

# Introduction to the First Arts Education Quality Assessment in Compulsory Education Stage in China

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**Abstract:** The school-based arts education is an indispensable part of qualified education in elementary and secondary schools. The first national arts education assessment was carried out at the compulsory education stage in China in May 2016. According to the NCEQAP, the objectives of national assessment are to provide data and policy advice to ensure that every student in primary and secondary schools can receive qualified arts education. This article will introduce China's education quality assessment policy. Then, it will elaborate the arts education quality assessment indicators, tools, content, music and art subject assessment, the assessment implementation, and the first national arts education assessment report in China.

## 1. Introduction

In the turbulent period of the 1930s and 1940s, Mr. Yuanpei Cai, who is a famous educationist and politician in China, proposed firmly that the arts education is very important for social and the government should "to breed religion by arts education.", "Everyone is an artist", this is Joseph Bernays' words, but nowadays the words are believed by many Chinese researchers. And more and more people believe every child could be an artist, hopefully, if he or she could get qualified even good art education, that will benefit his or her personal development and social success.

School-based arts education is an indispensable part of qualified education, and it was listed in Chinese education system early in March 1952, the Ministry of Education (MOE) issued "the draft of provisional regulations for primary and secondary schools". It was widely believed that the arts education play important role in qualified education: Arts education improves overall academic performance and increased standardized test scores; It helps the student's lifelong personal development and personality, helps to cultivate humanistic spirit; It helps improving innovation ability: It even helps to inherit national culture and enhancing the cultural exchange over the world from the viewpoint of government; In general, it helps to build a harmonious society.

Arts education assessment at the national compulsory education stage was carried out very late, in a long time, the academic education got too much more attention, even qualified education is difficult to implement. The arts education assessment was hoped to continuously promote the development of arts education in China in details, to grasp the overall situation and regional differences of education quality, to analyze the problems existing in arts education, to find out the possible causes, and to explore ways to improve the quality of arts education. And the objectives of arts education assessment are to provide data and policy advice to supervise, improve and account, to implement quality education, and to ensure that every student in primary and secondary schools can receive the very basic arts education.

## 2. China's education quality assessment policy

In April 2015, the Education Steering Committee (ESC) under the State Council issued the "National Compulsory Education Quality Assessment Program (NCEQAP)", in accordance with the "National plan for medium and long term education reform and development (2010-2020)", which states the ten years goal, implementation of curricula standards and establishing assessment system for compulsory education quality across the country. Since then, the Collaborative Innovation Center of Assessment for Basic Education Quality (previously called "the Basic Education Quality

Assessment Centre"), short as "the innovation center" below, which is a third-party organization, started to assess national wide the students' performance in academic, art and sports subjects.

According to the NCEQAP, the six assessment disciplines are moral integrity, Chinese, mathematics, science, sports, and arts. The assessment will run in the long-term, 3 years a cycle. In the first year, mathematics and sports will be assessed, and then Chinese and arts in the second year, and then science and moral integrity for the third year. Up to now, the assessment of the first cycle of 2015-2017 has already been completed.

According to the requirements of the NCEQAP, compulsory education quality assessment tools are divided into paper and pencil testing tools and field test tools. Paper and pencil testing tools are divided into subject papers tests and questionnaires. The subject test volume mainly measures the students' academic level. The questions in paper testing are divided into multiple-choice questions, fill-in-the-blank questions, and open-ended questions. The questionnaire mainly investigates the factors affecting the students' academic level and is divided into three types, which are student questionnaires, teacher questionnaires, and principal questionnaires. The field test tools are mainly used in the fields of sports, science, and arts, and to examine the movement, operation, and creative ability through the students' live demonstrations and project participation.

According to NCEQAP, in 2016, China launched the first art education quality assessment for the fourth and eighth grade students nationwide, covering both music and fine arts. With the help of many Chinese national experts, based on the national curriculum standards [1, 2] and multi-version textbooks, we developed an indicator system and tools for art education quality assessment.

