

СЕКЦИЯ 5. ПРОФЕССИОНАЛЬНАЯ ПОДГОТОВКА ПЕДАГОГА-МУЗЫКАНТА В КОНТЕКСТЕ РЕАЛИЗАЦИИ ПОЛИХУДОЖЕСТВЕННОГО ПОДХОДА

FENG XIAOYIN

China – Republic of Belarus, Vitebsk, VSU named after P.M. Masherov

SIMILARITIES AND DIFFERENCES BETWEEN PLUCKED MUSICAL INSTRUMENTS BY EXAMPLE LUTES, DOMRAS AND MANDOLINS

Lute is an ancient musical instrument in Egyptian, Greek, Roman, Bulgarian, Chinese and Silesian cultures. Its origin is unclear. In the early 7th century, lute appeared in Persia, Armenia, Byzantium and Arab caliphate, in the Balkans in the 6th century, and in Spain and Catalonia in the 8th century. Note that in the 11th century, Arab masters of the Fatima era painted the Lute on the carved ceiling of Palatine Chapel in Palermo. This fact proves the interaction between Muslim culture and European Christian culture.

In the 16th century, Lute was played not only by professional musicians, but also by amateurs. Musical instruments sounded in kings' palaces, nobles' palaces and ordinary citizens' homes. Lute plays solo and ensemble works, accompanied by singers and choirs. In addition, Lute was introduced into orchestras. Schools for making Lute instruments have been established in different countries. The most famous craftsmen lived and worked in Bologna (Italy). The design of instruments is constantly changing.

At the end of the 17th century, the popularity of Lute declined. It was gradually replaced by guitar, harpsichord and piano. In the 18th century, Lute actually stopped playing. It was not until the turn of the 19th and 20th centuries that Arnold Dolmich, a British instrumental master, professional musician and musicologist, helped revive interest in ancient musical instruments. The purpose of this article is to analyze musical instruments, the prototype of which is the lute.

Main section. Nowadays, Lute has once again attracted great attention. It can be heard at concert venues, not only as a solo, but also with other ancient instruments. Contemporary composers compose music for lute: J.N. David (Germany), V. Vavilov (Russia), T. Sato (Japan and Netherlands), R. McFarlen (USA), P. Galvao (Portugal), R. McKillop (Scotland), J. van Vissems (Netherlands), R. Turovsky-Savchuk (USA and Ukraine) and others. The most famous performers are V. Vavilov, O. Timofeev, A. Suetin and V. Kaminik (Russia), P. O 'Dette, R. Barto and H. Smith (USA), B. Yan (China), J. Imamura (Japan), R. Lislevand (Norway), J. Kaminik (Croatia). H. Held and L. Kirchhof (Germany), E. Eguez (Argentina), J. Lindberg (Sweden), M. Lowe and N. North (UK), J. Van Lennep (Netherlands) and many others [1].

The structure of Lute has undergone many changes in the whole history of its existence. Masters experimented with the shape and structure of the hull, the number and size of chords. Therefore, there are many independent musical instruments in the world, and their ancestors are Lute (table).

Table – Musical instruments of the lute family

№	Musical instrument	Brief characteristics
1	Sitar (India)	This instrument has two resonators, the second of which is located on vultures. The striking feature of sitar is that there are many strings, of which 7 are main strings
2	Kobza (Ukraine)	It has a rounder body and a shorter vulture, unlike its ancestors, which only has eight chords
3	Vihuela (Italy)	The main difference with Pipa is to extract sound. Initially, they used bows instead of intermediaries. So Viveira doesn't sound like a lute. It comes in the form of a modern guitar, which is classified as stringed and bow instruments because of the way it is played
4	Mandolin (Italy)	It looks a lot like a lute, although it has a shorter neck and fewer matching strings. Playing Mandolin uses a special technique –vibrato

