Teachers respect the individual differences and initiative of students, put students from the position of “plasticized” to the position of “self-molding”, and continuously derives the internal drive of students, and “learning” lies in observation, imitation and application and creation (Han, 2009).

Therefore, we define classroom guidance based on the teaching protocol as: the teacher uses the teaching protocol as the carrier, and the students are formed under the three aspects of teacher guidance including prior-class introduction, in-class guidance, and after-class help. To form a teaching method that takes students as the main body, goal-oriented, problem-centered, combines cooperative inquiry and teacher teaching, and uses teaching evaluation as a means to promote the overall development of students.

The difference from other teaching methods is that this teaching model is carried out in strict accordance with the procedures stipulated by the teaching protocol, students learn according to the teaching protocol, and teachers teach according to the teaching protocol. Teaching by the protocol is the foundation of this teaching method (Xia, 2017).

## **Definition of Teaching Goals**

Teaching goals play an essential role in the teaching process. “Teaching goal is the starting point and destination of teaching activities. In the teaching process, it restricts the design of teaching strategy and evaluation, and plays the role of outline guide and list” (Wang & Zhong, 2010).

In 1934, Taylor of Ohio State University put forward the concept of “teaching goals” for the first time, but did not elaborate on it (Zhao, 2014). After the 1960s, with the development of program teaching, teaching goals have also received extensive attention. Many foreign researchers have successively defined teaching goals from different perspectives (Liu, 2013).

The American scholar Clark’s point of view is: teaching goals are things that cannot be achieved at present, they are things that are striving for, progress forward, and will be produced (Clark, 1985).

Mager (2007) suggested that the teaching goal should have three components: a description of the behavior required by the learner; a statement of the important conditions to demonstrate the behavior; and a standard for evaluating whether the goal is achieved.

Wang (2004) believed that teaching goals are the stipulations or assumptions of the standards and tasks of the expected results of teaching activities. The effect of teaching activities is mainly reflected in the changes in the physical and mental development of students, and the teaching goal is to prepare the expected changes in students through certain teaching activities.

In the “Contemporary Pedagogy” edited by Yuan Zhenguo, it is mentioned that the goal of teaching is the requirements or the result of changes that educators hope to meet when educators complete a certain stage of work in the process of education and teaching (Yuan, 2004).

Zhong (2008) believes that teaching goals are the learning results and standards expected to be achieved by teachers and students in the teaching process.

Xie Limin suggested that the teaching goals can be understood from the following aspects in “The Design, Application and Guidance of Teaching”: First, the teaching goal is essentially the learning goal, which must be achieved by the learner; Second, the teaching goal is mainly by the teacher and the learners; Third, the teaching goal is an important central link in the transition from educational ideals, training goals, and curriculum goals to realistic educational practice and results; Fourth, the teaching goals should be based on educational ideals and training, and meanwhile there are often changes such as curriculum objectives, such as reification, supplementation, expansion, and enrichment (Xie, 2007).

Through the interpretation of the above definitions, we believe that the teaching goal is: after in-depth interpretation of textbooks and related documents, teachers hope that students should achieve or the desired goals in a certain learning stage (such as a lesson or a unit) during which the knowledge, skills, and emotional to be mastered.

## **Definition of Target Guidance**

Different from the teaching goal, the learning goal is to describe the results and requirements of course learning from the perspective of students. It is to show the content of the course from the perspective of the students and help students understand the course objectives. Although they are all goals, there is a big difference between learning goals and teaching goals in terms of the design intent, function, and educational values of the goals (Yu & Guo, 2019).

On this basis, target guidance based on teaching protocol is derived, and Chinese scholars define it in various ways. Jiang (2011) believes that target guidance is to implement classroom teaching goals as the basic guidance of classroom teaching activities, to construct activities as the basic form of teacher-student interaction, and to meet the standards in the classroom as the basic means to test the teaching effect, and to optimize the structure of classroom teaching as a whole. Adhere to the teaching principles of scientific goals, learning autonomy, and compliance with standards, and focus on cultivating students' autonomous learning ability to achieve the individual development and harmonious development of students' lives.

