

# Analysis of the Intervention Effect of Positive Behavior Support (PBS) Art Education on the Psychological Characteristics of Autistic Adolescents

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**Abstract.** Art education is an essential part of basic education. For teenagers with autism, the art curriculum can play an important role in aesthetic ability and stress relief. Finding a relatively reasonable curriculum evaluation method is the common expectation of art educators in the field of autism. This study tries to find out the current differences between "teaching" and "healing" in academic circles. Based on the positive behavior support (PBS) theory, it makes an empirical investigation on Chinese educators who are offering art courses for autism, and establishes an evaluation method for art courses for autism based on PBS theory. The results show that under the positive behavior support (PBS) mode, whether it is task-oriented and relief-oriented, or functional teaching mode/atmosphere teaching mode, it has a significant effect on the pathological psychological characteristics of autistic teenagers. The results are helpful for educators to analyze the strategy of "teaching students in accordance with their aptitude", so that specific psychological characteristics can better match the appropriate intervention measures. The research also makes exploratory analysis of other related variables, and puts forward reference suggestions and prospects for the future development of art education of autism in China.

**Keywords:** Autism; Education; Positive Behavior Support; Special Education.

## 1. Introduction

Since the beginning of the 21<sup>st</sup> century, under the general requirements of China's education reform, art education has become the focus of reform in the field of China's basic education. Especially in the stage of primary and secondary education, the former "non-main teaching subjects" have become important new teaching subjects. Under the background of post-epidemic situation, special education inevitably needs to turn to the education mode of combining online education with offline education, and aesthetic education, as an important national education guarantee content, should also be a part of the whole link of special education. For a long time, aesthetic education in primary and secondary schools has been the theme of China's medium and long-term education reform and development plan, but under the existing environment, aesthetic education in primary and secondary schools also includes the special education for young people, which should not be confined to ordinary primary and secondary schools or ordinary secondary vocational schools. At the same time, in the field of special education, specific courses such as painting, music, calligraphy, film and television included in aesthetic education have become important contents with long-term practice and remarkable achievements. There are also a lot of practical applications in the field of special population care and treatment in China. Therefore, at present, when the Ministry of Education proposes to comprehensively deepen the aesthetic education in primary and secondary schools, how to further implement the coverage of aesthetic education and how to make aesthetic education take a new step have become the main issues that need to be considered by the industry.

In fact, art education for autistic teenagers has been carried out for many years, and gradually different emphasis on art education curriculum content has been formed in different parts of China. As early as 1997, China's full-time autism rehabilitation training institutions offered courses related to painting and music. Over the next 20 years, in the process of implementing the actual educational behavior, formed two main different branches and schools. A mainstream view is that children with autism have completely different character representation and information reception ways from ordinary children, so the art course for autism should adopt the framework of art healing. That is, the

emphasis is on the correction and rehabilitation training of the symptoms of children's autism [1]. In this school's view, the premise of children's study and life is that autism and its complications are well controlled. Therefore, in these studies, art itself is not the purpose of offering art courses, but the means of auxiliary therapy; Its purpose is to evaluate and intervene the children's psychological situation at an early stage, In the course practice, we should create a more soothing atmosphere for autistic children compared with language barriers, and use flexible content to make children gradually relieve the stereotypes and other phenomena [2] The other mainstream view stands on the standpoint of art education itself. Scholars who hold this view are mostly teachers and art professionals engaged in the art industry. They believe that art courses, as an indispensable part of the quality education system for teenagers in the basic education stage, should have certain functional attributes. Art itself should also be the purpose of the art teaching curriculum system [3] Therefore, in the art education courses for autistic patients, the only purpose of art courses should not be the adjuvant treatment of symptoms. The aesthetic ability, the ability to appreciate and taste works of art, As well as some basic thinking ability in images and creative ability of artistic works, which are the requirements of art curriculum training for healthy children, should be equally applicable to autistic children. Scholars who hold this view point out that from the horizontal comparison, some children with autism may be better than healthy children in thinking in images and some memory and artistic cognitive abilities [4]. From the perspective of the implementation of basic education tasks, arranging corresponding art curriculum tasks for these children with more "artistic talent" can promote the ability cultivation of autistic children who receive the curriculum, so that children can have their own abilities that they are good at, thus increasing the possibility of autistic children and ordinary healthy children realizing the same social rights; From the vertical comparison point of view, compared with traditional courses such as Chinese, mathematics and English, autistic children themselves are more interested in accepting art courses, and can get better classroom effects. Because autistic children suffer from language and cognitive disorders pathologically, the perception nerve of thinking in images is sometimes not damaged. Therefore, we can't simply think that autistic children will encounter obstacles similar to those in Chinese, mathematics and other courses that are highly dependent on symbols and characters [5]. In other words, autistic children can get better ability training than other subjects in art education.