5	Duthar	It is distributed among the inhabitants of Central and South Asia. The neck of the dutar is longer than that of the lute, so the range of sounds that can be extracted is much wider
6	Rubab (Persia)	A lute instrument, a stringed instrument, is widely known in the medieval Oriental culture dominated by Persian influence and is mentioned in the works
7	Dombra	Lute-style 2-string plucked string instruments are most common in Kazakh and some Turkic cultures. It is the traditional instrument of professional singers-Akynov, Anshi and instrumentalist-Kyushi
8	Guitar	It is a long-necked lute plucked instrument, which appeared in Europe in the 15th century on the basis of the predecessor instrument Viveira
9	Oud	It is a short-necked lute-style plucked instrument, translated verbatim from Arabic, like a tree. Originating in the early Middle Ages in the Near and Middle East, it is an Arabic variant of Persian Berbett and is made differently, unlike Berbett's leather deck, which Ude's deck is made of wood

After the Arabian oud was introduced to Europe, two musical instruments similar to the Lute were born, named Mandolin and Domra. Since these two instruments share the same origin with the Chinese Pipa, they have many simulations (figure).

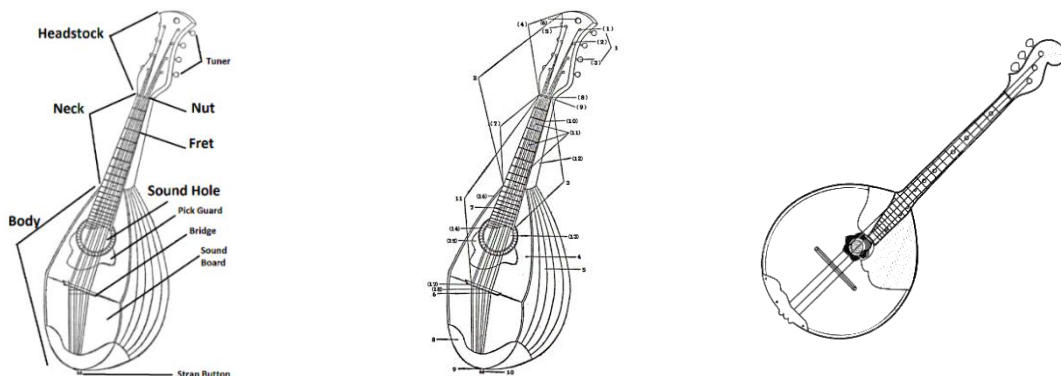


Figure – Lute, Mandolin and Domra

Mandolin (italy. *Mandolino*) is a small-sized string plucked instrument, which is a kind of Pipa soprano. Mandolin has a shorter neck and fewer chords. The history of Mandolin can be traced back to the 8th century ad, when the Arabs entertained the Iberian Peninsula and rough the oud. It can be said that the Mandolin is the product of the development of the oud in Europe. It was officially named around 1634. There are four bimetallic strings (chorus), tuned in fifths, plucs Ked with a pick, pear shaped speaker. Mandolin is growing most rapidly in Italy. Around the twenties or thirties of the 17th century, the Neapolitan Master Antonio Venaccia created a new type of Mandolin, which in 1835 book on a different form. The body of the mandolin increased gradually: the number of frets increased from 12–13 to 17. In the eighteenth century, the instrument used to play Mandolins, the pick, was added born [2].

The production process of Mandolin soundboard is similar to that of classical guitar soundboard. When the tool shell is ready, attach a fingerboard made of mahogany or walnut to it. Then they installed a black wood deck and a stretch mechanism, which was similar to the stretch mechanism of a Spanish guitar, but not three, but four stretch mechanisms on each side of the head. When all the details are connected together, the Mandolin is coated with varnish. Each Mandolin can be decorated with mosaics (butterflies, flowers and birds, etc.) to decorate the performer's taste.

This novel instrumental music spread quickly in the Russian region, and from the second half of the 1880s schools and tutorials by variable authors were published: I. Kulikova, F. Cristofaro, L.A. Nadezhina, P.A. Rozmyslova, N.P. Trapeznikova, I.Ya. Petrov, M.Z. Belsky and many others.

Mandolin appeared in Italy in the 16th and 17th centuries and became the most popular folk musical instrument in the next century. Interest in her comes not only from her popularity in Celtic, Italian and American folk music, but also from the universality of the sounds made by musical instruments. Mandolin was introduced to Russia probably in the first half of the 18th century.

