FUNDAMENTALS OF THE USE OF INAVATORY PROGRAMS OF MUSIC CULTURE IN TEACHING AS A SUBJECT

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Annotation. this article covers the basics and stages of development, history of the use of inavatory programs of musical culture in teaching as a science. Also, scientific information is provided with the aim of increasing the effectiveness of teaching the subject of music culture by means of inavation programs in the training of pedagogical personnel for general music education.

Keywords: virtual communication, interface, effect, Martenot waves, music education, pedagogy, MP3, MIDI, WAV, PowerDVD, AEG, NHK, Plate records, computer music programs.

Today, a growing part of communication between people is entering the world of virtual communication technologies. Music could not stand aside from information and communication technologies. With the help of a computer, if a person wants, a person can, without leaving home, record sound recordings using amateur equipment, process them in a special program using various effects, and then start distributing "newly recorded hits in MP3 format over the internet. Computer music programs can be divided into three main groups. The first group includes programs that work with a sound wave. These are various multimedia players designed to play audio and video files; all audio editors where you can edit the sound wave; as well as programs for burning discs. We can say that the programs of this group are the most used in various types of human activity. The second group includes sequencer programs that combine many functions. Recently, sequencer has become a universal program for working with MIDI and audio sound, but at first they worked only with the MIDI group.

And the third group of programs is music editors, with the help of which the method of typing music is the same as typing using Microsoft Word. The simplest in everyday use are media players. The most popular are Windows Media, WinAmp and CyberLink PowerDVD. From CDs (uncompressed audio formats: *.WAV,*.AIFF; compressed audio formats whose data has not been lost:*.APE,*.FLAC; compressed audio formats whose data is partially lost: *. MP3,*.OGG) music in the format can be listened to. It also supports DVD format videos and other compressed formats (*.AVI,*.MPEG,*.WMV,*.VOB, *TS,*. MP4 and others) can be watched. With the development of Internet technologies, the functionality of these programs is expanding significantly, with the help of these programs it will be possible to listen to internet radio. When copying a disc, information about the performer and song names are automatically filled in, making life much easier for users. Computer music programs also include audio editors, such as Adobe Audition, Sony Sound Forge, Steinberg Wave Lab. These programs are designed for more professional users. With their help, it is possible to convert an audio CD to MP3 format with a large number of additional options. It is also possible to edit an audio wave of one track (adhesive cut sound).

With the help of a sound editor, it is possible to create a collage, popurri from several songs. In addition, audio editors are also used to recover old recordings from recordings and audio cassettes. It

should be noted that this process requires a lot of time, for example, actions in the process of restoring audio cassettes. Such recordings not only lose sound quality polish and dynamics over time, but what is most unpleasant is that the tape stretches and begins to float with time and intonation, in order to bring audio recordings in such cases to their original state and or closer to the original, it is advisable to use computer music programs extensively, mainly in digitization. Digitization of recordings is also a rather laborious process, but automation work in audio editors of computer music programs is easy. One of the main disadvantages of plate recording is the moderate amount of dynamic gradations, the appearance of additional noise and slow beats. The noise level on the plate is constant from beginning to end, which allows you to detect noise in pauses between tracks, and in the sound-producing areas of the work, experimentally sets the optimal level of noise reduction.