### **3. Arts education quality assessment**

#### **3.1 Indicators, tools, and content**

In 2015, the innovation center, as required by the ESC, took responsibility for the development of the arts education quality assessment indicator system and tools. As the deputy director of the arts education assessment department under the center, the author organized and participated in the development of the indicator system and tools, as well as the subsequent preparation, implementation, data analysis and the report writing.

To complete the first indicators, the innovation center actively organized representatives of various related parties, make up a hundred more people research team, which including music, arts teachers from primary and secondary school, other arts education experts, psychological and educational measurement experts, musical researchers and so on. The innovation center also organized a series of scientific and rigorous work, such as expert seminars, tool development conferences, two nationwide forecasts, multiple small scale pretests, and multiple trials and revisions, and in the end the final review.

The research team launched a pioneering work, which is mainly based on the Compulsory Education Law, "Long-term Education Reform and Development Plan (2010-2020 years)" and other regulations and policies. In detail, the indicators system is according to "compulsory art curriculum standards (2011 edition)" [1] and "Music of compulsory education curriculum standards (2011 edition)" [2] as the basis, the quantitative indicators meet the requirements of surveying, has good reliability and validity. As for the development of the assessment tools, which learned some experience from the US NAEP project and New Zealand NEMP projects, and based on arts subject characteristics, and also fully considered the Chinese national culture, academic and technology trends.

The research team quickly clarified the working direction. The quality of arts education mainly refers to the results of students' art study and the status of school arts education. The orientation of national arts education quality assessment mainly includes two aspects: the assessment of factors affecting students' artistic literacy and the quality assessment of students' arts learning. The development of the indicator system and tools must reflect the requirements of qualified education and follow the following principles: Based on the basic content of the students in the curriculum standards; Ability-oriented, that is, to test students The art appreciation and performance ability is

the main, not the rote learning; Focus on the traditional culture and regional cultural differences in China; Pay attention to the investigation of the state of arts education; Should have good measurement indicators.

Further and more, the content of student artistic literacy influencing factors is divided into four levels: students, families, schools, and society. Student factors refer to factors that influence students' artistic literacy, such as students' artistic interests, artistic attitudes, time spent on arts learning, etc. Family factors refer to factors closely related to students' artistic literacy in the family, such as family arts resources, family arts activities, parents' artistic attitudes, etc. School factors mainly include school arts courses and teaching, arts resources conditions, arts teacher allocation and school arts atmosphere; social factors mainly include social, community arts resources and off-campus arts activities.

To monitor the students' arts learning quality, the test content is divided into two disciplines, music and art. The two disciplines are commonly opened in most schools to be assessed, as for other disciplines like dancing and drama, they may be included in future monitor circles.

In April 2016, about one year later after the start, the innovation center has the indicator system and tools work done. The assessment tools designed included student academic test papers, students, teachers, and principals questionnaires. It is worth to mention that this work product also included a set of singing electronic test system, and such kind of system wasn't be reported in the field of education quality assessment all over the world. By design, the system used intelligent speech technology such as speech synthesis and voice evaluation, with those technologies, the system can collect and store data during the assessment, and then perform a computer-aided automatic music scoring. With the research team's innovative work, many evaluation concepts and methods are refined, demonstrated and then used in the new computer-aided testing environment, the later testing with this system verified the system is successful.

### **3.2 The introduction of music subject assessment**

There are many reasons to cause the difficulty of carrying out the music subject assessment. We need to draw representative students to take the assessment, due to the huge number of students in China. Performance testing of music is difficult to standardize, the arts activities are time-related, such as singing, but all the activities need to be done in limited time in the assessment. The scoring work is very heavy and very easy to be affected by subjective examiners.

Those difficulties greatly affect the definition and the process of the assessment, some special aspects will be described below.

