UNIT FIVE

Elements of Music V:

a) Tone Colour/Timbre

b) Texture

c) Dynamics

Course Learning Outcome(s)

By the end of the lesson you would be able to:

Explain the listed elements of music and identify them in pieces of music they come across

Activities

a) Read the notes on the given elements of Music.

b) Listen to the audio of a piece of music and identify by name the music instruments you hear playing the music and describe the sounds they make. Think of words you can use to do this, e.g. bright, harsh, dark, mellow, deep, high, light, throaty, brassy, and so on.

c) Listen to the music again. Do all the instruments/voices sing the same thing at the

same time? Do they come in one after the other? How many instruments/ voices can you hear?

d) Listen to the music again and describe the speed as well as the loudness and softness of the sound.

Notes

Tone Colour/Timbre

In music, timbre, also known as tone color or tone quality, is the perceived sound quality of a musical note, sound or tone. Timbre distinguishes different types of sound production, such as choir voices and musical instruments, such as string instruments, wind instruments, and percussion instruments.

Sounds produced by different objects are not the same. They sound different because they possess different qualities. In a musical performance instruments or voices with various

tone colours are combined to create the sound effects the composer wants.

Tone colour, also known as timbre, is the quality of a sound that is not characterized as frequency (pitch), duration (rhythm), or amplitude (volume). Generally speaking, tone colour is what allows a listener to identify a sound as being produced by a specific instrument and to differentiate between instruments of the same type. For instance, a trumpet sounds quite different from a violin, even if they play a tone at the same frequency, amplitude, and for the same duration. However, one violin may also sound audibly different from another violin.

What Causes Tone Colour?

The sound made by an instrument is determined by several factors. The most basic factor is the raw material with which the instrument is

crafted. An instrument made of wood, like a guitar, will have a different sound quality than an instrument made out of metal, such as a trombone. In the same way, an *atɛntɛbɛn* made from bamboo pipe would sound different from that made from a plastic pipe. Then also, variations in the specific raw materials will also affect tone colour; for instance, substituting one kind of wood for another in a guitar or making a flute out of silver versus stainless steel. Many instruments are made up of several kinds of materials, any of which can be altered. As an example, most violin bows are strung with horsehair, but some use synthetic nylon strings. When played on the same instrument, each bow will produce slightly varied sound effects. The shape and size of the instrument, and the method of sound production all influence the quality of sound produced.

Professional musicians develop preferences as to how they want their instruments to sound, and may have them modified in pursuit of specific tone colors. In some instances, brass wind instruments may be muted with different types of mutes to give different sounds. Sometimes, these preferences vary based on the performance space. Gold-plated violin strings have a brilliant and penetrating sound that works well for solo performances and in open-air spaces, while many steel strings have a more mellow quality appropriate for indoor ensemble playing where it is important to blend tone colours with those of other instruments.

The performer also has a significant amount of control over changing tone colour by using different performance techniques. A piano can sound smooth and shimmering or piercing and aggressive depending on the amount of force

the pianist decides to employ when striking the keys.

Instruments have an individual sound quality that can allow a trained musician to easily distinguish one from the other, even if the instruments are the same kind (i.e., both violins) and made from the same raw materials. One reason for this has to do with the resonance of vibrations created by the instrument. When a musical pitch is played, the audible sound most often corresponds to the lowest frequency produced by that vibration. This is called the fundamental pitch. The sound waves created by the vibration oscillates along the full length of its spectrum but also on the fractal points, including the halfway point, in thirds, quarters, fifths, etc.

Each of these fractal vibrations produces an additional, higher frequency, which is called an overtone. Most of the time, these overtones

are not individually perceived by the naked ear. Nevertheless, every time a pitch is produced, its overtone frequencies also resonate to a greater or lesser degree, depending upon the nuances of the instrument's construction. The added resonances created by overtone vibrations can significantly impact the overall sound quality, making the tone colour of one instrument sound fuller or richer than another.

Terms used in describing tone colour include reedy, mellow, bright, husky, throaty, squeaky, high, low, deep, croaky, grunt, brassy, metallic.

