DIDACTIC POTENTIAL OF THE ELECTRONIC MUSIC IN THE TERTIARY MUSIC EDUCATION

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Abstract. The paper deals with the main issues in China's electronic music education in the context of teacher training. The authors analyse the electronic music curriculum on the example of the syllabus "Electronic Music Production" by the Music Department of Yuncheng University and highlight the most important outcomes that strengthen the didactic potential of electronic music in the university music curriculum.

Keywords: electronic music, STEAM, electronic music production, music teacher training.

ДИДАКТИЧЕСКИЙ ПОТЕНЦИАЛ ЭЛЕКТРОННОЙ МУЗЫКИ В СИСТЕМЕ ВЫСШЕГО МУЗЫКАЛЬНОГО ОБРАЗОВАНИЯ

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Аннотация. В статье рассматриваются основные проблемы электронного музыкального образования Китая в контексте подготовки учителей музыки. На примере анализа содержания и задач учебной дисциплины «Электронная музыка» музыкального отделения Университета Юньчэн авторы обосновывают дидактический потенциал внедрения электронной музыки в программу подготовки учителей музыки в системе высшего образования.

Ключевые слова: электронная музыка, STEAM, создание электронной музыки, музыкально-педагогическое образование.

Electronic music (电子音乐), referred to as 电音 or 电子乐 in Chinese, is music produced with electronic instruments and electronic music technology. It is also an art form that uses specific electronic technology to convert sound into music. According to the Overview of China's electronic music industry (2019) China's electronic music market continues to expand, "driven by the continued increase in user scale and the electronic music of mainstream artists' works" and has likely reached 38.53 billion yuan in 2023 [3].

The rise and prosperity of every culture depends on a large number of professional talents. In Western countries, many world-renowned music schools such as Berklee College of Music, Jacobs School of Music at Indiana University Bloomington, and Juilliard School offer undergraduate, postgraduate and doctoral degrees in electronic music-related majors, providing opportunities for the electronic music industry. However, China lacks electronic music professional schools, resulting in a shortage of electronic

music talents [3]. At this stage, there are only a few professional music schools in China that recruit and train undergraduate and graduate students in electronic music, such as the Central Conservatory of Music (中央音乐学院) and Communication University of China (中国传媒大学).

In this paper, we will consider the main issues in electronic music education in the context of music teacher training. We will analyse the electronic music curriculum on the example of Yuncheng University syllabus and highlight the most important outcomes that contribute to the didactic potential of implementing electronic music into university music curriculum.

Electronic music learning usually is presented in two major directions – electronic music composition (电子音乐作曲) and electronic music production (电子音乐制作). With the development of AI, some colleges and universities offer courses on Music artificial intelligence (音乐人工智能). College music education requires mastery of music-related technological skills because nowadays, there are sound sequencers editors available and applications to make recordings and sound mixing, as well as technological resources that simulate the interpretation of instrument groups, which was only possible in recording studios and can now apply to musical education.

Lee Cheng emphasizes that "STEM/STEAM continues to be the educational trend in the digital era, the development of pre-service music teachers' knowledge and skills would better prepare them as STEAM-ready music educators of the future" [2, p.151]. The activities within electronic music curriculum (or extra-curricular and elective courses) include "live coding, laptop ensemble training, multimedia performance, and electronic music practices" [2, p.151].

According to the "Computer Music Production" syllabus developed by the Music Department of Yuncheng University, this professional optional course is offered to students majoring in Musicology (Teacher Education). Through the study of MIDI software, students can initially master the methods of MIDI music production, and cultivate their basic ability to use MIDI high-tech means to create, learn and research other music courses [4]. The acronym MIDI stands for Musical Instrument Digital Interface and refers to a digital standard for producing, editing, playing, transmitting and storing music and sound information.

The course "Computer Music Production" comprises 8 units that help students master digital music equipment, practical MIDI skills and effects, computer sound sources, varieties and effects of digital audio, as well as notation and composition software. This course can be roughly divided into four parts: MIDI hardware equipment and connections, MIDI software applications, audio software applications, and notation software applications.

The focus is on MIDI software application, and the difficulty is on audio software application. Classroom teaching is mainly based on group teaching, and a large number of

examples are used to help students master simple practical operations. The assessment of this course is a combination of current assessment and final examination. The current assessment is mainly based on class attendance, homework completion, etc., and the grades obtained account for 20% of the total semester grade; the final paper grade accounts for 80% of the total semester grade [4].

The general purpose of the course is to train students to become familiar with the basic experimental methods and procedures in electronic music production. In order to achieve the course objectives, students are required to complete a certain number of computer-based assignments. This enables students to deepen their understanding of the various electronic music production methods and other basic contents learned in class. Through experimental teaching, students can master the basic production methods of electronic music, including electronic music production hardware settings, computer music production, audio files and video files composition.

As was mentioned above, the teaching content comprises MIDI music production basics and also teaches arrangement of sounds in film and television. The latter usually includes mastering the basic knowledge and skills in Cakewalk, a DAW (digital audio workstation) software package developed by BandLab to compose, edit, record and master music. Through the study of this course, students must have the ability to use relevant computer software, including software installation methods and operation methods.

The focus of this course is on music score design, MIDI production and audio editing technology. Students learn the basic theory of computer music, the basic principles of digital audio, and the basic principles of MIDI. Students develop their ability to use relevant music software for audio production and editing. Course teaching methods are mainly based on demonstration teaching method, and more example analysis and demonstration teaching should be carried out in teaching.

When we analyse the learning outcomes, we note that ideological, moral and professional quality goals need to be achieved. Through the study of this course, students develop hands-on operation, analysis, and critical thinking skills. They learn how to develop a rigorous, realistic and innovative style of work in their career, learn to be flexible and acquire life-long learning attitudes. Modern music teachers should be able to learn new knowledge according to the development of the times, constantly pursue progress, and achieve the ability to keep pace with the times.

As electronic music learning requires both technical competence and creativity, it fully mobilizes students' professional development, their motivation for learning and maximizes students' mastery of the main content of the course.

There is one more aspect in the didactic potential of the electronic music in the system of tertiary music education. As L. Cuervo claims, "the application of a variety of didactic, musical, and technological knowledge and strategies … emphasized the aspects of reflection, analysis, and the proper use of digital media for personal, educational, and

social purposes" [1]. So, we can see that electronic music education develops general functional literacy of students. It develops their creativity, critical thinking and digital skills.

Moreover, being proficient in electronic music editing and production, university music students are more likely to respond to the rapid changes in the digital sphere and to implement electronic music innovations into their classrooms.

So, after analyzing the educational background for tertiary music education in China as well as teaching content and principles in the framework of music teacher training, we can conclude that electronic music courses provide for the cultivation of students' musical and creative activity based on computer programs. It also teaches strategies for implementing electronic music into music classroom utilizing composer and sound engineering synthesis in musical arrangement and performance interpretation. Comprehensive electronic music education lays the solid foundation for future music teachers' professional and personal development.

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