Wang (2016) believes that target guidance refers to the teaching model of introducing students into the learning field through previewing; integrating students into the classroom through cooperative inquiry and group activities; and mastering the learning situation of students through tests.

Lin (2015) pointed out that the "target-guided teaching model" is based on teaching protocol as the medium, teacher regulation as the means, method guidance as the focus, three-dimensional teaching goal as the basic orientation, activity construction as the basic form, and the in-class test as the standard for measuring the teaching effect. The basic method of teaching effect is to optimize the structure of classroom teaching as a whole, and adopt teaching strategies that are targeted, autonomous and open.

Based on the above, we consider that target guidance is the teacher, who fully considers the student's learning situation before class, conducts in-depth research on the teaching content and sets goals; in class, the teacher guides the students to cooperate and explore independently to achieve the goals; after class, consolidate exercises and tests to check the completion degree of the teaching goal.

## **Strategies for Determining Learning Goals**

### **Basis for Determining Learning Goals**

#### **Theoretical Basis**

The theoretical basis for determining learning goals mainly includes mastery learning theory and constructivist theory, which will be explained separately from the two aspects below.

#### ***Mastery Learning Theory***

The so-called “mastery learning” is to provide students with individualized help and extra learning time based on group teaching, supplemented by frequent and timely feedback under the guidance of the learning philosophy of “most students can master”, so that most students can master the content stipulated by the teaching objectives (Zhuang, 2017).

Bloom pointed out in the mastery of learning theory that as long as the various learning conditions required for learning are available, almost all students can master the course content that they should master. The strength of learning ability determines the length of time they need to learn the same knowledge, i.e., the learners with strong learning ability can master the learning content in a short time, while those with poor learning ability need more time (Feng, 2007).

Under the mastery of learning theory, teachers must first clarify what students need to master, that is, when fully understanding the students, put forward a clear learning goal, and then focus on the set learning goals for teaching and testing. This theory provides a solid theoretical basis for the generation of target guidance.

### ***Constructivist Theory***

The cognitive psychologist Piaget, the proponent of the constructivism theory, believes that children construct knowledge step by step in the interaction with the external world, thereby enabling themselves to develop. He insisted that children’s cognitive development is developed under the interaction of individual internal factors and external factors (Zhang, 2003). From the perspective of constructivism, the world exists objectively, but the understanding of the world is determined by the individual subjectively; learning is not simply a process by which teachers transfer knowledge to students, but a process by which students construct knowledge; students should not become passive receivers of information, but on the contrary, it should be a process of meaningful learning that is actively constructed under certain external conditions and with the help of others using necessary learning materials (Lin, 2015).

The process of knowledge construction stems from cognitive conflict (Lu, 2007). The “Target-guided teaching model” is based on the theoretical basis of constructivism, following its principles, advocating cooperation and communication, through the joint research, sharing, inspiring and accelerating the students to construct knowledge (Robert & Elena, 2002).

### **Realistic Basis**

The realistic basis for determining learning goals is mainly based on national policies and children’s own development, and is divided into the following two points:

#### ***The Requirements of the New Curriculum Standards***

Curriculum standards are the main basis for furthering the teaching reform. It requires teachers to reasonably grasp the teaching capacity and difficulty requirements, adjust teaching concepts and behaviors, stimulate students’ initiative and enthusiasm in learn-

ing, control the burden of homework, and continuously improve the quality and level of teaching; it is necessary to determine scientific evaluation standards based on curriculum standards and achieve the goal of emphasizing knowledge and skills, processes and methods, emotions and values (Ministry of Education of the People's Republic of China, 2011).

### ***The Requirements of Children's Physical and Mental Development***

The law of children's psychological development refers to the characteristics of children's psychological activities and the laws of psychological development during the growth stage of children. It is embodied in the following aspects (Luo, 2016).

