



# Bruner's Structuralist Educational Ideas and Their Implications for Today's Education

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**Abstract.** Jerome Seymour Bruner is one of the important representatives of structuralist education and proposed the theory of cognitive discovery learning. This learning theory plays an undeniable role in both developing student intelligence and enhancing their ability to solve practical problems. Therefore, this article is based on Bruner's structuralist educational thought and combines it with educational practice to explain the enlightenment of Bruner's structuralist educational thought on today's education: in the education process, teachers should clarify the basic structure of the subject, and at the same time, teachers should be good at using discovery learning method in teaching to stimulate students' internal motivation.

**Keywords:** Jerome Seymour Bruner; structuralism; teaching.

## 1 Introduction

Jerome Seymour Bruner is one of the founders of contemporary cognitive psychology and a pioneer and advocate of structuralist curriculum theory. Bruner is very concerned about educational issues and has conducted extensive and profound research on the psychological issues involved in education. His learning theory emphasizes the internal motivation of learners and advocates discovery learning. Therefore, Bruner's learning theory is also known as cognitive structure theory or cognitive discovery theory. Bruner not only made breakthroughs in educational theory, but also had a profound impact on various countries in educational practice. Therefore, Bruner's structuralist educational ideas also have important implications for today's education.

## **2 Bruner's Structuralist Educational Ideas**

### **2.1 Teaching Purpose: Emphasize the Development of Students' Intelligence**

Bruner believes that in education, it is not only necessary to cultivate students' basic knowledge and skills, but also to develop their intelligence, improve their quality, and enable them to adapt to the rapid development of society and science and technology. Structuralism places great emphasis on developing students' cognitive abilities and views education as a process of construction. The so-called "construction" refers to the diagrams of various behaviors formed during different stages of children's development. In order to balance the intellectual development of each student, he suggests that when writing textbooks, they should be divided into several levels to adapt to students of different grades and levels in the same school. He believes that when all students are able to fully utilize their intelligence, the country will have better opportunities for survival.

### **2.2 Teaching Content: Emphasis on Mastering the Basic Structure of the Subject**

To effectively develop the intelligence of every student, it is necessary to start with the teaching content. Unlike the previous emphasis on the quantity of knowledge imparted, Bruner attempts to study from a qualitative perspective. He emphasized the importance of structure and suggested that students should master the basic structure of each subject. Bruner said, "No matter which subject we teach, we must make students understand the basic knowledge of each subject, which is the minimum requirement for them to apply knowledge. Only in this way can we solve problems that students encounter outside of the classroom and in future training<sup>[1]</sup>". In summary, the more basic or even close to the definition of what students learn, the more they can apply it to new problems.

### **2.3 Curriculum Organization: Proposing a Spiral Curriculum Organization Method**

Bruner opposed both the linear arrangement of courses based on the original logic of knowledge and the circular arrangement of courses based on children's interests. He proposed a spiral arrangement centered on the basic structure of the subject<sup>[2]</sup> Spiral curriculum refers to a curriculum that is based on children's thinking patterns and centered around basic subject structures. As students grow older, the breadth and difficulty of subject knowledge gradually expand, resulting in a spiral development of subject knowledge in the curriculum system. Bruner proposed that the curriculum of schools should be conducted in order from low to high age. Firstly, the dimension of action operations; Next is the dimension of the image, which is more abstract and complex; Finally, students can master the entire structure of the subject. Although students need to master these practical knowledge as early as possible, they cannot achieve it overnight, but must learn step by step. As age increases, in the learning

process, it is necessary to supplement the learned content based on the cognitive development characteristics of students themselves, thus forming a spiral teaching model.

#### **2.4 Teaching Method: Discovery Learning and Inquiry Teaching**

Bruner's discovery learning theory focuses on cultivating students' exploratory spirit and emphasizes their subjectivity<sup>[3]</sup>. The essence of "discovery learning" is to allow students to explore a rule-based learning method after the teacher provides them with relevant learning materials. Once learners master this unique learning method, they can easily learn a large amount of knowledge and establish their own unique cognitive structure. Discovery learning theory places more emphasis on the process rather than the outcome, emphasizing students' autonomous exploration. During the learning process, students are the ones who actively construct knowledge, and both teachers and students form an equal and collaborative relationship.

#### **2.5 Education Target: Emphasize the Cultivation of Students' Intuitive Thinking Ability**

The premise of using discovery learning method is to cultivate students' intuitive thinking ability. Intuitive thinking is an understanding of the overall structure of things, with implicit and intuitive qualities. Unlike analytical thinking, intuitive thinking often does not require rigorous logical reasoning, but relies on a comprehensive understanding of the entire scene, using intuitive or visual methods to directly solve problems. Bruner pointed out that in the process of cognitive development, children often use intuitive thinking based on their different age characteristics and psychological development patterns. Therefore, educators should not require students to use logical thinking to solve problems, but should start from their instincts, encourage them to boldly imagine and speculate, thereby expanding their thinking ability, enabling them to better grasp learning methods that suit themselves, and gain more knowledge.

#### **2.6 Educational Process: Stimulating Students' Intrinsic Motivation for Learning**

Bruner acknowledges the role of external motivation, such as rewards and punishments, but points out that external motivation only stimulates students' temporary interest in learning, and this opportunity is limited and cannot be sustained. Therefore, in order to cultivate students' long-term interest in learning, it is necessary to start from intrinsic motivation<sup>[4]</sup>. In the teaching process, teachers should pay attention to cultivating students' learning motivation, based on their interest in learning as much as possible, and focus their interests on learning activities. In this way, students will gradually develop an intrinsic motivation for self-directed learning, thereby enhancing their willpower and determination.