However, from the perspective of educators who implement these courses, these two orientations are not either one or the other. They pay more attention to the actual effect of their own classroom on children, and they are more willing to analyze how much their classroom has played on children from the actual effect level, and how to adjust it in time if there is any problem. Unfortunately, In the existing research, both directions lack an evaluation standard or reference system for the actual effect of art courses. For the teachers who offer art courses for autistic children, most of the time they can only set their own teaching goals and classroom settings according to their own experience or the requirements of school administrators and parents. After the end of the course, it is difficult for these teachers to use their own evaluation system to make a relatively scientific and reasonable feedback evaluation on the completed courses, and they can only rely on their own experience to complete the adjustment of related courses. For children with different characteristics and symptoms, how to set the curriculum objectives more reasonably, It has become the expectation of Chinese autistic art educators to "teach students in accordance with their aptitude" and adopt different teaching orientations and curriculum settings to maximize the effectiveness of art courses for children. This is the goal of this study: to find a common goal that can meet the art curriculum of autism, And use the existing teaching evaluation theory to evaluate the current "treatment" orientation and "teaching" orientation, and provide data constructive reference for the "teaching students in accordance with their aptitude" method expected by autistic art educators from the empirical level.

## 2. Literature Review and Variable Setting

### 2.1 Effect Variables: Typical Psychological Characteristics of Autistic Adolescents

Autism, also known as autism, is a syndrome with serious problems in communication, social interaction and behavior caused by abnormal neuropsychological function. The results show that autistic children have the following five psychological and behavioral characteristics [6]. First, language development is slow and abnormal. Autistic children with certain language skills have limited speech activities and can't communicate effectively with others. They often lack oral ability or language functionality. Misuse of personal pronouns makes it difficult to change one's focus when changing from one topic to another. When communicating with more than two people, it is difficult to keep the same topic of communication; Affect communication due to repeated behavior; It is difficult to keep eye contact with the talker. Second, social communication barriers. Children with autism lack social interest, and often show indifference to familiar or unfamiliar people indiscriminately. Autistic children show great difficulties in emotional interaction, It is not easy for them to understand other people's facial expressions, and they can't "read people's faces"; I can't express my feelings properly. Therefore, it is impossible to express feelings or establish relationships with others-the relationship with others is distorted. Third, abnormal interest and behavior. The main manifestations are narrow interest, obsessive-compulsive concept, spasm and persistence. Obsessive-compulsive concept is a certain idea, impulse or repeated imagination that can lead to anxiety and anxiety. Persistence is the repeated speech or behavior in an inappropriate range [7]. Fourth, perceptual and motor disorders. Many autistic children have obvious sensory disturbance, some of them are too slow to respond to sensory stimuli such as light, noise, touch or pain, while others are too sensitive. Or unable to filter and integrate effective information and make appropriate response. Fifth, cognitive defects. Among the attention characteristics of autistic children, Sensitivity and dullness coexist. There are two tendencies: excessive choice and ignoring stimulation.

In the curriculum for autistic children, improving the above psychological characteristics of autistic children is the common goal of curriculum teaching. Therefore, this study will take the actual intervention effect of art courses on the above five psychological characteristics as the main effect variable of the investigation.

### 2.2 Measuring Variable: Positive Behavior Support (PBS)

(PBS) Positive Behavior Support (PBS) is a systematic method of intervention on individual behavior. It develops individual positive behavior by means of education, adjusts the environment by means of systematic change, achieves the purpose of preventing and reducing individual problem behaviors and changing individual lifestyle, and finally achieves the goal of improving their life quality [8]. Since Horner and others created this method in 1990, positive behavior support has not only expanded the theoretical perspective, but also integrated the methods of different disciplines, and has been deeply studied in family, school and community situations. In recent twenty years, it has formed a problem-solving model of systematic prevention and intervention in the application of schools. Under the influence of situational adaptation theory, Active behavior support advocates adopting multi-dimensional methods to evaluate behaviors and implement interventions, changing various influencing factors that lead to individual problematic behaviors in the environment, showing an important shift from single behavior correction to comprehensive intervention that comprehensively considers the surrounding ecology of individuals and develops individual superior behavior ability [9].