If the maximum noise reduction is set, the timbre of high-range sounds (for example, violin) will disappear. In most cases, clicks on the plate are also periodic, but they can be removed as much as possible with the help of special plugins. The dynamic and timbre range can be corrected by the equalizer and special plugins. Sequencer allows you to create, edit, save, play musical compositions in a MIDI sequence. In addition, the sequencer is able to actively work with sound waves. MIDI abbreviation (abreviatura) Musical Instrument Digital Interface - digital interface of musical instruments. This term refers to the generally accepted standard for the exchange of digital data between devices that carry out the synthesis and processing of electronic music. The main difference between musical information corresponding to the MIDI standard from a traditional digital sound is that it is not encoded by the amplitude of sound vibrations, but teams that describe the instrumental composition of the orchestra involved in the performance of the composition, and for each of these instruments are notated partitura soundtracks. This standard was shared in 1983 by Korg, Roland, Yamaha, the largest producers of electronic musical instruments installed. Developed by independent manufacturers, it ensured the interaction of synthesizers and other electromechanical devices. Wherever a MIDI command comes to the device, it immediately generates a sound that matches it. Thus, through this interface, the entire electronic orchestra can be controlled from a single console. Often such devices resemble a piano keyboard in appearance and are accordingly called MIDI keyboards. But on a computer, the control panel is often implemented in software in the form of a special program - a sequencer. Naturally, the sound card, any other additional devices need software. The musician usually works with a sequencer program. The most popular of them are Cakewalk Pro Audio, Cubase and Digital Orchestrator, each of which is presented in several versions. It should be noted that these programs of competing firms provide the user with different options, but their interfaces and methods of working with them are very similar. On separate tracks, acoustic instruments and vocals can be recorded, and then, signal processing and multi-channel Phonogram can be dropped into stereo. The musician has the opportunity to choose the composition of the orchestral instruments, see the correct signs of their parties, pre-adjust the relative sound level of each of them, set the placement of performers in the panorama of the orchestra, immediately transpontrate the batch of any instrument.

The ability to record sound is often associated with the idea of producing electronic music. But this does not mean that the production of electronic music is the goal of the recording process. In 1857, French publisher and bookseller Edward Leon Scott de Martinville patented a device he

invented - a phonootograph. The phonootograph was the first device that could record sounds but not reproduce them. In 1878, the American inventor Thomas A. Edison patented the phonograph. Edison's phonograph, just like Scott's phonootograph, used cylinders to record sounds, but unlike the phonootograph, the sound could be both recorded and repeated. In 1887, the American inventor Emil Berliner presented his invention - a disc phonograph. In 1906, a large invention appeared, which greatly influenced the development of electronic music. It was a triode tube amplifier (audio) developed by American inventor Lee de Forest. It was the first electronic lamp composed of a glass container with a hot cathode inside, allowing the generation and amplification of electrical signals. The invention of the vacuum tube laid the foundation for radio broadcasting and made it possible for electronic calculations to appear. Long before electronic music became available, composers wanted to use emerging technologies for musical purposes. Several instruments were created that used both mechanical and electronic components. It was these instruments that paved the way for more advanced electronic instruments. The first electronic instruments include: the sound cross (fr. Croix Sonore), and "Martenot waves", invented by French musician Maurice Martenot in 1919 and 1928.

The most famous example of the use of Martenot waves is Olivier Messiana's "Turangalila Symphony" and his other works. The instrument of the Martenot waves was used to write music by other composers, mainly French, such as Andre Jolivet. 1920-1930. During this decade, many electronic instruments and the first compositions for them appeared. The first electronic instrument was the etheraphone, invented in Leningrad in 1919-20 by Lev Termen, later renamed "Termenvox". With the advent of thermenvox, the first compositions for electronic instruments appeared. These compositions were quite different from the works of "noise makers". And this led to a change in the goals of using music machines. In 1928, the French cellist Maurice Martenot invented the instrument "Martenot waves", with which he made his debut in Paris. In 1929, composer Joseph Schilinger wrote the "first airphonic suite" ("First Airphonic Suite")for termenwox and orchestra. For the first time, xuita was presented with the Cleveland Orchestra, where Lev Termen performed solo. In the same year, American composer George Antale wrote parties for mechanical instruments, electric noise machines, engines and amplifiers for the first time in his work. He wrote these parties for the opera "Mr. Bloom" ("Gospodin Blum") and did not finish it.

Electronic music. Electronic music (nem. elektronische Musik, visual. electronic music) refers to music that is the acoustic result of the production, modification and reproduction of music in a partial or completely electronic way. In this process, the internal organization of sound comes first. The sound source can be natural or artificial (acoustic and electronic). Electronic music-1) works of music created by means of electronic music instruments, sound recording and sound scanning (such as a tape recorder) devices. In the composition, such types as Concrete Music, computer music created on the basis of special computer programs, applied electronic music composed for a motion picture, performance, etc.are distinguished.

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