

# On the Development of "Computer Music" Education in China

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**Abstract:** Computer music simply refers to the wide application of computer multimedia technology in the fields of music production and creation, music communication, music education, etc., which will play a certain role in promoting and developing some aspects of our traditional music creation and music teaching. The era of technological reform in the music world is coming to us. In this short decades of development, computer music is evolving at an amazing speed.

**Keywords:** Computer Music; Educational Development of Computer Music; Practical Application; Synthesis Technology

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## 1. Introduction

Computer music originated in the 1950s, which uses the combination of music and modern electronic computer technology and has attracted people's attention once it came out. Its appearance has given music a new direction of development, and we have a new understanding of music concepts and thinking methods. The emergence of computer music has changed the original programs and methods in music and our traditional music creation. And some aspects such as music teaching will play a certain role in promoting and developing. The era of technological reform in the music world is coming to us, but some of these problems also require us to explore and solve. This includes the research results of many disciplines such as audiology, electroacoustics, recording technology, information technology and electronic computer technology during the development of human civilization, which has opened up a new development path between music art and scientific civilization. The new technology of computer music can be used to create music and then edit it through the recording function of computer music. There are also some advanced composition techniques that we can practice through computer music, in the orchestra, the arrangement of the instrument group, the harmony function configuration, the orchestra of the electro-acoustic band, etc. Looking at the process of its historical development, we can know that computer music has evolved from the original analog technology to synthesizer technology, and then to today's digital music technology. In this short decades of development, the speed of development is also an issue worth exploring and thinking.

## 2. Brief introduction to the development of computer music

Since the second industrial revolution, with the rapid development of science and technology, advanced science and technology have penetrated into every corner of our lives. Advanced scientific and technological civilization and traditional music have naturally merged together. This led to the discipline of "computer music".

In the 1940s, French composer Pierre Schaeffer used tape to record various sounds in subway stations, and spliced and

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reorganized them. And named this piece of music "Metro Etude", this technique of using high-tech music, marking the birth of computer music. At the same time, it inspired some later composers to create music. This historic major breakthrough and development have found another brand-new musical expression for modern music creation. The emergence of this phenomenon is closely related to the development of science and technology.

Computer Music: In simple terms, it refers to the extensive application of computer multimedia technology in the fields of music production and creation, music communication, and music education.

In the development of contemporary music, our composers use computers mainly for composition design and production. Computer technology is also widely used when studying music styles, analyzing works, and developing staff software. When some musicians create musical works, the intervals and intervals are no longer in an arbitrary state of choice, such as Computer-Cantata (1963) by Hirler. It is selected according to the probability of its importance, for example, according to the direction of the previously selected sound level. In the composition system of another composer Xenakis, computer music only appeared as a special effect, and was no longer used as a method of composition. In his orchestral work "Transformation", he used the intent of the music to be expressed by the changes of various speeds in the glide technique presented by computer music.

### **3. The development of computer music education in China**

Computer music entered our country in the late last century. China's major universities first came into contact with this emerging art. In the 1980s, China's first "computer music laboratory" Shanghai Jiaotong University was established in 1984. Expert lecture groups on computer music from various countries came to China. In 1986 and 1988, they invited foreign experts to give lectures at Tianjin Conservatory of Music, Shanghai Jiaotong University and Shanghai Conservatory of Music. In 1987, Peking University established the "Sound Research and Computer Music Research Laboratory". Although some institutions have completed their historical missions and withdrew from the historical arena, they have made tremendous contributions and played a great role in the development of computer music in China.

Regarding the development of computer music education in China:

In 1987, the Wuhan Conservatory of Music established the music sound director major. In 1993, the major enrolled the first batch of graduate students.

In 1994, the China Modern Electronic Computer Music Research Center was established at the Central Conservatory of Music, and began to recruit postgraduates specializing in "Electronic Computer Music Composition" in 1997.

In 2003, the Department of Music Technology of the School of Music, Capital Normal University was established, with professional directions such as recording art, digital music production, music media and management, musical instrument production evaluation, computer network music and game music production, music psychology and therapy, music copyright management, etc. Professionals in computer music technology are its main training direction. In 2005, the first batch of enrolled doctoral students entered the school, which has epoch-making significance in the field of computer music education in China.

In 2004, the Shanghai Conservatory of Music established computer music engineering major and started the undergraduate and postgraduate education of the Shanghai Conservatory of Music computer music major.

In addition, many art colleges in China have successively established computer music-related majors.

In the favorable situation of today's social and economic development, the market demand for computer music is also expanding. Some companies and commercial organizations have opened up new markets. Since the 1990s, there have been some domestic enterprises and units organizing seminars on computer music and related computer music training courses. Although these academic exchanges and training courses all carry a certain commercial atmosphere, the issues involved are also popularized first. However, these activities have also promoted the popularization of computer music as a new thing in our country.

In August 2002, the "Chinese Musicians Association Digital Music Education Society" was established. This was co-sponsored by 12 higher professional art schools across the country. Professor Wang Ciyin, vice chairman of the Chinese Musicians Association, was elected as the first president. President Wang Ciyin put forward: "Music education should also keep pace with the times. The biggest goal of establishing this society is to apply digitalization beneficially. Music teaching methods promote the level of music art education in China, improve its service to music education, produce practical effects on music education, and strive to make the

Digital Music Education Society of China Musicians Association an influential and dynamic society ". The establishment of the "Chinese Musicians Association Digital Music Education Society" marks that our country's computer music education has gradually entered the right track.

Until now, computer music has been in China for more than 30 years. A large number of major art schools and some comprehensive schools in China have established computer music majors and some related majors. These professional settings focus on different majors, such as music production, computer music performance techniques, sound recording technology, multimedia music teaching, etc. Many breakthroughs have been made in the artistic creation and technological innovation of computer music, so that China's computer music has developed rapidly.

#### **4. Conclusion**

In recent years, the combination of music creation and computer music technology has created gratifying achievements for the development of contemporary music. Numerous colleges and universities have successively established independent teaching departments and research centers, and comprehensively carried out the research and teaching of computer music, forming a new situation in which computer music is diversified. Nowadays, classroom multimedia teaching in elementary and middle schools in our country has been widely promoted. Elementary and middle school teachers are also frequently contacting and using computer music technology to enrich classroom teaching. Computer music has been integrated into our society, entered our lives, and promoted our education. Therefore, we also need to give more understanding and attention to computer music.

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