In 1990, eight scholars, including Horner, put forward the concept of positive behavior support, and defined it as a method with unique skills and values to provide behavioral support to individuals with bad behaviors. According to PBS theory, active support intervention strategies should be adopted for behavior problems, including: Functional analysis, multi-factor behavior intervention, adjustment of ecological environment and background events in which problem behaviors are located, adjustment of causes and consequences of behaviors, teaching of adaptive behaviors, reduction of punishment,

differentiation of prevention strategies and crisis intervention strategies; In addition, the result of intervention should pay attention to the change of individual lifestyle, Intervention should respect individual dignity and follow social validity standard [10]. Most of the objects evaluated by PBS theory are individuals with severe disabilities who have serious self-injury or aggressive behaviors, and its application scope is more limited to family and community situations. Active behavior support no longer only looks at problems from the pathological point of view, but seeks the idea of problem solving from the perspective of active prevention, changing the environment and enhancing positive behavior skills. Horner, in PBS theory, this paper puts forward the implementation dimension of solving and improving problem behaviors, which is based on functional analysis, aims at improving objective factors, reduces aversion countermeasures and increases the sociality and value of problem actors [11].

Therefore, referring to Horner's hierarchical definition of PBS, the effect of intervention on psychological characteristics of autistic disorder in this study can be divided into the following dimensions from the theoretical level of PBS: 1) functional analysis: analyzing the causes of problems; 2) Prelude event: an event that becomes the most fundamental cause of the problem behavior; 3) Substitute behavior: teach students with problematic behaviors that can substitute for problematic behaviors, Appropriate behavior acceptable to others; 4) Follow-up results: the reactions of people around you when problematic behaviors occur. Or, by improving the problem behavior, teachers can evaluate some results.

### **2.3 Independent Variables: Art Education and Orientation**

As mentioned above, the emphasis of art courses for autistic children is divided into "treatment" orientation and "teaching" orientation. The main goal of treatment orientation is medical effect, and it is important to shape the artistic atmosphere of the course. The main goal of teaching orientation is to cultivate the effect and attach importance to the realization of the objectives and tasks of the course. This study will set independent variables for the characteristics and ways of art courses of autism from the aspects of teaching orientation and teaching mode in the form of matrix scale.

In the teaching orientation of art courses, aesthetics and practicality are two different goals. Dewey believes that the process of interaction between man and environment is not static but dynamic. In the process of interaction between man and environment, both sides are in the process of constant balance loss and recovery, that is, in the process of mutual transformation. On the basis of children's innate instinct and impulse, education is a process of continuous experience transformation through interaction with the environment [12]. Behind aesthetics and practicality are two artistic education orientations, namely, aesthetics and practice. They are both artistic education representing the spirit of the times when they came into being, and they are the products of specific times. At the same time, experience is the result of interaction between people and environment. Dewey believes that experience can be divided into completeness and incompleteness, and the experience of daily life is fragmentary and incomplete [13] The result of experience is the meaning of experience. Meaningful experience needs to have two qualities: becoming a complete "one experience" and refining through reflection.

In the course setting of intervening in the psychological characteristics of autistic teenagers, we can analyze it from strengthening theory. Bandura, an American economist, believes that people's behavior can be changed by reinforcement, and reinforcement is not necessary for the acquisition of behavior, but only for the performance of students' behavior [14]. When teachers want to consciously promote or shape a new positive behavior, they need to constantly strengthen those behaviors to be shaped, so as to lead out or form the expected new behaviors. He divided reinforcement into three types: first, direct reinforcement. Bandura emphasized that reinforcing effect has two functions: information and motivation. The effect of direct reinforcement is obvious, Teachers usually use praise, appreciation and grading to strengthen students' learning behavior. Second, vicarious reinforcement. Bandura believes and empirically proves that individuals can actually learn any kind of behavior without direct reinforcement, that is, they can learn by observing what others do and what results

others' behaviors get. Third, self-strengthening. Self-reinforcement refers to the process that people create their own result standards, evaluate and adjust themselves according to information feedback, and maintain and change their behavior with their own rewards or punishments. Self-reinforcement emphasizes the individual's cognition and subjective initiative [15] For autistic children, the direct reinforcement in the curriculum is mostly reflected in the task-based teaching mode of drawing, singing, repertoire and other factors; Vicarious reinforcement and self-strengthening are mainly embodied in the atmosphere-based teaching mode such as shaping music atmosphere, completing appreciation experience and sharing music instead of rigid movements.