- The sequence of psychological development. The development of individual psychology is sequential and develops in a certain direction. Psychological development follows the development sequence from low level to high level, from simple to complex, and from concrete to abstract. This process is irreversible, that is, it cannot develop in the opposite direction, and its overall trend is upward.
- The stages and continuity of psychological development. The development of individual psychology is staged and continuous. Only by solving the development crisis of each stage, the individual can develop smoothly to the next stage; otherwise the individual will encounter difficulties in adapting, which will affect the development of all subsequent stages. Therefore, education should be based on the stage characteristics of children's psychological development, and take a reasonable way to complete the tasks of each stage, so that it can enter the next stage smoothly.
- Differences in psychological development. The overall trend of children's psychological development is consistent. However, because individuals are subject to the combined effects of objective and subjective factors such as genetics and environment, each child has its own characteristics in terms of development speed, level of development, and development advantages, and there are differences in development between individuals.

Therefore, in education, we must fully consider the sequence, stage, continuity, and difference of children's cognitive development, and implement education in accordance with the characteristics of different students at a certain stage of development step by step.

## **Determine the Requirements for Learning Goals**

### **1. The dominant body of learning goals is students.**

The subjectivity of student learning is the overall inherent characteristics of independence, consciousness, initiative, creativity, and development that students have as the subject of learning activities. It is the internal basis and fundamental symbol for the establishment of the student body. Only when the student's dominant position is estab-

lished, can we find the correct position in classroom teaching, and cultivate high-quality talents with the spirit of the subject and comprehensive development for the society (Ma, 1999);

Target guidance based on teaching protocol should clarify the orientation of teachers and students in the classroom. The task of the teacher is to guide students purposefully according to the teaching goals, and the task of the students is to understand and master knowledge under the guidance of the teacher (Xia, 2020). The established learning goals can be achieved only through the “guidance” of teachers and the “learning” of students; strictly speaking, students have actually completed their own learning in the process of being “guided” by teachers (Zhao, 2016).

**2. The learning goals should be operable, measurable, and evaluable, and their expression should be expressed using accurate verbs that students can achieve (Li, 2019).**

The student is the master of learning, and the main body of the description of the learning goal is also the student; the focus is on describing the result of the student’s learning, specifying the result of the student’s learning behavior, and the learning goal is the generalization of the student’s learning behavior to meet the requirements. In teaching, not only students are required to realize, but also teachers are required to realize. If the teaching goals are not specific, then the measurability of the teaching goals will be lost. At the same time, it is necessary to learn to use explicit verbs to describe the learning goals. If the words “understand, comprehend, experience” and other words are used to describe the teaching goals, the quantity is not clear and specific, and the results are not easy to measure, which will reduce the measurability of the learning goals. On the contrary, when describing the teaching goal, using specific explicit verbs such as “mastery, recognize, talk”, the results described are very measurable. In this way, it is easy for teachers to measure, and it is clear at a glance whether students meet the standard (Pan, 2020).

The learning goals should be hierarchical. The so-called goal stratification means that teachers use the teaching syllabus as the basis, according to the structure of the teaching materials and the actual learning possibilities of students at all levels to reasonably formulate teaching goals suitable for students at all levels. Hierarchical goals play a role in positioning, guiding and stimulating the learning of students at all levels in teaching activities, and set a stage for students’ progress. Establishing the “layered goal” is the basis for changing the “one size fits all” and implementing the “target-layering-guidance” to teach students in accordance with their aptitude. The stratification goal should pay attention to the suitability and challenge of students at all levels. The formulation of hierarchical goals can only be “challenging” for students at all levels by paying attention to the “recent development zone” of students, and can effectively promote them to “jump to get the fruit”, so as to help students at all levels to lay the foundation for transforming learning into realistic goals (Gu, 2003).

### **3. The number of learning objectives is controllable, not too many.**

The learning content of each chapter has its key points and difficulties. In the teaching process, teachers should accurately grasp this key point and put forward learning goals in a targeted manner. Therefore, the number of learning goals should not be too many, but they must be targeted, so as to improve the effectiveness of learning (Ben, 2019).

## **Examples of Setting Learning Objectives**

Based on the four requirements for the above learning goal setting, the following is an example of the learning goal setting in the Welcome to the unit section of Unit1-Dream Homes in the second volume of the seventh grade “Phoenix Digital Guide (English)” published by Yilin Publishing House. The core of this lesson is to describe the ideal residence and different living environments. The teaching focuses on the living environment, capital names, and landmark buildings of different countries.