#### **3.2.1 General information of music assessment**

The content of students' arts learning quality assessment was defended as 4 parts, that is arts common knowledge, arts appreciation, artistic expression, emotional attitudes and participation in arts, same to music and art.

Music common knowledge, refers to students' understanding of the basic knowledge of music, the basic knowledge that students in grade four and grade eight need to know, which include sound, note, rest and common marks.

Music appreciation includes two dimensions: listening and memory, feeling and understanding. Audio listening and memory, that is, through listening, test students' ability to recognize and memorize the basic elements of music (timbre, rhythm, melody, harmony), the theme and structure of music works, as well as representative famous songs. Feeling and understanding, that is, through listening, to test students' perception and understanding of the genre, form, and genre of music works.

Music expression includes performance and creation. Performing is to assess students' ability to perform music by singing or playing music which learned in school. Creation is a process and method for students to practice music creation and explore creative thinking ability. It assesses students' ability to use music to create in the process of compilation and creative activities.

Emotional attitudes and participation in music. Emotional attitudes refer to the students' interests and attitudes towards music, as well as their feeling of the music. Activity participation mainly

refers to students' participation in music activities in and out of school.

There are two types of testing in the assessment, paper-based testing, and singing based testing. Most of the content is tested by paper-based testing, however, music performance (music appreciation and music expression) tested by singing based testing.

After considered the balance of coverage rate, sampling representativeness and implement efficiency, 474 districts were sampled from various provinces (cities, counties), which is called sampled districts. and in each sample district, 12 primary schools and 8 middle schools were selected, which is called sampled schools, there were still few excluded schools which don't have required equipment.

Among each sampled school, 30 students were selected randomly from fourth grade and eighth grade. And 25 of the 30 students participated in a paper-and-pen test based on a hearing test, and another 5 students participated in a musical performance (singing) test.

In the end, nearly 0.3 million students nationwide took the music assessment.

### **3.2.2 Paper and pencil test**

In the paper and pencil test, most of the questions are measurable, comparable, and easy-to-score selection questions, some of them are open-ended questions with a small number of melody creations or music works analysis.

Most of the music paper-based test required students listening to a materials firstly, and then answer on the paper, which is determined by the music characteristics itself, therefore, the knowledge and ability that students should master was standardized, but at the same time, the selected test point and the listening materials should be scientific and perfect.

In the choice of test points, the innovation center first sorts out the scope of knowledge points according to the "compulsory education music course standards (2011 Edition)". To accurately classify the knowledge points that should be mastered in the fourth and eighth grades, and to ensure that the knowledge points examined have no super levels and omissions, the innovation center has comprehensively integrated the 14 versions of music textbooks national wide. The knowledge points of grades 1 to 4 and grades 5 to 8 of each version of the textbook are all listed, and then compare to the "course standard" one by one, and then decide whether to delete or to add to the test points. In principle, the fourth grade test points contain high frequency and important knowledge points from grades 1 to 4. The eighth grade test points are based on the knowledge points of grades 5 to 8 and also contain some knowledge from grades 1 to 4. In the end, the test points can correspond to the requirements of the course standard and have a high coverage rate.

The listening material is also carefully selected. Firstly, select the music works in the textbooks with high repetition rate to build the audio library, and then select the excellent classics music that does not appear in all the versions of the textbooks from the expert track library. The work guarantees that the test content is classical, ensure it's fairness for those students from different districts.

The paper-based test includes the recognition of musical elements, the memorization of melody and structure, the judgment of musical genre forms and emotions, and the understanding of musical styles. Each part of the examination points to several levels of music aesthetic development. It aims to promote teachers to guide students to listen and analyze the works in a targeted manner so that students can acquire knowledge and improve their ability in the process of pleasure exploration. In particular, the paper and pencil test also includes a compilation of the title, requiring fourth grade students to create a melody of 2 bars, and eighth grade students to create a melody of 4 bars.

