



The Theory of Music and the Design of Fast Tunable Transformations of Harmonic Sounds and Musical Chords

Nasriddinova Nozima Khayrullaevna

Lecturer at the Department of Music Education, Termez State University, Termez, Republic of Uzbekistan

Annotation: Harmony is a complex concept of music theory. Harmonious is the harmony of sounds pleasant to the ear and comprehended by the mind. In a scientific perspective, this idea leads to the compositional and technical concept of harmony as the combination of sounds into consonances and their regular sequence. Harmony as a scientific and educational-practical discipline studies the pitch organization of music - both polyphonic and monophonic. Harmony is a musical discipline that studies the structure and combination of chords. In order to study harmony, you need to have a clear understanding of such concepts as the actual musical sound, rhythm, tempo, meter, size, mode, key, diatonic, interval, chord, chromatic, melody, texture, sequence, modulation.

Keywords: harmony / sequence of sounds / combination of chords / musical sound / rhythm / tempo / meter / time signature / mode / key / diatonic / interval / chord / chromaticity / melody / texture / sequence / modulation.

Music theory is the study of the practices and possibilities of music. Music theory is a specific set of educational and scientific disciplines of musicology that deal with the theoretical aspects of music. All this forms the main basis for creating music.

Instrumentation - the study of musical instruments;

Orchestration - presentation of music for the orchestra;

Harmony is a discipline about the organization of music;

Polyphony - the study of polyphonic compositions;

Rhythm - studies meter and rhythm;

Musical form is a discipline about the structure of a work.

It also includes additional courses on the theory of musical content, modern composition, musical textology and much more.

Despite the fact that now there is a lot of information, many still have porridge in their heads from scraps of some knowledge. As a result, some people think that this is all very easy. After all, they seem to understand the information, but they cannot apply it. So they think it's easy.

At the same time, they do not lose their relevance, because they are designed for a classical school.

What we are studying now, we don't even have as many genres as in classical music. We do not have something global now. We don't write operas, symphonies and so on.



Therefore, music theory is the main base that no one has canceled yet. Everything is very well written and organized.

But if you're into contemporary music, you'll still need to learn that base and move on.

Knowledge of notes is, roughly speaking, knowledge of letters. But you must understand that knowing only the letters will not be enough for you. You need to learn how to put these letters into syllables, and then put them into words. Only then will you have a complete picture.

In addition to the harmonic component (what we mean by pitch, notes), there is a second very important branch in music. This is a temporary component. This is what is called duration.

In this material, we will take a closer look at what sound is, its speed, loudness and other important definitions. We will also talk about frequency, pitch and notes.

The staff is a system of five lines where all music is recorded. I will show you how to place notes and musical keys on it.

all sound is vibration. What we call a note is a sound of a certain pitch caused by vibration. How high or low a note sounds depends on the frequency of these vibrations. The higher the vibration frequency, the higher the note, and vice versa.

If you double the frequency of a note, you raise it by an octave. (An octave is a musical interval in which the ratio of frequencies between sounds is one to two (that is, the frequency of a high sound is twice the frequency of a low one). Sounds complicated? Now let's look a little more. For example, the note "la" is somewhere in the middle of the piano the keyboard will vibrate 440 times per second, and "la" an octave higher - 880 times per second, and the one one octave lower - 220 times per second. The number of vibrations per second, in turn, is measured in "Hertz" and often abbreviated to "Hz".

If you look at a piano keyboard, you will see a repeating sequence of 12 notes.

Because in Western music we divide an octave into 12 equal steps. But despite the fact that we use only 12 notes in our music, only 7 notes are used in major and minor scales.

That's why when you play all 7 notes of the scale and go back to the same note, you'll have traveled an octave, that's 8 notes. Think of words like octagon, octopus, etc.

So, as you may have noticed, we do not use all the notes in a row when playing the scale. We skip certain notes, that is, the distance between some notes will be greater than others (the distance between any two notes is called the interval). To move to the nearest note is to move a semitone (P), and to go one step further than that (two semitones away) is called a tone (T).

A scale is a scale in which the first and last notes have the same name but are separated by an octave. What distinguishes different scales from each other is that they have their own patterns of tones and semitones. The major scale, which is the basis for most of the music you hear, has the following interval pattern:

(tone, tone, semitone, tone, tone, tone, semitone)

If you start playing this pattern from C, you will end up playing all the white keys on the piano.

playing all the white notes on the piano starting with C gives you a major scale. All notes in the C major scale are in the C major key. If we

If we play the notes of a major scale, starting from another note, for example G, then these notes are in the key of G Major. Simple, right?



Let's take a look at the G Major scale. Remember, this means we start on G and move up the pattern.

(tone, tone, semitone, tone, tone, tone, semitone)

But you will immediately notice that now a black key has appeared in our scale - "F sharp".

