

# Several Principles of Teaching Students to Learn

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**Abstract:** Teaching students to learn is the ultimate goal of teachers' professional development and the highest teaching realm of teachers. Teaching students to learn is not only a matter of how teachers impart knowledge and skills, but more importantly, how and what students do. How to teach students to learn should follow the principles of subjectivity, motivation, comprehensiveness, exploration and reflection.

**Keywords:** *Teacher professional development; Subjectivity; Motivation; Exploratory; Comprehensive; Reflective*

The ultimate goal of teacher professional development is for students to learn better and for their future development. From the perspective of teachers' professional development, every teacher's teaching career has gone through three stages, namely learning to teach, being able to teach and teaching students to learn. Teaching students to learn should be the highest level of teachers' professional development, the highest teaching realm of teachers, and the essence of teaching process. Teaching students to learn includes three contents: (1) how to teach students to learn; (2) How to teach students how to learn; (3) Teach students what to learn. Article [1] further breaks down "what to teach students to learn", including five levels. The first level is that students should learn to learn; At the second level, students should learn to recognize; At the third level, students need to learn the subjects in the national basic education curriculum; The fourth level is to learn the skills required for work; At the fifth level, students need to learn how to live in a community. It can be seen that teaching students to learn is not a problem of method, but a problem of guiding ideology of teaching. In fact, teaching students to learn not only involves teachers' knowledge, teaching methods and strategies, but also involves students' cognitive structure, students' learning methods and strategies. That is to say, teaching students to learn is not only the teaching of knowledge, skills and techniques, but also the cultivation of students' non intellectual factors, including good learning motivation, strong learning interest, firm belief, tenacious willpower, the spirit of unity and cooperation, persistent exploration spirit and independent innovation ability. According to years of teaching practice experience, in order to teach students to learn, the author believes that the following teaching principles should be paid attention to.

## 1. Principle of Subjectivity

There have always been two completely different views and theories regarding the status of teachers and students in the education process. One is the student-centered theory represented by Rousseau and Dewey, and the other is the teacher-centered theory represented by Herbart. Student-centered scholars believe that students' development is a natural process, and in the process of education, students should be allowed to acquire certain knowledge and skills themselves, thereby enhancing their own abilities. Teachers can only serve as 'waiters' and cannot

dominate the natural development process of students. Teacher centered theorists believe that in the education process, teachers have absolute control and command power, and the mental growth of students completely depends on the design and organization of teaching content by teachers, as well as the teaching mode and methods adopted by teachers. "In any other function of education, students are directly in the minds of teachers... students maintain a passive state towards teachers."<sup>[2]</sup>

According to the systems theory, "Subjectivity is based on the position of individuals as subjects in the cognitive structure system and their own structure and essential strength. .... People must rely on the external world and have passivity. However, when dealing with the outside world, people always grasp and occupy things in the external world through active and dynamic activities, thus placing themselves in an active position, which is not accidental. Because humans, as subjects, are also a complex system with multiple factors, including both material and spiritual aspects, aspects that are innate to humans through natural genetic evolution, and aspects that are given by society through social genetic evolution. Together, they form the essential force of human beings as the theme, forming the subject system."<sup>[3]</sup> According to this viewpoint, in the process of education, both teachers and students have the characteristic of subjectivity. Compared to students and textbooks, teachers are the main body, while students are the main body. However, the roles of these two subjects in the bilateral activities between teachers and students are different. The principle of subjectivity here is to always adhere to the teaching philosophy of teacher led and student led in the classroom teaching process. Recognize the leading role of teachers, that is, acknowledge their influence on education, their regulation, control, and transformation of educational objects; Recognizing the subjectivity of students, that is, recognizing them as human beings, developing individuals, a complete person, an individual with thoughts, emotions, unique creative value, and development potential.

## 2. Incentive Principle

In the process of education, the spiritual world of students as subjects is composed of two parts: rational spirit and irrational spirit. The education of teacher centered theory has the sole educational purpose of imparting rational knowledge and cultivating rational spiritual abilities. In the teaching process, there has been a one-sided tendency: (1) Emphasizing the impartation of rational knowledge while neglecting the accumulation of emotional experience; (2) Emphasizing rational control while neglecting emotional cultivation; (3) Emphasizing the teacher's leadership suppresses students' initiative; (4) Emphasizing scientific procedures while neglecting flexibility and versatility. Teaching students to learn is to pursue the integrity of education. The main basis for judging the integrity of education is whether the students' perfect personality has been cultivated, that is, the cultivation

of students' rational spirit and irrational spirit has been taken into account. According to modern cognitive psychology theory, whether students will learn is closely related to their level of metacognitive development. "The main content of metacognitive training is to teach students how to flexibly make plans according to their own characteristics, material characteristics, learning tasks and requirements, take effective strategies, actively monitor, feedback and adjust in learning activities, and timely revise strategies and processes to effectively achieve goals as soon as possible - teach students how to learn."<sup>[4]</sup> Applying metacognitive theory to the teaching process, transforming mechanical imitation into flexible and diverse strategic learning, is the key for students to learn. But this does not mean that as long as students receive metacognitive training, they can master effective learning strategies. In fact, metacognition and strategic learning only solve the technical aspects of students' learning, and their role must be achieved through students' subjective efforts.