To sum up, according to Dewey's and Bandura's theories, this study sets two independent variables in the investigation of art education forms: function orientation/relief orientation; Task-based teaching mode/atmosphere-based teaching mode. In addition, reference variables are set according to the degree of symptoms of autistic children, the teaching stage and the teaching frequency of art courses. The individual situation of the teachers who participated in the survey was also statistically analyzed in terms of demographic significance.

### 3. Research Process

This study is conducted in the form of a questionnaire, which is distributed to grass-roots teachers who teach art courses in China. The courses cover art, sculpture, film and television, music, dance, drama, calligraphy and other art fields. Teachers include art teachers working in ordinary primary and secondary schools (who have taught autistic teenagers), teachers working in art education guidance institutions (who have taught autistic teenagers), art teachers working in special education schools, art teachers working in schools or institutions specializing in the treatment of autistic teenagers, and art studios for autistic teenagers. Artists who teach related courses (teachers' qualification certificates), students in normal colleges who teach autistic teenagers part-time (teachers' qualification certificates and teach art courses) and other related personnel.

A total of 53 valid questionnaires were collected this time, covering people aged 18-50 years, meeting the employment requirements of teachers in China [16]. Among the 53 art teachers who participated in the survey, 44 were women, accounting for 83.61% of the total number. Nine were male, accounting for 16.39% of the total number. Combined with the Report on Investigation and Policy Analysis of Teachers' Professional Development in Primary and Secondary Schools in China released in 2011 [17] At present, the number of male teachers who are engaged in art education and have taught autistic teenagers is relatively small, far lower than the 45.4% male teachers in Chinese primary and secondary schools disclosed in the above report. However, all the teachers who have accepted this survey generally have a high degree of education. 75.47% of the teachers who have no high school education or below have a bachelor's degree or a junior college degree and 20.76% have a master's degree. Even 3.77% of them have doctoral degree, which is much higher than the average educational level of teachers in primary and secondary schools in China disclosed in the above report. It also shows that art disciplines have relatively good talent cultivation in higher education in China. It is worth noting that most of the teachers are junior teachers with only about 2 years' working experience. Middle-level teachers with 3-5 years' experience account for 32.07%, and vice-senior or senior teachers with 6-8 years' experience only account for 9.43%, which shows that most of the teachers in this survey are young teachers, not many middle-aged teachers with rich experience, which may be related to the promotion mechanism of the teacher industry (teachers can choose to change to management positions after having certain qualifications). It may also be related to the development of the special education industry itself. Among the teachers who participated in this survey, 31 teachers mainly taught patients with moderate degree, 16 teachers mainly taught patients with mild disorder and 6 teachers mainly taught patients with severe disorder. Most of the autistic patients who received art education in this survey were children around 6 years old, and the rest accounted for 22.5%. 64% of children aged 6-8, 5.66% of children aged 9-12, 1.88% of junior middle school (13-15 years old) and 5.66% of senior middle school (16-18 years old).

In this study, the art education courses for autistic teenagers are mainly classified into two orientations: functional and relieving, and the teaching modes are divided into task-based and atmosphere-based. In the course of teaching, the teacher will make a comprehensive observation of autistic teenagers, taking five psychological characteristics of autism as reference. Conduct classroom behavior judgment, emotional evaluation and learning effect evaluation for patients. Finally, through the continuous observation of the patients for three months or more, the teacher will summarize and record the results, and report the art course learning, behavior and emotion, course completion and course satisfaction of autistic teenagers in the questionnaire. During this process, patients will continue to receive medical treatment before the course is set.

## 4. Results and Analysis

### 4.1 Main Effect Analysis

According to the recovered data results, this study processed the data according to the set variables, and made Spearman correlation analysis and partial correlation about the control variables. The Spearman correlation of main variables is shown in Table 1:

**Table 1.** Relationship between the characteristics of art courses and the intervention effect of psychological characteristics of autistic adolescents

	Language barrier	Social communication obstacle	behavioral abnormality	Perceptual dyskinesia	Cognitive thinking disorder	General psychological characteristics
Function orientation	0.407**	0.461**	0.327*	0.395**	0.328*	0.334*
Relieve and guide	0.503**	0.518**	0.432**	0.314*	0.350*	0.383**
Task-based teaching mode	0.507**	0.472**	0.393**	0.425**	0.442**	0.476**
Atmosphere teaching mode	0.413**	0.426**	0.331*	0.334*	0.339*	0.375**
Self-evaluation of intervention effect	0.716**	0.832**	0.828**	0.767**	0.783**	0.703**

\*\* .  $P < 0.01$ , the correlation is very significant \* .  $0.01 < P < 0.05$ , the correlation is significant.