So, in the key of "G major" there is one sharp. And if we start with the note "D" and do the same, there will be two sharps in our scale, "F" and "C", that is, in the key of "D Major" there will already be two sharps. And so on.

A chord is a combination of three or more tones that sound at the same time; moreover, the distances (or intervals) between the individual tones of the chord are subject to a certain pattern.

Knowing the structure of chords is useful for any musician, basic and advanced chords for piano and keyboards look and sound.

Literature used:

1. РРК Мардаева. Роль музыкальной грамотности в развитии музыкальных знаний учащихся дошкольного образования. *Science and Education* 3 (3), 818-824.
2. РРК Мардаева. Использование инновационных образовательных технологий в обучении музыкального руководителя на уроках музыки. *Science and Education* 3 (3), 872-878.
3. РРК Мардаева. Унифицированные детали музыки, логические правила взаимоотношений аккордов/ *Science and Education* 3 (3), 885-890.
4. РР кызы Мардаева. Традиции народной культуры в музыкальном воспитании и обучении детей. *Энигма*.
5. РР Мардаева. Традиции народной культуры в музыкальном воспитании и обучении детей. *Энигма*, 46-49.
6. МРР кизи. The modern lesson in music education activities is the content of education and upbringing. *Научно-практический журнал «Энигма»* 2 (Выпуск №34), 44-52.
7. РР Мардаева. Использование наглядных, словесных и практических методов преподавания музыки в дошкольном образовательном организациях. *Science and education* 3 (2), 1253-1258.
8. РР Мардаева. Общедидактические и специфические методы музыкального обучения. *Science and education* 3 (2), 1259-1264.
9. РР Мардаева. Теория музыки и упражнения на развитие музыкального слуха в дошкольном образовательном организациях. *Science and education* 3 (2), 1265-1269.
10. К.Б. Холиков. Диезлы мажор ва минор тоналлигини аниқлашнинг оптимал усуллари. *Science and Education* 3 (9), 416-421.
11. К.Б. Холиков. Бемолли мажор ва минор тоналлигини аниқлашнинг оптимал усуллари ва креативлиги. *Science and Education* 3 (10), 533-539.
12. К.Б. Холиков. Музыкальное образование и имитационное моделирование процесса обучения музыки. *Science and Education* 3 (3), 1020-1025.
13. Теоретические основы определения механических свойств музыкальных и шумовых звуков при динамических воздействиях.. *Scientific progress* 2.



14. К.Б. Холиков. Место творческой составляющей личности преподавателя музыки и её роль в обучении детей общеобразовательной школе. *Science and Education* 3 (8), 145-150.
15. KB Kholikov. Harmony to voice exercise their role in the regulation of muscular activity in vocal music. *Scopus, musical education.*, 705-709.
16. KB Kholikov. The content of a music lesson in a comprehensive school. *Web of Science Magazine*, 1052-1059.
17. KB Kholikov. Polyphonic forms of music based on traditional organizational principles. *Web of Science Magazine*, 375-379.
18. KB Kholikov. signs. The main elements of music, their formative action. *Melody. Theme. Web of Science* 2, 720-728.
19. KB Kholikov. The role of theory and application of information systems in the field of theory, harmony and polyphony of music. *musical education - Web of Science*, 1044-1051.
20. К.Б. Холиков. Область применения фугированных форм. Тройные и четверные фуги. Фугетта и Фугато. *Scientific progress*, 2.
21. К.Б. Холиков. Форма музыки, приводящие к структурной, драматургической и семантической многовариантности произведения. *Журнал Scientific progress* 2 (№ 4), 955-960.
22. К.Б. Холиков. Проблематика музыкальной эстетики как фактическая сторона повествования. *Science and Education* 3 (5), 1556-1561.
23. К.Б. Холиков. Проблема бытия традиционной музыки Узбекистана. *Science and Education* 3 (5), 1570-1576.
24. К.Б. Холиков. Отличие музыкальной культуры от музыкального искусства в контексте эстетики. *Science and Education* 3 (5), 1562-1569.
25. К.Б. Холиков. Пение по нотам с сопровождением и без него по классу сольфеджио в высших учебных заведениях. *Science and Education* 3 (5), 1326-1331.
26. К.Б. Холиков. *Musical pedagogy and psychology. Bulletin of science and education.* 99 (21-2), 58-61.
27. К.Б. Холиков. Значение эстетического образования и воспитания в общеобразовательной школе. *Science and Education* 3 (5), 1549-1555.
28. К.Б. Холиков. Эстетическое воспитание молодёжи школьного возраста в сфере музыки. *Science and Education* 3 (5), 1542-1548.
29. К.Б. Холиков. *Methods of musical education through education in universities. musical education - Web of Science* 3 (66), 57-60.
30. К.Б. Холиков. Роль педагогических принципов метода моделирования, синтеза знаний при моделировании музыкальных систем. *Science and Education* 3 (3), 1032-1037.