Antonio Vivaldi and Giovanni Paeziello's Mandolin master concertos, L. Beethoven's Mandolin and piano plays are well known. In operas "Don Juan" and "The Marriage of Figaro", V.A. Mozart also has the voice of Mandolin. If the sound of Mandolin can be heard in symphony orchestra or opera orchestra before, Mandolin appears in rock music as time goes by. Paul McCartney, "Led Zeppelin", "Night Sniper", "DDT", "Lyapis Trubetskoy", "Aria" and many other musicians used it in their work. Many movies are dubbed with Mandolin as the theme. One of the most popular films is the Adventures of Pinotino, in which Mandolin appears in songs by Pope Carlo, tortoise tortillas and Piero [3].

A large part of this is because the Mandolin is similar to the Domra, a folk instrument in Russia and Belarus. Since the instrument of Domra disappeared in 1648, no one knew the existence of Domra until the 19th century, but many musicians did not give up the development of this ancient musical instrument. The built Domra appeared in 1896, with the shape of round sound, medium Length fretboard, three strings, and four strings by 1908.

Domra is a Russian, Ukrainian and Belarusian folk string plucked instrument. It has a hemispherical shell, and the sound of strings is produced by using a modulator. One feature of sound extraction is vibrato. There are two types of Domra: three-stringed Domra and four-stringed Domra. Three-stringed Domra – traditionally used in Russia. Four-stringed Domra is most common in Belarus and Ukraine. Domra is used as a solo (Domra Malaya, Prima) and as part of an ensemble and orchestra of Russian folk instruments.

Domra was widely used as a solo and ensemble instrument by Russian clowns in the 16th and 17th centuries. But in 1648, Tsar Alexei Mikhailovich issued a decree prohibiting clown activities. As the clown disappeared, so did Domra. The Domra acquired its modern look in 1896, after the reconstruction by V.V. Andreev Vyatka balalaika. Based on this tool, artist master F.S. Passerski, S.I. Nalimov, N.P. Fumin and P.P. Karkin founded an orchestral Domra family. These instruments became the great Russian orchestra V.V. Andreyev.

Domra, like many stringed instruments, consists of two main parts: hemisphere and fingerboard. To make it, use the following wood: for the body of the tool – yavor and birch; Deck-well-dried straight spruce and resonant fir; the bracket is cut with maple trees. Condors are made of very hard wood, and the lining, top and bottom door frames of condors are made of black wood.

The fingerboard is inserted into the hull and fixed in the hull. A pad is pasted on the top of the fingerboard, and an upper pad is pasted on the joint between the head and the neck of the fingerboard. A slender transverse saw blade is applied to the gasket, in which metal powder is inserted. The gap between metal thrusters is called pull. Their sequential count starts at the top half. On different types of Domra, the number of Lads varies: from 19 to 30 [4].

At the beginning of the twentieth century, Domra appeared in Belarusian territory in the form of amateur music performances in the army and schools. In 1937, the Domra Balalaye Orchestra and Domra Sextet (later transformed into a chamber orchestra), which were established in Belarusian Radio Station, began to operate successfully in the Republic. In the 1960s, the Belarusian radio station Domra Sextet was led by L. Smelkovsky, a talented domrist musician who produced wonderful works for Domra. The arrival of a new generation of Domra performers in Belarus in 1970s is related to the names of G. Osmolovskaya, V. Krasnoyartsev, N. Maretsky, J. Volosyuk and others.

In 1992, at the initiative of Professor G. Osmolovskaya, the Belarusian Association of Domristers and Mandolinists was established in Belarus with the aim of reviving Mandolins. A few years later, Belarusian Mandolin performers E. Dikovitskaya, E. Prokopchik, O. Dubovskaya, N. Korsak (graduates of the associate professor class N.N. Maretsky) became winners of prestigious international competitions [5].

The strengthening of cultural ties between the republics and the creative interaction between Russian and Belarusian musicians contributed to a new stage in the development of Domla performance in the 1990s. The circle of Belarusian composers-creators of Domla's original tracks (G. Ermochenkov, A. Klevanets, V. Korolchuk, A. Shpenev, A. Bezenson and others) has greatly expanded.