As the main body of students, the non-intelligent factors in their psychological structure can make their psychological activities in a positive state, thus possessing a dynamic nature. The organic combination of various elements of non-intelligent factors can form a complex dynamic system that is opposed, unified, relatively stable, and constantly changing.<sup>[5]</sup> It is a system with multiple functions such as initiation, maintenance, regulation, and orientation. This system can transform passivity into initiative and transform intelligent potential into intelligent action. The system mainly includes beliefs, motivations, needs, emotions, attractiveness, and willpower. In the teaching process, teachers should fully play a leading role and stimulate students' learning motivation; Wake up students' desire to learn, cultivate their strong interest in learning, and guide them to study happily; Cultivate students' spirit of scientific exploration that dares to question, and stimulate their strong emotions for discovery and invention; Cultivate students' strong willpower to overcome and solve difficulties; Especially, teachers should assist students in achieving success, allowing them to experience the joy of success in learning activities, and enhancing their confidence, because success is one of everyone's basic needs, which is an indispensable part of guiding students to learn.

### 3. Principle of Comprehensiveness

A remarkable feature of teaching students to learn is that students can use what they have learned to acquire new knowledge, thus triggering positive transfer of learning. Psychologist Bruner divides learning transfer into special transfer and non special transfer. Special transfer is the transfer of habits and associations, while non special transfer is the transfer of principles and attitudes. "No matter what subject we choose, it is important to make students understand the basic structure of the subject." "If you understand the knowledge structure, this understanding will make you rely on your own strength; You don't need to come into contact with everything in order to understand the essence of things. As long as you understand some profound principles, you can infer various details as needed."<sup>[6]</sup> Bruner emphasized that mastering the knowledge structure of a discipline, understanding basic principles and concepts, is a sufficient condition for generating learning transfer. Despite being one-sided, it illustrates the important role of the knowledge structure of a discipline in learning transfer. The comprehensiveness here refers to the comprehensiveness of

knowledge. The knowledge here includes declarative knowledge, procedural knowledge, and procedural knowledge. Process knowledge is experiential knowledge that accompanies the learning process, which can be divided into four stages: (1) The experience of knowledge generation; (2) Experience of knowledge development; (3) Experience of knowledge outcomes; (4) Experience in applying knowledge.<sup>[7]</sup> In the teaching process, teachers should fully explore the process knowledge implicit in declarative and procedural knowledge, including ideas, methods, spirit, etc., and guide students to represent relationships and concepts, so that these three types of knowledge are integrated and form a reasonable structure of knowledge system. The richer, clearer, and more stable this knowledge system is, the easier it is to extend new knowledge on the basis of old knowledge, leading to positive transfer of learning.

### 4. Exploratory Principles

The core content of teaching students to learn is to cultivate students' innovative thinking and innovative ability. The traditional teaching process often adopts an indoctrination teaching model, where students passively accept knowledge only as a matter of 'what'. As for how and why knowledge is generated, students are vague and unable to experience the process of exploring and discovering knowledge, thus depriving them of the opportunity to think independently and unleash their imagination. This kind of teaching activity is not conducive to students' acquisition of knowledge, nor is it conducive to the improvement of learning ability, and creative ability is even more difficult to talk about, thus suppressing the full play of students' subjectivity and enthusiasm. The exploratory principle requires teachers to carry out creative teaching design, making their teaching activities exploratory, and creating a good atmosphere for students to love, explore, and ultimately discover truth. This encourages students to imitate the real scenarios of scientists' actual research activities, reproduce the process of knowledge regeneration, and experience the creative process of scientific discovery or invention through various stages of practice and experience, such as asking questions, daring guesses, teamwork, experimental analysis, and logical verification. In this exploration process, it not only cultivates students' logical thinking ability, but also allows them to fully utilize their non logical thinking such as association and intuition. At the same time, it also helps to cultivate students' non intellectual factors such as emotions, will, and attitudes.

### 5. Reflective Principles

From the perspective of teacher professional development, self-diagnosis and self-reflection are effective ways for teachers to develop their profession. Because of this, teachers guide students to self diagnose and reflect during the learning process based on their experiences and methods of self diagnosis and self reflection. It mainly includes two levels of reflection: intellectual and non intellectual. At the intellectual level, we mainly reflect on whether we understand and master the basic concepts and principles in the discipline; Have you achieved a visual grasp of them; Do you have a comprehensive understanding of the background, historical evolution, development, and improvement of concepts and principles; What are the realistic prototypes of basic concepts and principles, and what practical problems can they solve; What are the ideas and methods used in the formation and application of concepts and principles, and what are the

underlying concepts; Can we reveal the internal connections between these basic contents, including the logical and methodological connections; Can the basic structure of the discipline be promoted accordingly. In terms of non intelligence, the main reflection is whether one actively participates in all learning activities; Have you invested a great deal of enthusiasm; Has there been effective cooperation with other classmates; Whether they dare to defy authority and raise doubts; Whether to rise to the challenge and gain self-efficacy, sense of achievement, etc. Through reflection and continuous correction, students can reach the realm of perfection and beauty.

Teaching students to learn is an extremely complex system engineering. Only through continuous exploration and reform can we improve this theory and achieve success in teaching practice.

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