From the perspective of curriculum orientation, the improvement of overall psychological characteristics by functional orientation is slightly lower than that by relieving orientation, but it is slightly higher than that by relieving orientation in terms of improving perceived motor disorders. This performance benefits from the functional orientation with certain skills training requirements [18]. For example, painting, sculpture, calligraphy and other courses are designed to master certain techniques. Therefore, in the teaching process, teachers will guide students to do more training and activities in perception, encourage and guide students to use brushes, touch musical instruments, imitate or try actions more actively, and increase the proportion of perception movement in the course content. Set up relevant evaluation criteria in the teaching plan. On the contrary, in the relieving orientation, the evaluation goal of teaching will be designed to improve the physical condition, and more emotional guidance will be incorporated into the main teaching contents. In courses such as dance and music, teachers will pay more attention to cultivating students' artistic aesthetics and actively promote social communication with students. Even give up the teaching of some difficult techniques and movements, so that students can get a good mood as the evaluation standard. In contrast, the effect of relieving orientation of autistic patients is better than functional orientation,

although receiving skill training can better mobilize their own sensory muscle energy. However, emotional guidance is reflected in the more significant improvement of various obstacles.

From the perspective of teaching mode, task-based teaching mode is better than atmosphere-based teaching mode. In the task-based teaching mode, most of the teaching content will be divided into modules, students will learn the next module only after completing the front module, and the learning objectives will be divided into multiple stages. Only after the completion of a certain stage goal will the next stage goal be opened, and students' learning and teachers' teaching will be more structured. However, in the atmosphere-based teaching mode, teachers will create a certain atmosphere environment in a single class or multiple classes, and achieve the teaching objectives through the teaching of the whole course. There is no strict logical relationship between the teaching contents. The course difficulty setting does not completely follow the step-by-step approach from shallow to deep, so students may come into contact with different course topics in this teaching mode, and there may also be a big gap in learning performance in different class hours. According to the data results, the task-based teaching model with objective division in this survey is generally better than the atmosphere-based teaching model. This situation also reflects that even with the same teaching objectives, the teaching model of dividing the objectives and completing structured design will be better suitable for the art courses of autistic teenagers, while the art courses completed by adjusting the atmosphere or environment through design are slightly inferior to the former.

Except for the investigation of teaching orientation and teaching mode, all the teachers surveyed gave a good overall evaluation on the teaching effect of art courses for autistic teenagers, and at the teacher level, they thought that the symptoms of autistic teenagers improved significantly. After comparing the PBS effect of actual overall psychological characteristics with teachers' self-assessment, this study found that, The average score of actual intervention effect on psychological disorders in PBS mode (18.811) is slightly lower than the average score of teachers' self-assessment (18.868). The emergence of this phenomenon should first consider the art teacher who teaches the course's more confident attitude towards the course effect, and secondly, it should also consider that the average effect score of actual intervention will cover up the actual situation that some obstacles have been significantly improved. Therefore, when teachers self-evaluate the intervention effect, they may consider that some obstacles to improvement have been significantly improved, thus completing the evaluation slightly on the high side. Finally, Most teachers generally think that continuous art education will give autistic teenagers better psychological help before they have not been exposed to art education courses and after they have been exposed to art education courses for three months or more. Therefore, under the optimistic attitude that the psychological disorder of autism will continue to improve in the future, teachers give a higher evaluation of the effect.

## 4.2 Exploratory Analysis

### 4.2.1 Strengthen the Art Education of Autistic Teenagers in the Middle and High Schools

In this research survey, this study found that most of the teachers surveyed worked in the primary school department, and most of the autistic youths who came into contact with them were low-grade students (around 6-8 years old), and they seldom came into contact with autistic students in junior high school (13-15 years old) and senior high school (16-18 years old). At the same time, according to the data results of the existing questionnaire, after controlling the average value of educational frequency, symptom degree and teaching stage, the PBS intervention effect of overall psychological characteristics in task-based teaching mode will be significantly better than that before uncontrolled variables. The comparison of control variables is shown in Table 2.

From Table 2, we can see that under the condition that the PBS intervention effect and task-based teaching mode of the overall psychological characteristics have not changed, the scores of educational frequencies, symptom degree and teaching stage in the questionnaire are generally lower than the average value, and the correlation coefficient after controlling variables will be more significant with the increase of variable scores. According to this study, combined with the existing teaching situation and questionnaire data, The art education of autistic teenagers in PBS mode may try to extend to

patients with higher grades or severe symptoms, and increasing the frequency of education may also get better practical intervention effect.