Based on this, teachers can set the learning goals of the “Welcome to the unit” section as follows on the basis of fully studying the requirements of the textbook and syllabus, grasping the important and difficult points of the teaching content, and understanding the students’ cognitive level:

- Master vocabulary: dream, palace, capital, town, country, next to, etc.;
- Identify the landmark buildings or landscapes of different countries, and master the English expressions of different countries and their capitals;
- Understand the representative things of some developed countries, and be able to talk about their ideal residence and different living environments.

The setting of learning goals in this lesson, on the premise that students’ learning goals are specifically arranged, also reflects the measurability, hierarchy and quantity controllability of learning goals.

## **Strategies for Using Learning Goals**

### **Guide in Class, Students Achieve Learning Goals**

After the learning goals are set, the teacher will assign pre-study requirements and distribute the teaching protocol to the students before class, so that the students can use the self-study time to complete. Teaching protocol plays a crucial role in guiding students to learn independently. Teaching materials are the source, and teaching protocol is the guide. According to the problems specifically designed by the teaching protocol, students will independently think, analyze, and implement item by item in reading the textbook, as well as basic exercises for testing. In the preparatory process, students should be encouraged to ask questions, and students should be able to discover, propose and solve them (Lu, 2014). In the target guidance based on the teaching protocol, after the teacher sets the target, the next step is to guide the students and provide timely help to the students, so that the students can form their own knowledge system, that is, knowledge construction through continuous thinking and exploration.

Constructivist theory emphasizes student-centered, through determining students' learning needs, setting their own goals, monitoring their own progress and obtaining learning outcomes (Neo et al., 2007). Wallace (1992) proposed that humans are not passive recipients of information. Learners can acquire knowledge, connect it with previously absorbed knowledge, and make it their own knowledge by constructing their own interpretation.

Knowledge construction is the center of the entire classroom. The role of teachers in this process is not to impart knowledge, but to guide learning (Wang, 2002). Give the initiative of the classroom to students, and guide students to explore independently, discuss in groups, and focus on exchanges and displays. Teachers patrol the classroom, provide guidance on learning methods in time, adjust teaching strategies, and provide guidance to students with learning difficulties. Teachers should present new knowledge in a hierarchical manner, stimulate thinking, improve students' autonomous learning in the classroom, improve their self-learning ability, and promote all-round development (Lin, 2015).

For example, in the teaching practice of "The Structure of Atom" in the second volume of the ninth grade of "Digital Guidance Draft (Chemistry)" of the People's Education Edition, teachers set learning goals and arranged preparatory exercises before class to give students a preliminary understanding of the learning content. Let students know that the learning content includes physical changes, chemical changes, and molecular and atomic changes. On this basis, teachers can set the following questions for classroom target guidance,

- i. When a substance made of molecules undergoes physical and chemical changes, how do molecules and atoms change?
- ii. Explain from the point of view of molecules and atoms:
  - Water becomes steam when heated;
  - Water is decomposed into hydrogen and oxygen by electricity;
  - Mercury oxide decomposes into mercury and oxygen when heated.
- iii. How to distinguish molecules from atoms?

Let students discuss and summarize in groups, and finally conclude their own answers. In this process, on the one hand, the teacher has completed the role transition from teaching to guiding; on the other hand, students have achieved their learning goals while completing their own knowledge structure.

With the continuous reform of education, the cultivation of students' core literacy has become a mainstream trend. This also requires teachers to change the traditional teaching methods, return the classroom to students, and cultivate students' independent learning ability, independent thinking awareness and teamwork awareness by setting up various classroom activities (cooperative or independent inquiry, etc.). Therefore, it is particularly important for teachers to guide students to establish their own knowledge system and improve it in teaching.