Just like V.V. Mahan, the practice of medieval European music performance shows that the formation of ancient Russian Domra was influenced by European Pipa. Ancient Russian Domra appeared in the early 15th century. Together with Balalaika, as two varieties of the same musical instrument. Domrov performances from 1896 to 1945. It is formed within the framework of orchestra and ensemble. Domra developed from orchestral and ensemble instruments to solo instruments. The discussion among the supporters of the third and fourth strings Domra in the early 20th century promoted the perfection of domr performance. This involves Domrister's attention to high artistic repertoire, drawing lessons

from the experience of academic tools, establishing the norms of planting and placing hands, forming stroke culture, and publishing methodology manual [6].

Conclusion. Analyzing stringed plucked instruments (Lute, Domra, Mandolin), it should be noted that the Chinese national musical instrument Pipa has much in common with them. First of all, they are plucked instruments that are basically played in the same way and may even have similar left-handed skills. This is because they have the same origin. They are all exotic instruments, and they all have a wide range of tones. Among them, the 30-fret Domra is three octaves and ten semitones. It's exactly the same as Pipa.

But it should be noted that they are somewhat different. First of all, the Lute has given up the way of playing with picks and has been completely changed to fingerstyle, but Mandolin and Domra are still playing with picks, which is the biggest difference between them. Of course, their tunings are also different, Mandolins and Domra are G, D, A, E, while Pipa are A, D, E, A. The Mandolin and Domra are very similar to the Pipa. This creates favorable conditions for the spread of the Pipa in Belarus.

List of sources cited:

1. Lute / Wikipedia, the free encyclopedia [Electronic resource]. – Access mode: <https://ru.wikipedia.org/wiki/Лютня>. – Access date: 09.07.2022.
2. Sparks, P. A history of the neapolitan Mandoline from its origins until / P. Sparks. – City University of London, 1989. – 205 p.
3. Mandolin / Exhibition project "History of one exhibit" [Electronic resource]. – Access mode: <http://ikmb.ru/2016/10/25/Mandolin/>. – Access date: 07.09.2022.
4. Domra / Wikipedia Free encyclopedia [Electronic Resources]. – Access mode: <https://ru.wikipedia.org/wiki/domra>. – Date of visit: 21.02.2022.
5. Koryakovtseva, G.A. The return of the Domra / G.A. Koryakovtseva. – Kirov: Triada-S, 2003. – 100 p.
6. Mahan, V.V. Domra in Russia: origins and revival: author's abstract. dis. ... cand. art critic.: 17.00.02 / V.V. Mahan; State Institute of Art History. – Moscow, 2017. – 30 p.

WU JUN

China – Republic of Belarus, Vitebsk, VSU named after P.M. Masherov

ARRANGEMENT FEATURES FOR DIFFERENT MUSICAL INSTRUMENTS

There are a wide variety of keyboard instruments, and although the vocal principles are different, the structure is mostly similar. Keyboard instruments often used in contemporary times are acoustic piano, electric piano, synthesizer, accordion, organ, MIDI keyboard and so on. At present, the most commonly used piano in music production should be the acoustic piano and MIDI keyboard, and the electric piano is also used very frequently in live performances. Strictly speaking, the MIDI keyboard is just an input tool and does not sound in itself, but it can also be used as an instrument after loading the sound source. MIDI keyboards and electric piano are sometimes also used as synthesizers because they can load different tones [1].

Because the keyboard belongs to the order of semitonic sound, sound and playing more regular, so it is easier to use computer technology to quantitative processing, this technology is also mature, and MIDI keyboard input tools and piano playing method almost no difference, so can truly and completely reflect the style of piano playing style and skills. When using computer music technology to teach the piano sound department, the key to guarantee the effect is mainly to choose a high-quality sound source. The purpose of the article is to analyze the technology of creating computer music.

Main section. Piano sampling technology started early, coupled with its own structure technology, there are a lot of realistic effect, sound quality of the software and music to choose from. At present, larger computer music manufacturers have invested a lot of costs in the production of transferred piano sound sources, which often use top recording equipment to sample Steinway Grand Piano and Yamaha Piano. The high production cost doomed the extraordinary quality of these sound sources. When arranging the piano sound part, it can avoid quantitative functions to allow subtle changes and defects. Try to play as rich and varied as conditions permit [2].

For the organ, the old wave meter and the new sampling sources can truly restore its sound, and their simulation of the old organ phoner often gives an auditory experience with a sense of The Times.