**Table 2.** Comparison of each control variables

	Uncontrolled partial variable	After controlling some variables
PBS intervention effect of overall psychological characteristics (Avg.)	18.811	18.811
Task-based teaching mode (Avg.)	19.302	19.302
Educational frequency	(Mode)1.0	(Avg.)3.094
Symptom degree	(Mode)2.0	(Avg.)1.811
Teaching stage	(Mode)1.0	(Avg.)1.717
correlation coefficient	0.476	0.512

#### 4.2.2 Strengthen Teacher Training and Guide Teachers' Gender Education

As mentioned above, there is a big gender gap among art teachers in this survey, and the total proportion of male teachers is far lower than the average level of primary and secondary school teachers in China. This study believes that there is some distortion in this phenomenon, and 53 samples can't show the proportion of male teachers in the industry well. But existing research shows that, Teachers' gender and work activities may lead to gender stereotypes among primary and secondary school students [19], and the larger gender ratio gap under a single discipline may also affect the establishment of gender cognition of primary and secondary school students, thus leading to the formation of stereotypes of teenagers on gender issues. Therefore, in the current art education of autistic teenagers, attention should be paid to the equal status and extensive participation of different sexes in educational activities. We should also pay attention to the reasonable gender guidance for students in the process of education and teaching, and establish a good gender concept for teenagers in their growth stage.

## 5. Discussion

Based on the above data analysis, the questionnaire used in this study well reflects the intervention effect of art education on autism psychological disorder in PBS mode, and also makes a comparative analysis of the curriculum-oriented design of art education and the teaching mode of teachers. According to the teachers' self-assessment and actual improvement effect, The existing art courses are not completely suitable for autistic teenagers. Art education courses with relief-oriented and task-based teaching mode may be more suitable for autistic teenagers, and can also help students alleviate existing obstacles more effectively.

In addition, all the teachers who participated in this survey showed a high academic level, which once again showed that the teachers who participated in art education for autistic teenagers had good professionalism and technical level, which reflected the actual effect of the Ministry of Education of China in strengthening art education construction in primary and secondary schools since 2008 [20]. The cultivation of high-quality teachers' team provides the foundation for art education to move towards autistic groups, and also provides the conditions for further targeted teaching. In the existing practice of art education in primary and secondary schools, the courses offered mainly include art, sculpture, film and television, music, dance, drama, calligraphy, etc. However, according to the 2020 Statistical Bulletin on the Development of Education in China [21] It shows that the existing number of full-time teachers in special education is only 66,200, which cannot meet the learning needs of the existing 880,800 students in special groups. The proportion of art education disciplines needs to be investigated and studied urgently, and art teachers for special groups still need to be strengthened.

Statistical Bulletin of China's Education Development in 2020 Statistics show that the education situation of existing special groups is varied, and 49.47% of special group students receive primary

and secondary education with ordinary classes; 23.00% of the students in special groups receive primary and secondary education by home delivery (tutor); Only some students actually attend specialized special education schools, This also explains why the art teachers surveyed this time come from different types of schools or enterprises. The diversified forms of education for special groups have led to the complicated situation of art education for autistic teenagers in China. However, the complexity of the situation can't hide the fact that art education resources are scarce at present. Under the teacher-student ratio gap mentioned above, Although the existing art education institutions have sought more diversified teacher resources, and introduced all the high-quality talents who meet the requirements of art education into the classroom as much as possible, in the future, the sustainable development of art education may need to deepen the integration of multi-channel educational resources. Develop more abundant teaching methods to adapt to the educational forms of autistic teenagers. Art education in primary and secondary schools should also be compulsory education under the protection of special groups' right to education. Since December 2019, affected by the COVID-19 epidemic, primary and secondary schools in China have tried to adopt the teaching mode combining online education with offline education [22] use video, Internet live broadcast, real-time voice and other media means to complete the course teaching. Under this measure, art education has also successfully tried and used Internet technology for distance teaching, and achieved good teaching effect in art and calligraphy education [23]. With the shortage of existing special education resources, the art courses for autistic teenagers may also complete the integration and upgrading of resources through distance teaching, video teaching, etc., and make full use of the only educational resources at present to bring more autistic teenagers into art education courses, and try to use the way of home-school linkage. Online and offline mixed education mode with professional teacher teaching and family participation counseling.

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