### **3.3 Singing based test**

The songs used in the singing test are also based on the curriculum standard and selected the multiple version textbooks, and be designed and refined much time by the experts. First, all the music textbooks used in fourth and eighth grades are collected, there were 234 textbooks with 14 publishers, including more than 4,000 songs. Second, analyze and compare those songs, the teaching requirements of each track, and label them with the version, the type, etc. Third, filtered the song according to the frequency, difficulty, proportion, and type of Chinese and foreign music

works, and build a singing song library, and more than 1,700 songs are selected from grade 1 to grade 8.

Finally, the songs were also be carefully selected to build the test song library, which ensures that each version of the textbook has at least one song in the library, which means at least one song is taught for each student. In the end, the test song library contains 21 songs, 11 of them are for primary schools, and 11 of them are for middle schools, the national anthem of the People's Republic of China is in the two groups at the same time.

Music performance assessment should include singing, performance, comprehension, and reading of musical scores, etc. Considering that the assessment of performance evaluation is difficult by now, it was a decision that the 2016 music performance test only contains two types: one is singing, another is editing & creating songs. In the singing test, the students are required to sing two songs: one is mandatory from the testing song library, and the other one is free to choose from the sing-song library, and the singing was recorded in real-time by the computer system.

### **3.4 Assessment content and music scoring technology**

The assessment of music education at the stage of compulsory education focuses on the core music literacy that every student should have, not professional music accomplishment, so the difficulty of the test was set to the middle and the lower level, which focus on assessment on the knowledge and ability that must be known and must be learned in the classroom learning, that is, the most basic knowledge, the most classic music works, and the most basic abilities.

Before the national unified test, two national pre-tests were conducted, and with the test results, all question in the test were analyzed from many aspects, i.e. the difficulty of the questions, the distribution of the topic options, the degree of discrimination of the questions, and the internal consistency of the test, etc.. And then the test has been repeatedly polished and demonstrated to ensure that the difficulty is suitable and fully reflect the true level and ability of the students.

In the 2016 national music education assessment, a set of singing electronic test system was used, which used computer-assisted data collection and scoring, can greatly reduce labor costs and increase the objectivity in scoring.

### **3.5 The introduction of art subject assessment**

The assessment of art subject is very similar to the assessment of music. The organization and the process are almost the same.

The main difference is the content of the assessment, the content is different, and more for art education, there are no singing-based testing, and testing for grade 4 and grade 8 is much different. For art education in primary schools, mainly assessment art appreciation & reviewability, art practice and performance ability. Junior high school art comprehensive literacy evaluation appreciation ability and creative ability.

## **4. The implementation of arts education quality assessment and guarantee measures**

In order to ensure the smooth implementation of the assessment work, the ESC commissioned the Innovation Center to release some guiding document, i.e. the 2016 national compulsory education quality assessment organization work manual, the 2016 national compulsory education quality assessment field operation manual, the 2016 national compulsory education quality assessment singing test system operation manual and some related video materials. The education administration and supervision departments of each province set up a leadership team led by the leaders in charge, led by the supervision department, and coordinated by multiple departments. They formulated a local implementation work plan, formed a team of visual guides, and conducted business training.

Next step is sampling, according to the requirements of the NCEQAP, a sampling method with stratified unequal probability is adopted, and the social and economic development status and the level of education development are well-considered. In different stages, the sample counties (cities, districts), sample schools and sample students are randomly selected.

And then a unified test was carried out in a specified time, strictly with prescribed procedures. In the end, in the 31 provinces, autonomous regions and municipalities and Xinjiang Production and Construction Corps, 325 counties (cities, districts) are sampled, 6526 primary and secondary schools are involved, and more than 192 thousand fourth grade and eighth grade students are sampled and took the test. Meanwhile, nearly 6500 primary and secondary school principals, more than 70,000 Chinese, music, art and class teachers were requested to respond to questionnaires to gather additional data.