## **Application Enhancement, Students Consolidate Their Learning Goals**

The achievement of learning goals requires timely feedback through means to adjust and consolidate. Educational evaluation is the actual degree and situation of testing whether the activity has achieved the expected educational purpose (Bai, 2014), and it is also an important part of curriculum and teaching practice. It has an important role in diagnosing, positioning, monitoring, and guiding for teaching practice (Yu & Wu, 2015). Therefore, timely detection in the classroom is a key part of classroom target guidance. Determine the testing method and test question type according to the students' learning situation and the key and difficult points of teaching. The questions can be mandatory and optional questions, and the amount of questions is moderate, and students must complete them independently as required. In the process of testing, students actively discover problems and provide timely feedback. Teachers should give timely praise to students who excel in the test to fully stimulate students' enthusiasm (Lu, 2014). The test results can be communicated and exchanged in groups, which can not only test the teaching effect of teachers, but also adjust the teaching tasks and teaching goals of the class (Zhu, 1999).

For example, in the teaching of the second volume of "10.4 Fraction Multiplication and Division (2)" of Jiangsu Education Edition "Phoenix Digital Guide (Mathematics)", the teacher will determine the goal before class and achieve the goal in class. The following methods can be adopted to further consolidate the achievement of students' learning goals.

- i. Questions and answers. Through the form of question and answer to detect students' awareness of learning goals. The multiplication and division of fractions mainly involves concepts such as the order of operations, so teachers can set the following questions:
  - What is the order of the mixed operations of addition, subtraction, multiplication, and division of fractions?
  - What do you think should be paid attention to when performing fractional mixed operations?
- ii. Practice. Test students' mastery of the content by letting students complete exercises. The form of practice questions can be calculations, or simplified calculations, and even allow students to choose their favorite values and plug them into fractions for calculations to check their actual mastery and application ability.
- iii. Communication. Let students sort out their knowledge through free conversation. Topics can be learned from this lesson? Whether the knowledge learned in this lesson is in the same phase as the previous knowledge is developed, allowing students to construct their own knowledge system in the process of conversation and achieve the integration of new and old knowledge.

Therefore, students can learn about their own deficiencies through testing, and teachers can also provide targeted guidance to students based on their feedback from testing, which not only verifies the completion of learning objectives, but also helps students consolidate their knowledge.

## **Teachers Discuss and Understand Students' Accomplishment of Learning Goals**

The after-class discussion is a process by which the case research team examines the pros and cons of classroom teaching from different angles based on observations, and then reveals the possible directions for improvement in teaching. The level of after-class discussion directly affects the quality of subsequent teaching improvement. The content of the after-class discussion should focus on the facts that students learn in the classroom, and avoid focusing on the success and failure of the class or the teaching style of the teacher. Only by taking "student's learning" as the main theme of the discussion, and by analyzing and researching students' learning to improve classroom teaching and form teaching practice, can we create a "learning-centered" classroom and make every student's difference be paid attention to. Only in this way can the improvement of teachers' learning and behavior be realized through students' learning (An & Yan, 2010). In the continuous discussion, teachers can more clearly understand whether the students' learning goals are achieved, and for the unachieved learning goals, teachers can also analyze the reasons and put forward solutions.

## **Conclusions**

Integration of teaching protocol, as the localized teaching model of basic education in China, emphasizes the balance between student autonomy and teacher guidance. The goal is the basic orientation of teaching activities. Through the formulation and implementation of learning goals and teaching goals, the basic form of teacher-student interaction is constructed. The basic method is to use in-class training to test the accomplishment of learning goals, optimize the structure of classroom teaching as a whole, cultivate students' independent learning ability, and achieve the personality and harmonious development of students' lives.

This research is based on the target guidance in classroom teaching of teaching protocol. In the teaching process, reasonable teaching goals can guide students to learn independently and improve the overall level of student participation in the classroom. Sufficient preparation is a prerequisite for the effective realization of target guidance classes. Of course, teachers also need to detect the completion of learning objectives through timely teaching evaluation and feedback, so that students can follow up in time.

Therefore, the target guidance in the integration of teaching protocol is not a fixed model, but should be flexibly changed according to the teaching content. For example, the content of the new class and the review class are different, and the target guidance process will definitely be different.

At the same time, whether the target guidance model based on teaching protocol can be effective is closely related to teachers. From the formulation, consolidation, and completion of the target, teachers need to give full play to their leading role, and to reasonably guide students to develop self-directed learning around the target with full consideration of students' learning conditions. In addition, teachers constantly update their own professional knowledge reserves and update educational and teaching concepts, so that the target guidance model can play a better role.

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