### **3 The Influence of Bruner's Structuralist Educational Ideas**

#### **3.1 Promoted the Close Integration of Education and Psychology**

Education is a systematic project, and without the scientific theories of psychology as support, its functions cannot be fully utilized, and educational reform will also fall into difficulties. Bruner emphasized the internal motivation of learners, believing that internal motivation is more important than external motivation, and proposed to fully stimulate students' internal motivation<sup>[5]</sup>, so that they have clear learning goals and directions. He applied cognitive psychology to educational issues and pioneered a new path towards scientific education. American psychologist Robert Glaser believed that in the field of educational psychology, Bruner and Skinner were two pioneers. He pointed out that by the 1980s, cognitive psychology was no longer just a mainstream psychological theory, but a theoretical basis for educational psychology.

#### **3.2 Promoted Structured Teaching of Systematic Knowledge**

Bruner believes that in the teaching process, teachers should not only cultivate students' learning abilities, but also their intelligence to adapt to the rapid development of society and science and technology. Bruner's structured teaching method has played a significant role in both teacher instruction and student self-directed learning<sup>[6]</sup>. It emphasizes the importance of teachers imparting systematic knowledge, providing students with a theoretical framework to better organize their knowledge. By understanding the basic subject structure, students can better grasp the specific content of the course, facilitate memory, and promote the transfer of their learning motivation and interests.

#### **3.3 Emphasized the Necessity and Possibility of Early Childhood Education for Children**

Bruner believes that there is a direct correlation between a child's intellectual development and their age, but the speed of intellectual development varies under different educational conditions. Therefore, teachers should master the correct teaching methods so that children at any stage of development can achieve the expected learning outcomes. Practice has proven that solving difficulties for growing children and inspiring them to move on to the next stage is meaningful. Bruner's viewpoint also laid the foundation for education that focuses on early childhood intellectual development.

### **4 Bruner's Structuralist Educational Ideas and Their Implications for Today's Education**

#### **4.1 Clarify the Basic Structure of the Discipline**

Bruner emphasized that in the teaching process, mastering the basic structure of a subject is far more important than understanding knowledge <sup>[7]</sup>. By teaching the

structure of the course, learners can not only have a clear understanding of the learning content, but also use their transfer ability to predict unknown knowledge content. Therefore, in the teaching process, mastering the basic structure of the subject is far more important than understanding the knowledge. Teachers' classroom teaching should focus on the refinement of teaching content, so that students can not only master specific knowledge, but also understand basic concepts and principles, and cultivate their special transfer ability, thus forming a scientific learning attitude. Therefore, teachers need to start from the following points to help students master the basic structure of the subject. Firstly, teachers need to analyze textbooks, clarify their basic concepts, and connect them with the inherent cognitive structure of students. Secondly, in the teaching process, teachers should pay attention to guiding students to combine their learned knowledge with the original knowledge system. Finally, teachers need to handle the relationships between different disciplines correctly and form a holistic curriculum structure.

## **4.2 Using Discovery Learning Method in Teaching**

The discovery learning method advocated by Bruner still has important practical value today. By using the discovery learning method, teachers can pay more attention to students' interests and experiences, cultivate students' sense of responsibility and positive exploratory spirit, enhance their ability to discover, analyze, and solve problems, and cultivate their ability to retrieve, process, and acquire knowledge. In this process, the role of teachers has also changed, from simply imparting knowledge to promoting knowledge construction. Teachers play more of the role of teaching researchers in the teaching process, achieving mutual learning between teachers and students. During the teaching process, teachers should create a relaxed classroom atmosphere, create a democratic and harmonious teaching environment, and provide students with more opportunities for thinking, questioning, and speaking. Teachers should adhere to the teaching philosophy of teaching according to their aptitude, so that students' enthusiasm, initiative, and creativity can be fully utilized. At the same time, teachers should use teaching methods such as situational teaching and exploratory discovery to truly develop students' intuitive thinking and innovative consciousness. Bruner's discovery of learning methods also has certain shortcomings, such as placing too much emphasis on students' initiative, which leads to teachers losing their dominant position in the classroom. Therefore, in the teaching process, teachers should pay attention to the coordination and complementarity between discovering learning and receiving learning, and customize different teaching content for students of different age groups.

## **4.3 Motivate Students Internally**

The reinforcement theory suggests that in the classroom, teachers mainly stimulate students' external motivation through verbal praise or material rewards. These external reinforcements are easy to achieve in the short term, but they do not have much effect in long-term learning. If we only focus on external motivation and ignore internal motivation, it is likely that students will overlook their own learning goals and position them

to meet the expectations of teachers and parents. Relatively speaking, Bruner values the cultivation and stimulation of students' internal motivation<sup>[8]</sup>, and only an interest in the subject itself can generate strong learning enthusiasm among students. In teaching, teachers should make good use of this, pay attention to cultivating students' interest and curiosity, and often encourage and praise students so that they can actively participate in learning. Specifically, teachers need to do the following: firstly, create a teaching environment to stimulate students' interest in learning. Secondly, the logical sequence of textbooks should be arranged reasonably according to students' psychological development level. Finally, it is important to ensure that the difficulty of textbook content is moderate and to maintain students' intrinsic learning motivation.

## 5 Conclusions

In summary, Bruner's structuralist educational philosophy plays an important role and significance in today's education. It can not only promote students' deep learning and understanding, cultivate critical thinking and innovation abilities, enhance learning autonomy and initiative, but also optimize curriculum design and teaching strategies, promote educational reform and innovation. Reasonable application of cognitive discovery learning theory can effectively improve students' comprehensive quality and cultivate their innovative thinking ability. We should view Bruner's educational philosophy from a dialectical perspective, conduct in-depth research and development based on actual situations, and effectively promote the development and progress of education today.

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