In the process of implementation of the assessment work, some information system is used or improved, which significantly improved work efficiency. The improvements and innovations include improved assessment information reporting and sampling system, development of computer system for assessing implementation progress management system which associated with mobile APP, dissemination of dynamic information through WeChat subscription, instant message communication at the provincial level with QQ group, etc. With the help of these systems or methods, questions can be timely answered, hundreds of the assessment work processes in various places can all be followed-up in real-time.

After the sampling test was completed, the Collaborative Innovation Center of Assessment for Basic Education Quality conducted a statistical analysis of the test results, and formed a basic data report, and in the end released about 110 provincial reports in different scopes and 1666 county reports and special reports of different types. In June 2016, the arts education quality assessment work was completed.

## **5. Arts education quality national assessment report**

In July 2018, one year after the first cycle of education quality assessment, the innovation center publicly released the "China Compulsory Education Quality Oversight Report"[3], the first of its kind, which gives a holistic overview of the quality of Chinese compulsory education, and students' morality, intelligence, physique and aesthetic development, and offers indications on ways to further improve the standard of compulsory education.

The report shows that over four-fifth of students (82.6% of fourth grade students and 86.1% of eighth grade students respectively) were able to sing complete songs fluently and at a steady pace, however, they achieved an accuracy of just over 50% (52% of fourth grade students and 53.8% of eighth grade students, respectively) in quizzes on basic music knowledge, such as rhythm, beat, tone, intensity, and speed. 66.1% of fourth grade students and 63.2% of eighth grade students gave accurate answers in quizzes on style, genre, and form of music works, emotions, and sentiments conveyed by the works, and knowledge of famous songs. In terms of art, 63.9% of fourth grade students gave accurate answers in terms of color, lines, symmetry, space and other art elements, compared to 62.1% of eighth grade students, while 67.9% of fourth grade students answered accurately to questions on style, genre, and form of artwork.

Results from the surveys show that time spent on Chinese and math classes significantly exceeded that spent on PE and art classes. For example, in 72% and 67.2% of the surveyed schools, students had more than 6 Chinese classes and 5 math classes per week respectively. In contrast, in 44.3% and 12.9% of the surveyed schools, students had less than 3 PE classes and less than 3 art classes per week respectively.

The reports show that after years of efforts, China's compulsory education reform and development have achieved remarkable results, educational equity has made important progress, and the quality of education has steadily improved, making irreplaceable and significant contributions to economic development, social progress, and people's livelihood improvement.

However, it must also be noted that there are still some problems and shortcomings in the current compulsory education. Some of the most common problems include the overemphasis on academic achievement, a lack of emphasis on arts education and sports, a lack of opportunities for students to develop practical and hands-on skills and heavy homework load. Constructive recommendations are given in the final part of the report, to improve the country's compulsory education.

The report also gives many suggestions according to the data and the analysis. These

recommendations relate to refining the work mechanism of moral integrity, enhancing the sports and arts education, pushing the reform of education and teaching, reducing the students' workload from excessive academic work, strengthening the construction of teachers, and improving the utilization rate of teaching resources, and improving the family education guidance system and so on.

## **6. Conclusion**

The 2016 national arts education quality assessment has already come to an end. However, the assessment is only a means, and education quality improvement is the goal. Through the assessment, the overall status and problems of arts education can be clearly presented, and guide the provinces, cities and regions to analyze their own problems, propose corrective measures, and implement the reform of arts education and the improvement of students' artistic literacy. This is the ultimate goal of National arts education assessment.

There are still some problems to be solved in the actual operation of tool development and monitoring. This assessment adopts two modes of paper-and-pencil test and performance test. The two parts of the test are different test groups, so that the results of the paper-and-pencil test and performance test cannot be combined, so in the next round of monitoring, a breakthrough to time constraints, it is helpful for the same test group to complete the two test contents, which will help to reveal the overall status of arts education more comprehensively.

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