Texture:

Texture refers to how different sounds are combined in a piece of music. This depends on the number of instruments or voices used to perform the music, the relationship between these voices and the different sounds produced by each instrument or voice. a thick texture

contains many 'layers' of instruments. One of these layers could be a string section, or another brass. The thickness also is changed by the amount and the richness of the instruments playing the piece. The thickness varies from light to thick. A piece's texture may be changed by the number and character of parts playing at once, the timbre of the instruments or voices playing these parts and the harmony, tempo, and rhythms used. To get the texture that they want musicians combine instruments in many different ways.

Texture may be described as thin, thick, or dense. If only one drum plays a very simple rhythm, the texture would be thin, but if the drummer plays complex rhythms or is accompanied by many other drummers, then the texture of the music that would be produced would be thick or dense. A thick texture contains many 'layers' of instruments. One of

these layers could be a string section, or another brass. The thickness also is changed by the amount and the richness of the instruments playing the piece. The thickness varies from light to thick. A piece's texture may be changed by the number and character of parts playing at once, the timbre of the instruments or voices playing these parts and the harmony, tempo, and rhythms used.

Types of texture

a) Monophonic - Monophonic texture includes a single melodic line with no accompaniment

b) Biphonic - Two distinct lines, the lower sustaining a drone (constant pitch) while the other line creates a more elaborate melody above it.

c) Polyphonic or Counterpoint or Contrapuntal - Multiple melodic voices which are to a considerable extent independent from or in

imitation with one another, as found in some anthems.

d) Homophonic - The most common texture in Western music: melody and accompaniment. Multiple voices of which one, the melody, stands out prominently and the others form a background of harmonic accompaniment just as we have in most of the hymns we sing in church. If all the parts have much the same rhythm, the homophonic texture can also be described as homorhythmic.

Dynamics

Dynamics refers to the amount of energy used in a music performance. In music dynamics deals with two things: Speed (Tempo) and Intensity of Sound (Volume)

1. Speed (Tempo):- Music is performed at a certain speed or at various speed levels within the same performance. There are various terms used to

describe the speed levels at which a piece of music may be performed. Some of these are slow, broad, moderate speed, walking pace, fast, quick, hurrying, very fast, slowing down, and becoming gradually fast. One often finds these terms written in Italian, e.g.

Slow -adagio, largo

Fast -allegro, vivace (fast and lively)

Very fast -presto

Becoming slow -rallentando (*rall.*), ritenuto (*rit.*), ritardando (*rit.*)

Becoming fast -accelerando (*accel.*)

At a walking pace -andante

A little fast -poco allegro

At a moderate speed -moderato

2. Intensity of Sound (Volume):- Music is performed at a given volume of sound or a various volume levels in a given performance. Some of the terms used to describe these volume levels are very soft, soft, moderately soft, moderately loud, loud, very

loud, becoming gradually loud and becoming gradually soft.

Some Italian terms used to describe the intensity of sound include,

Very soft	-	pianissimo (*pp*)
Soft	-	piano (*p*)
Moderately soft	-	mezzo piano (*mp*)
Loud	-	forte (*f*)
Moderately loud	-	mezzo forte (*mf*)
Very loud	-	fortissimo (*ff*)
Becoming loud	-	crescendo (*cresc.*)

Becoming soft -decrescendo (*decresc.*), diminuendo (*dim.*)

Little by little becoming loud - poco a poco crescendo

Little by little becoming soft - poco a poco decrescendo/diminuendo

Fading, dying away - calando

Other terms are used to describe:

a) The mood of the performance, e.g. sadly, lively, lightly, and prayerfully.

b) The style of the performance, e.g. smoothly, short and detached (staccato), stressed (sforzando [*sf.*]) and marked (marcato).

Practice Exercises

1. What is tone colour?
2. How is a piece of music with polyphonic texture different from a piece of music with homophonic texture?
3. Listen to a piece of music and describe the flow of tempo as well as the flow of intensity (volume) in the music.

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